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# Listening to primary schools: Australian Health and Physical Education (HPE).

Lynch, TJ

<http://hdl.handle.net/10026.1/6475>

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<http://ichpersd.org/i/publications/Proceedings-Turkey.pdf>

ICHPER-SD

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55<sup>th</sup> ICHPER . SD Anniversary World Congress & Exposition  
The Green Park Pendik Hotel - December 19<sup>th</sup> - 21<sup>st</sup>

# 55. ICHPER . SD

## Dünya Kongresi ve Sergisi

19 - 21 Aralık



**PROCEEDING  
KONGRE KİTABI**



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*Dong Ja Yang, Ph.D.,  
Honorary President & Immediate Past President of the ICHPER·SD*

**A Special Message: Recognition, Tribute and Encouragement for Taking a Part in the  
HPERSD Professionals & their Institutions for Sustainable Advancement**

At this juncture in preparing for the 55<sup>th</sup> ICHPER·SD Anniversary World Congress & Exposition in Istanbul, Turkey, it is a good opportunity to look at our admirable legacy – to highlight the central pillar of the Council’s mission. We should also give well-deserved recognition to those contributors in Turkey and encourage all the worldwide professional colleagues and their organizations to take a part in our mission and programs.

We have held 34 world congresses, 32 regional congresses & numerous forums, conferences and symposia in the 8 geographical regions (*i.e., Africa, Asia, Caribbean, Europe, Latin America, Middle East, North America, and Oceania*). As a primary task force, Turkish professionals and organizations have made outstanding contributions to the Council’s record of achievement.

Turkish professionals and their organizations actualized outstanding ***ICHPER·SD European Regional Congresses*** in 2004 and 2011. At the world congress level, the Turkish Sports Sciences Association (TSSA) under its President Dr. Hasan Kasap and TSSA’s leadership-based ***WCEOC’2005*** Executive Committee members (Dr. Hasan Kasap; Vice Presidents Dr. Kamil Ozer & Dr. Umit Kesim; Secretary General Dr. Salih Pinar; Scientific Committee Chair Dr. Caner Acikada) delivered one of the best world congresses in the Council’s 55 year history. The theme of their World Congress: “*New Vision, New Mission, New Strategies: HPERSD as an Integral Part of Lifelong Quality Education of the Whole Person*” truly describes our underlying endeavors. Just as John F. Kennedy stated, “Change is the law of life”, so have we kept innovating and changing our congress themes and operations to ensure the vitality of our organization.

Professionals and organizations in Turkey have once again joined together to organize the 55<sup>th</sup> World Congress & Exposition (***WCEOC’2013***) at the Green Park Hotel & Convention Center

in Pendik, Istanbul from December 19 – 22, 2013. The **Theme** of the World Congress is, **“Total Fitness & Wellness: HPERSD as an integral part of the positive improvement of individuals”**. With the blessings of the Minister of Youth & Sport, the Governor of Istanbul, the Mayor of Istanbul, and the President of the Turkish National Olympic Committee, **WCEOC’2013** is comprised of the four organizations: the Turkish Physical Education Teachers Association (TUBED: President Mr. Sefik Sivrikaya), the Turkish Sports Sciences Association (TSSA: President Dr. Giyasettin Demirhan) and ICHPER·SD Europe, and promoted and managed by Byproje & Livadi, Kadikoy (CEO/President Arif Eksi & WC Coordinator Ms. Ozge Evlek). WCEOC’2013 Officers are President Dr. Hasan Kasap, Vice Presidents Kamil Ozer & Dr. Salih Pinar, Secretaries General Dr. Ilknur Hacisoftoglu & Dr. Fatih Derwent, and Scientific Committee Chair Dr. Gazanfer Dogu.

*The ICHPER·SD family, the officers, executive committee members, division and commission directors, life and individual members, institutional and organizational members, would like to extend our sincere appreciation to each and every one of the governmental and non-governmental authorities appearing in the paragraphs above, including many additional colleagues listed in the World Congress Information Booklet. We highly recognize the extraordinary and remarkable contributions to our central mission given by these outstanding Turkish professionals.*

The International Council for Health, Physical Education, Recreation, Sport, and Dance (ICHPER·SD) is an international alliance of HPERSD professionals and organizations. Since the Council’s founding in 1958, ICHPER·SD has championed the promotion of quality physical and health education (including all movement related physical activity and fitness, leisure and recreation, and dance education), and sport and the Olympic education especially in schools and other learning institutions. Moreover, it has been leading the movement for sustainable and vibrant scholarly activities (*i.e.* research and publications, organizing congresses for presentation and scholarly debate/discussion, and dissemination of findings and cutting edge knowledge) while exalting the importance of daily physical exercise and activity.

ICHPER·SD advocates that every government should revitalize a holistic education and life-long learning environment, so that all people are free to preserve and develop their physical, intellectual and moral powers. It is the goal of education to educate the whole child/person and is indeed a human right as proclaimed by the United Nations. Thus, we seek better methodologies for staying healthy through an active lifestyle for all global citizens – confidently pursuing that path while keeping in mind the importance of gender equity and enhancing good health and a better quality of life for all age groups, despite any mental or physical challenge. Following those principles, ICHPER·SD has been working in a partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO) for 51 years and with the International Olympic Committee (IOC) for the last 18 years.

The author is very pleased to have the opportunity to encourage everyone active in the areas of health, physical education, recreation and leisure, sport and the Olympic movement, and dance to participate in this world-class academic and scientific forum and exposition – the

55<sup>th</sup> ICHPER·SD Anniversary World Congress & Exposition. It is a gathering to solidify our endeavors and to share responsibilities for our global mission while extending marketable opportunities to related business sectors. We will be updated on the status of our mission and new scientific and pragmatic discoveries to create new methodologies and directions for our sustainable advancement. It is our firm belief and scientific fact and experience that, through this world congress, again, ***our dimension of knowledge is highlighted and expanded, our search for wisdom advanced, our depth of understanding deepened, and our inquiries in science answered.*** With these congresses we are in a better position to serve our profession and our program stakeholders in Turkey, the ICHPER·SD Europe region and around the world.

ICHPER·SD, as an organization of the members, for the members, and by the members, must rely on our members' commitment to be a currently registered member (i.e., individual or *Lifetime* professional members, institutions, national and international organizations), support and contribution as we undertake a course of strategic challenges and inevitable reform process for the sustainable development and advancement despite a worldwide continuing economic difficulty.

For the sake of ICHPER·SD's sustainable mission, the author has been highly moved by a strong sense of encouragement to boldly ask of you the following:

1. Consider championing the mission of the Council throughout your professional life and beyond by becoming a *Life* Member! The *Life* Membership fee of US\$ 1,500 may be a large amount for you; nevertheless, your heart is even bigger in caring for our mission through this commitment.
2. Consider making payment now for your overdue individual membership or registering as a new individual member.
3. Consider contributing any amount – large or small! Just think of it as another form of exercise – exercising your fine spirit of participation by giving to a great cause.
4. Write a pledge to yourself to contribute in accordance with your own preferred payment schedule!
5. Consider seeking & approaching potential donors on behalf of the ICHPER·SD.

Thank you for your consideration to take a part of our mission!
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Adel Elnashar, Ph.D.

ICHPER•SD President

Foremost, I would like to invite you all to share your thoughts, ideas, symposiums, and workshops at the 55th ICHPER•SD Anniversary World Congress. By contributing to the World Congress, you can make it a more dynamic and well-rounded experience for everyone.

The history of the World Congress goes back to 1958, the year of the first World Congress, which took place in Rome, Italy on the topic of Child Health and the School. Since then, there have been several of ICHPER•SD World Congresses dealing with a variety of themes. The 2013 World Congress is sponsored by the Physical Education Teachers Association of Turkey (TUBED) and the theme is: Total Fitness & Wellness: HPERSD as an Integral Part of the Positive Improvement of Individuals. It has been a great 55 years in which ICHPER•SD has contributed to the world of professionals, scholars, teachers, and coaches. In these 55 years, ICHPER•SD has also produced quality physical education around the world. It is a great honor to be part of the 55th Anniversary World Congress and Exposition in Istanbul, Turkey.

The World Congress largely impacts the development of Health, Physical Education, Recreation, Sport, and Dance in the world and in the eight regions. ICHPER•SD adds to the development of physical education and sport in both scientific and pragmatic ways. From a sociological perspective, sport, because it internalizes social circumstances, beliefs, values, attitudes, rules, aesthetics, and intellectual experiences, is a social system which transmits the dominant values of society at large. HPERSD has played, and continues to play, an integral part in the development of advanced industrial societies and has helped other societies get up to par. HPERSD contributes to society on a variety of levels: from education to health, and from ethics and politics to the productive use of leisure, stress relief, and cultural enjoyment. With changes in social and cultural values, the necessity, importance, and value of sport, physical education, and recreation have greatly increased.

The World Congress will enhance physical education and sport. Never has it been more important to maintain an energy about physical education and organizations like ICHPER•SD. ICHPER•SD is one of the oldest and most prestigious organizations of its kind, serving professionals in more than 204 countries. This is a great chance for the European Region and the world to participate and gain knowledge from global scholars. Special thanks to the Physical Education Teachers Association of Turkey (TUBED) for sponsoring this important World Congress and for making it happen.

Sincerely,



Prof. Dr. Hasan Kasap

President of the WCEOOC'2013 Organizing Committee

ICHPER•SD Vice President for Europe

Dear Friends of the World Sport Sciences,

As Vice President for Europe, it is my pleasure to welcome you for the 55th International Council for Health, Physical Education, Recreation, Sport, and Dance (ICHPER•SD) World Congress and Exposition which will be held in İstanbul, Turkey on 19-21 December 2013. The theme of the congress is ***Total Fitness & Wellness: HPERSD as an Integral Part of the Positive Improvement of Individuals*** emphasizes the mission of ICHPER•SD. The theme on the one hand reflects the atmosphere of this great organization, on the other focuses on discussing all dimensions of human&sport relation and offering solutions for problems concerned.

Turkish Physical Education Teachers Association (TUBED) brings together the sport scientists, researchers, sport event managers, sports facilities and equipment managers, sport marketers and customers under the roof from all continents of the world in this congress. I believe, the Congress which will be held second time in Turkey will accelerate knowledge sharing of sport science and provide a scientific atmosphere in high standards with presentations of new researches in the field. With presentations, workshops and social activities which draw attention to different doctrines, approaches and topics and include applied approaches of HPERSD will provide valuable contributions to participants.

We hope all participants enjoy discovering the world city İstanbul, a bridge between continents and universal cultures.

We invite everybody to this scientific feast.

## ***Organization Committies***

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### **ICHPER.SD Honorary President**

Dr. Dong Ja YANG

### **Congress President**

Dr. Hasan KASAP (TUBED)

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# **KEYNOTE SPEAKERS**



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# **KEYNOTE**

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# **A Search for Quality of Life and Happiness: A Reflection on a Legacy and Future Direction and Challenges through the 55 years of Commitment to Excellence in the Field of Health, Physical Education, Recreation, Sport, and Dance**

Dong Ja Yang, PhD <sup>a</sup>

<sup>a</sup> *Honorary President of ICHPER-SD*

## **Abstract**

The presenter's study: (1) investigated the underpinnings for a drive in the search for a better quality of life; (2) formulated a basis for a realistic state of happiness; (3) investigated an overview of ICHPER·SD through examining its history in 4 periods: (a) from the founding in 1958 to 1991 as the first segment; (b) from 1991 to 2001 as the 2<sup>nd</sup> segment; (c) from 2003 to 2011 as the 3<sup>rd</sup> segment; and (4) from 2012 to the present as the 4<sup>th</sup> segment. Three research approaches were implemented in effort to present the factual information, data and outcomes through the integrative method of historical, descriptive and evaluative research procedures. Living itself as the mode to search for a better condition of life as an inherent natural drive. A complete state of happiness varies from person to person, culture to culture, and from one's social environment to the next. We recognize, however, the existence of several different worldwide happiness indexes. Each segment has to accommodate and cope with the various social, institutional, economic, and regional conditions. Individual differences in the search for a better quality of life and level of happiness have to be recognized. It is an indisputable fact that whether the organization advances is very much dependent on the level of its leaders' qualities (e.g., preparedness and genuine degree of commitment). The presenter has illustrated a list of recommendations for the pursuit of a better quality of life and for setting goals to attain happiness and the strategic leadership-driven accountable operation and day to day management of the Council. Beyond the issue of quality of life and happiness, the presentation will convince every participant of the factual records as to why we, ICHPER·SD, have been the world's leading international umbrella organization in the field of HPERSD as a unified alliance of worldwide professionals. Nevertheless, it is hoped that my address will also elicit a hearty response of brainstorming to come up with ways to cope as a non-governmental organization with the worldwide economic recession. The recession has swept away statistically more than two thirds (2/3) of the available institutional funding and taken a toll on the number of professionals participating in both domestic and international congresses, conferences, and seminars.

## **Let's Move Active Schools: AAHPERD's Initiative to Get Children Moving**

Bradford Strand, PhD <sup>a</sup>

*<sup>a</sup> Department of Health, Nutrition and Exercise Sciences North Dakota State University*

### **Abstract**

In 2010 First Lady Michelle Obama launched a comprehensive initiative known as Let's Move that was dedicated to solving the challenge of childhood obesity within a generation. In response to the Let's Move initiative, the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) launched Let's Move in School (LMIS) in 2011. The goal of LMIS was to ensure that every school provides a comprehensive school physical activity program with quality physical education as the foundation so that youth will develop the knowledge, skills, and confidence to be physically active for a lifetime. In Feb 2013 the Let's Move program and Let's Move in Schools program emerged into one initiative now known as Let's Move Active Schools. In this session I will 1) discuss today's fitness landscape, 2) provide a brief history of Let's Move and Let's Move in School, 3) explain the Let's Move Active Schools program, and 4) provide an example of a successful program in action.



# **SYMPOSIA**



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# **PHYSICAL ACTIVITY SESSIONS**

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# Is Exercise for Weight Loss Overrated?

Prof.Dr. Robert Ross <sup>a</sup>

<sup>a</sup> *School of Medicine, Faculty of Health Sciences, Queen's University, Canada*

## **Abstract**

Despite decades of exercise science showing the impact of physical activity on all components of energy balance and on every aspect of human physiology, there are academics that remain steadfast in the belief that exercise alone is not a useful strategy for reducing obesity. Investigators still argue that exercise makes very little difference in weight loss, arguments that ignore evidence from randomized controlled trials that unequivocally demonstrate that when the energy deficit is matched, food restriction and exercise produce equivalent weight loss. Indeed, a careful review of the literature reveals that a clear dose-response relation exists between exercise and weight loss and/or obesity (fat) reduction. Independent of the overwhelming evidence suggesting that exercise is associated with clinically significant obesity reduction, in particular abdominal obesity, to focus solely on the utility of exercise to reduce body weight ignores the profound, positive influence of exercise on a wide range of health outcomes. Although it is apparent that far too few people do enough exercise/physical activity to have a meaningful effect on obesity at a population level, this is a question of behavioral adherence and should not be confused with the question of whether physical activity is a useful strategy for body weight control. It is proposed that exercise is fundamental to achieving optimal energy balance and sustaining weight loss, suggestions to the contrary are absurd, and the focus of this session will be to prove it.

# Europe: Facts about Physical Activity

Dr. Bekir Yüктаşır <sup>a</sup>

<sup>a</sup> *Abant İzzet Baysal University, Bolu, Turkey*

## **Abstract**

Being physically active is an important issue. Regular physical activity enhances a range of benefits to one's health while physical inactivity is a major risk factor in the causes of health problems and deaths per year in the World Health Organization European Region. Physical activity levels are not enough in the Region and a gap of inequalities in people engaged in physical activity among countries is getting higher. Some reports show that the northern part of the European Union is more active compared to the southern countries and new member states. There are also some individual factors affecting physical activity's levels. Among them, there are inequalities in engagement with sport activity between different socio-economic groups since people with less income have less free time and access to leisure facilities. In addition, there is a relation between level of education and amount of physical activity. Furthermore, gender differences determine participation in physical activities. Age is another important factor affecting physical activity level, amount of activity tends to decrease with age. Majority of adults do not perform the recommended activity level. Beside, inactivity causes high disability adjusted life years and health related problems. To improve the physical activity's levels, it is necessary to consider also people's preferences about places where to exercise. Those can be listed as; parks, on the way between home and school, work, shop, fitness center, clubs sport center, work place and schools. Therefore, attitude of local authority and facilities are also important factors influencing people's attitude to do exercise in the region. Some reasons to engage sports and physical activity are; improving health, improving fitness, relaxing, having fun, improving physical appearance, etc. Importance of physical activity is greatly accepted in the European Union region. Therefore, nowadays the European Union is actively aiming to promote physical activity level of citizens and to avoid a sedentary life style.



# Measurement of Physical Activity: Problems in the use of the Subjective Methods

Dr. Yeliz Ö. Pınar <sup>a</sup>

<sup>a</sup> *Gedik University Faculty of Sport Sciences*

## **Abstract**

Accurate measurement of physical activity (PA) is necessary in order to monitor population health and assess the effectiveness of PA interventions. There are a number of ways to measure PA; some of them (methods) are more accurate than others in assessing activity. Methods used to quantify physical activity include objective instruments which measure body movement (e.g. pedometers and accelerometers), or physiological processes (e.g. heart rate monitoring), and subjective methods. There are also lots of subjective methods which are grouped in the form of Self-reported surveys, Diaries, Physical activity logs, Recall surveys, *Retro-spective quantitative history and Global self-report*. Accelerometers are often used by researchers as an objective method for measuring PA and are generally considered the gold standard for assessing free living activity. However, accelerometers are not always feasible because they are expensive and participants have to wear them during all waking hours for up to 7 days. Although all instruments have limitations, the most commonly used method for measuring physical activity is the self-report questionnaire especially in the large communities. The best choice of method for measuring PA depends on various criteria but in epidemiological studies and large-scale trials, questionnaires are the most commonly used instrument. Self-report physical activity questionnaires are more feasible in older children and adolescents. Advantages of self-report questionnaires include low cost and ease of administration, relatively low participant burden, and the ability to capture the context in which activity occurs. However, the use of these instruments has also some disadvantages. Those are the difficulty that children and adolescents have incorrectly interpreting questions and accurately recalling activity. In addition, when compared with adult self-report instruments, limited validity and reliability information exists for children and adolescents. Many questionnaires have been developed to measure PA, but an overview of the measurement properties of PA questionnaires is not clear. Researchers should determine which questionnaire would fit their purposes best regarding the content of the questionnaire. Should be not that in general, longer and more detailed questionnaires are expected to be more valid than their shorter counterparts. Questionnaires with good content validity need to be validated in well-designed studies and in different countries. In conclusion, while physical activity questionnaires are often used by researchers as subjective methods to measure of PA, It should not rely only, but should combine questionnaires with objective measurements.

# Measurement of Physical Activity: Problems in the use of the Accelerometers

Prof. Dr. Kamil Özer <sup>a</sup>

<sup>a</sup> *Gedik University Faculty of Sport Sciences*

## **Abstract**

Physical activity is very complex and difficult to measure. There are many approaches have been used to determine physical activity in health and performance studies. Self-reported surveys, are used to determine the relation between physical activity and health. Diaries generally provide a detailed accounting of virtually all physical activity performed, normally within a single day. Activity logs provide an ongoing record of a subject's participation in certain types of physical activity. Recall surveys are less likely to influence physical activity behavior and generally require less effort by the respondent than do either diaries or logs. *Retrospective quantitative history* is the most comprehensive form of physical activity survey and generally requires specific detail for time frames of up to 1 y. The global self-report provides a self-assessment of an individual's physical activity relative to other persons in general or to those of a similar age and sex. In recent years, technological developments have produced a variety of devices that directly measure human movement, such as step counters, accelerometers, and physiological and spatial monitors. To determine the physical activity of the elderly and children, many researchers have focused on self-report studies. While these surveys are suitable for the classification of groups of elderly activity is limited to determining changes in physical activity. Obtaining highly accurate and reliable self-reported measures of physical activity in children has proven to be difficult because of their poor recall of activity intensity and duration. If necessary, self - reported physical activity questionnaires should be simple and understandable as possible. Motion sensors are used for certain periods and in certain conditions can be obtained very useful data. Calibration of motion sensors in some cases may become problematic. Therefore, the motion sensors used in research should be tested in the same activity. Specific protocols should be applied in the evaluation of the data collected from sensors. Synchronization with the use of heart rate monitors and sensors are important. A questionnaire used in conjunction with motion sensors strengthens the data. The value of the study can increase depend on the sensitivity of used measurement tool.



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**PHYSICAL EDUCATION  
AND SPORT SESSIONS**

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# Physical Education Teacher Education Programs: A Hope for the Future in the New Millennium

Assist. Prof. Dr. Ferman Konukman<sup>a</sup>

*<sup>a</sup>Department of Kinesiology, Sport Studies & Physical Education*

*The College at Brockport, State University of New York, USA*

## **Abstract**

The crisis in public education manifested itself at the beginning of 1980s, followed by the publication of "A Nation at Risk" (1983), a report that became a turning point. This report questioned the place of physical education courses in the school curriculum and suggested that school boards include more academic subjects in course requirements instead of physical education, arts and music subjects. Graham (1990) reviewed school physical education programs in the United States and reported improvements in elementary school physical education programs. On the other hand, a wide variety of activities rather than fitness and skill were emphasized in middle school physical education. On the contrary, Graham reported unsatisfactory physical education programs in high schools.

In addition, Rink (1993) suggested that there are five reasons for the problems in middle school physical education programs: Failure of the profession to improve the goals of the physical education programs in schools; Failure of state and school districts due to low expectations for physical education programs as well as less accountability for holding teachers responsible to have quality programs; Failure of teachers to behave professionally; Failure of physical education teacher preparation programs to prepare teachers for the reality of the world and support the teachers in the school system; Reality of the life conditions beyond the control of teacher preparation programs such as lack of funding and equipment, and large class size. Undergraduate physical education programs in the United States have changed considerably during the past two decades. One of the main changes was the expansion of non-teaching majors (Zeigler, 1988). The reform of undergraduate physical education programs from single track to multiple was a result of changing employment patterns of students in the programs. Thus, physical education programs in the United States have begun to prepare students in different careers (McBride, 1984). Newell (1990) stated that developing trends in academic discipline of physical activity caused dramatic changes in physical education programs. In addition to this, Sage (1987) pointed that the movement of making physical education an academic discipline was the main reason of having multiple-track in the field instead of a single-track program. However, it is important to realize that these changes were not related with reform of teacher preparation programs. On the other hand, change in physical education teacher education programs can be explained in two ways as conceptual orientations and theoretical perspectives (Bain, 1990; Rink, 1993). Technology and knowledge base will be two very important concepts in the future of physical education teacher education pro-

grams. Unfortunately, in many ways, the physical education teacher education programs has been slow to join the technological revolution while the foundation disciplines such as motor learning and exercise physiology have taken the recent advantage of developments in technology (Sharpe & Hawkins, 1998).

However, there are several good examples of implication of technology in physical education programs. Computers can be used by physical education teachers in three ways: a) utilities, b) assessment, c) computer assisted instruction (CAI) (Silverman, 1997). The use of e-mail, list servers, and World Wide Web led to important developments in physical education programs. (Elliott & Manross, 1996a,1996b). Knowledge base will also be an important concept in the future. Shulman (1987) defined knowledge base of teaching as a different way of knowing that is essential for teachers. This includes: a) content knowledge, b) pedagogical content knowledge, and c) pedagogical knowledge.

Finally, there is an argument over subject matter of physical education being closely aligned to sport, games, and fitness activities that physical education should focus on sub-disciplines (i.e. biomechanics, exercise physiology) (Corbin & Eckert, 1990). Wiegand, Bulger & Mohr (2004) stated that there are curricular issues in physical education such as foundational courses, time spent in pedagogical content knowledge and the best order of curriculum in the programs. Siedentop (1991) emphasized the importance of pedagogical knowledge and stated that all failures of bad teaching come from a lack of pedagogical knowledge, not from the inadequate subject matter knowledge. Besides, teacher educators contributed to development of pedagogical content knowledge that emphasized both pedagogical formation and knowledge base (Griffey & Housner, 1991).



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# **SPORT SOCIOLOGY SESSIONS**

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# Futbolda Taraftarlık, Fanatizm ve Şiddet (Fenerbahçe, Galatasaray, Beşiktaş ve Trabzonspor Örneği)

*Doç. Dr. Ahmet Talimciler<sup>a</sup>*

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## **Abstract**

Bu araştırmada, Türkiye’de futbolun örgütlenmesinde, işleyişinde ve kitleler ile buluşmasında büyük etkileri bulunan dört büyük takım taraftarlarının fanatizm ve şiddet davranışlarının ardında yatan sosyo-kültürel etmenlerin neler olduğunun ortaya konulması amaçlanmaktadır. Taraftarları şiddete iten nedenleri, fanatizmi ve şiddeti etkileyen sosyal değişkenleri tespit etmek çalışmamızın bir diğer amacını oluşturmaktadır. Son olarak taraftarlar ve taraftar temsilcilerinin yanı sıra basın mensuplarıyla yapılan görüşmelerden elde edilen bilimsel verilerin, giderek bir sosyal problem haline dönüşen futbol sahalarındaki şiddetin teşhisinde ve çözümünde, hükümet ve futbol federasyonu için kullanılabilir hale getirilmesi amaçlanmaktadır. Çalışmamızda dört büyük takım taraftarlarının temsilcileri ile yapılan derinlemesine görüşmeler ile taraftar temsilcilerinin şiddetin oluşumunda etkisi bulunan aktörler konusundaki görüşlerinin yanı sıra çözüme yönelik görüşleri de saptanmıştır. Basın mensupları ve basın analizi ile Türkiye’de futbol sahalarındaki şiddetin oluşumunda basının etkisi ve rolü örnekleriyle ortaya konulmuştur. Taraftarların toplumsal konum ve statüleri ile bağlı oldukları değerler arasında sosyolojik bir ilişki mevcut mudur? Cinsiyet, yaş, eğitim düzeyi, meslek, doğum yeri vb. etkenlerin sözü edilen değerler karşısındaki tutumları ne ölçüde şekillendirdiği saptanmaya çalışılmıştır. Bu doğrultuda dört büyük takım taraftarlarının içerisinde küfür ve şiddete meyilli, kavgayı onaylayan, takımına çok bağlı, deplasman dahil her maç giden kitlenin vermiş oldukları yanıtlar arasında anlamlı bir ilişkinin bulunduğu anlaşılmıştır.

Görüşme yapılan spor yazarları kendi içlerinde farklı temellerden ve bakış açılarından hareket etmekle birlikte futbol sahalarında yaşanan şiddetin oluşumunda “profesyonel” taraftarların varlığı konusunda uzlaşmaktadırlar. Türkiye’de yayınlanan gazetelerin futbol sayfalarının oluşturulması sürecinde kullanılan dil ve söylem, Türk toplumundaki şiddet kültürünün yeniden üretilmesinde aracı olmaktadır.

Derinlemesine görüşme yapılan taraftar grup liderlerinin hem kendi takımlarının başarısızlıklarıyla hem de şiddet olaylarıyla ilgili olarak “komplocu” bir mantıkla “mazeret bulma” tavrı içinde oldukları fark edilmektedir. Futbolda şiddetin nedenleri konusunda grup liderleri, medyayı ve yönetimleri (takım yöneticilerini, federasyonu ve emniyeti) suçlayan bir dil kullanmaktadırlar. Bu suçu başkasına atma tavrı, şiddeti önleme konusundaki önerilerine de yansımaktadır.

# **Modern Identity That is Full of Tension: To Be Both Women and Elite Athletes in The History of Modern Turkey**

Doç. Dr. Betül Yarar<sup>a</sup>

<sup>a</sup>*Gazi Üniversitesi, İletişim Fakültesi*

## **Abstract**

If we consider sport as a social field, in Bourdieu's sense of the term, we can analyse it as a structured field of social practices. Here instead of practices, I would rather prefer to use Butler's term "performance" since it leads us to go beyond structuralist account of "agency". On the basis of these two theoretical strands, in this paper, I would analyse the participation of women into the field of organised sport from the 1930s up until the 1980s in Turkey. In respect to Bourdieu's approach, I will analyse the process of structuration at two different levels: one is at the level of the field of sport which not only leads it to work selectively but also conditions the ways through which certain social groups act in the field in certain patterns and manners; secondly at the level of individual agents who are motivated to enter into the field of sport on the basis of their inherited or gained cultural and economic capital which exist in embodied form as dispositions or in objectified forms as ingoods, qualifications etc. I would also analyse, the ways how sporting women cope with contradictory impacts of social forces through their performances in their continuous movement from one field to another (from family to education; from education to sport, etc.). Doing my research in 2006, this way of analysis enabled me to carry on an intersectional analysis of life stories of almost 90 female athletes who had carried on their lives as elite athletes in distinct periods of long history of modernisation in Turkey. And this research led me to develop a gaze that looks at the very same history, I mean history of modernisation, from a different angle: i.e. from bottom up and from micro to macro.

# Sexual Harassment and Abuse in Sports

Kari Fasting

Research over the past 20 years has shown that problems related to sexual harassment and abuse occur in sports. Many people are unaware of what sexual harassment and abuse mean. I will therefore start with defining these concepts. Central in the definitions is that the behaviour experienced is unwanted or threatening, troublesome, insulting, offensive or forced, and common for sexual harassment and abuse is-- that they stem from power relationships and the abuse of power by the more powerful person in the relationship. Based on various studies I will present a brief overview of what we know about the prevalence, the consequences, the risk factors and the perpetrators. The most likely perpetrators are commonly male coaches, but recent studies have revealed that male peers also often are the harassing agents. The focus of the last part of the presentation will be the prevention of sexual harassment and abuse in sport. One national and one international example will be presented. The national illustration will be from my own country and the work done by our major sport organization--the Norwegian Olympic, Paralympic and Confederation of Sports (NIF). It decided in 2009 that all sports clubs would be “obliged to procure a police certificate of good conduct for persons who are to carry out tasks for the club that entail a relationship of trust and responsibility in relation to minors or persons with mental disability.” Ten new guidelines for preventing sexual harassment and abuse were adopted by the Confederation in 2010 and will be outlined. The presentation will close with a presentation of the preventive work done by the International Olympic Committee (IOC). The IOC adopted a position statement in 2007 on the prevention of sexual harassment and abuse in sport. It followed this up by developing interactive educational tools for sport organizations, coaches and athletes. The development of these educational tools was finished in 2012. The presentation will close with a presentation of some of these videos.



**SPORTS PHILOSOPHY SESSIONS**



# Sport as a Dionysian Field of Playful Forces

Prof.Dr. Yunus Tuncel <sup>a</sup>

<sup>a</sup> *The New School, New York*

## **Abstract**

Sporting enhances human life in many different ways. In this paper, I will focus on three related areas and show how sport enhances life; namely, pluralism or heterogeneity, community-building and ecstatic festivity, and aesthetic playfulness. Human life is diverse, but we often forget it; diversity that we are becomes obliterated in everyday functions. Sport, however, brings diverse players together and attempts to sustain this diversity—on a heterogeneous plain, to borrow from Bataille. We play a game in our own ways, from our perspectival, individual position, and yet we play the same game. It is a Dionysian individualism, if I can use this phrase à la Nietzsche. Moreover, a sporting event is a festive gathering of players; depending on the nature of the game, the festivity gains prominence. It is a communal gathering where athletes create an event through their play and struggle, as they become agonistically united with their opponents. In this way, they also create a communal spirit for the whole gathering. Finally, sport sustains the playful aspect of human life, as explored by Huizinga; it is the playfulness that children have and, in sports, has to do with chance, the unknown, and game-making. It is as important in sports as imagination is in aesthetics, shown by Kant in his *Critique of Judgement*. In each of these areas, my essay will show how sport enhances human life, that is, how individuals function in a pluralistic world, as they mediate their differences, what it means to be communal even in hardship and strife, and finally how we, as adults, can become playful again (analogous to the recovery of a dream lost).

# Culture of Defeat

Prof.Dr. Atilla Erdemli <sup>a</sup>

<sup>a</sup> *Istanbul University, Turkey*

## **Abstract**

Quality Life is only a matter of question for Human Beings. Since all living creatures other than Human beings have stable (static) living conditions, they lack the possibility to transcend; expand their Living Status at a certain period. Among the living, only Human being can get his/her life to a higher and quality level. The possibility to live so is the necessity of Existential Human Structure. Transcending oneself, increasing the quality of life is not only once or in one aspect of life: a change occurring in a living context affects the rest directly or remotely, yet an individual should try to transcend his/herself in every field of action of his/her life. In compared to other living, Human being is A DEFECTIVE BEING. On the other hand, it is not certain for the Human Being doing what, when, where, how, how much and what for, in each and every circumstances during his/her lifetime. This defect and uncertainty is also the chance of freedom for the Human being. Since his / her life is not certain (static), a Human being can transcend his / herself to a more competent and more qualified life forms. From a different perspective it can be said that Human being is a living creature with Multiple Lives. A Human being can create his / her freedom in every aspect of his/ her life and reach to more qualified lives. Some of these can be day-to-day and transient; some of them are particular to a certain period; some of them are necessary and some of them are compulsory. One of the needs, one of the lives of a Human being that one cannot procrastinate; transfer to someone else is Sport. Therefore, Sport is a fundamental right. It is an event that develops and enhances Human being's quality of life when it is done in the right way. Sport is the field of action that brings Human being to limits of living state from various aspects and demands Eminent Behaviour from the individual at that very point. Everything moves in the universe. In our world, the only living creature, which can convert movement into Action is Human being, hence Human being has the opportunity of liberation and to act freely. His / her act is variable; numerous since it depends on his / herself and since Human beings are defective beings, their action hitches, stumbles, does not happen properly, deviates from its aim, exceeds its aim, gets destroyed, shifts... Human being is mistaken. These hitches, failures, defeats are the requirements for Human beings to reach a more positive state. Human beings reach his / her great success with the correct knowledge of his / her mistakes and failures. Culture of Defeat starts at this very point. The Consciousness of Failure leads the way to success. As a Being with History, Human beings reach the consciousness of the mistakes that he / she can do by the mistakes that he / she has already done. This ascension or the development of Living is excellent and the most important foundation of this is The Consciousness of Failure. Culture of Defeat is a kind of liberation and the Culture of Constructive-Creative Living. In this understanding, the individual does not get overwhelmed by his / her defeat; does not search for outer forces for his / her defeat. In this way of thinking, the individual embraces his / her failure. Culture of Defeat does not occur without the embracement. One of the areas that the individual experiences this kind of embracement is Sport.

# Heidegger on the Left

Dr. David Kilpatrick<sup>a</sup>

<sup>a</sup> Mercy College, New York, USA

## **Abstract**

The concept of *agon* plays a crucial role in Heidegger's notion of the aesthetic process (cf. "The Origin of the Work of Art"). Contestation is most often constructed within the rubric of the political and this is certainly the case with the vast majority of critiques of Heidegger. This is rarely thought through in relation to the hotly contested space of sport in modernity. As Rüdiger Safranski notes towards the end of his biography on Heidegger, late in life the philosopher was enamored with Franz Beckenbauer and as a child in Meßkirch played as a left wing. My purpose here will be to explore what a Heideggerian aesthetics might offer to an understanding of soccer and more generally an ontology of sport. Further, I will speculate on what Beckenbauer might have meant to Heidegger and what such admiration might reveal about Heidegger and his later thought. Did Heidegger simply replace his obsession with the hands of Hitler with the feet of Beckenbauer? Did the elderly Heidegger find in *Der Kaiser und Die Nationalmannschaft* a less controversial but nonetheless guilty pleasure, an outlet for nationalist sympathies? Or is there something about the Beautiful Game that resonates with a more nuanced Heideggerean experience of the modern? Further, I'd like to challenge aesthetic conceptions that privilege impartiality as the position that best suits the philosopher (e.g. Mumford). In finding philosophy in Heidegger's engagement with sport, an agonistic opportunity is taken as an aesthetic experience; by identifying oneself with another and anonymous others, choosing sides, struggling with and against common rivals, the opponent offers opposition, therefore sport – as contestation – is seen as fertile ground for philosophical reflection, enhancing life quality. The philosopher isn't suspending philosophical thought when indulging in sporting activity (as athlete or audience) but one's sporting activity instead indulges and perhaps informs philosophical consideration with both ethical and aesthetic dimensions.

# **Sport, social development, education and human rights: a critical philosophical perspective**

Prof.Dr. Emanuele Isidori <sup>a</sup>

<sup>a</sup> *University of Rome, Italy*

## **Abstract**

According to the Olympic Charter and many declarations and documents of the United Nations and the European Union, sport is a human right. Everybody has the right to health, social inclusion and leisure: this is the reason why the above mentioned international organizations look at sport, which always implies both a healthy practice and ludic activity, as a key means to promote the fundamental rights of people as human beings and citizens. As a human right, sport should be promoted and developed in such a way that the most number of people can practice it in everyday life in the best possible way. The IOC, the United Nations and the European Commission always emphasize that sport is connected with the level of development of a society or a country. As sport is both culture and education, and a practice that is affected by them, people's involvement in sport is the indicator of the level of social inclusion and well-being achieved in a given community. To be clear, sport is a human practice belonging to the fourth generation of human rights. Starting from this introductory conceptual background, and from this point of view focused on the concept of sport as a fourth generation human right, our study aims to reflect, from a philosophical point of view and in a critical perspective, on the relationship between sport and development, wondering what is the true meaning of "development" in a global and capitalistic society. The main goal of our philosophical reflection is to dismantle some ambiguous discourses and statements on sport as a human right and indicator of social development made by the above mentioned international organizations. We are convinced, in fact, that the discourse on sport as a human right is often just a simple and ambiguous statement that hides instead the presence of a discourse that implies both discrimination and exclusion rather than social inclusion. To conclude, we want to demonstrate that the philosophy of sport, as a critical approach to sport and its main issues, can help educators, teachers and all the people involved in the organizations that promote this practice, think critically and avoid the presence of the so called "hidden curriculum" in the discourse which conceives sport as a human right and key factor for social development. This reflection will be useful to rethink, from a social, real, and active perspective instead of from a merely rhetorical one, contemporary human rights education, in which sport always plays a fundamental role.

***Keywords:*** *Philosophy, Sport, Society, Human rights, Development*



# Sports as Promoters of Human Dignity

Dr. Francisco Javier López Frias <sup>a</sup>

<sup>a</sup> *Albacete, Spain*

## **Abstract**

Many international associations see sport as a means of achieving non-sporting outcomes. For instance, the European Union says in *The European Sport Charter* that one of the main goals of sports is

“to protect and develop the moral and ethical bases of sport and the human dignity and safety of those involved in sport, by safeguarding sport, sportsmen and women from exploitation for political, commercial and financial gain and from practices that are abusive or debasing including the abuse of drugs and the sexual harassment and abuse, particularly of children, young people and women.” (Article 1, ii)

Philosophers and educators have bought the interpretation of sport as a dignity-promoting activity. However, it is my belief that they have done it without proper examination. I am not arguing here that sports cannot enhance peoples' dignity. What I am claiming is that this thesis needs further examination. In order to do so, this paper will attempt to clarify the two main concepts at stake here: “dignity” and “sport”. The term “dignity” is currently understood in light of the capabilities approach sketched by Amartya Sen and Martha Nussbaum. For instance, this theory is at roots of the United Nations Development Programme (UNDP), whose main task is to measure countries' level of development. There are many other interpretations of dignity, but I will analyze it by using the capabilities approach because this theory's concept of dignity has proven to be both useful and fruitful. In fact, this success is the reason why we normally use the term “*human development*” when we refer to a model of development of human societies which goes beyond mere economic growth. As far as the concept “sport” is concerned, it is more difficult to choose a theoretical framework to approach it. As sport is a highly context-dependent concept, it is tricky and ambiguous; it receives a different definition depending on the goal of our analysis. Some basic features should be kept in order to avoid relativistic implications. Rather, the scope varies. For example, as I will show in this paper, philosophers of play differentiate between game, play, and sport by focusing on the ontological aspects of them, namely, rules, skills, and goals. However, sport ethicists pay less attention to these features, and more to sport's axiological components. In this paper I will attempt to use both approaches, the ontological and the ethical, in order to analyze, first, whether or not sport could enhance people's dignity. And, second, what this dignity-promoting type of sport should be like. It might be the case that, as sport has to be modulated in order to promote dignity, we alter its nature in such a radical way that we cannot refer to it as “sport” anymore.

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**SPORTS FOR ALL TAFISA SESSIONS**

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# Global Challenges in Sport for All

Wolfgang Baumann

*TAFISA Secretary General*

On the threshold of the 21<sup>st</sup> century we look back on the last hundred years, in which sport grew into one of the most conspicuous cultural phenomena. From a minority pastime, it developed into a significant segment of today's world. However, there are challenges ahead of us that harden the efforts and at the same time improve the chances of Sport for All and physical activity (SAPA).

In consequence, TAFISA in its global approach has identified various challenges the world is facing presently. The approach is based on an extension of perspective strategy in order to fully exploit the potential of SAPA to meet major social, cultural, health, and economic contemporary challenges in society. In principle this implies to present SAPA

- not only as beneficial for the individual

**but also for society as such**

- not only as individual

**but also as social process**

- not only as final purpose

**but also as medium to change society**

**The world presently faces many global challenges, including:**

1. explosion of health costs
2. lack of understanding of those who are different
3. threat of terrorism and wars
4. lack of equal opportunities for men and women
5. growing age pyramid
6. role of globalization and thus disappearance of traditional cultures
7. lack of exercise on the part of young people
8. pollution of our environment and global warming
9. global economic crisis
10. increase of virtualization

SAPA, through its manifold benefits, and through practical recommendations on the implementation of the “Designed to Move” initiative on a national level, can pay contribution to better cope with each of these challenges.

It is postulated that the significance, recognition and visibility of SAPA on the international, national and local level will increase to the degree sport leaders succeed to present the benefits of SAPA, not only for the individual but for society as a whole. There is good reason to believe that due to its multiple social benefits, not only in the health field, SAPA can play a much stronger role in society. This does not imply that SAPA alone can solve the problems the world is facing globally. However, it can pay a contribution to make the world better and more active.

## Designed to Move – A Physical Activity Action Agenda

Bee Schilling

The world has stopped moving. Just a few generations ago, physical activity was an integral part of daily life. In the name of progress, we've now chipped away at it so thoroughly that physical inactivity actually seems normal.

In less than two generations, physical activity has dropped by 20% in the U.K. and 32% in the U.S. In China, the drop is 45% in less than one generation. Vehicles, machines and technology now do our moving for us. What we do in our leisure time doesn't come close to making up for what we've lost. The economic costs are unacceptable, the human costs are unforgivable.

No one can fix this alone. We must align strategies & combine resources. Urgent priority must be given to dramatically increase the world's commitment to physical activity. Designed To Move offers consensus on the path forward. It is a framework for action meant for 'changemakers' – people, companies, institutions and governments with the resources to turn this situation around.

Designed To Move centers around a single vision - future generations running, jumping and kicking to reach their greatest potential – and two asks:

- Ask 1 – Create early positive experiences for children.
- Ask 2 – Integrate physical activity into everyday life.

Today, the urgent priority is to break cycles of physical inactivity where they are already deeply entrenched, and prevent them in emerging economies where we still have time. While it's essential for everyone to be physically active, focusing on children before the age of 10 could change the trajectory for the next generation.

Designed to move is a physical activity action agenda, focusing on children before the age of 10. More than 70 experts from a wide range of disciplines contributed to the development of the fact base and this framework, and TAFISA has recently adopted Designed to Move as its physical activity platform.

# Future Perspectives of Sport for All in Turkey

Prof. Dr. Erdal ZORBA

*Board Member of TAFISA*

*Board Member and Vice President of FISpT*

*President of Balkan & Turkey Sport for All Federation*

*Full Professor in the Faculty of Physical Education and Sports, Gazi University, Ankara/TURKEY*

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## **Abstract**

Sporting activity, both elite and community-based, is very crucial to the vitality and productivity of every society. All ages, races and ethnic groups, all skill levels, each social strata and both sexes share the interest and the opportunity to benefit from active participation in sport, recreation and cultural activities. All sports for all agencies have common principles in their objectives. They aim to promote active participation in sport for all activities and the idea of volunteering in the administration, maintenance and support projects, programs and events that promote a unique network of sport enthusiasts and sports create for all participants. Sport for all knowledge has a great relationship with the Olympic idea and movement. Sport for All is a movement promoting the Olympic ideal that sport is a human right for all people regardless of race, social class and gender. The movement encourages sports activities that can be exercised by people of all ages, both sexes and different social and economic conditions. Sport for All helps to put the Olympic Movement's values into practice in terms of promoting health, education and well-being through sports activities practiced by all categories of the population without distinction.

In the light of this brief information, Turkish Sport for All Federation (TSFAF) is the main responsible foundation to carry out all processes for Turkish population since June, 1980. Under the umbrella of Turkish Sport for All Federation, this movement has recorded an important development during past 30 years, but most important turning point was the General Assembly of Federation which was held in 2009. From this year on, the federation changed its status and established very strong relations with international sport for all movements, including TAFISA in which the federation received full membership the same year. Just after a very short period, the federation was involved in a series of important international projects: hosted the 22<sup>nd</sup> World Congress of TAFISA in Antalya (2011); hosted the foundation assembly of Balkan Sport for All Association in 2010 in Istanbul, and two international Balkan SFA festi-

vals respectively in Edirne (2010) and in Bodrum (2011); carried out exchange programs with Korean SFA Council, Romanian, Tunisian and Bulgarian SFA Federations; hosted TAFISA CLC course in Izmir (2010), and two international scientific conferences on sport for all topic in Antalya (2009 & 2012); etc. As a result of this active international policy, Turkish SF AF had managed to receive board membership in the two global SFA organizations; TAFISA and FISpT.

For the following term, TSFAF is planning to establish more stronger and sustainable financial resources in order to support whole elite sport and SFA movements all over the country, and continue to be an active organization on international scale exchanging experience and information with all counterparts in this field.

Within this frame TSFAF has two main targets in order to turn out to be an effective and widely-known organization in both national and international frame which will be discussed in this presentation:

- Institutionalization: to complete its organizational identity within the rules of good governance policy
- Internationalization: to establish stronger relations with international counterparts
- Financial autonomy: to achieve real financial autonomy through serious sponsorship incomes and earnings from members, activities, products, etc.

# Designed to Move and School Based Development

Yasuo YAMAGUCHI, Ph.D.

*Board of Director, TAFSA, ASFAA, Professor, Kobe University*

In recent years, there has been a similar trend in developed countries, increasing urbanization and physical inactivity. Community ties have been weakened due to the urbanization of people's lifestyle and development of information technology. Furthermore, children in these days are likely to drop out of sport and physical activity at a young age. In addition, due to the lack of physical activity among children, obese children have increased drastically throughout the world. There is a strong need to provide near and fun opportunities of sport and physical activity for children in every country.

The purpose of this paper is to discuss the vision of Designed to Move in school based development focusing on community sport clubs in order to build a user-friendly sport and physical activity environment. Community sport clubs have been playing an important role in Sport for All and physical activity. There are two types of community sport clubs: one is a sport-specific club and another is multi-sport clubs. In the last two decades, the number of members in a sport-specific club has been decreasing in Japan and other countries. In Japan, a new type of multi-sport club has been promoting since 1995. The Comprehensive Community Sport Clubs provide a variety of sport including all generations from children to the elderly and a variety of sport orientation from recreational levels to competitive levels. CCSC is managed by members and is an independent voluntary association. The number of CCSC in Japan is approximately 3,200 in 2013, while the establishment of CCSC has made a strong impact on people's life and community development. Future tasks and strategies to build school based development are discussed toward increase of more active children in the world.

**Keywords:** *children, physical fitness, obesity, school, community sport club*





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**SPORT CULTURE AND OLYMPIC  
EDUCATION SESSIONS**

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# Evolution of a Pedagogy for Olympic Values Education

Prof.Dr. Deanna Binder <sup>a</sup>

<sup>a</sup> Royal Roads University Victoria, Canada

## **Abstract**

Although Olympic education programs world-wide are based on information and values associated with the Olympic Movement, they are grounded in national, historical, pedagogical, sport/physical education and Olympic traditions and purposes. Guided by the hermeneutic idea of philosopher Hans Georg Gadamer (1989) that application co-determines understanding, this presentation briefly explores the conversations between theory and application that evolved during the implementation of three Olympic-related curriculum projects. Each of these projects was informed by specific fields of then-current educational theory, and offered understandings and insights that were applied in the next project. These understandings guided the curriculum development of the Olympic Values Education Toolkit of the IOC titled *Teaching Values: an Olympic Education Toolkit* (2007). The presentation will help to identify insights and illuminate questions to be considered by people who want to develop initiatives – including Olympic values education initiatives– that teach values through sport and physical activity. The cooperation of the sport federations with the committee is important and only for the benefit of them to institutionalize, developed stronger financially and become more efficient. In 1 year time the effect of the work of the committee will be sensed and seen.

# The Heritage and Future of Olympic Education: Aims and Objectives

Prof.Dr. Roland Naul <sup>a</sup>

<sup>a</sup> Willibald Gephardt Institute in Essen, Germany

## **Abstract**

This presentation goes back to the roots of Olympic principles exposed by Pierre de Coubertin in his famous radio speech (1935) which have been partly incorporated into the Olympic Charta of the International Olympic Committee (IOC) up today. In a second part the five steps of promotion of Olympic education through the IOC since the foundation of the International Olympic Academy will be briefly highlighted which documents a heritage of at least 50 years. In a third step major concepts of Olympic education including their aims and objectives will be explained. Actually, critical assessment exists about aims and objectives of Olympic education which only refers to the history of Olympic Games. Therefore, some authors prefer the term of “Olympism education”. However, the future of Olympic education will embrace more than the heritage of Olympic principles as well as the history of Olympic Games. Finally, current strands of Olympic education with their aims and objectives will be presented focusing on a future concept of Olympic education with a multi-setting learning approach with a physical, social, moral, and cognitive domain.

# **Community Transformation through Sport and the Olympic Values: A Medellin, Colombia Case Study**

Prof.Dr. Clemencia Anaya <sup>a</sup>

<sup>a</sup> *Medellin, Colombia*

## **Abstract**

Medellin is a city transformed. This city in the heart of Colombia is alive with a vibrant, youthful population released from the grip of its troubled past. It is a place where its citizens greet you with genuine warmth and enthusiasm. It is a success story thanks to the city's leaders, who over the past decade, with the support of its citizens, took deliberate decisions to invest in Medellin's youth, and have transformed Medellin through powerful, inclusive programs built around the pillars of education, culture and sports: programs aimed squarely at improving society, beginning with its youngest generation. This investment is now producing a generation of engaged and responsible citizens with a new quality of life. Medellin is a community in which sport has played a key role in the city's transformation. A commitment by government to invest in new sport programmes and infrastructure has brought citizens out to play and exercise in new and safe public spaces, allowing them to focus on a healthier lifestyle through physical activity and Olympic values. Every day, thousands of Medellin's citizens participate in sport across the city in dozens of modern facilities free of charge for the public. This city is a living example of the Olympic spirit; a city that truly lives sport. The city's dynamic cultural, sport and education philosophy is driving a tremendous social change that represents a real testimony of the power of sport as a tool for society transformation.

# The Educational Value of Olympism

Prof.Dr. Kostas Georgiadis <sup>a</sup>

<sup>a</sup> *University of Peloponnese, Greece*

## **Abstract**

“Olympism” is a concept connected with the revival of the modern Olympic Movement. Its structuring elements are composed through the Evolution of the Olympic Games and the reflection on their course and humanitarian mission. The aim of the presentation is to approach the spiritual origins of Olympism and to elevate the composing elements of its universality, which form the basis of the humanistic education of the Olympic Education programmes. Olympism as a philosophy of life is not an “idealistic theory” of the approach of Sports; it is a “mental energy” of the body and mind, (Nissiotis 1984, p. 49) based upon common spiritual origins, common rules and traditions. This idea expresses the deepest concept of sport activity since it is governed by principles of universal validity and as a “practice” refers to the cultivation and evolution of human personality. The Olympic Education is the field of scientific research and implementation of pedagogical theoretical pursuits of Olympism. Pedagogy was the core in Coubertin’s thought for the revival of the Olympic Games. The concept of Olympic Education was gradually implemented on education on a world scale. For this reason the goal of the research is to define clearly, to demarcate and to show the main axes of concept in the educational process. The Olympic Education as expression of the essence of Olympism is based on the fundamental principles of peace, democracy, justice, entertainment and good example for the cultivation of the persons’ virtues as an eternal situation and way of life towards “kalokagathia”, the effort to achieve uplift and excellence.



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# **SPORT MANAGEMENT SESSIONS**

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# Current Trends in Sports Management

Prof.Dr. Gazanfer Doğu<sup>a</sup>

<sup>a</sup> *Abant İzzet Bayral University, School of P.E. & Sport, Department of Sport Administration, Bolu, Turkey*

## **Abstract**

The Sport Administration of Turkey's history starts in 1921 where 16 Soccer Clubs get together in a League. This League developed and found TICI(Federation of Clubs)at the beginning of Turkish Republic. In 1935, this administrative structure is changed into a mixed system (civil and government) called "Turkish Sport Institution". In 1938 a governmental organization named" General Directorate of Physical Education" was established and Turkish sport administration became a governmental institution. This governmental institution at the beginning was under the Prime Ministership and through the years up to day once it was made part of Ministry of Education, once became part of newly ministry called "Ministry of Education and Youth and Sport". During 1970-1983 Turkish sport was administered as "Ministry of Youth and Sport" and starting 2011 again it is administered same way. Because of this governmental structure, Turkish Sport Federations were administered by governmentally assigned presidents until 1991. With a change in article 19 of the Law of the general Directorate of Sport (14/3/1991 – 3703/13) Federation Presidents were started to be elected. Following this change Turkish Football Federation became independent by its' own law at 1992 and all other sport federations became a self – governing structure but under the jurisdiction General Directorship of Sport at 2004 by making change in article 9 of the Law of the general Directorate of Sport ( 4/3/2004-5105/2). At the latest structure, of the Turkish sport administration it is intended to administer through independent sport federation which will continue to receive government funds. But, to help them to have institutionalized structure and financial discipline " Committee of Sportive Evaluation and Development " by the Law of the general Directorate of Sport. This Committee is made out of 7 people who are known with their works and / researches in sport administration and education. Committee established sportive, financial and administrative criterias. This criterias listed under 27 items and all sport federations were asked to develop plans and programs accordingly. Committees will continuously control federations if they administer according their undertaken plans and programs, if there are problem(s) to realize the plans and programs and how to resolve them. Committee will present Report in 6 months periods regularly for each sport federation according to the findings obtained from controls to the Minister of Youth and Sports. The cooperation of the sport federations with the committee is important and only for the benefit of them to institutionalize, developed stronger financially and become more efficient. In 1 year time the effect of the work of the committee will be sensed and seen.

# **Management of Summer Sport Camps for Fitness and Skill Development**

Prof.Dr. F. Paul Blair <sup>a</sup>

<sup>a</sup> *The Academy of Sport and Leisure Studies The University of Trinidad and Tobago*

## **Abstract**

Sport activities have been identified and studied in many cultural, national, and international contexts. Sport ranges from professional sport to Olympic and international sport, to sport clubs and school sport, to recreational and noncompetitive sport. Sport encompasses elite sport, sport for persons with disabilities, sport for senior citizens, and a variety of Sport for All sports and recreational activities. Surrounding most sport activity is, to some extent or another, an array of supporting and entrepreneurial industries including facilities, equipment production and sales, sport clothing and shoes, sport drinks and energy bars, and event concessionaires. In many situations, it is readily apparent that sport and business have a symbiotic relationship. Sports can provide many opportunities for youth. Each year, 30 to 40 million youth in the United States play sports. These sport activities range from organized sport teams to backyard pick-up games (Beedy, 2007). The recent surge in sport participation has yielded research into aspects of character development through sport participation. Oftentimes people have disregarded the fact that sports can be a valuable teaching tool to youth. Society today has seen children engage in high risk activities such as drugs and violence (Beedy, 2007). Sports provide exercise, recreation, and the development of movement skills. Additionally, it can provide an opportunity for youth to learn about leadership, communication, and cooperation. Sport camps can promote exercise and fitness, recreation, and the development of sport skills.

# **We as a Global Community are Being Severely Challenged to Stay in the Game.**

Prof.Dr. March L. Krotee <sup>a</sup>

<sup>a</sup> *Departments of Health & Exercise Studies and Leadership, North Carolina State University, Raleigh, NC USA*

## **Abstract**

Keeping in mind the theme for the 56th ICHPER-SD World Congress of “Total Fitness and Wellness: HPERSD as an Integral Part of the Improvement of Individuals “, it is apparent that we as a global community are being severely challenged to stay in the game. Indeed the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) have recently named overweight, obesity and physical inactivity a world-wide epidemic and chronic disease joining malnutrition and infectious disease forming a triad of human deprivation. The signs are clear and should be disturbing to our profession who prides itself as being on top of its game. Childhood obesity has doubled and tripled in the last three decades in children (ages 6-11) and in adolescents (ages 12-19) respectively. In 2010 more than one third of U.S. children and adolescents were found to be overweight or obese. (Ogden et al, Journal of the American Medical Association, 2012.) This reflects increases of 11 and 13 percent from 1980 to 2010 for these target populations. ( USDHHS ,2012). Research indicates that children and adolescents who are obese and overweight and physically inactive are likely to carry over this burden into adulthood which affects us all. (Guo,S.S. and Chumlea, W.C., American Journal of Clinical Nutrition, 1996.) This affected population in large measure is a result of caloric imbalance – too few calories expended for the amount of calories consumed – although certainly mitigated by genetic, behavioral and environmental factors. (Office of the Surgeon General, USDHHS ,2010). The immediate effects for these children are chilling. A more likely risk for cardiovascular disease, high cholesterol and high blood pressure, not to mention, pre-diabetes, sleep apnea and a myriad of psychosocial problems including poor self-esteem. Long-term prognosis is even worse. As adults a higher risk for heart disease, type 2 diabetes, stroke, various types of cancer (breast, colon, kidney and prostate among others) and osteoarthritis will certainly add to the health care bill of any nation. For the United States that figure is \$290 billion USD. What can we do? This presentation will explore the pathway to a Healthy Children – Strong Community – and Great Nation Model in order to build a team of effective partnerships to attack this epidemic human health problem that all nations appear to be struggling with. It is no secret that healthy lifestyle habits including good nutrition, appropriate physical activity, and a safe and nurturing environment are the requisite in creating the pathway for a healthy populace. This presentation explores and discusses the various processes and team building strategies necessary to enable the building of healthy children, strong communities, and, ultimately, a strong nation.

# Current Sport Management Trends and the Role of Academic Programs

Prof.Dr. Robert C. Schneider <sup>a</sup>

<sup>a</sup> *The College at Brockport, State University of New York*

## **Abstract**

As higher education academic sport management programs continue to expand throughout the world, it is essential that graduates of academic preparation programs are prepared to enter the workforce. To that end it is necessary that academic program directors are aware of current trends in sport management and open minded to modifying their programs based on those trends, while also being mindful of sport management's history and present state. The glamour associated with working in the sport industry is an attractive feature to prospective students; however, it is important that the realities of the sport industry, including current trends, are explained to students (Mathner & Martin, 2012). This presentation will discuss the following academic program and industry trends in sport management and their potential effect on sport management academic programs: continued growth of undergraduate programs as a means for universities to generate revenue, expansion of the job market and the supply of graduates meeting its demand, growth of professional organizations, external accreditation, e.g., Commission on Sport Management Accreditation (COSMA), sport management curriculum and its alignment with the broad job market including a multi-disciplinary and multi-program or degree approach, meeting the needs of globalization through a study abroad component, program uniqueness, best teaching practices and class size featuring student engagement through critical thinking, and reinforcing morality in sporting organizations. From a broad global perspective, Doherty (2012) recommends a multi-disciplinary approach to sport management research when addressing an increasing student interest in complex global problems. Similarly, faculty members and students are embracing more of a mixed method approach to research (Nite & Singer, 2013). A sample academic sport management program at a four year university in the United States will serve as an example of a program attentive to the current trends in sport management.

# Current Challenges of the International Sport

Prof. Dr. Müslim Bakır

*<sup>a</sup> Okan University, School of Applied Sciences, Department Of Sport Management, Istanbul, Turkey*

## **Abstract**

Sport plays a very big role in today's society. A lot of people are actively taking part in sports as spectators, participants, or both. However, over several decades, especially depending on increasingly commercialization of sport, serious questions about the governance of sport have occupied the public with irregular intervals. According to Nygaard (Nygaard, 2011) cheating has always been going on in sport, but because of the ever growing role of the sport economically and politically, the problem is getting bigger. As a natural consequence of this development, the range of scandals has grown intensely and rapidly. In this situation, the credibility and integrity of sport and sport organizations are under the threat. The threats or source of threats are;

- Corruption in governance
- Doping
- Match-fixing
- Illegal betting
- Discrimination

Sport and recreation services have public and merit goods characteristics. In other words, the sports and recreation movement are part of the society and all related actors have to adhere to the rules of the society. After all, if the sports movement wants to keep its healthy sustainability for society, Sport and sport organizations need to protect their integrity, credibility, and reputations.

# **ORAL PRESENTATION**



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**PHYSICAL EDUCATION AND  
SPORT EDUCATION  
ORAL PRESENTATION**

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## **Psychological Variables as Predictors of Participation In Intramural Sports among Students with Special Needs of Colleges of Education in Southwestern Nigeria**

E. O. Morakinyo <sup>a</sup>, M. A. Rasheed <sup>a</sup>

<sup>a</sup> *University Of Ibadan, Nigeria*

### **Abstract**

Globally, students of various statuses participate in Intramural Sports (IMS) because of physical, social, mental and psychological benefits. Despite these benefits, Students with Special Needs (SWSN) have not been participating in IMS of colleges of education in Southwestern Nigeria. This study, therefore, investigated psychological (interest, career choice, fear of injury and fear of academic failure) variables as predictors of participation in IMS among SWSN within colleges of education in Southwestern Nigeria. Descriptive survey research design was used in this study, while multistage sampling technique was adopted to select 532 respondents: SWSN (n= 378) and staff (n=154) from purposively selected federal (two) and state (five) colleges of education in Southwestern Nigeria. Two instruments were used: Psychological Variable Scale( $r=0.84$ ) and Participation in Intramural Sports Scale( $r= 0.86$ ). Two hypotheses were tested at the 0.05 level of significance. The predictor variables jointly accounted for 20.5% of the variance. The null hypotheses tested were rejected which implied that psychological variables of interest, fear of injury and fear of academic failure were both relatively and compositely significant to predict SWSN participation in intramural sports of colleges of education in Southwestern Nigeria. Therefore, it was recommended that directors of sports and coaches in the colleges should sensitize the SWSN on the need not to entertain fear of sustaining injury and to embark on massive promotion of intramural sports among SWSN, by ensuring that priority is given to areas of interest of these students according to their ability and needs.

No. 035

## **Olympic Education in ICHPER.SD for People and Peace in the World**

Noriaki Osada

### **Abstract**

ICHPER.SD is free from all educational bureaucracies in the world. I myself Noriaki Osada, a U.S. book author for physical education, have been fighting against educational bureaucracies in Japan and the US and have been creating a universal principle my whole life. I decided to introduce the principle to ICHPER.SD at the world congress in Kagoshima, Japan in 2008. ICHPER.SD, as a global organization, should work and serve independently for building up humanity at all levels of education. It should help to work toward world peace and the betterment of all people, but not the fighting that occurs from educational bureaucracies in all nations. I will appeal for all to work with me and you join as a member of Olympic Education in ICHPER.SD. The purpose of Olympic Education is to communicate with all of PERSD scholars and build up different PERSD nations for peace, but is not to dominate other people, groups, or nations in the world. Olympic Education has national & international implications for all PERSD scholars in the world.

## Sporty Attitude Scale: Development, Validity and Reliability

Halil Evren Şentürk<sup>a</sup>

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### Abstract

This study described the process of developing, reliabiliting and validating a scale assessing sporty attitudes of people who give importance to sport, be interested in sport, work out, play sports, do physical exercises, go to the gym or not at all. For this purpose 25 of 53 items were carefully selected from predeveloped item pool. The scale was conducted to 594 high school students who 14-17 years old among three high schools and two grades (9th and 10th) which was carefully selected in Mugla city of Türkiye. Results of explanatory factor analysis provided three main factors. The sub dimensions of the Scale ( $\alpha=0.972$ ) are; “giving importance to sport” ( $\alpha=0.982$ ), “be interested in sport” ( $\alpha=0.983$ ), and “doing physical exercises or sport”( $\alpha=0.954$ ). Additionally correlation coefficients calculated among factors proposed medium level in general. As a result, “Sporty Attitude Scale” that titled by author, aim to determine that much of interest about sport of people consequently society and this scale is available to use interdisciplinary studies between sport sciences and others.

**Keywords:** Sport, Attitude, Scale, Validity, Reliability

### GİRİŞ

Olimpiyat hayalimizin hüsrana ile sonlandığı şu günlerde toplumun her kesiminde olmakla beraber özellikle de sporun profesyoneli olan spor bilimlerine gönül vermiş akademisyenlerde yarattığı hayal kırıklığı ortadadır. Türk sporcularının kürsüye, Türk spor ruhunun da dünya vitrinine çıkmasına öncülük edebilecek dünyanın en büyük organizasyonuna bu kadar yaklaşmışken elde edememek düşündürücüdür. Her ne kadar bağımsız dursalar da dünya politikalarının etkisinde oylarını kullandıkları açık olan IOC (Uluslararası Olimpiyat Komitesi) üyelerinin de bildiği bazı gerçekler elbette vardır. O gerçeklerdir ki; şehirlerin ve dolayısıyla toplumların olimpiyat oyunlarına ev sahipliği yapabilecek kadar spor kültürü ile yoğurulmuş olmaları kaçınılmaz bir gerekliliktir.

Yaz olimpiyatlarının belirli bir takım değerlere dayalı olarak gündeme getirildiğini belirtmek gerekir. Bu etkinliklerin fikir babası Baron de Coubertin'e göre, olimpiyatlar “evrensel bir bakış/anlayış, kardeşlik ve barış” (Crowther, 2004) gibi üç önemli değerlerin yaygınlaşmasına

aracılık edecektir. Bu değerler seti, olimpiyat oyunlarını, diğer büyük spor olaylarından ayırt eder (Şahin, 2010).

Bu türden organize spor olayları, Coubertin'e göre, hem fiziksel hem de kültürel bir yenilenme anlamına gelecektir. Oyunlar, bir taraftan fiziksel gelişmemizi teşvik edecek; diğer taraftan, demokrasi ve sosyal eşitlik çağında, farklı ulusları ve sosyal sınıfları bir araya getirecektir. Coubertin, olimpiyat oyunlarının her sene kendi ülkesinde yapılması için lobi faaliyeti yürüten Yunanlılara karşı çıkmış, olimpiyat oyunları her dört yılda bir, farklı kentlerde yapılmasını demiştir. Coubertin'e göre olimpiyatların bu şekilde organize edilmesi bu oyunları özgürlük, eşitlik ve ilerlemeden ibaret olimpiyat ruhunun bütün dünyada yaygınlaşmasının bir aracı haline getirecektir (Essex ve Chalkley, 1998: 189). Coubertin, "olimpiyat kenti"nde, atletle riyle, edebiyatıyla, sanatıyla birlikte uyumlu bir kent idealini görmektedir (Liao ve Pitts, 2006: 1236).

Orta Asya'dan beri gerek at üstünde, gerek minderde, gerekse de bozkırlarda sürekli bir hareketliliğin içinde yer almış bir toplumun nasıl çelikleşmiş bir spor kültürüne sahip olamadığı tartışılmalıdır. Milli Eğitim'in esaslarından olan sağlıklı nesiller yetiştirebilme ideali noktasında yeterli oranda elit sporcu yetiştirilememesi de ayrıca sorgulanmalıdır.

Milli Eğitimin amaçlarını gerçekleştirmek için kişiyi en üst düzeyde yetiştirmek, milletimize ve insanlığa yararlı, iyi ve verimli yurttaşlar haline getirmenin öğretmenlerin milli görevi olduğu bilinen bir gerçektir (Yalçın, 1995).

Spor bireyin sağlık durumunu, fiziksel kabiliyet ve performansını geliştiren hareketler bütünü olarak tanımlanmaktadır (Akgün, 1992). Yapılan bilimsel çalışmalarda, orta yoğunlukta sportif aktivitelerinin düzenli olarak yapılmasının fizyolojik, psikolojik ve toplumsal kapasitesini artırdığı gösterilmiştir (Erkan, 1992).

Bu bağlamda, sporcu bir toplum yaratmak adına yapılmış bütün çalışmaların temeline inerek, bireyin spor yapmaya ne denli yatkın olduğu, spora bakış açısı, spor alışkanlıkları, spor ile karakterini nasıl eğitebildiği gibi temel konuların, özetle sportif tutumunun derinlemesine sorgulanması gerekmektedir.

Toplum sporunun gelişebilmesi, olimpik ruhun kazandırılması adına öncelikli olarak problemin asıl kaynağı olan bireyin spor alışkanlığının araştırılması gerekmektedir. Bu amaçla hazırlanan ve "Sportif Tutum Ölçeği" (STÖ) olarak isimlendirilen ölçeğin sadece beden eğitimi ve spor öğretimi alanında değil, ilgili bilimlerin spor alışkanlıkları ile ilişkilendirilebilen tüm alanlarında kullanılabilecek geçerli ve güvenilir bir araç olup olmadığı tartışılacaktır.

## **YÖNTEM**

Araştırmacı tarafından ilgili literatür tarandıktan sonra öğrencilerin spor alışkanlıklarına ilişkin olarak sportif tutumlarını ölçecek Likert tipi (5 seçenekli) bir anket ölçeği geliştirilmiştir. Ölçeğin geliştirilmesinde izlenen süreçler aşağıda bölümler halinde sunulmuştur.

## Maddelerin Hazırlanması

Bu ölçekte kullanılacak maddelerin hazırlanmasında birkaç farklı yol kullanılmıştır. Maddelerin hazırlanması için okul takımlarında spor yapan 95 ortaöğretim (9. ve 10. Sınıf) öğrencisiyle yapılandırılmamış 5 dakikalık toplu bir görüşme yapılmış, bu öğrencilerden spora bakış açıları ve sporla olan bağlarını anlatabilecekleri kompozisyonlar yazmaları istenmiştir. Bu kompozisyonlarda, öğrencilere bir tane soru sorularak verdikleri cevaplar ile spor kavramına ilişkin bakış açıları ve kendilerine özgü spor alışkanlıkları anlaşılmaya çalışılmıştır. Soru “Yaşantınız boyunca bir çok kere fiziksel aktivite, egzersiz veya spor yaptınız. Bunlardan bazılarını aktif olarak katılıp keyif alırken bazılarında ise gönülsüz bir şekilde sadece katılımcı olmuştunuzdur. Katılmadığınız fiziksel aktivite, egzersiz veya spor etkinliklerinde ise sadece seyirci olmuş, o faaliyet hakkında bir görüş edinmişsinizdir. Bu tür katılım ve seyir durumlarında spora bakışınızı değiştiren duygularınız neler olduğunu örneklerle açıklayınız?” ifadesiyle verilmiş ve uygulamalar esnasında araştırmacı sınıfta bulunup, gerektiğinde konuyla ilgili örnekler vererek fakat yönlendirmede bulunmadan daha ayrıntılı açıklamalar yapmıştır.

Bu öğrencilerin görüşleri ayrıntılı olarak incelenmiş, bazı ifadeler değiştirilerek madde haline getirilmiştir. Hazırlanan maddeler sadece doğrudan ifadelerin düzeltilmesiyle sınırlı kalmamış, öğrencilerin sunduklarının bütünlüğü araştırmacıya yeni madde yazabilme fırsatı da doğurmuştur. Madde hazırlamada yukarıda kullanılan yollara ek olarak araştırmacı, beden eğitimi ve spor kavramlarından edindiği bilgileri maddeler haline getirme ve benzer ölçeklerdeki maddeleri inceleme yolunu da kullanmıştır. Deneme maddelerinin sayısının olabildiğince fazla olmasına dikkat edilmiştir. Bu şekilde 53 maddeye ulaşılmıştır.

Bu ölçek araştırmacı dışında, beden eğitimi ve spor öğretimi, ölçme - değerlendirme ve Türk dili alanlarında uzman kişilere 53 maddelik ham hali ile sunulmuş, araştırmacının ulaşmak istediği amaca dönük olarak 32 maddeye indirilmiştir. Bu 32 maddelik form ile 612 ortaöğretim öğrencisine uygulanmak üzere bir ölçek hazırlanmıştır.

## Çalışma grubu

Anket formu olarak hazırlanan bu 32 maddelik ölçek, genel bir lisede okuyan 612 ortaöğretim öğrencisine uygulanmış ve bu gruba çalışma grubu adı verilmiştir. Çalışma grubunu oluşturan sayının belirlenmesi konusunda, Tabachnick ve Fidell’in (1996) faktör analizi için verdiği kriterler dikkate alınmıştır. Yazarlara göre faktör analizi için 300 kişi “iyi”, 500 kişi “çok iyi” ve 1000 kişi “mükemmel” olarak değerlendirilmektedir. Çalışma grubundaki 612 öğrenciden elde edilen verilerin 18 tanesi eksik veya sistematik işaretleme yapıldığı için iptal edilmiştir. Sağlıklı veriler elde edilen 594 öğrencinin 324’ü (%54,7) erkek, 270’i (%45,3) kız ve 327’si (%55,1) 9.sınıfta, 267’si (%44,9) de 10.sınıfta öğrenim görmektedir.

**Tablo 1.** Çalışma grubunu oluşturan öğrencileri sayıları

	9. sınıf	10. sınıf	Toplam
Kız	156	114	270 (45,3)
Erkek	171	153	324 (54,7)
Toplam	327 (55,1)	267 (44,9)	594 (100,0)

## **Verilerin Analizi**

Yukarıda özellikleri verilen veriler üzerinde yapılan analizler, asıl ölçek maddelerini ve bu maddelerin özelliklerini belirlemek amacıyla yapılmıştır. Önce bu 32 maddeden, madde toplam korelasyonuna dayanarak madde seçilmiş, toplam puanla .30'un altında ilişki gösteren 4 madde faktör analizine alınmamıştır. Sonrasında kalan 28 madde arasındaki olası en uygun yapıyı ortaya çıkarmak amacıyla, faktör analizi yapılmıştır. Faktör analizinin ortaya koyduğu yapı içinde yer alan maddelerin madde analizleri yapılmıştır.

## **Faktör Analizi**

Bu çalışmada amaç, bireyin spor alışkanlıklarının altında yatan sportif tutumları ile ilgili olduğu düşünülen çok sayıda maddenin içinden, anlamlı bir bütün oluşturacak maddeleri bulmaktır. Araştırmacının amacı, çok boyutlu bir ölçme aracı geliştirmek olmadığından, madde yazılımında belli bir yapıya uygun maddeler değil, olası bütün maddeler değerlendirilmiştir.

Ortaya çıkacak olan yapının farklı eksenlerde ölçüm yapması yerine, aynı yapıyı oluşturan temel bileşenler olması planlanmıştır. Diğer taraftan, burada maddelerin önceden belirlenmiş bir yapıya uygunluğunun sorgulanması değil, ampirik olarak varolanın ortaya çıkarılması gözetildiğinden, Temel Bileşenler Analizi daha uygun görülmüştür (Tabachnick ve Fidell, 1996). Gerek adı geçen kaynak, gerekse bu alandaki diğer kaynaklar (Tatlıdil, 1992) hem Temel Bileşenler Analizini hem Temel Eksenler Analizini faktör analizi adı altında incelemeyi yeğlemiş, sadece farklılaşma durumunda özgün adı ile atıfta bulunmuşlardır. Çünkü bu iki teknik arasında, matematiksel olarak hangi tür varyansın kullanılacağından başka bir fark bulunmamaktadır. Denek sayısının artması durumunda, bu farklılığın sonuçlara yansımaları minimal düzeye inmektedir (Hovardaoğlu, 2000).

Öğrencilerin sportif tutumlarına ilişkin anlamlı bir yapıya ulaşabilmek, ölçek maddelerinin ölçtüğü ve faktör ya da bileşen adı verilen yapı ya da yapıları ortaya çıkarmak amacıyla faktör analizi uygulanmıştır.

28 madde faktör analizine sokulmuş ve hiçbir faktörde yer almayan ya da birden çok faktörde birbirinden ayırt edilemeyecek kadar yakın yükler alan maddeler analizden çıkarılarak analiz tekrarlanmıştır. Kalan 25 madde 3 faktör altında toplanmış ve herhangi bir madde dışarıda kalmamıştır. Faktörlere ilişkin bilgiler Tablo 2'de bildirilmiştir.

Bulgular üzerinden incelendiğinde, 1. faktörün ölçtüğümüz olguyu % 52,6; 2. faktörün % 22,7; 3. faktörün % 13,3 oranında ölçtüğü görülmektedir. Ayrıca 3 Faktör ve 25 sorudan oluşan bu anket öğrencilerin sportif tutumlarını % 60,6 oranında ölçmektedir. Maddeler içerik bakımından incelendiğinde ise birinci faktörün “spora ilgi duyma”, ikinci faktörün “sporla yaşama” ve üçüncü faktörün ise “aktif spor yapma” şeklinde gruplandırılabilceği belirlenmiştir. Faktörler içinde yer alan maddelere örnek verilecek olursa, “Sporu hayattan zevk alma amacı olarak görürüm” maddesi birinci faktör grubunda, “Spor yapmadığım günler kendimi ruhen eksik hissedirim” maddesi ikinci faktör grubunda, “Branşımın en iyi sporcularını kendime rol model alırım” maddesi ise üçüncü faktör grubunda yer almaktadır.

Faktörlerin açıkladığı varyanslar ve faktörler altında yer alan maddelerin içerikleri incelendiğinde ölçeğin hem faktörlü hem de tek boyutlu olarak kullanılabilceğini görülmektedir. Bu açıdan madde analizleri hem faktör hem de toplam üzerinden yapılmıştır.

**Tablo 2.** Sportif tutum ölçeği faktör analizi bilgileri

Madde no	Faktör 1	Faktör 2	Faktör 3	%	Grup adı
7	.70				
8	.70				
9	.69				
12	.64				
13	.58				
14	.58				
18	.54			52,6	Spora ilgi duyma
23	.51				
24	.49				
25	.48				
26	.53				
28	.70				
1		.69			
3		.67			
5		.66			
6		.63		22,7	Sporla yaşama
17		.57			
22		.51			
27		.62			
2			.66		
10			.63		
11			.58		
16			.54	13,3	Aktif spor yapma
20			.47		
21.			.45		

**KMO** = 0,958

**Barlett Testi** = 8712,629; p<0,001

% = 60,6

Sportif Tutum Ölçeği (STÖ) 25 maddeden oluşup, her bir madde yanıtlayıcıya kendisine uygun olup olmadığı bakımından beşli dereceleme şansı sunmaktadır. Ölçekte 17 madde olumlu puanlanırken, 8 maddenin puanlamasında tersine çevirme gerekmektedir. Ölçekten alınabilecek minimum puan 25 ve maksimum puan 125'tir. Puanın yüksekliği, sportif tutumun yüksekliğine işaret eder.

### Madde Analizleri

Ölçeğin güvenilirlik analizi de bu 3 faktör üzerinden tek tek yapılmıştır. 1. faktörün analizinde alfa: ,982, 2. faktörün analizinde alfa: ,983, 3. faktörün analizinde alfa: ,954 ve tüm faktörler için alfa: ,972 değerleri bulunmuş, bu sonuçlara göre çıkartıldığında anket ölçeğinin faktörlerinin güvenilirliğini artıracak bir madde bulunamamıştır. % 90,6 oranında açılan bu

bilgi arařtırmacı iin yeterli olduėu iin ankete yeni sorular ve faktörler ekleyerek alıřmayı tekrarlamaya gerek kalmamıřtır. Buna göre, maddeler baėlı oldukları faktörlere ait olacak řekilde gruplandırılmıřtır ve 3 alt boyut oluřturulmuřtur.

**Tablo 3.** Faktörler ve Toplamda düzeltilmiř madde toplam korelasyonları ve güvenirlilik (cronbach alfa) deėerleri

Madde no	Faktör 1	Faktör 2	Faktör 3	Toplam
7	.58			.65
8	.61			.64
9	.59			.68
12	.66			.63
13	.58			.62
14	.53			.67
18	.54			.67
23	.49			.63
24	.52			.64
25	.62			.60
26	.60			.59
28	.63			.67
1		.58		.59
3		.61		.63
5		.56		.65
6		.53		.59
17		.55		.61
22		.56		.58
27		.48		.63
2			.57	.61
10			.45	.57
11			.52	.59
16			.58	.56
20			.56	.61
21.			.57	.58
Cronbach Alfa	.982	.983	.954	.972

Tablo 3'te görülebileceėi üzere, her bir madde iinde bulunduėu faktör toplamıyla anlamlı korelasyonlar gösterirken, aynı zamanda toplam puanla da anlamlı ve çoėu madde de daha yüksek korelasyon göstermektedir. Beraberinde toplam iin hesaplanan alfa deėeri, her faktör iin hesaplanan alfa deėerinden de büyük bulunmuřtur. Bu sonuçlar öleėin hem tek faktörlü, hem de ok faktörlü olarak kullanılabileceėini göstermektedir.

Öleėi oluřturan 25 maddenin her birinin madde ayırt edicilik özelliklerini ortaya koyabilmek amacıyla, alıřma grubunu oluřturan 594 öėrenci ölekten aldıkları toplam puan bakımından büyükten küüėe doėru sıralanmıř, alıřma grubundaki alt ve üst %29 iinde bulunan katılımcıların toplam puan ortalamaları t testi ile her bir madde iin karşılaştırılmıřtır. t-testi sonuçlarına göre bütün maddelerin  $p < .001$  düzeyinde anlamlı olduėu görülmüřtür.



## Güvenirlilik Çalışması

Ölçeğin güvenirliliği test-tekrar test korelasyonu ve iç tutarlılık katsayısının hesaplanmasıyla belirlenmiştir. Çalışma grubundan ayrı, 92 öğrencinin oluşturduğu gruba 4 hafta arayla 2 kez ölçek uygulanmış, korelasyon değeri ,89 olarak bulunmuştur.

**Tablo 4.** Her bir madde için alt ve üst grupların karşılaştırılması

Madde no	N	Üst grup		Alt grup		t
		X	S	X	S	
7	155	4,54	0,67	2,65	1,23	14,49*
8	155	4,76	0,54	3,16	1,12	17,27*
9	155	4,34	0,76	2,87	1,34	12,64*
12	155	4,85	0,34	3,36	1,27	13,73*
13	155	4,38	0,38	3,47	1,37	14,81*
14	155	4,34	0,63	3,23	1,26	16,93*
18	155	4,13	0,93	3,54	1,34	15,39*
23	155	4,83	0,87	3,17	1,28	17,60*
24	155	4,47	0,53	3,05	1,36	16,54*
25	155	4,49	0,57	3,76	1,27	12,87*
26	155	4,63	0,45	3,28	1,32	15,44*
28	155	4,93	0,35	3,94	1,56	16,87*
1	155	4,38	0,32	2,76	1,16	17,38*
3	155	4,55	0,56	2,34	1,36	15,78*
5	155	4,76	0,90	3,01	1,28	17,27*
6	155	4,04	1,01	2,75	1,46	12,18*
17	155	4,38	0,46	2,65	1,35	15,65*
22	155	4,46	0,87	2,39	1,49	14,59*
27	155	4,28	0,75	2,47	1,13	15,94*
2	155	4,34	0,34	2,35	1,30	19,36*
10	155	4,05	1,08	2,24	1,35	18,97*
11	155	4,13	0,95	1,76	1,16	16,04*
16	155	4,48	0,78	1,97	1,39	17,38*
20	155	4,64	0,35	2,06	1,34	19,47*
21	155	4,49	0,57	1,67	1,57	15,28*

\* $p < ,001$

**Tablo 5.** Güvenirlilik çalışması test tekrar test uygulama sonuçları

Uygulama	N	X	Std.Sp.	r
İlk uygulama	92	96,80	12,67	0.89*
Son uygulama	92	95,73	11,88	

\* $p < ,001$

Tablo 5 incelendiğinde, 4 haftalık zaman farkına rağmen, iki uygulamada elde edilen gerek ortalamalar, gerekse standart sapmalar birbirine oldukça yakın bulunmuştur. Ölçeğin kararlı-

lığı için kanıt gösterilebilecek iki uygulama arasındaki korelasyon .89 olup, böyle bir ölçek için oldukça yüksek görünmektedir.

Yine aynı grupta, ilk ve ikinci uygulama için ayrı ayrı hesaplanan Cronbach Alfa değeri sırasıyla .83 ve .87 olarak bulunmuştur. Aşağıda verilen geçerlik çalışmasına katılan okul takımlarında yer alan ve yer almayan gruplar için hesaplanan Cronbach Alfa değerleri de yukarıdaki değerlere oldukça benzerdir. Adı geçen grupta yapılan uygulamada, güvenilirlik için hesaplanan Cronbach Alfa iç tutarlılık katsayısı okul takımlarında yer alan grup için .83, yer almayan grup için .86 iken, grubun tamamı dikkate alındığında bu değer .89 olmuştur.

Ölçeğin güvenilirliğinin yüksekliği ve her bir maddenin temelde sportif tutumu ölçmek amacıyla geliştirilmiş oluşu nedeniyle, ölçekten elde edilen puanlar her bir faktör için ayrı ayrı hesaplanmayıp, ileride yapılacak analizler için ölçekten elde edilen toplam puan dikkate alınacaktır. Gerektiğinde, ileride bu ölçekle yapılabilecek olası çalışmalarda, ölçek üç faktörlü olarak da kullanılabilir.

### **Geçerlik çalışması**

Ölçeğin yapı geçerliğine ilişkin bilgi toplamak amacıyla “döndürülmüş temel bileşenler analizi” kullanılmıştır. Verilerin temel bileşenler analizine uygunluğu Kaiser-Meyer Olkin (KMO) katsayısı ve Barlett Sphericity testi ile incelenmiştir. KMO katsayısı, verilerin ve örneklem büyüklüğünün seçilen analize uygun ve yeterli olduğunu belirlemede kullanılan istatistiksel bir yöntemdir. KMO katsayısı 1’e yaklaştıkça verilerin analize uygun olduğu, 1 olmasında ise mükemmel bir uyum olduğu anlamına gelir. Yapılan analiz sonucunda KMO değeri 0,958 olarak bulunmuştur. Parametrik yöntemi kullanabilmek için, ölçülen özelliğin evrende normal dağılım göstermesi gerekir. Barlett Sphericity testi verilerin çok değişkenli normal dağılımdan gelip gelmediğini kontrol etmek için kullanılabilir istatistiksel bir tekniktir. Bu test sonucunda elde edilen chi-square test istatistiğinin anlamlı çıkması verilerin çok değişkenli normal dağılımdan geldiğinin göstergesidir (Alpar, 2001). Çalışma içerisinde yapılan analiz sonucunda Barlett testi anlamlı bulunmuştur ( $\chi^2=8712,629$ ;  $p<0,001$ ).

Ölçeğin kapsam geçerliğine kanıt olarak, başlangıçta ölçülen özellik bakımından birbirinden farklı olduğu bilinen iki grubun ölçek puanları açısından aynı farklılığı gösterip göstermediğini ortaya çıkarmak amacıyla, gruplar t testi ile karşılaştırılmıştır. Graplardan birini, Turgut Reis Lisesi’nde okuyan, okul takımlarında yer alan ve sportif başarıları bulunan 76 öğrenci oluştururken, diğer grubu Muğla Fen Lisesi’nin üniversite sınavı stresi yaşayan 69 son sınıf öğrencisi oluşturmuş ve toplamda 145 öğrenci bu çalışmaya katılmıştır. Bu çalışma için oluşturulan grup, güvenilirlik çalışması yaptırılan gruptan farklı öğrencileri barındırmaktadır. Grupların ölçekten aldığı en düşük ve en yüksek puanlar ile ortalama ve standart sapma puanları Tablo 6’da görülmektedir.

**Tablo 6.** Okul takımlarında oynayanlar ile sınav stresi yaşayanların sportif tutum ölçeği puanları ortalamalarının karşılaştırılması t-testi

Grup	N	X	Std.Sp.	t
Okul takımında yer alanlar	76	101,82	9,61	8.14*
Sınav stresi yaşayanlar	69	75,66	13,87	

\* $p < .001$

Tablo 6’da görüldüğü gibi, sınav stresi yaşayan grubun standart sapması daha yüksektir. Okul takımlarında yer alan öğrencilerin daha fazla spor yaptıkları düşünüldüğünde, standart sapmanın daha düşük olması beklendik bir bulgudur. İki grup ortalaması okul takımlarında yer alanlar lehine  $p < .001$  düzeyinde anlamlıdır. Dolayısıyla ölçek, sportif tutum düzeyi bakımından birbirinden farklı olan iki grubu birbirinden ayırt edebilmektedir. Bu bulgu ölçeğin geçerliğine dair güçlü bir kanıt olarak gösterilebilir.

## SONUÇ ve ÖNERİLER

Geliştirilen ölçek gerek katılımcı sayısının uygunluğu gerekse çeşitliliği bakımından istatistiksel analizlerin gerektirdiği yeterliliktedir. Ölçeğin nihai maddelerinin belirlenmesinde üç liseden 594 öğrenciye ulaşılmıştır. Ölçek hem adlandırılabilir hem de toplanabilir, aynı doğrultuda üç faktörden oluşmakta, toplanabilirlik ve doğrultu dikkate alındığında tek boyutlu olarak kullanılabilir durumdadır. Ölçeğin ölçülen güvenilirlik ve geçerlikleri onun kullanıma hazır olduğunu göstermektedir. Ölçeğin güvenilirliğini belirlemede 92 öğrencinin katıldığı test-tekrar test yöntemi kullanılmış, iki uygulama arasındaki korelasyonun .89 olduğu görülmüştür. Bunun yanında güvenilirlik kanıtı olarak hesaplanan iç tutarlılık katsayıları (Cronbach alfa) aynı grupta farklı zamanlarda .83’ten .87’ye ve farklı gruplarda .83’ten .86 ya değişmektedir. STÖ’nin geliştirilmesinde geçerlik özellikleri kapsam geçerliği ile sınırlandırılmış ve bunu belirlerken sadece uzman görüşü değil, ölçeğin ölçülen özellik bakımından birbirinden farklı olduğu önceden bilinen iki grup arasındaki farka duyarlı olup olmadığı da incelenmiştir. Ölçek, okul takımlarında yer alan öğrenciler ile sınav stresi yaşayan öğrencilerin sportif tutum düzeyleri bakımından birbirinden farklı olduğunu göstermektedir.

Ölçek bu haliyle araştırmalarda kullanılmaya hazırdır. Ancak, ölçeğin özellikle yakın ve uzak erimli yordama geçerliği en kısa zamanda araştırılmalıdır. Başka bir çalışmada katılımcılara aynı anda uygulanacak “Uluslararası Fiziksel Aktivite Anketi”nin STÖ ile paralellik durumları çalışmayı daha da güçlü kılacaktır. Aynı şekilde, disiplinler arası çalışmalar ile ilişki düzeyi önceden bilinen psikolojik özelliklerin (Benlik saygısı, empatik eğilim, problem çözme, vb) ölçülmesinde kullanılan psikometrik bakımdan yeterli görülmüş ölçeklerle STÖ arasındaki ilişkiler de incelenmeye değerdir. Elde edilen bilgiler bir taraftan bireylerin spora bakış açılarını şekillendirecek, diğer taraftan da toplum sporunun gelişmesine katkı sağlayacaktır. Araştırmacı tarafından “Sportif Tutum Ölçeği” (STÖ) olarak isimlendirilen ölçeğin sadece beden eğitimi ve spor öğretimi alanında değil, ilgili bilimlerin spor alışkanlıkları ile ilişkilendirilebilen tüm alanlarında kullanılabilir geçerli ve güvenilir bir araç olduğu belirlenmiştir.

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## **A Systematic Review of Classroom Management Research in Physical Education**

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### **Abstract**

Classroom management ranks as the number one teacher concern in many countries. Administrators, parents and students also identify management as a critical concern. Classroom management in Physical Education refers to both the organizational effectiveness of the environment as well as the teacher's actions when student misbehaviors occur. Given its importance and complexity, it is critical that the topic be explored and understood. It was the purpose of this study to explore the research literature related to class management in Physical Education and to identify significant findings across settings, methodologies used in the field, and to provide suggestions for the field for future directions. A systematic review of research was conducted in a broad range of journals to identify all research that had classroom management as a component of its design and/or findings. The journals reviewed were written in the English language from 1970 to the present. The articles were then synthesized via a systematic constant comparison method to identify themes. A partial list of findings related to management includes: the unique working conditions of Physical Education teachers, recommended practices, teacher knowledge and time use, the complexity of student behaviors, why misbehaviors occur, and the effects of such off task behaviors on the class. Methodologies varied from systematic observation to surveys to interviews. This comprehensive review of the current status of research on management can be used to identify best practices for pre-service and in-service teachers as well as to identify gaps in the research literature related to the topic

## **Beden Eğitimi ve Spor Yüksekokulu Öğrencilerinin Yaşam Doyum Düzeylerine Göre Algıladıkları Hizmet Kalitesinin Doğrulayıcı Faktör Analizi ile İncelenmesi**

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### **ABSTRACT**

It is hard to measure the perceived service quality in education services as it is the same in all services. The aim of this study is to identify the relation of the factors effecting the life satisfaction perceptions of people and perceived service quality bu using confirmatory factor analysis and to present from which subdimensions the participants are affected. The sample of this study who are educating in Ondokuz Mayıs University Yaşar Doğu Faculty of Physical Education and Sports Science the 207 volunteer. In the study Service Quality Identification Scale in High School Education (HEDPERF) and Life Satisfaction Scale (SWSL) were used. Analysis of datas LISREL software was used. The calculated accordance measurements for Perceived Service Quality model were NFI (0.94), NNFI (0.94), CFI (0.96), SRMR (0.076), AGFI (0.81), RMSEA (0.070), X2/sd (2,01); statistically significant. At the end of analysis done by SWSL scale, participants were identified according to total points (20 points and above) as people who perceive life satisfaction positively and (19 points and below) negatively. When the service quality perceptions of participants according to life satisfaction average was compared with confirmatory factor analysis; who perceived life satisfaction positively were represented as “academic” 0.85, “administrative” 0.60, “name” 0.53, “access” 0.74 and “empathy” 0.80 parameters, who perceived negatively were represented as “academic” 0.65, “administrative” 0.38, “name” 0.33, “access” 0.71 and “empathy” 0.72. According to these results, the coefficients the service quality perception of participants who perceive life satisfaction more positively are higher than the ones who perceive life satisfaction negatively.

*Keywords: Service Quality, Confirmatory Factor Analysis, Higher Education*

### **GİRİŞ**

İnsan, yaşamı boyunca birtakım gereksinimleri karşılamak zorundadır. Her insanın gereksinimleri karşılamaları farklı olmakla beraber aynı ihtiyaca yönelik sunulan hizmet de farklılık gösterebilirken, aynı hizmet farklı algılanabilmektedir.

Hizmet kalitesi, anlaşılması zor, kolaylıkla birbirinden ayırt edilemeyen boyutları olan, oldukça karmaşık bir kavramdır (Parasuraman, Berry ve Zeithalm, 1985, 42). Bu anlaşılması

zor kavramı değerlendirirken kişilerin sahip oldukları yaşam kalitelerinin de etkili olabileceği söylenebilir.

Eğitim hizmetlerinde algılanan hizmet kalitesini ölçmek tüm hizmetlerde olduğu gibi oldukça zordur. Üniversitelerde algılanan hizmet kalitesini belirlemeye yönelik araştırmalarda algılanan hizmet kalitesine etki eden faktörlerin neler olduğu bilinmekle birlikte algılanan hizmet kalitesinin yaşam doyumunun algılanması ile doğrudan ve dolaylı ilişkileri konusunda yeterli çalışma bulunmamaktadır. Bu nedenle algılanan yaşam doyumunu ve algılanan hizmet kalitesine etki eden faktörlerin birbirleriyle olan ilişkilerinin ortaya konulması araştırmaya değer bir konu olarak görülmektedir.

Dolayısıyla bu araştırmanın amacı, kişilerin yaşam doyumunu algıları ile algılanan hizmet kalitesine etki eden faktörler arasındaki ilişkileri doğrulayıcı faktör analizi ile tespit etmek, buna bağlı olarak katılımcıların hangi alt boyutlardan etkilendiğini ortaya koymaktır.

## **MATERYAL**

Araştırmanın evrenini Ondokuz Mayıs Üniversitesi Yaşar Doğu Beden Eğitimi ve Spor Bilimleri Fakültesinde öğrenim gören 1200 öğrenciden oluşturmaktadır. Örneklemi ise araştırmaya gönüllü olarak katılan 207 öğrenci oluşturmaktadır.

Araştırmada Abdullah (2006) tarafından geliştirilen Yüksek Öğretimde Hizmet Kalitesi Belirleme Ölçeği (Higher Education Performance; HEDPERF) ve Diener (2006) tarafından geliştirilen Yaşam Doyum Ölçeği (Satisfaction with Life Scale; SWLS) kullanılmıştır.

HEDPERF ölçeği altı alt boyutla temsil edilen 41 maddeden oluşmaktadır. Bunlar “akademik” alt boyutu akademisyenlerin sorumluluklarını, “idari” alt boyutu akademik olmayan personel tarafından yerine getirilen sorumlulukları, “isim/ün” alt boyutu yükseköğretim kurumlarının popülerliğini, “erişim” alt boyutu; ulaşılabilirlik, iletişim kolaylığı, elverişlilik gibi sorunlara ilişkin maddeleri içermektedir. “Programlar” alt boyutu; geniş kapsamlı ve esnek yapısı ve müfredatı olan saygın akademik programlar/özellikler sunmanın önemine ilişkin maddeleri kapsarken “anlayış/empati” alt boyutu ise danışma ve sağlık hizmetleri açısından öğrencilerin özel ihtiyaçlarını anlamaya ilişkin maddeleri kapsamaktadır. Araştırmada Cronbach’s Alpha değeri “akademik” alt boyutunun 0.93, “idari” alt boyutunun 0.96, “isim/ün” alt boyutunun 0.93, “erişim” alt boyutunun 0.93, “programlar” alt boyutunun 0.90, “anlayış” alt boyutunun ise 0.73’tür (Abdullah, 2006).

HEDPERF ölçeği için yapılan 80 kişilik pilot çalışmada güvenilirlik analizi sonucunda 3, 10, 17, 18, 19. maddeler düşük değerle temsil edildiği için ölçekten çıkarıldıktan sonra yapılan açıklayıcı faktör analizi sonucunda 15 madde farklı faktörler altında yer aldığı için araştırmadan çıkarılmıştır. Araştırmada 21 maddeyle doğrulayıcı faktör analizi gerçekleştirilmiştir. Bunun sonucunda HEDPERF ölçüm modelinden esinlenerek geliştirilen Algılanan Hizmet Kalitesi (AHK) modeli beş alt boyuttan oluşmaktadır. Bunlar; “akademik”, “idari”, “erişim”, “isim”, “empati” alt boyutlarıdır. Araştırma modelinin Cronbach’s Alpha değeri 0,88 olarak bulunmuştur. Faktörler itibarıyla ölçme aracında yedi düzeyli likert ölçeği benimsenmiştir. Ölçme aracının cevaplandırılması, maddelerin açıkladığı durumların, gösterilme derecesine göre “kesinlikle katılmıyorum” dan “kesinlikle katılıyorum” a şeklinde düzenlenmiştir.

**Tablo 1. Ölçme aracında yer alan faktörler ve maddeler**

<b>Faktör: Akademik</b>
S1. Akademik personel, benim sorunum olduğu zaman çözmek için samimi bir ilgi göstermektedir.
S2. Akademik personelin, öğrencilerle olan sınıf içi iletişimi yeterli düzeydedir.
S3. Akademik personel, bilgi ve becerilerimin (performansımın) gelişim süreci ile ilgili geribildirim sağlamaktadır.
S4. Akademik personel, öğrencileri yönlendirmek için yeterli zamanı ayırabilmektedir.
<b>Faktör: İsim/ün</b>
S5. Üniversitem iyi bir imaja sahiptir.
S6. Üniversitemin akademik tesisleri (derslik, laboratuvar, konferans salonu, spor salonu vb.) yeterlidir.
S7. Üniversitemde mükemmel kalitede diploma programları yürütülmektedir.
<b>Faktör: İdari</b>
S8. İdari birimler, öğrencilere ait kayıtları ve bilgileri hatasız ve ulaşılabilir olarak tutmaktadırlar.
S9. İdari personel, öğrenciye verdiği sözü zamanında yerine getirir.
S10. İdari personel, kendi görev alanlarına ait prosedüre ilişkin yeterli bir bilgi düzeyine sahiptir.
S11. Üniversitem, hizmetlerini daha önceden söylediği zaman içinde gerçekleştirir.
S12. Üniversitem öğrencinin gizlilik haklarına saygılıdır.
<b>Faktör: Erişim</b>
S13. İdari personel, öğrencilere ayırım gözetmeksizin ve saygılı olarak davranmaktadır.
S14. Üniversitem tarafından öğrencilere yeteri kadar özgürlük ortamı sağlanmaktadır.
S15. İdari büroların çalışma saatleri benim için uygundur
S16. Üniversitemin personeline rahatlıkla telefonla ulaşabilirim.
S17. Üniversitem mükemmel bir danışmanlık hizmeti sunmaktadır.
S18. Üniversitem sunduğu hizmet kalitesini arttırabilmek için öğrencilerden gelen bildirimlere değer vermektedir.
<b>Faktör: Empati</b>
S19. Üniversitem, öğrenci kulüplerinin kurulmasını teşvik etmekte ve desteklemektedir.
S20. Üniversitemin sunduğu sağlık hizmetleri yeterlidir.
S21. Üniversitemin standart ve anlaşılması kolay bir hizmet sunum yöntemi vardır.

YDÖ (Yaşam Doyum Ölçeği) ölçme aracı tek alt boyutla temsil edilen beş maddeden oluşmaktadır. Deiner ve ark. araştırmasında ölçeğin Cronbach's Alpha değeri 0.86 olarak bildirilmiştir (Diener 1985). Ölçekte toplam puan ise 1-35 arasında değişebilmektedir. Ölçeğin toplam puanları 5-9 puan aralığı son derece memnuniyetsiz, 10-14 puan aralığı memnuniyetsiz, 15-19 puan aralığı biraz memnuniyetsiz, 20 nötr, 21-25 biraz memnun, 26-30 puan aralığı memnun, 31-35 puan aralığı son derece memnun olarak değerlendirilmektedir. Ölçeğin Türkçe geçerlik, güvenirlik çalışması Yetim (1993) tarafından yapılmıştır. Yetim'in çalışmasında ölçeğin Cronbach's Alpha değeri 0.86 olarak bildirilmiştir (Yetim 1993). Ölçüm modelinde "kesinlikle katılmıyorum" dan "kesinlikle katılıyorum" a 7'li likert tipi ölçek benimsenmiştir. Ölçeğin veriye uygulanması ile iç tutarlılık katsayısı olan Cronbach's Alpha değeri 0,70 olarak elde edilmiştir.



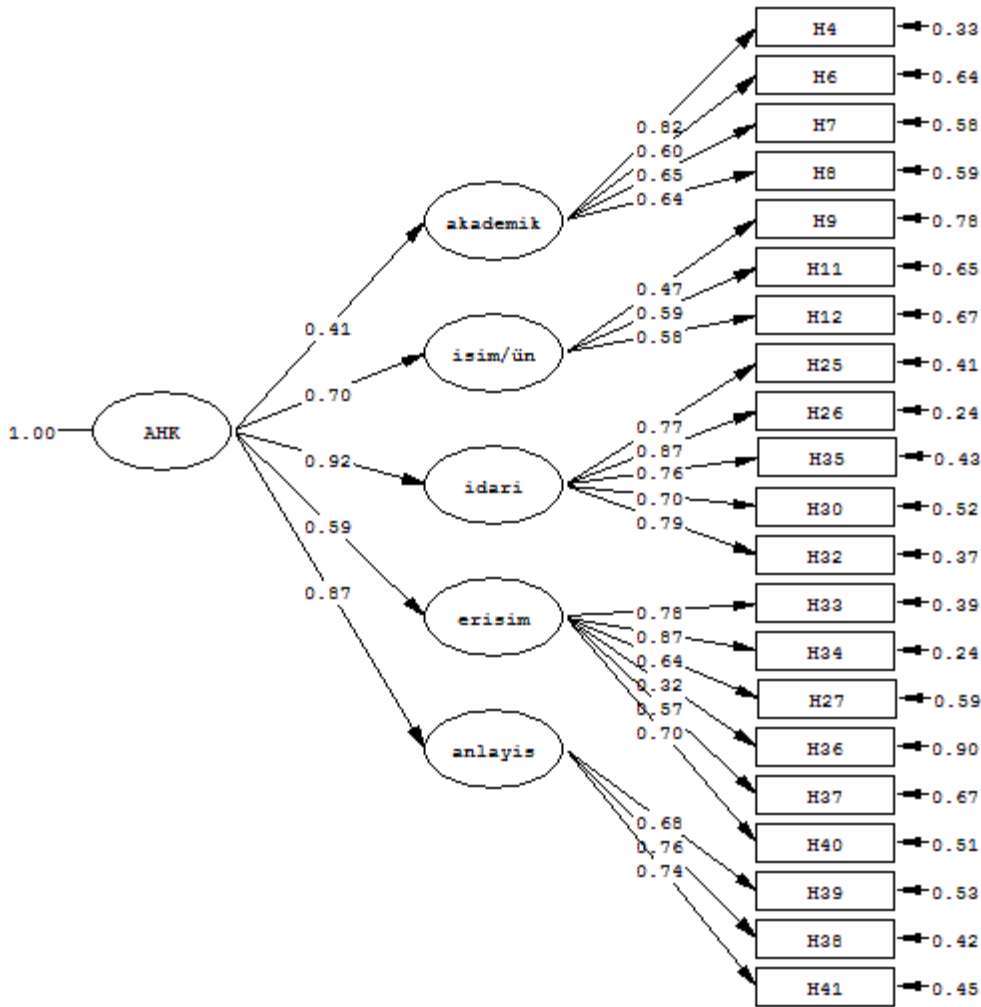
Bu bağlamda araştırmada teorik modelden yararlanılarak ileri sürülen “Katılımcıların yaşam doyumu algıları ile hizmet kalitesi algıları arasında aynı yönde anlamlı bir ilişki vardır” hipotezi test edilmektedir.

Ölçme aracı yer alan bağımsız değişkenler açıklayıcı faktör analizi yöntemi ile daha anlaşılır yapılara dönüştürülmüştür. Daha sonra doğrulayıcı faktör analizi yapılmış ve araştırmaya ilişkin hipotezin sonucu araştırılmıştır. Verilerin analizinde SPSS ve LISREL hazır yazılımı kullanılmıştır.

## BULGULAR

Araştırmaya katılan 207 kişinin %57’ sini erkek % 43’ünü ise kadın katılımcılar oluşturmaktadır. Katılımcıların ortalama yaş grubu ise 21- 22 yaş aralığıdır.

Şekil 1’ de Algılanan Hizmet Kalitesi Modelinin yol diagramı verilmiştir.



Şekil 1. Yükseköğretimde Algılanan Hizmet Kalitesi Ölçüm Modeli

Yükseköğretimde Algılanan Hizmet Kalitesini “akademik” alt boyutu 0.41 ile açıklarken, “isim/ün” alt boyutu 0.70, “idari” alt boyutu 0.92, “erişim” alt boyutu 0.59, “empati” alt boyutu ise 0.87 ile açıklamaktadır. İdari personel tarafından yerine getirilen sorumlulukları temsil

eden “idari” alt boyutu ile öğrencilerin özel ihtiyaçlarını anlamaya ilişkin maddeleri kapsayan “anlayış” alt boyutunun Yükseköğretimde algılanan hizmet kalitesinin en büyük belirleyicileri olduğu görülmektedir.

**Tablo 2:** Yükseköğretimde Algılanan Hizmet Kalitesi Ölçüm Modeli için güvenilirlik değerleri

Faktörler / Maddeler	Standartlaştırılmış Yükler	t-değeri	Cronbach's $\alpha$	$R^2$
<b>Faktör Akademik</b>	<b>0.41</b>	<b>5.20</b>	<b>0.72</b>	
S1.	0.82			0.67
S2.	0.60	8.25		0.36
S3.	0.65	7.39		0.42
S4.	0.64	8.66		0.41
<b>Faktör İsim/ün</b>	<b>0.70</b>	<b>5.46</b>	<b>0.60</b>	
S5.	0.47			0.22
S6.	0.59	5.01		0.34
S7.	0.58	5.15		0.33
<b>Faktör İdari</b>	<b>0.92</b>	<b>11.24</b>	<b>0.87</b>	
S8.	0.77			0.59
S9.	0.87	13.18		0.75
S10.	0.76	10.21		0.57
S11	0.70	10.25		0.49
S12	0.79	10.31		0.62
<b>Faktör Erişim</b>	<b>0.59</b>	<b>6.29</b>	<b>0.82</b>	
S13.	0.78			0.60
S14.	0.87	8.92		0.75
S15.	0.64	9.73		0.40
S16	0.32	4.28		0.10
S17	0.57	7.80		0.32
S18	0.70	9.55		0.49
<b>Faktör Empati</b>	<b>0.87</b>	<b>10.18</b>	<b>0.70</b>	
S19.	0.68			0.46
S20	0.76	8.93		0.57
S21	0.74	8.20		0.54

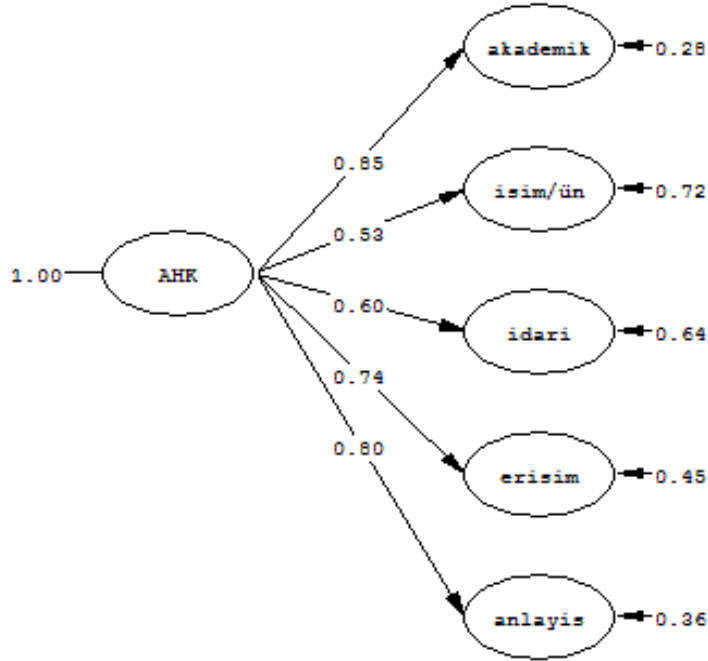
**Tablo 3:** Yükseköğretimde Algılanan Hizmet Kalitesi Ölçüm Modeli için uyum ölçütleri

Uyum Ölçüsü	Değeri	Uyum
$\chi^2 / (sd=80)$	2.01	İyi Uyum
RMSEA	0.07	Kabul Edilebilir
SRMR	0.076	Kabul Edilebilir
NFI	0.94	İyi Uyum
NNFI	0.94	İyi Uyum
CFI	0.96	İyi Uyum
GFI	0.89	Kabul Edilebilir
AGFI	0.81	Kabul Edilebilir

HEDPERF Ölçüm Modelinden geliştirilen Algılanan Hizmet Kalitesi (AHK) araştırma modeli için hesaplanan uyum ölçütleri NFI (0.94), NNFI (0.94), CFI (0.96), SRMR (0.076), AGFI (0.81), RMSEA (0.070),  $\chi^2/sd$  (2,01); bütünsel olarak ölçme modellerinin istatistiksel olarak anlamlı ve uygun olduğunu göstermektedir.

Yaşam doyumunu belirlemede YDÖ ölçeği ile yapılan analiz sonucunda toplam puanlarına göre (20 puan ve üstü) yaşam doyumlarını olumlu algılayan ve (19 puan ve altı) yaşam doyumlarını olumsuz olarak algılayan katılımcılar olarak belirlenmiştir.

Şekil 2’ de yaşam doyumunu olumlu algıladığı varsayılan katılımcıların Yükseköğretimde algıladıkları hizmet kalitesinin yol diagramı verilmiştir.

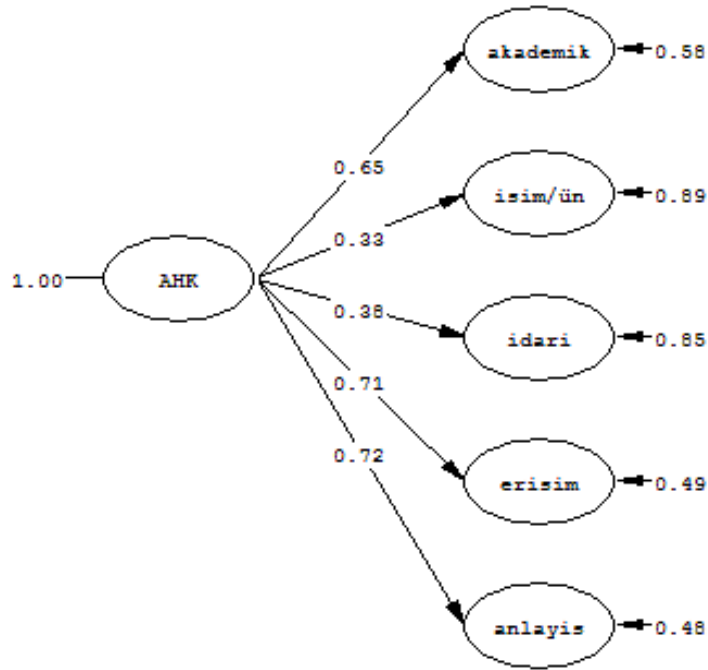


**Şekil 2.** Yükseköğretimde Algılanan Hizmet Kalitesi Araştırma Modeli I (yaşam doyum algısı olumlu).

Yaşam doyumunu olumlu algıladığı varsayılan katılımcıların Yükseköğretimde algıladıkları hizmet kalitesi ölçüm modeli için hesaplanan uyum ölçütleri NFI (0.88), NNFI (0.88), CFI (0.99), SRMR (0.13), AGFI (0.68), GFI (0.80), RMSEA (0.09), X<sup>2</sup>/sd (2.06)’ dir.

Katılımcıların yaşam doyum ortalamalarına göre hizmet kalitesi algıları doğrulayıcı faktör analizi ile karşılaştırıldığında; yaşam doyumunu daha olumlu algılayan katılımcıların algıladıkları hizmet kalitesi “akademik personel”, “idari personel”, “isim/ün”, “erişim” ve “anlayış” alt boyutlarında sırasıyla; 0.85, 0.60, 0.53, 0.74 ve 0.80 katsayıları ile temsil edilmektedirler. “Akademik” ve “anlayış” alt boyutu yaşam doyumunu olumlu algılayan katılımcılar için hizmet kalitesini açıklamada en önemli alt boyut olarak ortaya çıkmaktadır.

Şekil 3’ te yaşam doyumunu olumsuz algıladığı varsayılan katılımcıların Yükseköğretimde algıladıkları hizmet kalitesinin yol diagramı verilmiştir.



**Şekil 3.** Yükseköğretimde Algılanan Hizmet Kalitesi Araştırma Modeli II (yaşam doyum algısı olumsuz).

Yaşam doyumunu olumlu algıladığı varsayılan katılımcıların Yükseköğretimde algıladıkları hizmet kalitesi ölçüm modeli için hesaplanan uyum ölçütleri NFI (0.85), NNFI (0.85), CFI (0.89), SRMR (0.16), AGFI (0.62), GFI (0.76), (RMSEA (0.1),  $\chi^2/sd$  (1,95)'dir.

Şekil 3'ü incelediğimizde yaşam doyumunu daha olumsuz algılayan katılımcıların algıladıkları hizmet kalitesi ise, “akademik personel”, “idari personel”, “isim/ün”, “erişim” ve “anlayış” alt boyutlarına göre sırasıyla 0.65, 0.38, 0.33, 0.71, 0.72 katsayılarına sahiptirler. “anlayış” alt boyutunun yaşam doyumunu olumsuz algılayan katılımcıların hizmet kalitesi algılarını en çok açıklayan alt boyut olduğu görülmektedir. “Erişim” alt boyutu ise ikinci olarak hizmet kalitesini açıklayan alt boyut olduğu görülmektedir.

## TARTIŞMA

Araştırmaya 89 kadın 118 erkek öğrenci katılmıştır. Katılımcıların çoğunluğu 21 ve 22 yaş grubu arasında bulunmaktadır.

Tablo 2 ve Tablo 3 incelendiğinde betimleyici uygunluk ölçütleri RMSEA ve model karşılaştırmalarını temel alan NFI, NNFI, GFI, AGFI, CFI'nın referans aralıkları içinde olması HEDPERF'ten geliştirilen AHK ölçüm modelinin uygun bir model olduğunu istatistiksel olarak belirtmektedir. Model uyumunun değerlendirilmesinde  $\chi^2 / (sd)$  oranı kullanılmış, bu oran değeri 2.01 olarak elde edilmiş ve verinin model ile uyumunun kabul edilebilir olduğuna istatistiksel olarak karar verilmiştir. HEDPERF ölçüm modelinden geliştirilen AHK modelinin hizmet kalitesini belirlemede istatistiksel olarak anlamlı ve uygun bir model olduğu görülmektedir. Aynı şekilde yaşam doyumunu olumlu algılayan katılımcıların ve yaşam doyu-

munu olumsuz algılayan katılımcıların algıladıkları hizmet kalitesini belirlemede geliştirilen AHK Model I ve Model II' in uyum ölçütlerinin referans aralıkları içerisinde olması ve  $\chi^2 / (sd)$  oranlarının 2.06 ve 1.95 olarak belirlenmesi her iki modelinde istatistiksel olarak uygun modeller olduğunu göstermektedir.

Katılımcıların yaşam doyum ortalamalarına göre hizmet kalitesi algıları doğrulayıcı faktör analizi ile karşılaştırıldığında; yaşam doyumunu daha olumlu algılayan katılımcıların algıladıkları hizmet kalitesi alt boyutlarından “akademik personel” 0.85, “idari personel” 0.60, “isim/ün” 0.53, “erişim” 0.74 ve “anlayış” 0.80 katsayıları ile temsil edilirken yaşam doyumunu daha olumsuz algılayan katılımcılarda “akademik personel” 0.65, “idari personel” 0.38, “isim/ün” 0.33, “erişim” 0.71 ve “anlayış” 0.72 katsayıları ile temsil edilmektedir. Yaşam doyumunu daha olumlu algılayan katılımcılarda hizmet kalitesi alt boyutlarının algılanan hizmet kalitesini açıklama oranının daha yüksek olduğu görülmektedir. Bununla beraber yaşam doyumunu daha olumlu algılayan katılımcıların yaşam doyumunu olumsuz algılayan katılımcılara göre hizmet kalitesini daha çok önemsedikleri söylenebilir. Bu sonuçlara göre “katılımcıların yaşam doyum algıları ile hizmet kalitesi algıları arasında aynı yönde anlamlı bir ilişki vardır” hipotezi doğrulanmaktadır.

Chen ve arkadaşlarının da yaptığı araştırmada da yaşam doyum ortalaması 5-5.34 olan katılımcıların yaşam doyumlarının algıladıkları hizmet kalitesinden ve müşteri memnuniyetinden etkilendiğini, bu yüzden spor organizasyonları için hedeflenen stratejiler geliştirilirken hizmet kalitesi için soyut ve somut özelliklerin de düşünülmesi gerektiği sonucuna varmışlardır (Chen ve ark. 2012). Aynı şekilde Alexandris ve arkadaşları da sporcuların algıladıkları hizmet kalitesi, müşteri memnuniyeti ve psikolojik durumları ile arasındaki ilişkilerin incelendiği araştırmanın sonucunda katılımcıların psikolojilerinin hizmet kalitesi algılarını etkilediğini bu yüzden, yöneticilerin pazarlama iletişim teknolojilerini sporcuların duygusal düzeylerine göre de düzenlemeleri gerektiği sonucuna varmışlardır (Alexandris ve ark. 2004).

Yaşam doyumunu daha olumlu algılayan katılımcıların algıladıkları hizmet kalitesi alt boyutlarından “akademik personel” ilk sırada “anlayış” alt boyutu ise ikinci sırada hizmet kalitesini açıklayan alt boyut olurken, yaşam doyumunu daha olumsuz algılayan katılımcılarda “anlayış” alt boyutu ilk sırada “erişim” alt boyutu ikinci sırada hizmet kalitesini açıklamaktadır. Yaşam kalitesini olumlu algılayan katılımcıların akademik personelin sorumluluklarını yerine getirmesini üniversitedeki hizmet kalitesini algılayan yaşam doyumunu olumsuz algılayan katılımcılara oranla daha çok önemsedikleri görülmektedir. Üniversitede öğrencilerin özel ihtiyaçlarını anlamayla ilişkili olan “anlayış” alt boyutu yaşam doyumunu olumsuz algılayan katılımcılar arasında hizmet kalitesini açıklayan en önemli alt boyut olurken yaşam doyumunu olumlu algılayan katılımcılara göre hizmet kalitesini açıklamada önemi nispeten daha azdır.

Her iki grupta da algılanan hizmet kalitesini en düşük katsayı ile açıklayan “idari” ve “isim/ün” alt boyutu olduğu görülmektedir. Bu da üniversitenin idari personelinin sorumluluklarını yerine getirmesinin ve üniversitenin popülerliğini her iki katılımcı grup içinde de algılanan hizmet kalitesini pozitif yönde istatistiksel olarak anlamlı açıklamasına rağmen diğer alt boyutlara oranla daha düşük katsayı ile temsil edilmesi, bu alt boyutları katılımcıların algıladıkları hizmet kalitesini açıklarken daha az önemsediklerini göstermektedir.

Genel olarak elde edilen sonuçlar değerlendirildiğinde; YDÖ toplam puanları yüksek yani yaşam doyumunu olumlu algılayan katılımcılarda hizmet kalitesi alt boyutlarının algılanan hizmet kalitesini açıklama oranlarının yaşam doyumlarını olumsuz algılayan katılımcılar göre yüksek olduğu görülmektedir.

Yaşam doyumunu olumlu algılayan katılımcılarda birinci ve ikinci sırayı “akademik” ve “anlayış” alt boyutları alırken yaşam doyumunu olumsuz algılayan katılımcılarda ise “anlayış” ve “erişim” alt boyutları gelmektedir. Her iki grup için de “isim/ün” alt boyutu en az önemsenen alt boyut olmuştur. “Katılımcıların yaşam doyum algıları ile hizmet kalitesi algıları arasında aynı yönde anlamlı bir ilişki vardır” hipotezinin doğrulandığı bu araştırmada hizmet kalitesi alt boyutları iyileştirme çalışmalarında katılımcıların yaşam doyum düzeylerinin de önemle ele alınması gerektiği söylenebilir.

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## **Prospects and Challenges in Adequate Teaching of Physical Education: Implications for Peace and National Development: A Nigerian Experience**

Alagbu Chukwubuikem Eugene <sup>a</sup>, Elias Okey Agwubuike <sup>a</sup>

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### **Abstract**

From available records the teaching of physical education in Nigeria is yet to assume its pride of place. The neglect which the subject suffers from, hinges on the fact that successive governments in Nigeria fail to understand the role proper teaching of physical education in Nigeria would play in fostering peace and national development. This research made use of 10 secondary schools from 10 states in South-East and South-South geopolitical zones of Nigeria. From each of the selected secondary schools 20 adolescents were randomly selected; in all 200 adolescents were used for the study. The researchers collected the data by visiting the schools chosen using Continuing Education Program (CEP) students. The data collected were based on the use of a questionnaire titled, "Prospects and challenges in the teaching of Physical Education: Implications for Peace and national development a Nigerian Experience." The data were analyzed using Pearson Product Moment Correlation coefficient at 0.05 level of significance. The findings of the study revealed that there is a significant relationship between improved/positive social peace, stability in school environment and teaching of physical education (sports). The study also revealed that positive teaching of physical Education in a school environment bridges the gap of indiscipline and act of militancy among adolescents thereby helping produce youths that will contribute meaningfully to National Development in Nigeria.

## **Impediments to Participation in Physical Activities by Female Civil Servants: The Nigeria Experience**

Oyeniya Oladepo Patrick <sup>a</sup>

<sup>a</sup> *Ekiti State University, Nigeria*

### **Abstract**

The study examined impediments to participation in physical activities among female civil servants in South Western Nigeria. Descriptive research of the survey type was adopted for the study. The population consisted of all female civil servants in southwest Nigeria. The sample for the study was 300 female civil servants, stratified along junior and senior workers. The researchers randomly selected 90 senior female civil servants and 201 junior civil servants from all the six states of South Western Nigeria. The research instrument was a self designed questionnaire which was validated by experts. The reliability of the instrument was determined through test, retest method and a reliability co-efficient of 0.82 was obtained. The data collection was carried out by the researchers and research assistants in state secretariats in all the six states. The result showed that nature of work and engagement in domestic work at home by female civil servants are significant impediments to participation in physical activities. On the other hand, the health status of female civil servants is not a significant impediment to participation in physical activities. Recommendations were made that employers of labor should always provide recreational materials for employees, and allow workers to close earlier in order to give them the opportunity of participating in physical activities.



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## **Women's Attitudes to Physical and Mental Aging: Implication for Fitness and Wellness Educational Programs**

Ruth Ochanya Adio-Moses<sup>a</sup>

<sup>a</sup> *University of Ibadan, Nigeria*

### **Abstract**

A sample of 238 Nigerian women aged 20 years and over, representing a cross-section of ages and geographical areas, were interviewed in a public opinion survey of attitudes to physical and mental aging and perceived methods of coping with aging changes. Generally and in contrast to some earlier studies, a uniformity of opinion was found across age groups, with exception usually indicating the preoccupations of a particular group cohort rather than intrinsic differences in attitudes to aging itself. Furthermore the attitudes to aging were pragmatic rather than pessimistic, with most respondents seeing positive as well as negative aspect of the aging process. Respondents saw the need for therapeutic fitness and wellness programs to stave off the worst effect of aging. But by indication were less certain of their success. The implications of these findings for fitness and wellness educational programs will be discussed.

# **Interconnections between metacognitive awareness and problem solving perception: An investigation on school of physical education and sports students**

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## **ABSTRACT**

The purpose of the study has been two-fold. First to investigate the relationship between the meta-cognitive awareness and problem solving perceptions; and second to determine the effects of meta-cognitive awareness on problem solving perceptions. 271 physical education and sports school students (117 female [43.2%], 154 male [56.8%]) were participated in the study. Pearson correlation analysis and multiple regression analysis were used. Results showed that there was a strong and linear relationship between the variables of meta-cognitive awareness and problem solving perceptions ( $p<.01$ ). Multiple regression analysis results indicated that 18.3% of problem solving perceptions were explained by meta-cognitive awareness variables ( $p<.01$ ). Between variables that effects the problem solving perception of students', declarative knowledge ( $p<.01$ ) and information management ( $p<.05$ ) were stand out among these variables. This suggests that gaining competencies, having knowledge related with the aspects that may affect the performance and improving the awareness of managing the information effectively may increase the problem solving perceptions of school of physical education and sports students.

**Key Words:** Problem solving perception, metacognitive awareness, interconnections

## **Giriş**

Kavramsal temelleri çok daha önceleri bilişsel ve gelişim psikolojisi alanlarında konu edilmiş olsa bile “Üstbiliş” (meta-cognition) kavramı ilk olarak Flavell tarafından 1970’li yılların başında çalışmalarında yer alan “Üstbellek” (meta-memory) kavramından türetilerek kullanılmıştır (Aktürk ve Şahin, 2011). En genel tanımıyla üstbiliş, bireyin kendi bilişsel süreçlerinin farkında olması ve bu süreçleri düzenleyerek kontrol edebilmesi anlamına gelmektedir (Flavell, 1979; Wellman, 1985; Brown, 1987; Nelson, 1999; Hacker ve Dunlosky, 2003; Jager ve diğ., 2005).

Karmaşık bir psikolojik kavram olmasına rağmen bilim insanları tarafından kabul gören üstbiliş kavramı (Luke ve Hardy, 1999; Pifarre’ ve Cobos, 2009), öğrenme, problem çözme, kavrama, akıl yürütme, bellek gibi bilişsel süreçleri izlemek ve düzenlemek gibi süreçlerle birlikte kullanılmaktadır (Karakelle, 2012). Araştırmacılar tarafından bilişsel öz denetim olarak değerlendirilen üstbiliş (Vandergrift ve diğ., 2006), bazı kuramcılar tarafından da, bireyin

zekâ, problem çözüme veya zihinsel yetenekleri arasında güçlü bağlantıları sebebiyle, öğrenmede asli sorumlu olarak gösterilmektedir (Karakelle, 2012).

Günümüz eğitim kurumlarının en önemli görevi, demokratik, yaratıcı, eleştirel ve çok yönlü düşünebilen, öğrenmeyi öğrenen ve problem çözebilen bireyler yetiştirmeleridir (Gök ve Erdoğan, 2011). Problem çözüme becerisi, bireyin sosyal yaşamı içerisinde çevresinde oluşan değişikliklere uyum sağlayabilmesi için ortaya koyduğu bilişsel ve duygusal davranışlar şeklinde yorumlanır (Shewchuck ve diğ., 2000). Lin ve diğ. (2005)'e göre, problem çözüme sürecinde oluşan bu bilişsel ve duygusal davranış değişikliklerini üstbilişsel gereksinimler belirlemektedir. Problem çözüme ve üstbiliş arasındaki bağlantıları ortaya koymayı amaçlayan çalışmaların çoğu matematiksel problemler üzerine kurgulanmış olsa bile, son yıllarda yapılan araştırmalarda gündelik problemleri çözüme ve pratik düşünebilme üzerinde durulması gerektiği vurgulanmaktadır (Karakelle, 2012). Lee ve diğ. (2009) üstbilişsel farkındalığın iyi yapılandırılmış matematiksel problemler kadar, günlük problemleri çözüme etkili olduğunu belirtmektedir.

Karşılaşılan problemlerin çözüme kavuşmasında bireyin sahip olduğu motivasyon kadar üstbilişsel farkındalık da son derece önemlidir (Mayer, 1998). Motivasyon, bilişsel ve üstbilişsel farkındalık yeteneklerinin bilinçli olarak bir arada kullanılması problemlerin çözümü için gerekli olduğu kadar (Hoffman ve Spatariu, 2008; Leutwyler, 2009), gerçek anlamda öğrenmenin oluşumunda da son derece etkilidir (Schulz ve Stamov, 2010).

Tüm bu yorumlardan anlaşılacağı gibi, öğrenmenin gerçekleşebilmesi, problem çözüme becerilerinin geliştirilebilmesi için bilişsel ve duygusal anlamda birçok olgunun bir araya getirilebilmesi ve bunların düzenli bir şekilde kullanılması gerekmektedir. Bu noktadan hareketle yapılan bu araştırmanın amacı, yoğun bir etkileşim içerisinde olan bu farklı değişkenlerden ikisi olan üstbilişsel farkındalık düzeyleri ile günlük problem çözüme becerileri arasındaki bağlantıyı ortaya koymaktır.

## **Yöntem**

### **Katılımcılar**

Çalışmaya Ege Üniversitesi Beden Eğitimi ve Spor Yüksekokulu'nda öğrenim gören 271 öğrenci katılım göstermiştir. Yaş ortalamaları  $23.56 \pm 2.97$  olarak hesaplanan öğrencilerin 117'si (% 43.2) kız, 154'ü (% 56.8) erkektir.

### **Ölçüm Araçları**

Çalışmada Üstbilişsel Farkındalık Envanteri ve Problem Çözüme Envanteri olmak üzere iki farklı ölçüm aracı kullanılmıştır. Bu ölçüm araçlarından ilki olan Üstbilişsel Farkındalık Envanteri (MAI-Metacognitive Awareness Inventory), Schraw ve Dennison (1994) tarafından geliştirilmiş ve Akın ve diğ. (2007) tarafından Türkçeye uyarlanmıştır. 52 maddeden oluşan envanteri oluşturan alt boyutlar, açıklayıcı bilgi, prosedürel bilgi, durumsal bilgi, planlama, izleme, değerlendirme, hata ayıklama ve bilgi yönetmedir. 5'li Likert tip skala üzerinden cevaplanan envanterin iç tutarlık katsayısı .95 olarak hesaplanmıştır (Akın ve diğ., 2007).

Heppner ve Petersen (1982) tarafından geliştirilen ve Şahin ve ark. (1993) tarafından uyarılma çalışması yapılan diğer bir ölçüm aracı Problem Çözme Envanteri (PSI-Problem Solving Inventory) 35 sorudan oluşmakta ve 6'lı Likert tipi skala üzerinden cevaplanmaktadır. Envanteri oluşturan maddelerden 3'ü kontrol maddesi olarak kullanılmakta ve hesaplama dâhil edilmemektedir. Bu nedenle envantere alınabilecek en düşük puan 32, en yüksek puan 196 olarak hesaplanmaktadır. Olumsuz maddelerden oluşan envantere alınan puanların yükselmesi, katılımcıların sahip oldukları problem çözme konusundaki yeterlilik algılarının düştüğü şeklinde yorumlanmaktadır. Üniversite öğrencilerinin katılım gösterdiği uyarılma çalışmasında, ölçüm aracının iç tutarlık katsayısı .88 olarak hesaplanmıştır (Savaşır ve Şahin, 1997).

## İstatistiksel Analiz

Ölçüm araçlarından elde edilen veriler SPSS 13.0 istatistik paket programı kullanılarak depolanmış ve analiz edilmiştir. Çalışmanın amacına yönelik olarak, katılımcıların problem çözme algıları ile üstbilişsel farkındalıklarını oluşturan değişkenler arasındaki ilişkiyi ortaya koymak amacıyla Pearson korelasyon analizi uygulanmıştır. Bununla birlikte, üstbilişsel farkındalık değişkenlerinin hangilerinin problem çözme algılarını etkilediğini ve bu etkinin şiddetini belirlemek amacıyla çoklu regresyon analizi kullanılmıştır. Her iki analiz kapsamında anlamlılık oranı  $p < .05$  olarak dikkate alınmıştır.

## Bulgular

Beden eğitimi ve spor yüksekokulu öğrencilerinin problem çözme algıları ile üstbilişsel farkındalık değişkenlerinden elde edilen betimsel analiz sonuçları, katılımcıların problem çözme becerisi algılarına yönelik puanın  $122.58 \pm 13.5$  olduğunu göstermektedir. Bu durum, beden eğitimi ve spor yüksekokulu öğrencilerinin problem çözme becerisi algılarının orta düzeyde olduğunu göstermektedir (Tablo 1).

**Tablo 1.** Beden eğitimi ve spor yüksekokulu öğrencilerinin problem çözme algıları ve üstbilişsel farkındalıklarına ilişkin betimsel analiz sonuçları

	N	Toplam	Standart Sapma
<b>Problem Çözme Algıları</b>	271	122.58	13.05
<b>Üstbilişsel Farkındalık Değişkenleri</b>	N	Ortalama	Standart Sapma
<b>Açıklayıcı Bilgi</b>	271	4.18	.85
<b>Prosedürel Bilgi</b>	271	3.66	.78
<b>Durumsal Bilgi</b>	271	3.08	.63
<b>Planlama</b>	271	3.62	.79
<b>İzleme</b>	271	3.56	.74
<b>Değerlendirme</b>	271	3.54	.75
<b>Hata Ayıklama</b>	271	3.66	.79
<b>Bilgi Yönetme</b>	271	3.63	.72

Uygulanan Pearson korelasyon analizi sonuçları incelendiğinde, problem çözme algısı ile üstbilişsel farkındalık değişkenleri arasında oluşabilecek tüm ilişki kombinasyonlarının yüksek oranda ve  $p < .01$  düzeyinde anlamlı olduğunu belirlenmiştir. Katılımcıların problem çözme algıları ile üstbilişsel farkındalık değişkenleri arasında, açıklayıcı bilgi değişkeninin .398 ile en yüksek; hata ayıklama değişkeninin ise .272 ile en düşük ilişki katsayısına sahip oldukları görülmektedir (Tablo 2).

**Tablo 2.** Problem çözme algısı ile üstbilişsel farkındalık değişkenleri arasındaki korelasyon analizi sonuçları

	Açıklayıcı Bilgi	Prosedürel Bilgi	Durumsal Bilgi	Planlama	İzleme	Değerlendirme	Hata Ayıklama	Bilgi Yönetme
<b>Problem Çözme Algısı</b>	.398**	.308**	.338**	.299**	.342**	.343**	.272**	.373**
<b>Açıklayıcı Bilgi</b>		.815**	.895**	.803**	.867**	.835**	.752**	.841**
<b>Prosedürel Bilgi</b>			.811**	.840**	.851**	.785**	.747**	.802**
<b>Durumsal Bilgi</b>				.804**	.840**	.830**	.721**	.849**
<b>Planlama</b>					.886**	.809**	.763**	.846**
<b>İzleme</b>						.834**	.773**	.866**
<b>Değerlendirme</b>							.794**	.850**
<b>Hata Ayıklama</b>								.826**

\*\* $p < .01$

Tablo 3'te problem çözme algısı bağımlı değişkeninin, üstbilişsel farkındalığı oluşturan bağımsız değişkenlerine göre çoklu regresyon analizi sonuçları verilmiştir. Sonuçlar, regresyon modelinin genel anlamlılığının test edildiği F istatistiğinin 7.348 ile anlamlı olduğunu göstermektedir ( $p < .01$ ). Bununla birlikte, üstbilişsel farkındalık değişkenleri, problem çözme algısını %18.3 oranında açıklamaktadır.

**Tablo 3.** Problem çözüme algısı için çoklu regresyon analizi sonuçları

	Standartlaştırılmamış Regresyon Katsayıları (B)	Standartlaştırılmış Regresyon Katsayıları (Beta)	t	p
<b>Sabit (Constant)</b>	96.955		24.965	.000
<b>Açıklayıcı Bilgi</b>	6.961	.456	3.099**	.002
<b>Prosedürel Bilgi</b>	-.118	-.007	-.059	.953
<b>Durumsal Bilgi</b>	-3.917	-.191	-1.340	.181
<b>Planlama</b>	-2.003	-.122	-.900	.369
<b>İzleme</b>	-.102	-.006	-.037	.970
<b>Değerlendirme</b>	1.274	.074	.590	.556
<b>Hata Ayıklama</b>	-2.891	-.176	-1.648	.101
<b>Bilgi Yönetme</b>	6.265	.348	2.387*	.018

$$R^2 = .183 \quad F = 7.348 \quad p = .000$$

**Problem Çözme Algısı** = 96.955 + (6.961) Açıklayıcı Bilgi – (.118) Prosedürel Bilgi – (3.917) Durumsal Bilgi – (2.003) Planlama – (.102) İzleme + (1.274) Değerlendirme – (2.891) Hata Ayıklama + (6.265) Bilgi Yönetme

\*p<.05; \*\*p<.01

Regresyon denklemi içerisinde yer alan değerlerden, açıklayıcı bilgi (p<.01) ve bilgi yönetme (p<.05) değişkenlerinin problem çözüme algısı üzerinde anlamlı düzeyde etkili olduğu görülmektedir. Başka bir ifadeyle, açıklayıcı bilgi değişkeninde oluşabilecek 1 birimlik artışın problem çözüme algısı üzerinde .456 birim, bilgi yönetme değişkeninde oluşabilecek 1 birimlik artışın ise problem çözüme algısı üzerinde .348 birim artışa sebep olacağı belirlenmiştir (Tablo 3).

## Tartışma

Çalışmada elde edilen sonuçlar incelendiğinde, Beden Eğitimi ve Spor Yüksekokulunda öğrenim gören öğrencilerin problem çözüme beceri algılarının ortalama seviyede olduğu tespit edilmiştir. Bu sonuç, farklı Beden Eğitimi ve Spor Yüksekokullarında öğrenim gören öğrencilerin katılımıyla gerçekleştirilen çalışmalarda elde edilen sonuçları desteklemektedir (Karabulut ve Kuru, 2009; Yıldız ve diğ., 2011; Çinkılıç ve Soyer, 2013). Bu sonuçlardan farklı ola-

rak, sınıf (Saracaloğlu ve diğ., 2009), müzik (Çevik, 2011) ve bilişim teknolojileri öğretmeni adayları (Schreglmann ve Doğruluk, 2012) gibi farklı branşlarda öğrenim gören eğitim fakültesi öğrencilerinin katılımıyla gerçekleştirilen çalışmalarda elde edilen problem çözme becerisi algılarının yüksek olduğu belirlenmiştir. Bunun yanı sıra, Genç ve Kalafat (2010) gerçekleştirdiği sınıf, İngilizce ve Türkçe öğretmeni adaylarının katılım gösterdiği çalışmada, eğitim fakültesi öğrencilerinin problem çözme beceri algılarının bu çalışmada olduğu gibi orta düzeyde olduğunu görülmektedir.

Tüm bu sonuçlar, problem çözme beceri algısının eğitim görülen branşlara göre farklılık gösterdiği konusunda kesin bir sonuca varmanın uygun olmayacağı görüşünü güçlendirmektedir. Bu durumu destekleyen bir diğer çalışma ise, Pehlivan ve Konukman'ın (2004) yılında beden eğitimi öğretmenleri ve diğer branş öğretmenlerinin problem çözme beceri algılarının karşılaştırıldığı çalışmanın sonuçlarıdır. Pehlivan ve Konukman (2004) çalışmalarında, beden eğitimi öğretmenlerinin problem çözme becerileri algılarının diğer branş öğretmenlerine göre düşük olduğunu, ancak aradaki farkın istatistiksel olarak anlamsız olduğunu bildirmişlerdir.

Çalışmadan elde edilen diğer sonuç ise, problem çözme beceri algısı ile üstbilişsel farkındalık değişkenleri arasında yüksek düzeyde anlamlı bir ilişki olduğudur. Metallidou (2009) yapmış olduğu çalışmanın sonuçlarında, problem çözümede kullanılan stratejilerin düzenlenmesi ile temel düzeyde sahip olunan üstbilişsel farkındalığın ilişkili olduğunu belirtmektedir. Tüysüz (2013) üstün yetenekli öğrencilerin katılımıyla gerçekleştirdiği çalışmada, öğrencilerin üstbiliş düzeyleri ile problem çözme becerileri arasında paralellik gösterdiği belirtmiştir. Özsoy ve Kuruyer (2012) çalışmalarında, alan yazında yer alan çalışmalarda üstbiliş ve bileşenleri ile problem çözme becerisi arasında yüksek düzeyde ilişkinin bulunduğu ve bununla birlikte öğrencilerin üstbilişsel becerilerinin gelişmesine yönelik uygulanan öğretim faaliyetlerinin problem çözme becerilerini geliştirdiği sonucuna varıldığını rapor etmiştir.

Son olarak üstbiliş ile problem çözme becerisi arasında oluşması ön görülen etkileşimi ortaya koymaya yönelik yapılan çoklu regresyon analizi sonuçları, problem çözme becerisi ile üstbiliş değişkenleri arasındaki etkileşimin anlamlı olduğunu göstermektedir. Ayrıca çalışmaya katılan örneklemin problem çözme becerisinin üstbilişsel farkındalık düzeylerini % 18 oranında açıkladığı tespit edilmiştir. Elde edilen bu sonuçlar Karakelle (2012) tarafından yapılan üst bilişsel farkındalık, problem çözme algısı, düşünme ihtiyacı ve genel zekâ arasındaki bağlantıların ve bu üç değişkenin üst bilişsel düzey üzerindeki etkilerinin incelendiği çalışmanın sonuçlarını destekler niteliktedir. Çoklu regresyon sonuçları detaylı şekilde incelendiğinde, oluşturulan denklem içerisinde istatistiksel açıdan anlamlı olan açıklayıcı bilgi ( $p<.01$ ) ve bilgi yönetme ( $p<.05$ ) değişkenleri ön plana çıktığı görülmektedir.

Açıklayıcı bilgi, bireyin kendi sahip olduğu yeterlilikler hakkındaki bilgisi (Özsoy, 2008) olarak tanımlanırken, bilgi yönetme ise, sahip olunan bilgiyi organize etme, işleme ve detaylandırma işlemlerini içerir (Akın ve diğ., 2007). Bu çalışmada elde edilen sonuç, problem çözme becerilerinin düzeylerinin belirlenmesinde, sahip olunan bilginin işlenmesinin de, öğrenilmiş bilgi miktarı kadar önemli olduğunu ortaya koymaktadır. Bu yeteneklerin eğitim or-



tamında arttırılmasına yönelik girişimler, bireylerin karmaşık problemleri çözmelerinde yardımcı olacaktır.

Sonuç olarak, beden eğitimi ve spor yüksekokullarında kontenjanların belirli olması ve sınıf mevcutlarının diğer alanlara oranla daha az sayıda olması, üstbilişsel becerilere yönelik eğitimlerin verilmesini kolaylaştırabilecektir. Doğan (2013)'e göre, yüksek düzeyde üstbiliş beceriye sahip olan bireyler, öğreneceği konuya dikkatini yoğunlaştırır, motive olur ve o konuya ilişkin belirli bir tutum geliştirir. Bu durum bireyin kendisi hakkında bilgisi ve kendi düşüncesini kontrol edebilmesini sağlar. Böylece hangi düzeyde olduğunu görür ve sonraki aşamada ne yapacağını planlar. Planını değerlendirir, düzeltir ve tekrar dener. Hangi düşünme yollarını izlediğinin farkına varır, bunu geliştirir ve bu becerileri bir yaşam tarzı haline getirir. Bu amaçla üniversitelerde üstbiliş stratejileri ile ilgili eğitimler verilmesi son derece önemlidir.

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## **Listening to Primary Schools: Australian Health and Physical Education (HPE)**

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### **Abstract**

This research investigated Australian Government Primary School Principal's perceptions of a University Pre-service Teacher Education course where the graduate teacher is qualified as a generalist primary classroom teacher and a Health and Physical Education specialist. Research suggests that the optimum time for children to learn and refine their motor skills and to be introduced to positive HPE experiences is during preschool and early primary school years. The research data were gathered using surveys completed by 138 government primary school principal participants in the state of Victoria, a large number considering the demanding role of school principal. There were two ethical clearances that were granted before this research was conducted. They were the ethical clearance from Monash University Human Research Ethics Committee (MUHREC) and the Department of Education and Early Childhood Development (DEECD). The key findings were that principals: 1) strongly desire to have specialist HPE teachers in their schools; 2) want HPE specialist teachers who are interested and want to be working with primary aged children. Furthermore, HPE specialists who are able, willing and qualified to teach as generalist classroom teachers. Such a course requires a tertiary education structural change and would involve for the first time in Australia's history, primary education pre-service teachers being given the opportunity within their university courses to specialize in developmentally appropriate Health and Physical Education.

## Öğrencilerin Gözünden Beden Eğitimi Derslerinde Sınıf Yönetimi (Pilot Çalışma)

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### GİRİŞ

Öğretmenlerin okul ve sınıf ortamında çeşitli rolleri bulunmaktadır, ancak bunlardan en önemlisi sınıf yöneticiliğidir. Sınıf yönetiminin zayıf olduğu bir sınıf ortamında etkili öğretme ve öğrenmenin olması beklenemez. Eğer öğrenciler düzensiz ve saygısızlarsa ve hiçbir kural ve prosedür onların bu davranışlarına rehber olamıyorsa bir kaos durumu söz konusudur. Bu tip durumlarda hem öğrenci hem de öğretmen zarar görür. Öğretmen öğrencilerin öğrenmesi için çaba gösterir ancak öğrencilerin çoğu öğrenebileceklerinden daha az öğrenirler. Bunun tam zıttı düşünüldüğünde ise, iyi bir sınıf yönetiminin olduğu bir sınıfta öğrencilerin öğrenmesinin artacağı bir ortam sağlanır. İyi bir öğrenme ortamının oluşması ve sınıf yönetiminin gerçekleşmesi için üst düzeyde bir çabanın gösterilmesi gerekir, bunu gösterecek kişi de öğretmendir (Marzano, Marzano and Pickering, 2003).

Sınıf yönetiminin amacı, öğretmenin eğitim programına uygun olarak planlandığı hedef davranışların, bireysel ayrılıklara göre gerçekleştirmesini sağlamaktır. Bunun için sınıfın yönetmeni olan öğretmen, öğretimi planlar; öğretime gereken kaynakları örgütler; öğrencilerin ve öğrenci kümelerinin arasında es güdümü sağlar; kendisi ile öğrencileri arasında ve öğrencilerin birbirleri arasında iletişimi gerçekleştirir; öğretim etkinliklerini ve öğrencilerin öğrenmelerini denetler; öğrencilerin öğrenme edimlerini ölçer ve değerlendirir. Kısaca öğretmen sınıfının öğretim ve yönetim sorunlarını çözer ve karşılaştığı öğrenme sorunlarının çözümlerine kılavuzluk eder (Başaran, 2005).

Sınıf yönetimiyle ilgili kaynaklar genellikle öğretmenlerin disiplinle alakalı rollerinden bahsetmektedir. Öğrencilerin istenmeyen davranışları, öğrenme için ayrılan zamanı ve bunun sonucu olarak öğrencilerin öğrenmelerini de olumsuz olarak etkileyeceği için istenmeyen davranışlarının iyi incelenmesi gerekmektedir (Cothran, Kullina & Garrahy, 2003; Lewis & Levegrove, 1987). Bununla birlikte bu durum öğretmenlerin psikolojisini de olumsuz olarak etkilemekte (Bibou-Nakou, Stogiannidou&Kiosseoglu, 1999) ve öğretmenlerin daha çok stres

altına girmelerine neden olmaktadır. Ancak öğretme süreci disiplin sorunlarının yanı sıra öğrenme etkinliklerinin planlanması, etkinlikler arası geçiş, sınıfın fiziksel düzeninin organizasyonu, öğrenme materyallerinin hazırlanması, zaman kullanımı ve genel düzeni koruma gibi çeşitli değişkenleri de kapsamaktadır (Latz, 1992). Bu nedenle sınıf yönetimi disiplinin ötesinde bir genişlik ve derinlik içermektedir. Bunun için, öğrencilerin derse katılımı, öğretmenle ve dersle işbirliğinin sağlanması ve üretken bir öğrenme ortamının hazırlanması için gerekli her şeyi içermektedir (Sanford, Emmer ve Climents, 1983).

İyi bir sınıf yönetimi, öğretimin her safhasında ve her bir ders için gereklidir. Ancak beden eğitimi derslerinin, yapısı ve doğası gereği diğer derslerden farklı olarak ele alınması gerekir. Çünkü beden eğitimi dersleri, dersin yapıldığı ortamlar, farklı araç ve gereçler ve öğrenci ve öğretmenlerin giydiği spor kıyafetleri ile diğer derslerden ayrılır. Bunun yanında öğrenciler beden eğitimi derslerinde diğer derslere nazaran daha çok özgürlüğe ve daha çok hareket etme imkânına sahiptir. Bunun bir sonucu olarak da beden eğitimi sınıflarında meydana gelen istenmeyen öğrenci davranışları da diğerlerinden ayrılmaktadır. Bu yüzden beden eğitimi dersinde istenmeyen davranışlar ve uygun olan davranışların belirlenmesi; bunlara yönelik kuralların, beklentilerin ve izlenecek yolun oluşturulması gerekir (Fink and Siedentop, 1989; Supaporn, 1998). Bu açıdan bakıldığında, beden eğitimi derslerindeki kuralların, beklentilerin ve izlenecek yolların da beden eğitimi dersindeki düzenlemeye uygun olarak oluşturulması gerekir.

Bunun yanında, birçok beden eğitimi öğretmeninden kalabalık öğrenci gruplarına, yoğun bir içeriği, daha az zaman, daha küçük bir alanda ve daha az araç-gereçle öğretmesi istenmektedir. Beden eğitimi öğretmenleri, bu şartlar altında etkinliklerine devam edebilmek için izledikleri yolları ve öğretim stillerini gözden geçirmeli ve sürekli değişen isteklere karşı uygun bir şekilde adapte olabilmelidirler. Beden eğitimi öğretmenleri zamanı ve enerjilerini etkili bir şekilde kullanabiliyorlar mı? Öğrencilerin ihtiyaçlarına odaklanabiliyorlar mı? Öğrencilerin kişisel ihtiyaçlarını karşılayabiliyorlar mı? Tüm konularda kendilerini sorgulamalı ve bunun yanında bireysel çalışmaları ve deneyimli öğretmenlerin becerilerini kullanarak öğretim becerilerinin gelişmelerini sağlamalıdır (Siedentop, 1991; Ballinger, 1993).

Buradan hareketle, beden eğitimi gibi dinamik bir derste sınıf yönetiminin öğrenci tarafından nasıl algılandığının, ayrıca uygulamalara ilişkin öğrenci görüş ve önerilerinin belirlenmesi, beden eğitiminde sınıf yönetimi konusunda öğretmenlerin, öğrenciler tarafından daha kolay kabul görecektir nitelikte becerileri geliştirmelerinde ve uygulamalarında etkili olacaktır.

**Araştırmanın Amacı:** Beden eğitimi dersinde sınıf yönetimi uygulamalarına ilişkin öğrencilerin görüşlerini ortaya koymaktır.

## YÖNTEM

**Araştırma Grubu:** Araştırmaya Ankara ve Sivas illeri merkez ilçelerinden sosyo-ekonomik düzeye göre belirlenmiş 3 ortaokuldan toplam 18 öğrenci katılmıştır.

**Veri Toplama Araçları ve Verilerin Toplanması:** Bu arařtırmada grupların ya da bireylerin iinde buldukları sosyal ortamları ve etkileřimleri daha derinlemesine tanımak ve anlamak amacıyla nitel arařtırma yöntemi seilmiřtir. Merriam (1998)’a göre, nitel veri insanların deneyimleri, duyguları, düşünceleri ve bilgileri hakkında direk alıntılardan oluşmaktadır. Bu arařtırmada, nitel arařtırma yöntemi ierisinde yer alan odak grup görüşmeleri yolu ile veriler toplanmıştır. Odak gruplar alan yazında önerilen şekli ile 6 kişiden oluşturulmuştur (Yıldırım ve Şimşek, 2006). Ortalama 1-1,5 saat süren görüşmelerde öğrenciler için hazırlanmış, yarı-yapılandırılmış görüşme formu kullanılmıştır. Görüşmeler sırasında bir arařtırmacı bulunmuş ve katılımcılardan ve MEB (Milli Eğitim Bakanlığı)’dan alınan izinle görüşme ses kayıt cihazına kaydedilmiştir.

**Verilerin Analizi:** Verilerin analizinde ses kayıtları çözümlenerek yazıya dökülmüş daha sonra ierik analizi yöntemi ile analiz edilmiştir. Bu analiz tekniđi kapsamında, çalışmadan elde edilen veriler arařtırmacılar tarafından incelenerek belirli temalar altında sınıflandırılmıştır.

## BULGULAR

Arařtırmadan elde edilen bulgular yapılan ierik analizi sonucunda 4 ana tema altında toplanmıştır. Bunlar; sınıf atmosferi, öğretmen davranışı, zaman yönetimi ve ierik yönetimi olarak adlandırılmıştır. Aşađıda bu temalara ilişkin öğrencilerin bazı ifadeleri yer almaktadır.

**Sınıf Atmosferi:** Bu tema altında öğrenciler sınıf atmosferi ile ilgili olarak özgür, mutlu, neşeli ve rahat olduklarını, serbest kaldıklarını aşağıdaki ifadelerle belirtmişlerdir.

*“Beden Eğitimi dersinde diğer derslere göre kendimi daha özgür dolayısıyla daha mutlu hissederim.” (Ali).*

*“B.E. dersi beni mutlu ediyor ama diğer dersler kasıyor” (Ahmet).*

*“Derste rahatız Hoca karışmıyor!” (Tuğe).*

*“Neşeli, özgür ve rahatım, derste istediđimi yapıyorum!” (Göke).*

*“Bu dersin en sevdiđim yanı eşofman giymek. Okul kıyafetleri beni sıkıyor” (İdil).*

*“İlk ders konu işleyip, ikinci ders serbest kalmayı seviyorum” (ađrı).*

**Öğretmen Davranışı:** Bu tema altında öğrenciler, öğretmenlere ilişkin olarak istenmeyen davranış karşısında kızgın ve ceza verici olduğunu ama öğretmenin gözüne girmenin onlar için önemli olduğunu aşağıdaki ifadelerle belirtmişlerdir.

*“Öğretmen derste bir şey yapmamızı istediđinde sınıfta karışıklı olur, sınıf öğretmeni dinlemez, o da kızar” (Seda).*

*“Öğretmenimiz hoşuna gitmeyen bir davranış gösterirse bize bağırır” (Ayşe).*

*“Öğretmenimiz bize kızdıđında bazen ceza olarak ders işlemez” (Volkan).*

*“Öğretmenimiz, ders dışında iyi biridir ama derste biraz serttir” (Kerem).*

*“Hocanın gözünden düşmek istemem” (Çiğdem).*

*“Öğretmenimin herkese adaletli davranmasını isterim”.*

*“Ben B.E. öğretmeni olsaydım, yaramazlık yapanları notla korkutmazdım, dersten atardım” (Özkan).*

*“Öğretmenimiz bizi serbest bırakacağı zaman ne yapmak istediğimizi sorar onun dışında o ders işlerken biz karışamayız, ne derse yaparız” (Su).*

*“Öğretmenimden övgü almak benim için önemlidir” (Mehmet).*

**Zaman Yönetimi:** Bu tema altında öğrenciler B.E. dersine ayrılan zamanın yetersizliğini belirtmiş ayrıca var olan zamanında bazı engellerle daha da kısaldığından şikâyetçi olduklarını belirtmişlerdir. Örnek ifadelerden bazıları aşağıdadır.

*“Keşke B.E. haftada 4 saat olsa” (Yeliz).*

*“Giyinip soyunmaya çok zamanımız gidiyor, oyunlarımız, maçlarımız yarıda kalıyor.” (Gökhan).*

*“Her gün B.E. olsun isterdim” (Sedat).*

*“Bazen hep aynı şeyler yapılıyor, serbest oyuna zaman kalmıyor” (Beknur).*

*“İlk ders B.E. olsa giyinmeye çok zamanımız gitmezdi” (Yeşim).*

**İçerik Yönetimi:** Bu tema altında öğrenciler yoğun olarak benzer aktiviteler yaptıklarını, serbest zamanları ders işlemeye tercih ettiklerini belirtmişlerdir.

*“Hep aynı şeyleri yapmaktan sıkılıyoruz, serbest kalınca çok daha iyi oluyor” (Beritan).*

*“Öğretmenimiz serbest bıraktığında istediğimizi oynamamıza izin veriyor, onun dışında daha çok koşu oyunları yapıyoruz” (Selma).*

*“Atletizm, futbol, voleybol en çok yaptıklarımız. Tenis ve başka sporlarında olmasını isterdim” (Nermin).*

*“B.E. dersinin hep serbest olmasını isterdim. Her istediğimi yapabilmek isterdim” (Hayri).*

*“Aslında çok farklı sporlar var ama biz hep aynı şeyleri yapıyoruz” (Özge).*

*“Bence ders gayet iyi öğretmen ne istersek o oyunu oynamamıza izin veriyor” (Banu).*

*“Salonumuz güzel ama bahçede çok farklı şeyler yapamıyoruz, küçük ve pota kırık.” (İsmail).*



## TARTIŞMA VE SONUÇ

Yapılmış pek çok çalışma B.E. dersine ilişkin tutumların olumlu olduklarını göstermektedir (Güllü ve Korucu, 2005; Taşmektepligil, Yılmaz, İmamoğlu ve Kılıçgil 2006; Erkmén ve arkadaşları 2006; Harriet, Richard ve Tokie, 2006; Subramaniam ve Silverman, 2007). Solmon (2003) sınıf atmosferinin öğrenci tutumlarını etkilediğini belirtmiştir. Öğrenci, öğretmen tarafından yaratılan olumlu sınıf atmosferi sayesinde kendini rahat ve özgür hissedebilmekte böylece derse yönelik tutumu olumlu olmaktadır (Chen & Darst, 2001; Graham, Holt/Hale, & Parker, 2004; Hagger, Chatzisarantis, & Biddle, 2002; Mitchell, 1993; Solmon & Carter, 1995). Bu çalışmada elde edilen bulgular doğrultusunda oluşan temalardan “sınıf atmosferi” temasına ilişkin olarak öğrencilerin B.E. dersine ilişkin atmosferi olumlu algıladıkları söylenebilir. Bu bulgu alan yazında ki pek çok bulgu ile benzerlik göstermektedir.

Aicinena’ya (1991) göre öğrencilerin beden eğitime karşı olumlu tutum geliştirmesinde, sınıf çevresi, aile ve okul yönetimi ile birlikte öğretmen davranışında son derece önem taşımaktadır (Luke ve Cope, 1994). Ryan ve arkadaşları (2003) yaptıkları çalışmada, ortaokul öğrencilerinin beden eğitimi öğretmenlerine ve beden eğitimi dersine ilişkin tutumlarını saptamış ve lise öğrencileriyle yapılan benzer çalışmalarla bağlantı kurmayı amaçlamıştır. Çalışmada öğrenci tutumlarını etkileyen etmenlerde ilk sırada beden eğitimi dersinde öğrencilerin değişik aktivitelerden hoşlanmaları, ikinci sırada ise öğretmen davranışlarından hoşlanmaları ortaya çıkmıştır. Bu çalışmada elde edilen bir diğer temada “Öğretmen davranışı” olarak belirlenmiştir. Öğrenciler, öğretmenlere ilişkin olarak istenmeyen davranış karşısında çoğunlukla kızgın ve ceza verici olduklarını ama öğretmenin gözüne girmenin onlar için önemli olduğunu belirterek öğretmen davranışının derse yönelik tutumdaki etkisine değinmişlerdir.

Bu çalışmada ortaya çıkan bir diğer tema ise “zaman yönetimi”dir. Yine beden eğitimi dersine ilişkin olarak yapılan pek çok çalışmada derse ayrılan zamanın yetersizliğinden ve var olan zamanın verimli geçirilemediğinden şikayet eden öğrenci ve öğretmen görüşleri bilinmektedir. Sönmez ve Sunay (2004), Başoğlu (1995) yaptıkları çalışmalar ile uygulanan beden eğitimi ve spor dersinin etkin bir şekilde uygulanabilmesi için ders saatlerinin yeterli olmadığını ortaya koymuşlardır. Bu çalışmada ortaya çıkan zaman yönetimi teması altında da öğrenciler yine B.E. dersi için zamanın yetersiz kaldığını ortaya koymuşlardır.

Bu çalışmada ortaya çıkan “içerik yönetimi” teması altında öğrenciler derste yapılan etkinliklerin benzerliğinden, kullanılan ve kullanılmayan araç-gereçlere kadar ders içeriğini etkileyen durumları dile getirmişlerdir. Beden eğitimi derslerindeki en olumlu deneyimler çeşitli aktiviteler sunmak, kazanma/başarı, iyi yapmak, katılmak, takım çalışması ve tatmin olma/eğlenme olarak sayılabilir (Chung ve Philips, 2002). Daha önce de belirtildiği gibi Ryan ve arkadaşları (2003) yaptıkları çalışmada, ortaokul öğrencilerinin beden eğitimi öğretmenlerine ve beden eğitimi dersine ilişkin tutumlarını saptarken, öğrencilerin tutumlarını etkileyen etmenlerde ilk sırada beden eğitimi dersinde öğrencilerin değişik aktivitelerden hoşlanmaları konusu ortaya çıkmıştır. Bu çalışmada da öğrenciler aynı etkinlikleri yapmaktan sıkıldıklarını dile getirerek Ryan ve arkadaşlarının çalışmasını destekler sonuçlar ortaya koymuşlardır. Aynı şekilde farklı branşları da derslerinde görmek istediklerini, ancak okullarında bulunmadığı-

nı belirtmişlerdir. Araç-gereç ve tesis eksikliği Türkiye’de yapılan pek çok çalışmada (Koçyiğit ve Öztürk, 1992; Salman ve arkadaşları, Özşaker ve Orhun, 2005). B.E. dersine ilişkin olarak sıklıkla ortaya çıkmış bir sorundur.

Sonuç olarak, yapılan bu çalışma ile öğrencilerin genel olarak sınıf atmosferini olumlu algıladıkları ve bu nedenle derse ilişkinde olumlu tutuma sahip oldukları söylenebilir. Bununla birlikte öğretmen davranışına ilişkin olarak ortaya çıkan bulgular, beden eğitimi öğretmenlerinin öğrenci isteklerini daha fazla dikkate almaları gerektiğini ve istenmeyen davranışlara ilişkin uyguladıkları çözüm yollarını gözden geçirerek daha etkili bir yaklaşım izlemeleri gerektiğini ortaya koymuştur. Öğrenciler, pek çok çalışmada öğrenci ve öğretmenlerin belirttiği derse ilişkin zamanın yetersizliğini bu çalışmada da bir sorun olarak ortaya koymuşlardır. Zaman yönetimine ilişkin olarak yönetsel çözümlerle beraber öğretmenlerin derse ayrılan zamanları daha etkili kullanmaları adına da değişik çözüm yolları üretmesinin gerekliliği ortaya çıkmıştır. Ders içerikleri konusunda öğrencilere çeşitli aktiviteler yaptırmak için öğretmenlerin daha fazla çaba göstermesinin gerekli olduğu öğrencilerin söylemleri ile ortaya çıkmıştır. Ayrıca tesisi ve materyal konusunda öğrenciler daha fazla seçeneğe sahip olmayı istemektedirler. Bu durumu çözüme kavuşturmak adına okul yönetimleri ve yine öğretmenlere görevler düşmektedir.

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## Comparison of Tennis Skill Acquisition Improvements of Physical Education and Sport Students

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It is known that previous experiences facilitate to acquire of some current skills related to physical education and sports. Accordingly, the purpose of this study was to compare tennis performance improvement among students who enrolled in Physical Education & Sport Teaching (PE&ST), Sport Management (SM) and Recreation (R) departments. The students matriculated in Physical Education & Sport Teaching and Sport Management departments achieved a Special Ability Exam. But Recreation department students did not need to achieve an ability exam like other students. They admitted to the Recreation Department only University Entrance Exam in this study. Eighty three students took part in the study as a volunteer. Tennis education was given to the all students for two hours and twice a week during 8 weeks. The tennis performance improvement of students was tested with Tennis Ability Test the beginning and at the end of the tennis education. According to the results, there was no significant difference among departments at pre-test (PE&ST $n=23:52.77\pm 17.16\%$ , SM $n=27:50.00\pm 17.05\%$ , R $n=33:44.76\pm 16.39\%$ ;  $F=1.655$ ,  $P=0.198$ ). But significant difference appeared between Recreation ( $57.58\pm 15.94\%$ ) and other department measurements at posttest in favor of PE&ST ( $82.02\pm 7.18\%$ ) and SM ( $71.21\pm 12.98\%$ ) departments ( $F=24.429$ ,  $P=0.000$ ). Consequently, previous athletic experiments of PE&ST and SM students might be facilitated to improve their tennis performance.

**Keywords:** *Tennis, Recreation, Skill Acquisition, Exam, Student*

## **An Analysis of Studies Published in the Field of Physical Education in GCC Journals during 2009-2013**

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### **Abstract**

The purpose of this study was to analyze research studies published in the field of physical education in Gulf Cooperation Council (GCC) countries, namely the Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, UAE, and Bahrain. The analysis of these refereed journals was over a five-year period, from 2009-2013. The sample of the study consisted of 96 online studies published in the main refereed journals of the six GCC countries. The data were obtained from websites of the journals. Data obtained were analyzed using mean, standard deviation, percentage, and T-test. The results indicated that the Journal of Educational and Psychological Sciences (Bahrain) is the first in rank among all the journals in which it published 23 (24%) studies over a five-year period. Single authors published 46% (44) of the articles, 36% (35) were by two authors, and only 15% (14) were produced collaboratively by three authors. Only 2.2% of the published articles had four or more authors. The first author's gender was male in 78% of cases (75) and female in 22% (21). Almost three-quarter of all articles in the sample (75%) used quantitative research methods, while 25% used qualitative research methods. About 44% of the studies used a survey or a questionnaire, while 32% used interviews. About half of the studies (54%) used descriptive statistics, while 46% used some inferential statistics. "Curriculum and Instruction" was the most frequently studied topic in the journals with almost 24% of the articles studying this topic.

## Research on The Effect of the Development of Basic Motor Skills 9 – 10 Years Old Children Who Takes Physical Education Lesson Which is Based on Cooperative Teaching Method

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This research has been done to examine the efficiency of Teaching Method Based on Physical Education with the collaboration of 12 weeks, on 9–10 years old children's developments of basic motor skills and problem solving skills. The research group composed of children ages between 9-10, there were 69 student as experiments (35 female, 34 males) and 70 control students (35 girls 35 boys) participated on a voluntary basis as a group of 139 students in total. Cooperation with the Faculty of Physical Education program is based on the method applied in the study of children to investigate its effect on the basic motor skills, hand and ball control, foot and ball control, running coordination, static balance (flamingo), vertical jump, flexibility, standing long jump, speed, agility with the tennis ball throwing and agility tests. SPSS statistical software was used to analyze the data. To find the difference between the experimental and control group, independent test, both control and experimental group, to find the difference between pre and post-tests, paired samples t test was used. According to statistics, between the experimental and control group pre-test values in hand with the ball control, foot and ball control, running coordination, static balance (flamingo), vertical jump, flexibility, standing long jump, 30 meter sprint, agility and quickness with the no significant difference between the mean values of the tennis ball throwing test was found ( $p>0.05$ ).

**Keywords:** *Physical Education, Cooperative Learning, Basic Motor Skills*

## Organism and Task Constraints of Consecutive Chinese Cursive Writing

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### **Abstract**

Handwriting is a skill that is used in our daily life. In order to write efficiently, one has to control the body segments properly. A great deal of research has shown that writing performance would be different if some conditions changed. These variables may be regarded as constraints. Organism, task, and environmental constraints would interact with one another to induce the production of the most appropriate coordination. This research was based on the dynamical systems approach to explore how the writing performances and the coordination patterns would be influenced by organism and task constraints. Thirty-six adults were assigned into three groups: (1) non-inverted right-hander, (2) non-inverted left-hander, and (3) inverted left-hander. The other independent variables included the characteristic of the pen-tip (marker pen and Chinese writing brush) and writing hand (dominant and non-dominant hand). Participants were required to perform the straight-line Chinese cursive-writing task. In order to find the differences in writing performances and the changes in intra-limb coordination patterns, the rectangular area that writing outcome covered per second, cross-correlation coefficient of target joints, and the variability of the joint degrees were analyzed by mixed-designed three-way ANOVAs: 3 (groups) x 2 (pen-tip properties) x 2 (writing hands). The latter two factors were repeated measures. Results showed that the types of the writer, the characteristics of the pen-tip, and the writing hands interact to influence the writing performance. Differences were found in movement coordination patterns among different groups and writing hands. Writing tools induce the coordination pattern to change.

## Age Differences in Self-Controlled Feedback Strategy for Motor Performance and Motor Learning

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### **Abstract**

Traditionally, experimenters decided when to provide feedback information to participants. However, Self-determination Theory predicts types of behavioral motivation are determined by the degrees of satisfaction in psychological needs, and consequence of behavior is up to the degrees self-determined motivation. This study was designed to examine effects of self-controlled feedback strategy on motor performance and motor learning, and its age differences. Twenty participants were recruited, with 10 adults (20-35 years of age, mean age = 23.5±1.5 years) and 10 older adults (65-75 years of age, mean age = 71.4±4.9 years). Linear positioning task was used to measure absolute error (AE) scores. Independent one-way ANCOVA, with kinesthetic parameter as covariance, was employed to examine statistical differences in AE scores between adult and older adult groups. It was found that AE during acquisition phase in adults was significantly higher than that of older adults ( $p < .05$ ,  $ES = 0.22$ ), suggesting linear positioning movement accuracy of older adults were higher than their counterparts. No statistical difference was found in both immediate retention test ( $p > .05$ ,  $ES = 0.13$ ) and delayed retention test ( $p > .05$ ,  $ES = 0.08$ ). It was concluded that there is age differences in self-controlled feedback strategy in motor performance but not in learning.



## Assessing Pre-Service Physical Education Teachers' Quality Teaching Performance Practice

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### ABSTRACT

One of the most difficult tasks of teacher educators is to quantify qualitative information about teaching that is make information objective, reliable and specific. Few systematic observation instruments that have been specifically designed to measure aspects of the teaching process are available in physical education. One of the observation instruments is the qualitative measures of teaching performance scale. The purpose of this study was to determine the relationship between the qualitative measurement of teaching performance scale (QMTPS) and teacher effectiveness in course student achievement. The participants were 96pre-service physical education students (51 male and 45 female). The QMTPS was used to collect instructional data from the videotapes. The instrument is divided into four sections: type of task, task presentation, student response appropriate to task focus and specific congruent feedback. All lessons were videotaped and coded using QMTPS instrument. All QMTPS data were collected viewing the 96 videotapes. Two investigators coded the videotapes according to the suggested OMTPS system. The procedure continued until coders established interobserver agreement of .96 for all categories of the instrument on four successive lessons. According to the statistical analyze that the correlation between the total QMTPS total score and student course achievement was positive relationship and significant. Pre-service physical education teachers with positive low success score of the course in teaching practice course and the teacher in the teaching process can be said to be effective. In addition, this study demonstrated that instructor could use this scale to assess pre-service physical education teachers to their teachers' effectiveness.

*Key Words: QMPTS, pre-service physical education students, practice of teaching course*

### GİRİŞ

Aday beden eğitimi öğretmenlerinin niteliklerinin ölçülmesi en zor görevlerden birisidir. Niteliklerin belirlenmesi için dersin gözlenmesi ve gözlem sonucunun kesin ve açık bir şekilde

belirlenerek kayıt işlemi yapıp aday beden eğitimi öğretmenine doğru geri bildirimde bulunması gerekmektedir.

Eğiticiler aday beden eğitimi öğretmenleri, uzun yıllar öğretmenlik staj uygulama derslerini gözlem yaparak sistematik olmayan biçimde kayda alıp aday beden eğitimi öğretmenlerinin öğretim performans değerlendirmesinde gözlem formları kullanmışlardır (Byra, 1992). Bu gözlem formlarında, aday beden eğitimi öğretmenin beceriyi öğrenciye öğretme sırasında ne kadar zaman harcadığı, ne kadar süre aktif olduğunu nicel verileri kullanarak ölçülebilmışlerdir. Ancak aday beden eğitimi öğretmenin beceriyi ne kadar iyi gösterdiği veya öğrencinin bir beceriyi ne kadar doğru tekrarlayabildiği, verilen niteliksel ipuçlarının miktarı ve doğruluğunu nicel ölçme aracıyla belirlenmesinde gözlenen davranışın nesnel, güvenilir ve özel alana özgü kılma konusunda zorluklarla karşılaşmışlardır (Sidentop, 1991; Byra, 1992). Ancak son yıllarda geliştirilen ve geçerliliği güvenilirliği test edilmiş beden eğitimi dersinin öğretim sürecini anlamak amacıyla kullanılan birçok hem nicel hem de nitel gözleme dayalı ölçekler geliştirilmiştir. Bu ölçeklerin bazıları öğrenciyi bazıları öğretmeni bazıları ise hem öğretmeni hem öğrenciyi gözlemlemek amacıyla tasarlanmıştır. Hangi gözlem ölçeği olursa olsun bu ölçekler beden eğitimi dersine ait amaç ile öğrencinin öğrenme odağı veya öğretmenin öğretim sürecindeki davranışı arasında bağ kurmaktadır. Bu gözlem araçları birbirinden farklı özelliklerde de olsa öğretmenin beden eğitimi dersi öğretim sürecindeki öğrencinin üzerindeki başarısı hakkında bilgi verdiği varsayılmaktadır (Kelly ve Rink 1997). Bundan dolayı literatürde bu gözlem ölçekleri öğrenci başarısını ölçmek amacıyla kabul gördüğü gibi öğretmen eğitiminin de bir parçası haline gelmiştir. Bu ölçeklerden CAFIAS ve ALT-PE gözlem ölçekleri beden eğitimi dersindeki daha çok öğrenci başarısını tahmin etmekte kullanılırken (Metzler, 1979; Cheffers, Mancini ve Martinek, 1980; Silverman, Devillier, ve Ramirez, 1991) Rink ve Werner tarafından (1989) geliştirilen “Öğretim Performans Nitel Değerlendirme Ölçeği” ise daha çok öğretmenin öğretim sürecindeki davranışlarını ölçmek amacıyla geliştirilmiştir. Bu ölçek ile aday beden eğitimi öğretmenin dört yıl boyunca aldığı derslerden edindiği bilgi, beceri ve tutumun öğretmenlik uygulama dersinin değerlendirilmesinde kullanılarak var olan durum hakkında bilgi edinilmesi sağlanmaktadır. Bu araştırmanın amacı aday beden eğitimi öğretmenin öğretmenlik uygulama dersinde seçtiği konuya ait dersteki başarı durumu ile ölçekten aldığı puan arasında ilişkiyi incelemektir.

## YÖNTEM

**Araştırma Grubu:** Çalışmaya 45 kadın 51 erkek toplam 96 aday beden eğitimi öğretmeni oluşturmaktadır. Aday öğretmenler, öğretmenlik uygulaması yapan H.Ü. spor Bilimleri Teknolojisi Yüksekokulu dördüncü sınıf öğrencileridir.

**Verilerin Toplanması:** Öğretmenlik uygulaması dersi kapsamında aday beden eğitimi öğretmenlerin gözlemleri devlet okullarında yapılmıştır. Beden Eğitimi dersleri video kamera kullanılarak kaydedilmiştir. Derslerin görüntülenmesi Milli Eğitim Bakanlığı Ankara il Müdürlüğü ‘den alınan yasal izinle gerçekleştirilmiştir. Aday beden eğitimi öğretmenlerin gözlemlemek için işledikleri dersler araştırmacılar tarafından belirlenmiş ve derslerdeki konu dağılımı Tablo 1 ‘de verilmiştir.

**Tablo 1.** Gözlenen Derslerde İşlenen Konular

İşlenen Konu	Aday Beden Eğitimi Öğretmeni
Hentbol	9
Basketbol	29
Futbol	13
Cimnastik	9
Voleybol	29
Atletizm	3
Masa tenisi	1
Tekvando	1
Orienteering	1
Kofball	1
Toplam: 10	96

**Gözlem Aracı:** Video kayıtlarının değerlendirilmesinde Öğretim Performans Nitel Değerlendirme (ÖPND) (Qualitative Measures of Teaching Performance Scale) sistematik gözlem aracı kullanılmıştır (Rink ve Werner ,1989). ÖPND temel olarak dersin başlangıcı, dersin süreci ve dersin bitimi olmak üzere üç ana kısımdan oluşmaktadır. Dersin başlangıcı kısmında derse başlama, dersin amacı, güvenlik ve ısınma. Dersin süreci ana boyutu altında üç boyut incelenmektedir. Bunlar; (a)görev öncesi davranışlar ; sunumun kategorileri, öğretmenin konumu, öğrencinin dikkati, ortamının düzenlenmesi,(b) görevlerin sunumu; açıklık, beceriyi gösterme, beceriye ilişkin ipuçları sayısı ,ipuçlarının doğruluğu ve niteliği,(c) görev sonrası; öğrencinin beceriye verdiği tepki, öğrencinin düzeni, öğretmenin beceriye yönelik doğru geri bildirimi ve konu amacına yönelik öğrenciyi motive etmedir. Dersin kapanışı ana boyutu altında dersi bitirme, beceri öğreniminin gözden geçirilmesi, sosyal davranışların gözden geçirilmesi, malzemelerin toplanması ve beceri kontrol listesi yer almaktadır (Rink ve Werner ,1989). Değerlendirme için öğretmenlik uygulaması dersi alan aday beden eğitimi öğretmenlerinin staj okullarındaki örnek dersleri belirlenmiştir. Dersler staj okullarında araştırmacılar tarafından video kameraya çekilmiştir. Video kamera dersin işlendiği alanın tamamını görüntüleyecek şekilde yerleştirilmiştir. Değerlendirme sürecinde ise gözlem sırasında hem aday beden eğitimi öğretmeni hem de öğrencinin o esnada yaptığı etkinliğe bakılarak yukarıda belirtilen ana ve alt boyutlara uygun bir şekilde davranışları ÖPND gözlem formuna kodlanmıştır. ÖPND gözlem formundan alınan en yüksek değer 1200' ham puandır. Bir ders içerisinde gözlenen farklı davranışların toplam puanının yüzdesi hesaplanarak betimsel bir değer-

lendirme yapılmıştır (Rink ve Werner,1989). Çalışmada değerlendirilen 96 dersten 4 adeti farklı zamanlarda, iki farklı gözlemci tarafından gözlenerek “gözlemciler arası” ve gözlemcilerin on gün ara ile aynı dersi tekrar gözlememesi (5 ders) ile gözlemler arası güvenilirlik tekrarlı ölçümlerde tek yönlü varyans analizi (ANOVA) sınıf içi korelasyon tekniği ile hesaplanmıştır. Buna göre, gözlemciler arası R:0.96,gözlemler arası R: 0.88, R: 0.84 bulunmuştur.

**Verilerin Analizi:** Verilerin analizinde betimsel istatistikler, frekans-yüzde, sınıf içi korelasyon Pearson korelasyon analiz tekniği kullanılmıştır.

## BULGULAR

Çalışmaya alınan aday beden eğitimi öğretmenlerinin örnek dersleri Öğretim Performans Nitel Değerlendirme (ÖPND) (Qualitative Measures of Teaching Performance Scale) sistematik gözlem aracına uygun kodlanmış ve kategorilere ham puan ortalama değerleri Tablo 2’de verilmiştir.

**Tablo 2.** Beden Eğitimi Dersinde Gözlenen “Görev öncesi davranışlar, Görevlerin sunumu, Görev sonrası” Yüzde Değerleri.

Cinsiyet	Görev öncesi davranışlar		Görevlerin sunumu		Görev sonrası			
					Öğrenci		Öğretmen	
	%	f	%	F	%	f	%	f
<b>Erkek</b>	99	51	89	51	76	51	22	51
<b>Kadın</b>	93	45	91	45	73	45	27	45

Tablo 3’de görüldüğü gibi aday erkek öğretmenlerin %99 ’lık oranı beden eğitimi dersinde gözlenen görev öncesi içerik yönünden %93’lık oranla kadın aday beden eğitimi öğretmenlerinden daha fazla yeterli olduğu gözlenmiştir. Görev sunumların bölümünde ise kadın aday beden eğitimi öğretmenleri %92’lik oranla erkek aday öğretmenlerden yeterli olduğu ve görev sonrası bölümünde ise %76’lık oranla erkek aday beden eğitimi öğretmenlerin öğrencilerin beceriyi öğrenmede tepkisi gözlemlerken %73’lik oranla kadın aday beden eğitimi öğretmenlerin oranının düşük olduğu gözlenmiştir. Görev sonrası öğretmenin beceriye yönelik doğru geri bildirim ve motive etme davranışlarını sürdürebilirlik %27’lik oranla kadın aday beden eğitimi öğretmenleri gözlenmiştir.

Pearson korelasyon analiz sonuçlarına göre aday beden eğitimi öğretmenlerinin ders sürecindeki öğretmen davranışları alt boyutları ile gözlenen derslerden aldığı notlar arasındaki ilişki Tablo 4’de verilmiştir.

**Tablo 4.** Aday Beden Eğitimi Öğretmenlerinin Ders Sürecindeki Öğretmen Davranışları ile Gözlenen Derslerde İşlenen Konular Arasındaki İlişkiler

N=96	Ders Sürecindeki Öğretmen Davranışları
Gözlenen Derslerde İşlenen Konular	.43**

\*p<0.05, \*\*p<0.01

## TARTIŞMA VE SONUÇ

Bu araştırmanın ana bulgusu, aday beden eğitimi öğretmenlerinin öğretim performans ölçeğinden elde ettikleri puan ile ders başarı puanları arasındaki ilişkinin öğretmenlik uygulama dersindeki öğretim sürecinde öğretmen yetkinliğinin çok etkili olmadığı söylenebilir. Ancak Rink ve Kelly'in (1997) Öğretim Performans Nitel Değerlendirme ölçeğinin öğretmen yetkinliğinin geçerliliği çalışması sonucunda öğretmenlerin öğrencilere voleybolda temel becerileri öğretimindeki başarı yüzdesinin yüksek olduğunu bulmuşlardır. Sonuç olarak bu ölçek aday beden eğitimi öğretmenlerinin öğretim etkinliğini değerlendirmek ve öğretim sürecini geliştirmek için de kullanılabilir.

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## **The Effects of TPSR Model on Middle School Students' Self Efficacy and Responsibility**

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### **ABSTRACT**

This study focused on the application of teaching personal and social responsibility model to middle school students with after school PE activities for 8 weeks in order to develop students' self-efficacy and responsibility for their behavior. The participants were 60 students whose age was 12 years old 30 of the students (16 boys, 14 girls) were in intervention group and 30 of them (14 boys 16 girls) were in control group. In this study Children's Self-Efficacy Scale which was developed by Murriss (2001) and Responsibility Feeling and Behaviors Scale which was developed for Turkish population by Özen (2013) were administered to each of the groups before and after the intervention. The study of analyses involved the total sample of participants in the intervention group and the control group. Pre-test and posttest responses of both groups to the measures administered at the beginning and the end of the program were examined and contrasted using repeated measures with pre-test and post test scores as the within subjects-factor and group membership as the between subject factor. Results indicated that students' in intervention group responsibility for their behavior improved significantly when compare to control group. Although a non-significant increase was observed in the self-efficacy of intervention group participants but there is a significant between two groups' responsibility feeling and behavior scale.

*Key Words: Teaching Personal and Social Responsibility Model, physical education, self-efficacy*

### **GİRİŞ**

Bireysel ve sosyal sorumluluk modelinin (BSSM) özünde öğrencilerin sosyal çevre içinde başarılı bireyler olmak için kendilerinin ve başkalarının sorumluluklarını almayı öğrenmelerini sağlayan öğrenme ortamlarının oluşturulması vardır (Gallay 2006). Başkalarının haklarına ve duygularına saygı duyma, katılım ve çaba, öz yönetim, başkalarına yardım etme ve liderlik etme, okul dışında da bu davranışları sürdürebilme bu modelin beş düzeyidir. İlk düzeyin amacı öğrencilerin empati kavramı ile karşılaşması ve barışçıl çatışmayı çözme yeteneğini öğretmektir. İkinci düzeyde öğrencilerin içsel motivasyonunu ve iyi yapılandırılmış bir iş ile ilgi seviyelerini bulmayı öğretmektir. Üçüncü düzeyde öğrencilerin, zamanlarını yönetme,

kendi öğrenme planlarıyla birlikte kısa ve uzun vadeli hedefleri belirlemeyi teşvik etmeyi öğretmektir. Dördüncü düzeyde, başkalarına yardım etme ve duyarlı olmayı öğretmektir. Son düzeyde ise sosyal sorumluluk fikrini taşıma ve rol model olma becerisini okulun dışındaki yaşantısında benimsemesini öğretmektir (Escarti, 2012). BSSM modeli öğretim programının bir parçası olarak hem ders dışı etkinliklerde (Hellison ve Martineki, 2006) hem de ilk ve ortaokullarda beden eğitimi derslerinde uygulanabilir (Siedentop, 1994; Wright and Burton, 2008). Özellikle okullardaki beden eğitimi ve sosyal sorumluluk alma ve geliştirme becerisi zayıf olan çocuklara bu becerileri kazanmaları için bu modeli uygulayarak öğrenme ortamı oluşturulabilir (Rink, 1993; Pangrazi, 2001). Buradan hareketle bu çalışmanın amacı bireysel ve sosyal sorumluluk modelinin ortaokul öğrencilerinin öz yeterlilik ve sorumluluk duygusuna etkisini incelemektir.

## **YÖNTEM**

Bu araştırmada, 16 oğlan, 14 kız çocuğu çalışma grubunda, 14 oğlan, 16 kız çocuğu kontrol grubunda olmak üzere toplam 60 ortaokul 2. sınıf öğrencisi katılmıştır. Çalışma öncesi hem çocukların ailelerinden hem de okul idaresinden izin alınmıştır. Öğrencilerin yaş ortalaması 12'dir.

### **Veri Toplama Aracı**

Uygulama öncesi ve sonrası olmak üzere Murriss (2001) tarafından geliştirilen Çocuklar için Öz-yeterlilik Ölçeği ile Özen (2013) tarafından geliştirilen Sorumluluk Duygusu ve Davranışları ölçeği kullanılmıştır.

### **İşlem Yolu**

Uygulama öncesi deney grubunda olan çocukların ailelerine ve okul idaresine çalışma hakkında bilgi verilmiştir. Çalışmaya çocuklar gönüllü olarak katılmışlardır. Gönüllü katılan çocuklara ders sonrası 8 hafta boyunca haftada iki gün 45'er dakikalık ders dışı etkinlik olarak bireysel ve sosyal sorumluluk modeli kapsamında fiziksel uygunluk konusu işlenmiştir.

### **Verilerin Analizi**

Çalışmada deney ve kontrol grupları arasında özyeterlilik ve sorumluluk alma düzeyleri arasında fark olup olmadığının belirlenmesi amacıyla bağımsız gruplarda t testi uygulanmıştır. Verilerin normal dağılıma uygun olup olmadığı Kolmogorov Smirnov testi ile sınanmıştır. Her grubun ön test son test sonuçları alınarak zamana göre değişimine tekrarlı ölçümlerde 2 yönlü varyans analizi yapılmıştır. Tüm istatistiksel işlemler SPSS 16.0 paket programı kullanılarak yapılmış ve 0.05 anlamlılık düzeyi dikkate alınmıştır.

## **BULGULAR**

Araştırmada deney ve kontrol grupları tesadüfi yöntemle oluşturulduktan sonra gruplar arasında özyeterlilik ve sorumluluk alma düzeyleri arasında fark olup olmadığını Bağımsız

Gruplarda t-testi ile sınınanmıştır. Bağımsız gruplarda t testi sonuçları gruplar arasında özyeterlilik ( t (0,91) 0,52, p>0.05) sorumluluk alma ( t (-,979)= ,765 p>0.05) düzeyleri arasında istatistiksel olarak anlamlı fark bulunmadığını göstermiştir. Yapılan 2x2 tekrarlı ölçümlerde ANOVA analizi sonucunda özyeterlilik, sorumluluk duyma değişkenleri istatistiksel olarak anlamlı olduğunu göstermiştir (Tablo 1-2).

**Tablo 1.** Deney ve Kontrol Gruplarına ait Özyeterlilik Ölçek Puanlarının Karşılaştırılması

	Ön test	Son test	F	p
Deney Grubu (n=30)	59,97 ± 13,216	73,83 ± 9,914	23,03	0,000*
Kontrol grubu (n=30)	59,67 ± 12,234	60,27 ± 12,720		

\*p<0.05

Deney grubu özyeterlilik ölçeğinden ön testte toplam puan ortalaması 59,97 iken, kontrol grubunun 59,67 dir. İşlem sonrası her iki grubunun özyeterlilik ölçeğinde aldığı toplam puan ortalamaları ise deney grubunun 73,83, kontrol grubunun ise 60,27’dir. Bu sonuç ön testten son teste deney ve kontrol grubu arasındaki özyeterlilik düzeyleri arasında (F (1,58)= 23,03 p<0.05) istatistiksel olarak anlamlı fark olduğunu göstermektedir.

**Tablo 2.** Deney ve Kontrol Gruplarına ait Sorumluluk Duygusu Ölçek Puanlarının Karşılaştırılması

	Ön test	Son test	F	p
Deney Grubu (n=30)	25,97± 3,672	31,40± 4,375	64,87	,000
Kontrol grubu (n=30)	26,93± 3,973	28,90±3,689		

\*p<0.05

Deney grubu sorumluluk duygusu ve davranma ölçeğinden ön testte toplam puan ortalaması 25,97 iken, kontrol grubunun 26,93’dir. İşlem sonrası her iki grubunun özyeterlilik ölçeğinde aldığı toplam puan ortalamaları ise deney grubunun 31,40, kontrol grubunun ise 28,90’dır. Bu sonuç ön testten son teste deney ve kontrol grubu arasındaki özyeterlilik düzeyleri arasında (F (1,58)= 64,87 p<0.05) istatistiksel olarak anlamlı fark olduğunu göstermektedir.

## TARTIŞMA VE SONUÇ

Bu çalışmanın ana bulgusu, bireysel ve sosyal sorumluluk modelinin ortaokul öğrencilerinin öz yeterlilik ve sorumluluk duygusu değişimine etkisi olduğunu göstermiştir. Alanda yapılan çalışmalar incelendiğinde, Hellison’ın bireysel ve sosyal sorumluluk öğretim modeli, öz-yeterliliği iyileştirme ve kişisel ve sosyal sorumluluk düzeylerini belirlemek için, okul dışındaki programa katılan, risk altındaki ergenler üzerinde, bir yıl süresince beden eğitimi sınıflarında uygulanmıştır. 13-14 yaşlarında toplamı otuz olan, risk taşıyan gençler (23 erkek, 7 kadın)



bir deney grubu (12 erkek ve 3 kadın) ve kontrol grubu (11 erkek, 4 kadın) arařtırmaya alınmıřtır. alıřmanın nicel sonuçları, sosyal kaynakları kaydetmek iin ğrencilerin z-yeterliđi ğrenmesinde nemli bir geliřme olduđunu gstermiřtir. Nitel sonuçlarında ise, sorumluluk davranıřları deney grubundaki katılımcılarda bir geliřme gsterdiđini daha net ortaya ıktıđını ifade etmiřtir. Bu model risk altındaki ergenlerde psikolojik ve sosyal geliřimi geliřtirmek iin etkili olabilir ve beden eđitimi dersleri risk altındaki genlerle alıřmak iin uygun bir arena gstermektedir (Escarti, 2010).

Sonuç olarak her ne kadar bu alıřmaya katılan deneklerin zyeterlilik ve sorumluluk duyma dzeyleri geliřmiř olsa da alıřmanın uzun sreli yapılarak kalıcı etkisine bakmanın gerektiđi dikkate alınmalıdır.

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### **Introduction**

This research project investigated Primary School Principals' perceptions of Health and Physical Education within Government primary schools. Research suggests that the optimum time for children to learn and refine their motor skills and to be introduced to positive HPE experiences is during preschool and early primary school years. This project investigates the perceptions of Principals within the state of Victoria, Australia.

The research data was gathered using ex-post facto designed surveys completed by 138 government primary school principals from a cross-section of primary schools. Principals surveyed represented schools from seven Victorian regions and schools of various enrolment sizes (Table 1).

Table 1 Victorian regions represented by school principals surveyed

<b>Victorian Region</b>	<b>Size of school enrolment</b>				
	Small schools (less 100)	Medium (100-300)	Large (300 – 600)	Very large (more 600)	<b>Total</b>
West	7	4	0	0	<b>11</b>
Inner West	0	8	3	1	<b>12</b>
North Central	6	3	0	1	<b>10</b>
Inner North	3	3	2	0	<b>8</b>
Melbourne	1	25	33	6	<b>65</b>
Inner East	4	7	2	0	<b>13</b>
East	6	11	2	0	<b>19</b>
<b>Total</b>	<b>27</b>	<b>61</b>	<b>42</b>	<b>8</b>	<b>138</b>

### **The Context**

Government schools within the state of Victoria are of particular interest, as Victorian official Government policy regarding graduate HPE specialist teacher requirements in schools do not support the socio-cultural perspective adopted by the last national curriculum reform (1994).

Australian Curriculum Assessment and Reporting Authority (ACARA) and the federal government espouse the present national pedagogically-based curriculum reform, involving a newly designed national curriculum. However, implementation (including Government policies) of the present Health and Physical Education curricula has been inconsistent and may again be an impediment.

The purpose of the current national reform is to enable a socially just curriculum throughout Australia, a large country consisting of diverse school contexts. Australian academic education commentator and Professor at Sydney University, Ewing states ‘The most important driver for a National Curriculum should be about equity and social justice and improved learning outcomes for our most disadvantaged and isolated students’ (2010, p.127).

The socio-cultural perspective according to Cliff, Wright and Clarke (2009, p. 166) adopted by the HPE key learning area in the last ‘de-facto’ (1994) reform emerged “as a complex counter-discourse informed by critical pedagogues and critical pedagogy in Australia, the United Kingdom and New Zealand”. They state with clarity how this has changed the teaching and learning in HPE:

As a perspective through which to interpret HPE content and issues, it has important implications both for the work of HPE teachers and for how these teachers are prepared through pre-service teacher education programs; first, because its sociological and cultural studies underpinnings represent a significant departure from the predominantly medioscientific, biophysical and psychological foundations of HPE; and second, because its attention to social and cultural influences on health put it in opposition to notions that locate responsibility for health almost solely in the individual and his or her decisions. (2009, p. 165).

While the adoption of the socio-cultural perspective was national, the depth that this perspective filtered into the implementation of the HPE curriculum in each state and territory has differed considerably. For example, the New South Wales Institute of Teachers (NSWIT) Subject Content Requirements for teaching HPE in the state of NSW Primary or Secondary schools (Abridged) July 2010 policy document states that the minimum requirements for a Primary teacher and Secondary Teacher in the key learning area include academic study in physical education, health and personal development (equally weighted), underpinned by cultural and sociological perspectives. Furthermore the key learning area is named Personal Development, Health and Physical Education (PDHPE):

Table 2 New South Wales Institute of Teachers HPE Secondary Teacher Requirements

<b>Subject Area Years 7-12</b>	<b>Relevant areas of academic study for first teaching subject</b>	<b>Relevant areas of academic study for second teaching subject</b>
Personal development, health and physical education	A major (three years of degree level study with at least 4 units at level 2 or above) in personal development and/or health studies (with a socio-cultural perspective) and/or physical education  WITH	At least two years (four units) of degree level study in personal development and/or health studies (with a socio-cultural perspective) and/or physical education with at least two units at level 2 or above  WITH

<p>at least three units of study in health education including mental health, sexual health, relationships, drug education, child protection education, gender studies and risk taking behaviour</p> <p>AND</p> <p>at least three units of study in physical education including contemporary physical activities, dance, gymnastics, games and sport. Vocationally oriented courses, coaching certificates, umpiring/refereeing accreditation in sports and physical activities are not recognised as equivalent.</p>	<p>at least two units of study in health education including mental health, sexual health, relationships, drug education, child protection education, gender studies and risk taking behaviour</p> <p>AND</p> <p>at least two units of study in physical education including contemporary physical activities, dance, gymnastics, games and sport. Vocationally oriented courses, coaching certificates, umpiring/refereeing accreditation in sports and physical activities are not recognised as equivalent.</p>
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Hence, the NSWIT requirements advocate the principles of the 1994 HPE ‘de-facto’ National Statement and Profile and promote the socio cultural perspective. However, the same cannot be shared for the state of Victoria (Table 3), where the Victorian Institute of Teaching (VIT) Specialist Area Guidelines policy (6 November, 2008) states:

Table 3 Victorian Institute of Teaching Specialist Area Guidelines for HPE

<p><b>PHYSICAL EDUCATION (Primary Teaching)</b> Major study in Physical Education</p> <p>The major study in Physical Education should include study in Human Movement (e.g. growth and motor development, exercise physiology, skill acquisition) and in the skill activity areas of aquatics, games, fundamental motor skills, fitness education, dance, athletics, ball handling and sport education</p> <p>A current first aid certificate (Emergency First Aid Level 2) AND a current AustSwim Teacher of Swimming and Water Safety certificate (or a current Australian Swimming Coaches &amp; Teachers Association (ASCTA) - Swim Australia Teacher certificate) are required</p> <p><b>PHYSICAL EDUCATION (Secondary Teaching)</b> One and a half years of study in Physical Education</p> <p>The one and a half years of study should include study in the following areas:</p> <p>(a) Discipline Study: Human Movement (e.g. anatomy, physiology, exercise physiology, biomechanics, growth and motor development, skill acquisition and psycho-social aspects of physical activity), Health and Nutrition</p> <p>(b) Skills: fundamental motor skills, ball handling, dance, games, fitness education, athletics, aquatics, sport education</p> <p>A current first aid certificate (Emergency First Aid Level 2) AND a current AustSwim Teacher of Swimming and Water Safety certificate (or a current Australian Swimming Coaches &amp; Teachers Association (ASCTA) - Swim Australia Teacher certificate) are required</p>
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This policy has no evidence of a socio-cultural perspective and suggests there has been no departure from the predominantly medioscientific, biophysical and psychological foundations of HPE. Furthermore, the key learning area is titled Physical Education which Dinan-Thompson (2006) shares is the name referred to the key learning area pre 1994 National Statement and Profile. There is no presence of socio cultural health or personal development. Again, raising question over the level of curriculum change that resulted from the last ‘de-facto’ national curriculum reform.

Promoting social justice and equity in education through the HPE curriculum materials and the socio-cultural approach does seem to have led the way for other curriculum key learning areas. This is evident through the National Curriculum and explicitly within the goals established at the Melbourne Declaration on Educational Goals for Young Australians (December, 2008):

- Goal 1: Australian schooling promotes equity and excellence
- Goal 2: All young Australians become:
  - Successful learners
  - Confident and creative individuals
  - Active and informed citizens (MCEETYA, 2008)

These goals have driven the national curriculum Framework, they support a socio critical pedagogy in education and are underpinned by the socio-cultural perspective.

### **Significance of Research**

The Victorian Department of Education and Early Childhood Development (DEECD) key responsibilities inform outcomes that the Department strives to achieve within its birth-to-adulthood learning and development agenda. The first listed outcome for Children 0 – 8 years is:

- Children have the best start to life to achieve optimal health, development and wellbeing (<http://www.education.vic.gov.au/about/departments/Pages/default.aspx>)

This outcome sits within and directly relates to the Health and Physical Education learning area:

In Health and Physical Education students develop the knowledge, understanding and skills to support them to be resilient, to develop a strong sense of self, to build and maintain satisfying relationships, to make health-enhancing decisions in relation to their health and physical activity participation, and to develop health literacy competencies in order to enhance their own and others’ health and wellbeing. (Australian Curriculum, Assessment and Reporting Authority, 2012, p. 2).

Health and Physical Education (HPE) as a learning area in Australia is embedded in phase three of the current national curriculum reform. This research investigates Principals’ perceptions of HPE teachers and specifically preparation of university pre-service primary teacher courses. Principals were probed for their opinions to a HPE course structural change, involving for the first time in Australia’s history, primary education pre-service teachers being gi-

ven the opportunity within their university courses to specialise in developmentally appropriate Health and Physical Education.

Principals' experiences and insights matter. "We know that school leadership must be at the centre of our reform effort. In our decentralised system where principals have a high degree of autonomy it is they who have the power to improve the quality of teaching." (DEECD, 2012, p. 3). Furthermore, such a course would be timely as there has been growing concern for universities improved preparation of teachers for the school environment (DEECD, 2012). A survey conducted by McKenzie, Rowley, Weldon and Murphy (2011) found that less than 30 per cent of principals felt that graduate teachers had acquired important skills for effective teaching and learning. It is pertinent that Principals are considered and opinions valued.

### **Literature Review**

The Australian Curriculum Assessment and Reporting Authority (ACARA) draft shape paper for HPE, espouses quality experiences for children and the importance of having these from the very beginnings of schooling. What is being accentuated within this shape paper is one particular aspect of quality HPE; that it is 'developmentally appropriate'. The priority for Health and Physical Education is:

to provide ongoing, developmentally appropriate opportunities for students to practise and apply the knowledge, understanding and skills necessary to maintain and enhance their own and others' health and wellbeing. (ACARA, 2012, p. 4).

In the late 1980s and early 1990s, the HPE school curriculum within Australian schools was considered to have been in crisis (Tinning, Kirk, Evans and Glover, 1994; Dinan-Thompson, 2009). Curriculum research indicates that the 'crisis' was experienced at an international level also (Dinan-Thompson, 2009, p. 4). 'In-house' discussions of crisis at HPE conferences and in journals led to a Senate Inquiry (Commonwealth of Australia, 1992) into the state of HPE within Australian Education systems. The findings in the report by the Senate Standing Committee on Environment, Recreation and the Arts (Commonwealth of Australia, 1992) confirmed the 'in-house' discussions of crisis (Dinan-Thompson, 2009). Findings included that there was in fact a decline in the opportunities for quality HPE in Australian schools although paradoxically there was unanimous support for the learning area. The problems were mainly with resources and the time allocation to the key learning area which resulted in a drastic decline in children's skill levels and physical fitness (Tinning, Kirk, Evans, and Glover, 1994). Another major problem was that "suitably qualified physical education teachers are not being employed to teach physical education and school sport to all children" (Commonwealth of Australia, 1992, p. xiv). There was also no required accreditation or formal training in physical or sport education as a condition of employment for graduating primary school teachers (Moore, 1994). Webster (2001, p. 1) recommended that "pre-service education of primary school teachers include mandatory units directly related to the content strands of the syllabus, with further opportunities for teachers to specialize in PE courses".

These issues, according to ACHPER (2011) still exist today. "It is true that some schools struggle to provide quality PE and sport, in particular in primary schools". Furthermore, some graduate teachers are to this day completing teaching degrees without studying any units in Health and Physical Education and are then responsible for implementing this learning area in

schools. Health and Physical Education primary specialist teachers are only employed sporadically within primary schools across Australia with, according to Dinan-Thompson (2009, p. 48) questions often raised about “who is teaching HPE, and who is deemed competent to teach HPE in schools”. Hence, the recommendations of a Senate Inquiry made 20 years ago appear to not have been achieved.

A study released recently (March, 2013), ‘The wellbeing of young Australians’, conducted by Australian Research Alliance for Children & Youth (ARACY) involved over 3700 people. This study evidenced that Australian children and youth are not doing as well as they should. Australia ranked in the top third of OECD countries for around one-quarter of the indicators (12 out of 46). Areas of concern where Australia was ranked in the bottom third included “jobless families, infant mortality, incidence of diabetes and asthma, young people in education, 3-5 year olds in preschool and carbon dioxide emissions” (ARACY, 2013, p. 4). Despite the rhetoric about children wellbeing and social justice, this report indicates that there has been no improvement in the majority of areas from the previous report in 2008. The report summary states:

if we want to change – to improve – we need to measure and report on the things we believe are most important for a successful Australian society. Few would disagree that one of the most important of these are the environments we can influence to help parents and others ensure our children have the opportunity to be healthy and to develop well. (ARACY, 2013, p. 26).

It is axiomatic that primary schools’ play a key role in children’s health and wellbeing. Hence, Health and Physical Education teachers (specialist or generalist classroom) need to be able to deliver quality Health and Physical Education lessons across all strands, which include Physical activity, Health and Personal/Social Development. This involves the teacher having the knowledge and understanding of the various pedagogies that exist in HPE and the awareness to choose the most appropriate for each particular learning experience (Tinning, 1999). This often involves choosing critical, socially just pedagogies rather than the traditional dominant science and performance-based pedagogies for HPE. Critical socially just pedagogies will necessitate teachers being trained and educated in this mode of teaching (Tinning, 2004).

Physical Education (PE) courses specifically tailoring to children in the 3-11 age range, where teachers are qualified generalist classroom teachers with a specialism in PE are offered in the United Kingdom. What is sometimes offered in Australia are quasi HPE courses where pre-service primary teachers may be able to choose electives in general sport often relating to industry or secondary physical education. While these offer opportunities for enthusiasts to study areas of interest, ideal candidates for primary HPE specialists, unfortunately they lack the ‘developmentally appropriate’ key aspect that the draft paper emphasises. Hence, specialist HPE teachers working within primary schools are often not qualified generalist classroom primary teachers (often secondary trained), and may not have had opportunities to develop pedagogy specifically for teaching children in the Primary school sector, or they are generalist classroom teachers with no HPE specialisation.

## **Summary Report**

This study indicates two key findings:

1. Principals in Victorian government primary schools of various sizes and locations, strongly desire to have specialist HPE teachers in their schools
2. Principals in Victorian government primary schools want HPE specialist teachers who are interested and want to be working with primary aged children. Furthermore, HPE specialists who are able, willing and qualified to teach as generalist classroom teachers
  - 88.2% of principals surveyed (120 out of 138) preferred to have HPE specialist teachers in their school.

Within small schools (less than 100 children) many Principals stated that it was not possible or financially viable to have HPE specialists due to their rural, regional or remote location. Therefore there was a much higher percentage of Principals in small schools who answered 'no' to this question.

The comments supporting HPE specialists in primary schools were many and suggested that quality was provided through expertise, knowledge of the subject, priority of the learning area, skill development, motivation, community relations, sport coordination and to enable a developmentally appropriate and consistent program. Also, it was mentioned that some classroom teachers are not able to take HPE classes and that it provided release time for classroom teachers.

- 82.6% of principals, believed a course that qualifies teachers to be generalist classroom teachers and HPE specialists would be or would probably be valuable

No	2	(1.4%)
Maybe	22	(15.9%)
Probably	30	(21.7%)
Yes	84	(60.9%)

- 62.3% of principals believed a testamur/ certificate that read "Bachelor of Primary Education (Health and Physical Education)" would assist or probably assist them with the employment of staff?

No	13	(9.4%)
Maybe	39	(28.3%)
Probably	37	(26.8%)
Yes	49	(35.5%)

- There were 102 schools (73.9%) where a HPE specialist teacher was responsible for part or all of the implementation of the learning area

This included:

Specialist HPE teacher	52	(37.7%)
Classroom & HPE specialist	42	(30.4%)
Classroom & HPE specialist & outsourced	5	(3.6%)



A generalist classroom in HPE role	2	(1.4%)
HPE teacher & outsourced	1	(0.7%)

- 62 principals (59.0%) stated that their HPE specialist teacher was a qualified specialist, 43 principals (41.0%) stated that their HPE specialist did not have specific qualifications and 33 did not answer the question.
- When employing staff, 98 principals (72.1%) indicated that they look at the university degree certificate/ testamur of potential staff and 38 (27.9%) stated that they did not.
- When employing staff, 74 principals (53.6%) said they do not peruse university transcripts.

This is problematic when transcripts are needed to evidence Health and Physical Education units successfully completed under the current courses offered.

- Principals' commented on key attributes of a good HPE teacher. The top six responses were:
 

1. HPE curriculum knowledge & dev appropriate pedagogy	54 (mentions)
2. Planning/ assessment and flexibility (organised)	49
3. Passion/ interest/ enthusiasm (children)	35
4. Rapport /communication and management skills	32
5. Cater for all learning needs (empathy & support)	20
6. Engage students & fun	12

- 121 schools gave no details of HPE being outsourced (87.7%)

HPE being outsourced included Gymnastics, Swimming, sporting organisations, Bluearth program, Active After School Community (AASC), Tennis and Dance.

- Principals' thoughts on quality HPE for children in schools

Within small schools (less than 100 children) many principals stated that HPE was an extremely important learning area and felt that it was undervalued. They believed more could be done through funding and Professional Development (PD) and some stated that they were disadvantaged in this learning area. Principals' suggested that HPE specialist teachers who were good classroom teachers would be beneficial. Having a HPE specialist enables for a regular and sequential program to be implemented and physical education (physical activities) is an area that some teachers struggle with implementing. Many of these schools are located in rural, regional or remote locations.

Principals of medium sized schools (100-300 children) believed that all schools should have a HPE specialist with knowledge of correct pedagogy for maximising participation, enjoyment was optimised and being developmentally appropriate was desirable. It was important that the program was inclusive and catered for various interests and needs. Qualifications and ability to teach in the primary classroom and have a developmentally appropriate understanding was

accentuated. One Principal wrote ‘We need people with classroom and pedagogical skills not just jocks!’. They expressed difficulties in smaller schools to employ a HPE specialist and that money was again a problem. HPE as a learning area was viewed as important although such importance was often lacking.

Principals of large schools (300-600 children) and very large schools (larger than 600 children) emphasised how pertinent it was to have HPE specialists with developmentally appropriate and inclusive pedagogy. They stressed the need for all schools to have HPE specialists and the power of implementing quality HPE as part of children’s early experiences. Again, the qualifications and ability of HPE specialists to be good primary classroom teachers was affirmed.

### **Recommendations**

It is recommended that pre-service primary teachers have the opportunity to specialise in HPE, specifically developmentally appropriate for the primary school and with a socio-cultural/ inclusive perspective. Having opportunities for pre-service teachers to become generalist classroom teachers and specialise in HPE is supported by a high majority of principals surveyed. Such a course enables teachers who want to specifically teach primary aged children and are passionate in Health and Physical Education, to acquire a developmentally appropriate pedagogy and holistic health understanding. This, along with an updated HPE specialist graduate teacher Government requirements policy would be a directional step towards the Victorian DEECD outcome ‘children having the best start to life to achieve optimal health, development and wellbeing’.

Furthermore, this would enable schools in rural, regional and remote Victoria to have a HPE specialist teacher and thus have the same opportunities as metropolitan schools, which is currently not the case. This directly relates to the Melbourne Declaration on Educational Goals for Young Australians (MCEETYA, 2008) and the recommendations of the Gonski Report (ABC, 2012). It is alarming the number of HPE specialists who are not qualified as specialists working in Victorian government primary schools and the number of principals who do not check for evidence of HPE units successfully completed. However, it is understandable as no specific primary HPE specialist course exists in Australia. Bachelor of Primary Education (Health and Physical Education) course and testamur would assist in improving this situation and is the second recommendation.

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No:75

**Impediments to participation in physical activities by female civil servants: The Nigeria experience**

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**Abstract**

*The study examined impediments to participation in physical activities among female civil servants in South Western Nigeria. Descriptive research design of the survey type was adopted for the study. The population consists all female Civil Servants in South West Nigeria, while the sample was 300 female civil servants stratified along junior and senior workers. The researcher randomly selected 90 senior female civil servants and 210 junior civil servants from all the six states of South Western Nigeria. The research instrument was a self-designed questionnaire which was validated by experts. The reliability of the instrument was determined through test retest method and a reliability co-efficient of 0.82 was obtained. The data collection was carried out by the researcher and research assistants in state secretariats in all the six states. The result showed that nature of work and engagement in domestic work at home by female civil servants are significant impediments to participation in physical activities. On the other hand, health status of female civil servants is not a significant impediment to participation in physical activities. Recommendations were made that employers of labour should always provide recreational materials for employees, and allow workers to close earlier in order to give them the opportunity of participating in physical activities.*

**Key Words:** health status, physical fitness, health investment, life style.

**Introduction**

Physical activity is generally defined as a form of bodily movement produced by the skeletal bones and muscles that expend caloric energy (WHO, 2010). According to Torabi and Luegers (2010), it is a vital component of maintaining a healthy lifestyle regardless of age or ability. Physical activity is a means of achieving physical fitness and also a means to prolong life. It is an important means for promoting healthy living. Jones, Ainsworth and Croft (1998) and Vuori (1995) posited that regular physical activity remains an important behavior of promoting health, postponing or preventing prevalent neuromuscular disorders such as mechanical low back pain and decreasing the risk of developing coronary heart diseases, hypertension, diabetes, osteoporosis, obesity and colon cancers. Adegun (2005) observed that physical activities occur naturally in both male and female and this is done to the demand of everyday living in terms of occupation as well as to keep the soul and body together. He sta-

ted further that the biological and social nature of human beings make it mandatory for mankind to engage in one form of physical activity from birth to death. However, these daily physical activities should be planned and organized in such a way that the activities are effective.

The roles played by physical activities in the life of man cannot be over emphasized because it serves as useful therapeutic measure. Akindutire and Oyeniyi (2010) observed that participation in physical activity is an antidote to promoting and prolonging individual's life. They posited further that for an individual to maintain high level of fitness there is need for constant involvement in physical activities which is the best investment in health as opposed to sedentary living. Justifying the need for physical activities by every individual Awosika (1992) opined that there is the need for relaxation in order to regain the lost energy; hence every being has the right to some private hours after the day's work.

The nature of or type of occupation of an individual determines the level of involvement in sports or physical activities. People who work round the clock like chief executives and others sparingly have time to relax or participate in physical activities. In the study carried out by Omolawon and Ibrahim in 2011 they discovered that occupational demand significantly determined sports participation among school teaching staff and also predict recreational sports participation among academic staff of tertiary institutions. Another study done by Adisa and Oloyede (2011) also found out that occupational demand is a significant inhibitor to recreational sports participation and college of education academic staff as they find it difficult to participate in recreational sports activities as a result of job demand.

Involvement in domestic work at home could also be an impediment to participation in physical activities by female civil servants, who are always involved in core domestic work at home. According to Humphrey and Ruseski (2007) the commitments of married persons to household work always pose restriction to their regular participation in leisure time physical activities. Many female civil servants who do not have house helps personally engage in a lot of domestic works such as washing, sweeping and others to list a few which may deprive them the opportunity of participating in physical activities.

Health status of an individual is also an important factor in participation in physical activities. Therefore, the health status of female civil servants could be a great determinant in participation in physical activities. Also participation in physical activities either by male or female has always been a significant factor in maintaining active lifestyles, and thereby prolong life if it is done constantly and consistently. Yakasai and Nijidda (2009) discovered that

there is significant impact of participation in recreational activities on healthy living. In fact studies have shown that many people that have certain health challenges like diabetes and others have used physical activities to reduce the effect of these problems on their individual healths. In a study carried out by Adisa and Oloyede in 2011 among academic staff of colleges of education they discovered that health status is a significant inhibitor to participation in recreational sports because the respondents are of the opinion that participation in recreational activities could aggravate their health problems. Omolawon and Ibrahim (2011) found out that health status is a significant predictor of recreational sports participation.

Oyeniya (2002) stated that those who are busy might find it difficult to spare time for participation in sports which is quite dangerous to their health. He observed further that some who have the opportunity of participating in sports or physical activities still consider it as waste of precious time. Also Chubb and Chubb (1981) declared that the work people do has a considerable impact on their leisure participation. They opined further that the number of hours they work when they work and the vacation to which they are entitled, the nature of the job and other benefits they receive all affect the nature of leisure pattern. In view of the importance of physical activity in the life of man, tight schedule of work should not be the reason why people should not participate in physical activity. This is because physical inactivity is considered a risk factor for various communicable diseases that can be linked to 1 million deaths worldwide (WHO, 2010).

### **Statement of the Problem**

Observations have shown that some people find time to participate in physical activities. However, the number of these participants are relatively small, that specialists like exercise therapists, physical educators, health educators medical doctors, and others are now concerned about this apathy. This concern about the non-challant attitude of female civil servants towards physical activities justifies the need for this study. Therefore, this study was carried out to determine whether nature of work, engagement in domestic work and health status of female civil servants are impediments to participation in physical activities in South Western Nigeria.

### **Hypotheses**

The following hypotheses were raised and tested:

1. Nature of work of female civil servants is not a significant impediment to participation in physical activities.

2. Engagement in domestic work at home by female civil servants is not a significant impediment to participation in physical activities.
3. Health status of female civil servants is not a significant impediment to participation in physical activities.

### Methodology

Descriptive research design of survey type was adopted. The population was all female civil servants in South Western Nigeria consisting of Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States. The sample for the study was 300 female civil servants in state secretariats that were selected through stratified sampling techniques. The sample consisted of 210 junior and 90 senior civil servants. Self-structured questionnaire was the instrument used for data collection. The instrument consists of two sections A and B. Section A asks questions about the demographic data of the respondents while section B asks questions on the variables identified for the study such as nature of work, engagement in domestic work at home and health status. The instrument was validated by experts in Physical Education and Measurement and Evaluation. The reliability coefficient of the instrument was done through test retest method. The data collected was subjected to Pearson Product Moment Correlation statistics and a reliability coefficient of 0.82 was obtained. Collection of data was carried out through the help of research assistants at the six state secretariats in South Western Nigeria. The data collected were analysed through mean score, frequency counts percentages and inferential statistics of chi-square at 0.05 alpha level.

### Results

Table 1 presents the results of data analysis on the basis of hypotheses 1-3.

**Table 1: Impediment to Participation in Physical Activities By Female Civil Servants**

S/N	ITEM	Agree	%	Disagree	%	$\chi^2$
	<b>NATURE OF WORK</b>					
1	Am always busy at work and too tired after work so I don't have time for physical activities	212	70.67	88	29.33	
2	I'm always in sitting position in the office and	126	42	174	50	

	hardly walk around					
3	I always work throughout the week which makes it difficult for me to participate in physical activity.	232	76.33	68	22.67	<b>21.32</b>
	<b>X</b>	<b>190</b>	<b>63.33</b>	<b>110</b>	<b>36.67</b>	
	<b>DOMESTIC WORK</b>					<b>5.34</b>
4	I have no domestic servant hence I do all domestic work so no time for physical activities.	234	78	66	22	
5	I always have enough domestic work to do and other office assignment hence no time for physical activities	106	35.33	194	64.67	
	<b>X</b>	<b>170</b>	<b>56.67</b>	<b>130</b>	<b>43.33</b>	
	<b>HEALTH STATUS</b>					<b>1.62</b>
6	I always have body pains after participating in physical activities.	183	61.11	117	38.89	
7	At my age I don't always feel at ease after participating in physical activities	139	46.33	161	53.67	
	<b>X</b>	<b>161</b>	<b>53.67</b>	<b>139</b>	<b>46.33</b>	

Critical value = 3.84 at 1 df

Item 1-3 are on nature of work as impediment to participation in physical activities by female civil servants in South Western Nigeria. The mean score showed that 190 (63.33%) agreed while 110(36.67%) disagreed their nature of work served as impediments to participation in physical activities by female civil servants. The calculated chi-square gave a value of 21.32 which is greater than the critical value of 3.84 at 0.05 alpha level. Therefore, the null hypothesis was rejected. Thus, the nature of work of female civil servants is a significant impediment to participation in physical activities.

Items 4 and 5 on domestic work at home as impediment to participation in physical activities by female civil servants in south Western Nigeria. The mean score showed that 170 (56.67%) respondents agreed while 130(43.33%) respondents disagreed. The calculated chi-



square of 5.34 is greater than the critical value of 3.84 at 0.05 alpha level. Therefore, the null hypothesis was rejected. Thus, domestic work at home is a significant impediment to participation in physical activities by female civil servants.

Items 6 and 7 are on health status as impediment to participation in physical activities by female civil servants in South Western Nigeria. The mean score showed that 161(53.67%) respondents agreed while 139(46.33%) respondents disagreed. The calculated chi-square of 1.62 is less than the table value of 3.84 at 0.05 alpha level. Therefore, the hypothesis was not rejected. Therefore, health status is not a significant impediment to physical activities by female civil servants.

### **Discussion**

The result of the findings showed that nature of work is a significant impediment to participation in physical activities by female civil servants in South Western Nigeria. The result is in line with the findings of Omolawon and Ibrahim (2011) discovered that occupational demands significantly determine sports participation among school teaching staff. The finding corroborates the findings of Chubb and Chubb (1981) who discovered that the work people do has a considerable impact on their leisure participation. They stated further that the number of hours they work, when they work and vacations to which they receive all affect the nature of their leisure pattern. It is therefore pertinent to note that non-participation in physical activity may be dangerous to individuals health, since a lot of health problems are associated with inactivity. Also Oyeniyi (2002) stated that those who are busy might find it difficult to spare time to participate in physical activities which is quite dangerous to their health.

The finding also showed that engagement in domestic work at home is a significant impediment to participation in physical activities by female civil servants in South Western Nigeria. This finding affirms the result of the study carried out by Humphrey and Ruseski (2007) that discovered that the commitments of married persons to household work always pose restriction to their regular participation in leisure time physical activities. The result also is in consonant with the findings of Oyeniyi (2002) who stated that in view of the importance of physical activity to man, tight schedule of domestic work should not be a barrier to physical activity. Adegun (2005) also posited that physical activity occurs naturally in both male and female and this is done to the demands of everyday living in terms of occupation as well as keep the soul and body together. The result contradicts the earlier findings of Adisa and Oloyede who discovered that health status is a significant inhibition to participation in recrea-

tional sports among college of education workers. The difference in the result may be due to the nature of the respondents used and their work environment.

The findings also showed that health status is not a significant impediment to participation in physical activities by female civil servants in South Western Nigeria. The result justified the importance of physical activities in promoting healthy living. Regular physical activity remain an important behavior of promoting health, postponing or preventing prevalent neuromuscular disorders such as mechanical low back pain and decreasing the risk of developing coronary heart diseases, hypertension, diabetes, osteoporosis, obesity and colon ulcer (Joner, Ainsworth & Croft, 1998; Vuori, 1995). Akindutire and Oyeniya (2010) posited that participation in physical activities is an antidote to prolonging individual's life.

### **Conclusion**

The findings of the study revealed that nature of work and engagement in domestic work at home by female civil servants are significant impediments to participation in physical activities. However health status of female civil servants is not a significant impediment to physical activities.

### **Recommendations**

In view of the findings and the importance of physical activities to an individual the following recommendations were made.

- 1) Employers of labour should always provide recreational materials and facilities for employee so as to allow them participate in physical activities during free period.
- 2) A day in a week should be set aside for regular participation in physical activities in order to keep workers fit at all time.
- 3) Female civil servants should endeavour to regularly take to long trekking, jogging and other exercises to prevent sudden death and illness associated with inactivity.
- 4) Female civil servants should not allow domestic work disallow them from participating in physical activities.

### **Acknowledgement**

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**PSYCHOLOGICAL VARIABLES AS PREDICTORS OF PARTICIPATION IN  
INTRAMURAL SPORTS AMONG STUDENTS WITH SPECIAL NEEDS OF  
COLLEGES OF EDUCATION IN SOUTHWESTERN NIGERIA**

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**Abstract**

*Globally, students of various status participate in Intramural Sports (IMS) because of physical, social, mental and psychological benefits. Despite these benefits, Students with Special Needs (SWSN) have not been participating in IMS of colleges of education in Southwestern Nigeria. This study, therefore, investigated psychological (interest, career choice, fear of injury and fear of academic failure) variables as predictors of participation in IMS among SWSN of colleges of education in Southwestern Nigeria. Descriptive survey research design was used in this study, while multistage sampling technique was adopted to select 532 respondents: SWSN (n=378) and staff (n=154) from purposively selected two federal and five state colleges of education in Southwestern Nigeria. Two instruments were used: Psychological Variable Scale (r=0.84) and Participation in Intramural Sports Scale (r=0.86). Two hypotheses were tested at 0.05 level of significance. The predictor variables jointly accounted for 20.5% of the variance. The null hypotheses tested were rejected which implied that psychological variables of interest, fear of injury and fear of academic failure were both relatively and compositely significant to predict SWSN participation in intramural sports of colleges of education in Southwestern Nigeria. Therefore, it was recommended that director of sports and coaches in the colleges should sensitize the SWSN on the need not to entertain fear of sustaining injury and to embark on massive promotion of intramural sports among the SWSN by ensuring that priority is given to areas of interest of these students according to their ability and needs.*

**Key words:** *Psychological variables, Intramural sports, Students with special needs*

**Introduction**

Intramural sports have important part to play in the life of students with special needs by helping them to develop physically, socially, mentally and psychologically. Despite these benefits, students with special needs are more restricted by teachers and parents, in intramural sports participation; as a result they are been denied health benefits of this programme than their peers without disabilities. Intramural sports refer to any form of organized physical activities within an institution or establishment for all members irrespective of their status either for recreational or competitive purpose. Intramural sports is an integral part or phase of physical education that concerns itself predominantly with physical activities, either competitive or non-competitive, in which students, staff and other members of the institution or organization participate or are involved in (Asagba, 2003). The

participants are sometimes semi-skilled individuals, although, a few could be highly skilled in one or two sports.

Intramural sports, in institutions of learning today is no doubt the most universally approved phase of extra-curricular activities for all students, irrespective of their status and condition. Bucher and Krottee (2002) asserted that intramural competitions are basic to sound education because they form a basis for the application of skills that will be used during leisure, both in the present and in the future. It is then desirable that intramural sports for the students with special needs should receive more emphasis than they are now getting at the college and university levels because skills learned and developed in the instructional programme can be put to use in a practical situation, with all the fun that come from such competitions.

Participation in intramural sports should not be for students without disability only, students with special needs should equally participate in such competitions because of its relevance to human development and optimum health of the participants irrespective of their conditions. In support of the above view, Sharkey & Gaskill (2007) opined that the negative health outcomes of a sedentary lifestyle such as cardiac risk factors, obesity and are susceptible to infections, have been widely acknowledged and likewise, never before have so many studies addressed the many positive aspects surrounding the health benefits of activity and fitness. Also, intramural sports is of immense therapeutic value, and plays an essential part in psychological and social rehabilitation of people with special needs. It has been identified as a means of increasing positive attitudes towards students with special needs as a result of opportunities to interact with non disabled peers.

In the past, the term “special needs” was used only for students with high mental ability. Even today, many people still use the word in the limited sense. But in special education, special need is an umbrella term which embraces individuals that deviate either below or above the group norm to the extent that they require special education services in order to attain their potential. Ozoji (2002) agreed that the special needs individual is one who has special learning needs, either because of significant sensory deficit or unusual high intellectual ability that is not properly addressed in the regular school programme or both. The individual is considered “special needs” in terms of his significant deviation in sensory functioning or intellectual ability that is either substantially below or above average.

Participation in sporting activities, such as intramurals has been linked with many theoretical approaches. One of these is Self-Determination Theory (SDT) which has gained prominence in the sports and exercise field to assist in understanding human motivation. Self-determination theory establishes the existence of different types of motivation, depending on the level of self-determination (that is, if the origin of the motivation is more or less from within the person), which form a continuum ranging from intrinsic motivation (the most self-determined type of motivation) to amotivation (the less self-determined type).

Sequel to the above theory, participation in intramural sports by the students with special needs in Colleges of Education in Southwestern Nigeria could be traced to psychological variables, in which interest is a major psychological motive that spurs students into action in participating in sports. It is the duty of a coach or trainer to ascertain the level of interest of the students and thus

take care of them. Corman (2002) suggested that the activities chosen by the teacher should suit the age and ability of the students. Closely related to this, is choosing sports as a career which involves a bundle of reasons such as interest, self efficacy, role model, peer influence, benefits incurred, parental influence, joy and excitement derived in sports make way for students to participate in intramural sports.

Fear of sustaining injury before and during intramural sports may also, discourage students with special needs from participating in the programme. Morakinyo (2010) reported that the art of playing volleyball at whatever level expose the parts of the body like the ankle, fingers, elbows, knees and others to minor and complex injuries. In a similar vein, Onohwakpor and Eboh (2006) said that fear of injury is a significant barrier to participation in recreational exercises. Therefore, fear of sustaining injury which may aggravate the conditions of special needs students either, during practice or competition proper may affect their participation in intramural sports. It is for this reason that this was carried to ascertain psychological variables such as interest, career choice, fear of injury as predictors of participation in intramural sports among students with special needs of Colleges of Education in southwestern Nigeria.

## **STATEMENT OF THE PROBLEM**

Students with special needs are expected to participate in general sports and particularly in intramural sports because of health, physical, mental, social and psychological inherent values. Sports participation in most of the Colleges of Education seems to be the exclusive right of students without special needs, especially in intramural sports such as Provost Cup; Registrar cup and Dean's cup. Unfortunately, the students with special needs seem to be marginalized. Reports gathered by the researchers from sports unit of the Colleges of Education in southwestern, Nigeria during preliminary investigation showed that the students with special needs rarely participate in intramural sports, they live largely sedentary life.

Going by the reports given from the sports unit of the Federal College of Education (Special) Oyo, since the commencement of intramural sports in 1997, students with special needs have not been included in intramural sports despite the over whelming population of 288 special needs students compared to average number of 310 able students that are yearly involved in both football and athletics events of intramural sports in the college. Meanwhile both able and special needs students paid the same fees for sports development while the latter are yet to enjoy what they paid for. It is on this note that the researchers investigated psychological variables as predictors of participation in intramural sports among students with special needs of Colleges of Education in Southwestern Nigeria, focusing on the following variables: interest, career choice, fear of injury, fear of academic failure and participation in intramural sports.

## **Hypothesis**

The following hypotheses were tested in this study:

1. Psychological variables of (Interest, Career choice, Fear of Injury and Fear of Academics failure) will not be significant predictors of participation in intramural sports among students with special needs in Colleges of Education in Southwestern Nigeria.
2. There will be no significant composite contribution of the psychological variables as predictors of participation in intramural sports among students with special needs in Colleges of Education in Southwestern Nigeria.

## Methodology

The descriptive survey research design was adopted for this study. The population for this study consists of students with special needs, academic and non-academic staff of Colleges of Education in Southwestern Nigeria. There are eleven (11) colleges of education owned by Federal and State governments in Southwestern Nigeria. The sample size for this study was five hundred and thirty-two (532) respondents, of both staff and students with special needs. The multi-stage sampling procedure was used to select the samples. In the first stage, purposive sampling technique was used to select the federal and state colleges of education. In the second stage, 50% of the federal colleges of education were selected through purposive and quota sampling techniques while simple random techniques, using fish bowl with replacement to select state colleges of education from the southwest states. Finally, the total sampling technique was used to select 100% of special needs students and 100% of staff(sports committees, coaches and lecturers). In conducting the study, self developed questionnaire, with reliability Co-efficient for Psychological Variables Scale (PVS) was 0.84 and Participation in Intramural Sports Scale (PISS) has 0.86 reliability value were used to collect data for the study.

The demographic data of the respondents were analyzed with frequency counts and percentages while multiple regression was used to test the hypotheses set at 0.05 alpha level.

## Analysis, Results and Discussion of Findings:

**Table 1: Frequency counts and corresponding percentages showing the sex distribution of the respondents**

SEX	FREQUENCY	PERCENTAGE
Male	302	56.8
Female	230	43.2
<b>Total</b>	532	100.0

The above table 1 indicated the frequency and percentage distribution and of respondents according to their sex. A total number of 302 (56.8%) respondents were males while 230 (43.2%) were females. This showed that males were more than females by 72 (13.5%) respondents.

**Table 2: Frequency counts and corresponding percentages showing the status of the respondents**

<b>STATUS</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Sports Directors	6	1.1
Coaches	13	2.4
Sports Committee Members	71	13.3
Lecturers	64	12.0
students with special needs (Physically)	152	28.6
students with special needs (Visually)	62	11.7
students with special needs (Hearing)	164	30.8
<b>Total</b>	<b>532</b>	<b>100.0</b>

Table 2 above showed that 6(1.1%) respondents were sports Directors, 13(2.4%) were coaches while 71(13.3%) were sports committee members and 64(12.0%) were lecturers. The table, further revealed that, 152(28.6%) respondents were physically impaired students, 62(11.7%) were visually impaired students while 164(30.8%) were hearing impaired students.

Summarily, 378(71.1%) respondents were students with special needs while 154(28.9%) were both academic and non academic staff. The population of students with special needs is an indication that they should be included in the intramural programme.

**Hypothesis One: Psychological variables of (Interest, Career choice, Fear of Injury and Fear of Academics failure) will not be significant predictors of participation in intramural sports among Students with special needs of Colleges of Education in Southwestern Nigeria.**

**Table 3: Relative contribution of Psychological variables as predictors of Participation in Intramural Sports among Students with special needs.**



Psychological Variables	B	Standard Error B	Beta $\beta$	T	Sig t	Remark
Interest	.378	.063	.242	5.969	.000	S
Career choice	-.008	.046	-.007	-.168	.867	NS
Injury	.442	.066	.272	6.737	.000	S
Academic	.220	.052	.180	4.234	.000	S

NOTE: S= Significant

NS= Not Significant

Table 3 above revealed that the B-value of Psychological independent variables were Interest (.378), Career choice (-.008), Fear of injury (.442) and Fear of academic failure (.220) respectively. These showed the level of contribution of psychological variables to the prediction of participation in intramural sports. Their standardized regression weight Beta ( $\beta$ ) were Interest (.242), Career choice (-.007), Fear of injury (.272) and Fear of academic failure (.180) which showed relationship between psychological variables and participation in intramural sports. Their t-values were Interest (5.969), Career choice (-.168), Fear of injury (6.737) and Fear of academic failure (4.234), at significant levels of Interest (.000), Career choice (.867), Fear of injury (.000) and Fear of academic failure(.000) respectively.

The table showed that the null hypothesis was statistically significant among psychological variables of Interest, fear of injury, and fear of academy failure. The null hypothesis was therefore rejected by these three psychological variables, while on the other hand, this table also showed that the null hypothesis was statistically not significant on career choice hence the acceptance of null hypothesis on this variable alone. Precisely, the result from psychological variables of Interest, fear of injury and fear of academic failure had significant effect on participation in intramural sports among students with special needs of Colleges of Education in Southwestern Nigeria while psychological variable of career choice had no significant effect on participation in intramural sports among students with special needs of Colleges of Education in Southwestern Nigeria.

**Hypothesis Two: There will be no significant composite contribution of the psychological variables as predictors of participation in intramural sports among special needs students of Colleges of Education in Southwestern Nigeria.**

**Table 4: Shows composite contribution of the Psychological variables as predictors of participation in intramural sports among Students with special needs of Colleges of Education in Southwestern Nigeria.**

Model	Sum of Squares	DF	Mean Square	F	Sig.	Remark
Regression	14936.199	4	3734.050	34.015	.000	Sig.
Residual	57852.358	527	109.777			
Total	72788.557	531				

R = .453

R<sup>2</sup> = .205

Adj R = .199

The table above revealed that the composite contribution of Psychological Variables to predict participation in intramural sports among students with special needs of colleges of education in Southwestern Nigeria was significant. It could be observed that the correlation is strong (R = .453). R-square indicated that 20.5% of the variance accounted for the Psychological independent Variables. Also, the table showed the effectiveness of the prediction with the F-ratio 34.015 and significant alpha (.000).

### Discussion of the findings

The results revealed that psychological variable of interest significantly predicted participation in intramural sports by the students with special needs of Colleges of Education in Southwestern Nigeria. This was in line with Itu (1995) who opined that the interests and needs of students should be placed first and foremost, not the interest of the teacher or coach during sporting activities. Similarly, Roberts (2003) posited that most children participate in sports to have fun, other reasons most of them cited are to do something they are good at, improves skills, get exercise, become fit, be with friends and make new friends and compete. Interest is a major motive that children have for sports participation therefore interest of students with special needs should be aroused in order to involve them in intramural sports.

The psychological variable of career choice had no positive relationship with participation in intramural sports among students with special needs of Colleges of Education in Southwestern, Nigeria. Therefore, psychological variable of career choice is not a significant predictor of participation in intramural sport among students with special needs of Colleges of Education in Southwest, Nigeria. Choosing sports as a career is attributed to many reasons such as interest, role model, peer influence, benefits incurred, parental influence, joy and excitement derived in sports and others which influence students choice but were not found in students with special needs because of their nature. This might not account for their non participation. It is evident that many students are in the wrong discipline and the outcome of their continued existence in such discipline leads to poor performance (McMahon, 2001). Therefore, there is need to provide students with special needs with initial gui-

dance and counseling in their choice of career with particular reference to choice of sport as a career, and this cannot be over emphasized when it comes to participation in sports.

Psychological variable of fear of injury had positive relationship with participation in intramural sports among the students with special needs of Colleges of Education in southwestern Nigeria. Morakinyo (2010) reported that, the art of playing volleyball at whatever level expose the parts of the body like the ankle, fingers, elbows, knees and others to minor and complex injuries. Special needs students might have in their mind the fear of sustaining injury which might aggravate their conditions, as a result they would be discouraged and refrained from participating in intramural sports. Similarly, Nancy and Paul (2008) opined that, although athletes with disabilities have rates of injury similar to those of other athletes, fear of injury frequently remains a barrier to participation in sports.

The psychological variable of fear of academic failure will significantly predict participation in intramural sports among the special needs students of colleges of education in southwest, Nigeria. In contrast to this finding, Francois and Roy (2008) opined that physical activities can be added to the school curriculum by taking time from other subjects without risk of hindering students' academic achievement. On the other hand, adding time to "academic" or "curricular" subjects by taking time from physical education programmes does not enhance grades in these subjects and may be detrimental to health. Thus, any intramural sports programme introduced into the curriculum of the students with special needs in colleges of education irrespective of its contribution to the totality of education should not be seen as jeopardizing academic work.

To further give credence to the findings above, this research work has shown that psychological variables accounted for non- participation in intramural sports among students with special needs of colleges of education in Southwestern Nigeria, because of the psychological challenges facing the students with special needs.

## **Conclusion**

It was concluded, based on the findings of this study that psychological variables of interest, fear of injury, and fear of academic failure had contributed to non-participation in intramural sports among Students with special needs of Colleges of Education in Southwestern Nigeria, while career choice on the other hand did not contribute to non-participation in intramural sports among students with special needs of colleges of education in Southwestern Nigeria.

## **Recommendations**

The following recommendations were made in accordance with the findings from this study;

1. There should be massive promotion of intramural sports among the students with special needs in the college of education by ensuring that priority is given to areas of interest of these students according to their ability and needs.

2. Director of sports and coaches in the college should sensitize the students with special needs on the need not to entertain fear of sustaining injury that would aggravate their condition but to rather see intramural sports as a means of improving their health status.

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**PHYSICAL ACTIVITY, SPORT AND  
HEALTH SCIENCES  
ORAL PRESENTATION**

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## **An Assessment of the Effectiveness of Lawma towards Eradication of Health Hazards among Lagosians**

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### **Abstract**

Studies have confirmed that health and safety issues arise from improper solid waste management and that insect and rodent vectors are attracted to the waste and can spread diseases which are cholera, dengue, hepatitis etc. Several research studies on waste management have been carried out, but there is a scarcity of such among Lagosians. This study therefore assessed the effectiveness of LAWMA towards eradication of health hazards among the residents in Lagos. A descriptive survey research design was used for the study. Stratified sampling technique was used to divide the residents in Somolu Local Government into groups, while proportionate sampling technique was adopted to select 800 participants and purposive sampling technique was used to pick 100 staff of LAWMA as a sample for the study. The instrument used was a questionnaire. Data were analyzed using Chi-square to test the five hypotheses. The findings showed that waste generation constitutes health problems to Lagosians ( $X^2 = 122.71$ ,  $p < 0.05$ ), provision of adequate facilities greatly improves waste management ( $X^2 = 47.30$ ,  $p < 0.05$ ), enlightenment and awareness influence waste management ( $X^2 = 23.30$ ,  $p < 0.05$ ), competent and qualified personnel promote proper waste management ( $X^2 = 16.60$ ,  $p < 0.05$ ) and indiscriminate waste disposal affects input of LAWMA ( $X^2 = 76.03$ ,  $p < 0.05$ ). This study revealed that the Lagos State government is doing a great job. It was concluded that the government should continue intensifying their efforts. The following recommendations are made; government should create a comprehensive action plan and discourage single use bags within the city.

## **Physical Performance Tests in Light of Social Background and Nutrition**

Margit Borkovits

### **Abstract**

The concept of future-oriented P.E. is scientifically based on the analysis of communicative, creative and cooperative activities of the human complex. Lack of exercise is the main risk factor of obesity. The main problem in most cases is not eating too much, but doing too little, or absolutely no exercise. For this study we collected data from 281 upper school students, from four institutions. We approached the unhealthy nutrition of students in two different ways. First, we asked how often they had consumed healthy and unhealthy food and drinks on a daily basis. Furthermore, we asked questions multiple times about the typical frequency of consuming unhealthy (junk) food, traditional Hungarian, greasy meals, and healthy food. Before investigating the relations between the fundamental questions of this analysis, we had to check how our collected data interlocked with the Hungarian status defined previously on a larger sample. Then, we also had to check how our extended family wealth scale correlated with the family wealth scale. Children heavier than optimal have 4 times higher chance of getting poor or very poor qualification in physical endurance, than the children with optimal, or smaller body mass index (Fisher test,  $p < 0,001$ ). It is clear that there is relation between the education of the parent and the child's attitude towards P.E. and school. The majority bows to their fate, lacking motivation for school activities.



## **Determinants of Wellness and Health Consequences of Female Genital Mutilation among Women of Childbearing Age in Ife Area of Osun State, Nigeria**

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<sup>a</sup> *Obafemi Awolowo University, Nigeria*

### **Abstract**

This study investigated the determinants of wellness and health consequences of female genital mutilation (FGN) among women of childbearing age in Ife East local government area (LGA). Descriptive survey design was adopted for the study; the population consisted of childbearing women in Ife East LGA. Purposive sampling techniques were adopted in selecting a total sample size of 400 women of childbearing age (WCB) from the population. A self-structured questionnaire, which was duly validated and found reliable with its reliability ascertained through test re-test method with a reliable co-efficient of 0.86 was used to elicit information from the respondents. The data collected were subjected to appropriate descriptive statistics of frequency counts and simple percentages. The result revealed that the research questions on educational factor and socio-cultural factor with 54.5% and 59.5% respectively were strong determinants of FGN, while religious factors with 41% was less recognized as a determinant. More than half of the WCB (55.5%) agreed that the health consequences of FGM are numerous and of serious consequences to wellness and longevity of women. The findings will be discussed and recommended that the reproductive health workers and other health experts should emphasis the negative impacts of FGM. It was be recommended that policy makers should organize seminars, workshops and health talks with community leaders and all health advocates bringing to their awareness the ills of FGM and other harmful practices to enhance wellbeing and longevity of WCB age and women generally.

## **Impact of 18-Week Physical Conditioning on Selected Health Related Variables of Female Students of the University of Delhi**

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### **Abstract**

Many research findings have shown that a lack of physical activity and negative lifestyle habits are a serious threat to an individual's health. Some popular health indicators include height, weight, Body Mass Index, lean body weight and fat percentage. Hence, the present investigation was conducted with the following objectives: (1) To describe the selected health related variables of female students of the University of Delhi; and (2) To study the impact of a physical conditioning program on selected health related variables of female youth. The sample size for the study was 78, with three groups of 26 samples (the mean age of the sample was  $19.76 \pm 0.69$  years). The variables included stature/height (cm.), body weight (kg.), body mass index (BMI), lean body weight (LBW), body fat (BF), and percentage body fat (%BF). Mean and standard deviations were computed to describe the selected health related variables while analysis of co-variance (ANCOVA) was applied to test the variability of covariance for the effect of the conditioning program on selected groups during different stages of testing in a longitudinal paradigm. The paired t-test comparison for mean difference was done as post-hoc analysis. The level of significance chosen for testing the hypothesis was .05. The study concluded that physical conditioning had a significant impact on the health related variables of female students of the University of Delhi.

## **Relationship between Selected Anthropometric Variables and Fosbury Flop Jumpers of India**

Anil Kumar Kalkal <sup>a</sup>

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### **Abstract**

The present investigation was conducted to study the relationship between selected anthropometric characteristics of the Fosbury Flop jumpers and high jump performance of male athletes. Thirty male Fosbury Flop jumpers, age ranging between 18 to 28 years, who participated in various Inter-University and National Competitions served as the sample for the study. The anthropometric variables included height, weight, sitting height, arm length, upper arm length, fore arm length, thigh length, subscial length, foot length, foot breadth, shoulder width, thigh girth, calf girth, chest circumference and fat percentage. The measurements were taken by the researcher, as per the procedures described by Sodhi and Sidhu (1984). Mean, standard deviation, Pearson's Product Moment Correlation and Stepwise Regression Analysis were computed to analyze the data statistically. The level of significance to check the obtained correlation and multiple correlation was set at .05 level. The study concluded that the high jump performance of male Fosbury Flop jumpers was significantly related to Upper-arm length (0.39) and shoulder width (0.41), whereas other anthropometric variables were not significantly correlated with high jump performance.

## **Relationship between Level of Physical Activity and Primary Dysmenorrhoea among Female Undergraduates of Lagos State University, Nigeria**

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<sup>a</sup> *Lagos State University, Lagos, Nigeria*

### **Abstract**

This study examined the association of physical activity (PA), body mass index (BMI), waist circumference (WC), and body surface area (BSA) with occurrence of PD. Matched case control experimental was the design, and a consecutive non-probability sampling technique was employed to get information on height and weight using height meter and a weighing scale respectively, while WC was measured with a tape measure. BMI and BSA were derived from measured height and weight using a standard formula. Data were analyzed using mean and standard deviation as well as cross tabulation and chi-square. All hypotheses were tested at 0.05. The mean ages of cases and controls were  $21.33 \pm 2.01$  and  $20.89 \pm 1.71$  while the mean BMI were  $22.65 \pm 2.7$  and  $22.53 \pm 2.7$  respectively, mean BSA were  $1.69 \pm 0.12$  and  $1.68 \pm 0.13$  for case and control respectively whereas mean WC were  $76.64 \pm 6.41$  and  $73.87 \pm 6.56$  respectively. PA was not significantly associated ( $P > 0.05$ ) with occurrence of PHD whereas WC, BMI, and BSA showed significant associations ( $p > 0.05$ ) with occurrence of PD. The odd ratio of individuals who were sedentary to those who were physically active having PD was 1.77, whereas the odd ratio individuals who were overweight to those who had normal weight having PD was 1.24. It was concluded that WC, BMI and BSA had a strong association with occurrence of PD and the most prevalent accompany symptom was lower abdominal pain. It was recommended that body weight should be controlled to reduce the chance of having PD.

## Systolic Blood Pressure Responses to Aerobic Exercise among HIV Positive Patients

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### **Abstract**

The study examines the effect of varied intensities of aerobic exercise on systolic blood pressure (SBP) among HIV/AIDS positive patients. Participants of mean age of 20.4 years were randomized into four groups. High intensity group (HIG), moderate intensity group (MIG), low intensity group (LIG) and control group (COG). SBP was measured at baseline (pre-exercise) and post-exercise (8 weeks). Analysis of variance (ANOVA) indicates a significant training effect on resting values of SBP ( $F[3,15] = 8.9, P < 0.05$ ). Sheffe post hoc analysis indicated that both HIG and MIG significantly differ from control ( $P < 0.05$ ). Dependent t- test indicates difference in HIG ( $t[7] = 6.5, P < 0.05$ ) and slightly in MIG ( $t[7] = 5.4, P < 0.05$ ). The study concluded that aerobic exercise is effective in reducing resting values of SBP, particularly the activities that are high intensity in nature. The study recommends that high and moderate intensity aerobic exercise should be used for improving the health condition of HIV/AIDS patients with regard to a decrease in resting values of SBP.

## **The Impact of a Mass Media Campaign on Immunization among Nursing Mothers in the Ezi Community of Delta State, Nigeria**

Christie Olokor <sup>a</sup>

<sup>a</sup> *Delta State University, Abraka, Nigeria*

### **Abstract**

This study focused on the impact of a mass media campaign on immunization among nursing mothers in Ezi Community in Aniocha North Local Government Area, Delta State Nigeria. It sought to ascertain the importance and relevance of the mass media in the immunization campaign programs among nursing mothers in remote areas, to improve the mortality and morbidity rates of infants through constant immunization programs. A self-structured questionnaire was employed to elicit responses from five sections of the locality, which were randomly selected - namely Ogbe-obi, Ogbe-Akwu, Ogbe-Ofu, Umolo and Ogbe Uwafu quarters. Chi-square was used to describe the data. The findings revealed that the government efforts in the sensitization of individuals on immunization campaign programs in rural areas were merely on the pages of reports not necessarily made available in rural areas. Nursing mothers' health information on immunization in these areas are left with town criers as Nigeria is a developing nation and has produced other sources through which health information is made available. Electricity is yet to be made stable in these areas and is therefore an unreliable source of power.

## The Effect of an Exercise Program on Hypertensive Rehabilitation

Adeloye Emily <sup>a</sup>, Ajao Adewale <sup>a</sup>, Adeniran Ogunsanya <sup>a</sup>

<sup>a</sup> *Ekiti State University*

### **Abstract**

This study investigated the effects of a three-month aerobic exercise program on the rehabilitation of hypertensive patients at the Lagos University Teaching Hospital. Eighty Hypertensive patients were randomly selected and used as subject for the study. Descriptive statistics of X, SD, and range as well as the inferential statistics of ANCOVA were the statistical tools employed for data analysis. The findings of this study indicated that aerobic exercises are effective in decreasing fat weight and improving body mass index of hypertensive patients when the program is well supervised.

## **Body Composition, Trunk Flexibility Changes during Sports Training among Football and Badminton players**

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### **Abstract**

In the present scenario, sports around the globe have become very competitive. Sport training is a process of preparation by sportsmen based on scientific and pedagogical principles for higher performance. The purpose of this study was to compare the body composition, flexibility and performances of football and badminton players using a pre and post-test. A group of 60 subjects were part of this study, with football players N=30, and badminton players N=30 selected randomly. The ages of the participants ranged from 19 to 22 years. Football and badminton training was initiated by the participants for 40 minutes twice a week, for 12 weeks. The tests that were used included ones for body composition (body mass index), and flexibility (sit and reach test). The mean and SD with regard to BMI of the football players from pre to post-test were (23.87+3.59) and (22.94+3.56), and flexibility (29.283+ 3.69) & (31.10+4.19) . The mean and S.D with regard to BMI of the badminton players from pre to post test were (22.33+2.77) and (21.19+1.14), and flexibility (24.17+5.37) & (25.83+5.19). It was concluded that both the groups with regard to body composition and flexibility had shown significant performance improvements from pre to post-test. It is further concluded that both the groups differed significantly with regard to body composition and flexibility performances. It was also determined that the football players had shown better performance in BMI and flexibility than the badminton players.



## The Effects of Dietary Patterns and Lifestyle on Cardiovascular Health

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### **Abstract**

The study investigated the effects of dietary pattern and lifestyle on cardiovascular health among students of College of Education, Agbor. A total number of 300 respondents were used for the study. A descriptive research design was employed in the study. Stratified sampling techniques was used to select respondents. The instrument for this study was a validated structure questionnaire. Percentage and inferential statistics of chi-square were used to test the formulated hypotheses at 0.05 alpha level. The findings revealed that many students perceived that dietary pattern and lifestyle have direct influence on cardiovascular health. The researchers recommend that students should avoid excess intake of food additives and dietary supplements. They should choose a diet that is moderate in total fat, and avoid diets rich in saturated fat and cholesterol and engage more in physical exercise.

## **Influence of Health Related Lifestyle on the Dietary Behavior of Male Adults in Corporate Establishments in Nigeria**

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<sup>a</sup> *University Of Ibadan, Nigeria*

### **Abstract**

Healthy life style is considered a significant factor in the total fitness and wellness of individuals in corporate establishments. Individual's healthy dietary behavior is the key element in preventing diseases and improving health. The study therefore investigated the influence of health related lifestyle on the dietary behavior of male adults in corporate establishments in Nigeria. The study adopted the descriptive survey design. The stratified and purposive sampling techniques were used to select 1,826 workers from 23 corporate organizations. Data were collected using a validated questionnaire, which yielded a test- re- test reliability coefficient of 0.76. Data were analyzed using Pearson product moment correlation co-efficient and multiple regressions. The result revealed a significant influence of health related lifestyle (smoking and occupational stress) on dietary behavior of male adults in corporate establishments in Nigeria. It is therefore recommended that organized fitness programs should be arranged for corporate workers in Nigeria.

## The Effect of 8-Week Swimming Exercises on Adolescents' Aerobic Powers, Respiratory Function and Body Balance

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The purpose of this study is to research the effect of 8-week swimming exercises on adolescents' aerobic powers, respiratory functions and body balance. Adolescent period is a period in which, there is rapid growth and development in humans' body. This is a special period that covers the passage from childhood to adulthood. The World Health Organization (WHO) defines 10-19 age group as adolescent, and 15-24 age group as youth period. This research was carried out on 26 healthy male adolescents. The mean age of the subjects was determined as  $12.58 \pm 0.86$  years. The subjects were divided into two groups: control and swimming group. The first measurements were applied and after 8 weeks the same measurements were applied for the second time. The study protocol was approved by the ethics committee of the Seljuk University, Physical Education and Sports Academy. Aerobic measurements of swimming group have shown an increase in the final test rather than pre-test ( $p < 0.05$ ) and there was decreasing in swimming group body fat percentage in the final test ( $p < 0.005$ ). In this study all the parameters of swimming and control group were given and there was no very significant effect in 8-week, week / 3 days exercise.

**Keywords:** Adolescent, Aerobic Power, Body Balance, Respiratory Function, Swimming

## Effect of 5-Weeks Shot-put Training on Body Mass Index of 12 – 14 years old Children

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### Abstract

The purpose of this study was to ascertain the effect 5-weeks shot-put training on the body mass index of 12 to 14 years old school children. A total of 20 secondary school students participated in the study with 14 male and 6 female. Using the international cut-off point for body mass index, all the 20 participants (12 – 14 years) were classified as being underweight and normal weight. Participants were tested before and after a 5-week weight training using object control subset paired sample t-test resulted in significant pre or post-test group difference in body mass index of underweight and normal weight participants. Both the BMI of male and female participants improved over time. The study demonstrates that the body mass index level is higher in underweight and normal weight participants after the shot-put training than before the training.

**Keywords:** BMI Shot - put training, Underweight, Normal weight

### Introduction

Weight problems including underweight, overweight, obesity abound among schoolchildren, globally. The rapid increase in under-weight has become a source of worry to many health experts because of its coexistence with obesity and chronic under-nutrition among schoolchildren in low income countries (Senbanjo & Oshikoya, 2010). Children normally follow a predictable course of weight gain as they grow. Deviations from this course, specifically a significant weight loss or a change from the previous pattern of weight gain, can indicate a problem. There are various reasons that a child could be underweight, overweight and obese for his or her age and height. Perhaps the child is an extremely picky eater, has a super-fast metabolism, or is just so tall that they never seem to be able to develop much of a layer of fat. Obviously, there can be medical reasons that cause a child to remain underweight, as well (Goldbloom, 2003). Child's weight status is a cumulative effect of the physical inactivity, nutritional and health problems (WHO, 2000). For many of them inadequacies of the quality and quantity of food they eat are the prime causes of the weight problems which often go un-

noticed since assessment of weight status seems not considered a priority in children in the developing countries.

There may be far more underweight children in developing countries than thought, which implies that those who are too thin may face a greater threat to their health as those who are too fat. Despite the widespread and well-documented alarm about the rising obesity epidemic among today's schoolchildren, being underweight is also a serious and under-recognized problem among today's schoolchildren in developing countries. Being underweight will cause a whole bunch of health problems like the absence of menstrual period in a girl during pubescence and that is only beginning of the hell that anorexia put the individual's body through. If one is overweight or obese the individual may develop hypertension, and under the risk of other diseases such as aneurysm atherosclerosis and so on (Mackay & Mensah, 2004).

To de Onis & Blossner (2000), rapidly increasing prevalence of overweight and obesity among school children in developing countries, with prevalence of overweight in countries such as Egypt, Malawi, Uzbekistan and Nigeria exceeds that of United States. In a recent study among urban teenagers in Lagos, Nigeria, the prevalence of overweight and obesity were 3.7% and 0.4% respectively (Ben-Bassey, Oduwale & Ogundipe 2007). The negative impact of underweight, overweight, and obesity on body mass index, physical fitness and motor abilities of children age 12 to 14 years cannot be overemphasized in this study.

Underweight is a term describing a human whose body weight is considered too low to be healthy. The definition usually refers to people with a BMI, or a weight 15% to 20% below that normal for their age and height group (Mahan, 2000). Obesity is a condition where excess body fat negatively affects a child's health or wellbeing. Obesity is a medical condition in which the BMI is above that normal for their age and height group, or excess body fats has accumulated to the extent that it may have adverse effect on health, leading to reduced life expectancy and increased health problems (Martins, 2003).

The BMI is the internationally accepted standard measurement of overweight and obesity. The weight of a person (in kilograms) divided by the square of the height of that person (in meters); used as indicator of whether or not a person is over- or underweight or obese (Deurenberg, Westrate, & Seidell, 1991). To Cole, Bellizzi, Flegal, & Deitz (2000), a boy of 9 years with Body Mass Index (BMI) of 14.35 is mild thinness underweight, 19.10 is overweight, and 22.77 is obese. A boy of 14.5 years with BMI of 16.69 is mild thinness underweight, 22.96 is overweight, and 27.98 is obese. In the same vein, a girl of 9 years with a BMI of 14.28 is mild thinness underweight, 19.07 is overweight and 22.81 is obese. While a girl of 14.5 years with a BMI of 17.18 is mild thinness underweight, 23.66 is overweight, 28.87 is obese. Underweight show top range (up to 12.58, up to 16.98 etc.) while ranges for overweight and obese show the bottom range (from 17.15, from 19.30 etc.). Children with BMI scores that fit between the top range for underweight and the bottom range for overweight are classified as being in the normal weight.

To Australian Bureau of Statistics, (2013) BMI calculations for children are based on the half year cut-off points, as these are considered to provide an essentially unbiased estimate of prevalence. A child who is recorded as being seven years old may just have turned eight, or may be shortly turning nine, so the half-year (.5) cut-off provides a mid- point across all eight years old in a study. There is a tendency for children to incubated health related behaviors into adulthood. Therefore, determining the epidemiology of physical activity among children as a tool for preventing underweight, overweight and obesity has become imperative. Despite the established evidence of values of physical fitness and exercise training, many Nigerians including the school pupils and students have not realized the need to participate. It has been noticed that overweight and obese children are unable to successfully engage in physical activity, and has limited physical abilities.

Numerous studies have been carried out on the effect of exercise on the body mass index of the participants. Weight lifting exercises are effective in helping to improve muscle tone as well as helping with weight gain (Men's Health, 2010). Weight lifting has also been shown to improve bone mineral density (Gleeson, Protas, Leblanc, Schneider, & Evans).

In another study, Emeahara, Abass, Nwankwo, Ajuluchukwu & Oke (2007) investigated the effects of 3-month aerobic exercise programme on body weight, percent body fat, and body mass index of cardiac patients at the Lagos University Teaching Hospital. Eighty three cardiac patients were randomly selected and used as subject for the study. Descriptive statistics of X, SD and range; as well as the inferential statistics of ANOVA were tools employed for data analysis. Results indicated that the aerobic exercise (walking and jogging) significantly lowered the weight of the experimental group. Also, BMI of the experimental subjects decreased significantly). Previous studies of obesity in Nigeria have focused on the conditions and prevalence of obesity. Little or no research has been carried out to determine the effect of a 5-week shot-put training on the body mass index of 12-14 years old children in Nigeria.

## **Hypotheses**

The following hypotheses were tested:

1. A 5-week shot-put training programme will not have any significant effect on the body mass index of the underweight participants.
2. A 5-week shot-put training programme will not have any significant effect on the body mass index of the overweight participants.
3. 2. A 5-week shot-put training programme will not have any significant effect on the body mass index of the overweight participants.

## **Methods**

The study was carried out at Michael Okpara University of Agriculture (MOUA ) International Secondary School, Abia State, Nigeria. The participants of this study comprise of 20 volun-

teered students; 14 male and 6 female students of MOUA International Secondary school, Umudike, Abia state Nigeria. Their ages ranges from 12-14 years. They are boarders and have not been taken part in organized sporting activities.

The age, height and weight of each participant were taken and recorded. All the twenty (20) participants were classified based on their age, weight and height. The researchers measured the participants’ height, and weight. With the participants bare-footed, dressed in light clothing, height was measured using a portable stadiometer, and weight was measured with a digital scale. Measurement was taken twice and the average for each measurement was used (Castebon, & Andreyeva, 2012). BMI was calculated as weight (kg) divided by height (m) squared.

One group pretest- post-test experimental design was used for the study. According to Leedy (1997), the one group pre-test-post-test non-control group design is used to evaluate the influence of a variable on one group without a control group. The 5-weeks, shot-put training exercise were carried out three times per week. The duration of training exercise was initially 30 minutes but was gradually increased to 40 minutes after the first week it was carried out between 5:00pm to 5:40pm on the school playing ground. After the 5-week shot-put training exercise, the weight of each participants were taken as was done during the pre-experimental measures. The 5-weeks shot-put training exercise session was divided into three components; warm-up which lasted for 5minutes, putting the ball – 20 minutes and later increased to 30 minutes. Each participant was allowed to make three trials, and cool down - 5minutes. The missiles used for the shot-put training programme weighed 3kg. The gross motor skills- run (locomotor), and overhead throw and underhand roll (object control subset) was utilized.

Descriptive statistics of mean and standard deviation was used in computing the data collected, while inferential statistics of student’s t-test was used to test the hypothesis. Level of significant was set at 0.05 alpha levels.

**Results**

Table 1: Mean BMI and Standard Deviation of Underweight Participants Before and After A 5-wWeek Shot-Put Training Programme(N=11 each)

	<b>Before</b>	<b>After</b>
X	14.7	20.1
SD	0.9	1.8

Table 1 show that the mean Body Mass Index (BMI) of the eleven (11) underweight participants before the 5-weeks shot-put training programme is 14.7, and after the training programme it increases to 20.1. the Standard Deviation (SD) before the exercise training programme is 0.9 and after the training programme it increases to 1.0 . Therefore there a significant effects on BMI of Underweight Participants after a 5-week Shot-Put Training Programme( $p < 0.05$ ).

**Table 2:** Mean BMI and Standard Deviation of Normal Weight Participants Before and after a 5-wWeek Shot-Put Training Programme (N=6 each)

	<b>Before</b>	<b>After</b>
X	17.1	21.1
SD	0.04	0.73

Table 2 show that the mean Body Mass Index (BMI) of the six (6) normal-weight participants before the 5-weeks shot-put training programme is 17.1, and after the training programme it increases to 21.1. the Standard Deviation (SD) before the exercise training programme is 0.04 and after the training programme it increases to 0.73 . Therefore there a significant effects on BMI of Normal-weight Participants after A 5-wWeek Shot-Put Training Programme( $p < 0.05$ ).

**Table 3:** Mean BMI and Standard Deviation of Obese Participants Before and After A 5-Week Shot-Put Training Programme (N=3 each)

	<b>Before</b>	<b>After</b>
X	19.4	19.4
SD	0.05	0.06

Table 3 show that the mean Body Mass Index (BMI) of the three (3) obese participants before the 5-weeks shot-put training programme is 19.4, and after the training programme it increases to 19.4. the Standard Deviation (SD) before the exercise training programme is 0.05 and after the training programme it increases to 0.06 . Therefore there a no significant effects on BMI of Obese Participants after a 5-week Shot-Put Training Programme( $P > 0.05$ ).



## Discussions

The primary purpose of this study was to examine the effect of a 5-week shot-put training programme on the body mass index (BMI) of 12-14 year-old children. Changes in BMI of the underweight, normal weight, and obese participants were expected after the 5-weeks shot-put training programme.

Results demonstrated a significant differences in the BMI of the underweight participants before after the 5-weeks shot-put training programme. The BMI was significantly high after the training. It has repeatedly been demonstrated that exercise increases muscle hypertrophy, and muscle hypertrophy increases body mass. Weight lifting exercises are effective in helping to improve muscle tone as well as helping with weight gain. Weight lifting has also been shown to improve bone mineral density, for which underweight people have an increased risk of deficiency (D'Hondt, Deforche, De Bourdeaudhuij, & Lenoir, 2009; Gleeson et al 1990). In contrary, Adebayo (2010); Howley and Powers (1997) suggests that, it take a relatively long time to observe changes in body weight with exercise programme

The results of this study show also that there was a significant difference in the BMI of the normal weight participants before and after the 5-weeks shot-put training programme. The BMI was significantly higher after the training programme. It was observed the normal weight participants exhibit dynamic balance, improved motor abilities. The results obtained in this study in respect of the normal weight participants is in line with the submission of Adebayo (2010), there was increase in body weight after a circuit strength training. Okpeze and Igbanugo (2010) also concludes that exercise impacts positively on the body weight

There was insignificant increase in the BMI of the obese participants in this study. No decrease in body weight of the obese participants after the 5-weeks shot-put training programme. This corroborate with the findings of previous studies by Adebayo (2010), there was no weight loss in obese participants after a circuit strength training programme. To Kwan, (2009) poorer motor skill performance has been found to be related with overweight and obese participants in physical activities. D'Hondt et al (2009) submits that, motor skill deficit and physical inactivity of obese contributes to a positive energy balance and is therefore related to the current increase in children's overweight and obesity

## Conclusions

It was concluded that, power and weight training exercise programme like shot-put can increase the BMI of the underweight and normal weight participants. A 5-week shot-put training programme will not have any significant effect on the BMI of the obese participant. The no significant increase on obese BMI might be related to their poor motor abilities. Future study on underweight participants in shot-put training programme should enable a better understanding of variables that plays role in the significant increase in BMI after the 5-weeks training programme. Finally, physical activity intervention should be designed to improve underweight members of the society.

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## **Keeping the Employee Healthy: A Challenge for Wellness and Productivity among Primary School Teachers in Lagos, Nigeria**

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### **Abstract**

Promoting wellness through lifestyle modifications to enhance employee productivity and longevity constitutes concern for health care providers in occupational health practice. Also, awareness to consider an employee's welfare as a factor in enhancing productivity is a primary aspect of employment relations. However, in a capitalist economy, an employee's welfare is often placed on the back burner in pursuit of profits. This study examined challenges of sensitizing employers and educating employees to promote worker's health, efficiency and consequent productivity. Ex-post facto research design and health interventions were used to determine efforts made by school teachers to promote healthy lifestyles. This study assessed knowledge and practice of exercise and healthy living and provided behavior changing interventions for knowledge and attitude among school teachers in Lagos State. One hundred Head Teachers and Assistant Head teachers from Local Education Districts within Lagos State were selected through cluster sampling technique as participants. The research instrument was a modified short form of International Physical Activity Questionnaire(Cora, et al. 2003)for self-reported physical activity (KPEHQ)  $r=0.84$ , was applied as pre-test and post test respectively, while a 30 minute health talk on wellness and healthy living followed by 30 minutes of an aerobics session constituted treatment for behavior change. Data analysis applied; Means and t-Test statistics to compare participant responses. Results showed that both employers and employee value exercise as an important tool to improve health. Also, health talk intervention focused on behavior-changing strategies significantly increased physical activity levels. In conclusion, exercise would promote wellness. Head teachers should encourage subordinates to participate.

## The Comparison of the Measurement Methods of Physical Activity Levels and Examination of the Factors to Effect Physical Activity in Women Who Have Desk Jobs.

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### ABSTRACT

The aim of this study was to compare the methods used for measuring physical activity level and to examine the factors that affect physical activity in women who have desk jobs. 50 healthy women who work at desks in a public institution (age: 34,80±5,93 years, height: 158,04±00 cm, body weight: 61,82±7,53 kg, Body Mass Index (BMI) 24,61±2,77 kg/m<sup>2</sup>) participated voluntarily. For the study, primarily anthropometric measurements (height, weight, BMI, waist circumference, hip circumference, and waist/hip ratio) were taken and then personal information forms (age, marital status, education level, income level, smoking status, number of children and their ages) were completed. Daily physical activity levels were measured with multisensor armband on the dominant arm triceps muscle (Sense Wear Armband-SWA) (23,2±1,6 hours/day), waist-mounted pedometer (13,7±1,5 hours/day), which were worn for 7 days and, the 7-Day Physical Activity Assessment Questionnaire (7-d-FADA). Average number of participants steps (STEP) were found 10941±2236 step/day. Significant correlation for the number of steps between the SWA and pedometer was  $r=0,735$ ;  $p<0,001$ ; SWA and the total energy consumption through 7-d-FADA (kcal/day)  $r=0,394$ ;  $p<0,005$ . Although significant differences were designated between weekday and weekend number of steps (respectively 11398±2190, 8996±3633) ( $p<0,001$ ), there was not any difference between weekday and weekend total energy consumptions ( $p>0,05$ ), both measured by SWA. According to the results, it has been observed that questionnaire, pedometer, or SWA are not only sufficient for PAL determination, but more accurate values can be obtained with the results achieved by utilization of all these methods. It is believed that information should be provided related to the use of pedometers in PAL calculations and that pedometers are motivational tools.

*Key Words:* Number of steps, Physical activity level, Total energy consumption

### GİRİŞ VE AMAÇ

Son yıllarda teknolojinin gelişmesiyle birlikte bilgisayar kullanımının artması masa başında uzun süreli hareketsizliğe zemin hazırlamakta ve bununla birlikte yürüme mesafesi ve yürüyüşe ayrılan zamanın kısalması FAS'ın düşmesine neden olmaktadır. Bu durumun uzun süre

devam etmesi durumunda obezite, Tip 2 Diabetes Mellitus, kardiovasküler hastalıklar, bazı kanser türleri (kolon, meme), mental sağlık ve kas-iskelet sistemi gibi problemler ortaya çıkmaktadır (HHS, 1996, s. 15). Dünya Sağlık Örgütü (DSÖ) 2008 verilerine göre her yıl dünyada meydana gelen 57 milyon ölümün yaklaşık 5.3 milyonunun fiziksel inaktiviteden kaynaklandığı ve inaktivitenin dünya genelindeki ölümlerde 4. büyük risk faktörü olduğu belirtilmiştir (Das ve Horton, 2012, s. 189). FA'nın sağlık üzerinde yararlı etkiler gösterebilmesi için istenilen şiddet ve sürede yapılması gerektiği vurgulanmaktadır ve DSÖ (2010) 18-64 yaş arası yetişkinler için haftada en az 150 dakika orta şiddette veya en az 75 dakika şiddetli aerobik egzersiz önermektedir. Bu doğrultuda FA'ya katılım oranının artırılması için fiziksel aktivitenin ölçülmesi, sağlık politikaların geliştirilmesi ve FA rehberlerinin hazırlanmasına ihtiyaç duyulmaktadır (Samdal, 2007, s. 246; Guthold ve diğ. 2008, s.486). Bu doğrultuda bu araştırmanın amacı, masa başı iş yapmaları nedeniyle fiziksel inaktivite, obezite ve kronik hastalıklar açısından risk altında olan kadın çalışanların fiziksel aktivite düzeylerini farklı yöntemler kullanarak ölçmek ve fiziksel aktiviteyi etkileyen faktörleri incelemektir.

## MATERYAL VE YÖNTEM

Araştırma Ekim 2011-Mayıs 2012 tarihleri arasında, 25-46 yaş arası T.C Sağlık Bakanlığı'nda masa başında çalışmakta olan 50 sağlıklı kadın çalışanın gönüllü katılımıyla gerçekleştirilmiştir. Çalışma sırasında kadınların günlük yaşamdaki FAS'ları 7-g-FADA, pedometre ve çok sensörlü kol bandı (SWA) ile ölçülmüştür. Katılımcıların olağan dışı aktivite yapmadıkları, tatil veya seyahat harici birbirini takip eden 7 günde SWA ve pedometreyi takmaları, ölçüm süresi içinde ise günlük yaşantılarına aynen devam etmeleri istenmiştir. Boy ölçümleri stadiometre (Seca, Almanya), vücut ağırlığı ölçümleri dijital tartı (Seca, Almanya), çevre ölçümleri ise esnemeyen mezura ile yapılmıştır.

**FAS:** TET/BMR (FAO/WHO/UNU, 2001) formülü ile hesaplanmıştır.

**Verilerin Analizi:** İstatistiksel analizde normal dağılım gösteren değişkenler için iki grubun karşılaştırılmasında student t testi ve bağımlı gruplarda t testi; ikiden çok grubun karşılaştırılmasında ANOVA testi, çoklu karşılaştırma için Tukey testi kullanılmıştır. Normal dağılım göstermeyen değişkenler için ise parametrik olmayan testlerden Kruskal-Wallis testi ve Mann-Whitney U testi kullanılırken değişkenler arasındaki ilişkiye Pearson Korelasyon analizi uygulanmıştır. Tüm istatistiksel işlemler SPSS 15,0 paket programında yapılmış ve yanılma düzeyi 0,05 olarak alınmıştır.

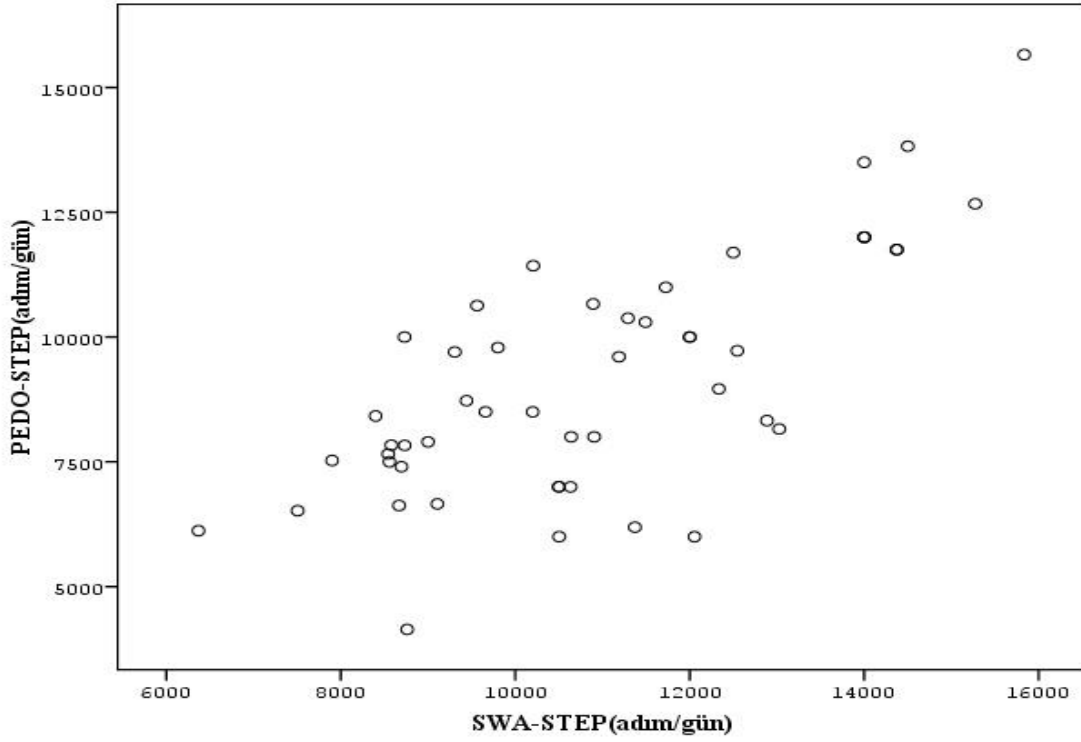
## BULGULAR

**Tablo 1.** Tanımlayıcı değerler

n=50	X	SS
Yaş (yıl)	34,80	5,93
Boy (cm)	158,00	0,04
Vücut ağırlığı (kg)	61,82	7,53
BKİ (kg/m <sup>2</sup> )	24,61	2,77
FAS	1,45	,13

**Tablo 2.** Adım sayıları değerleri

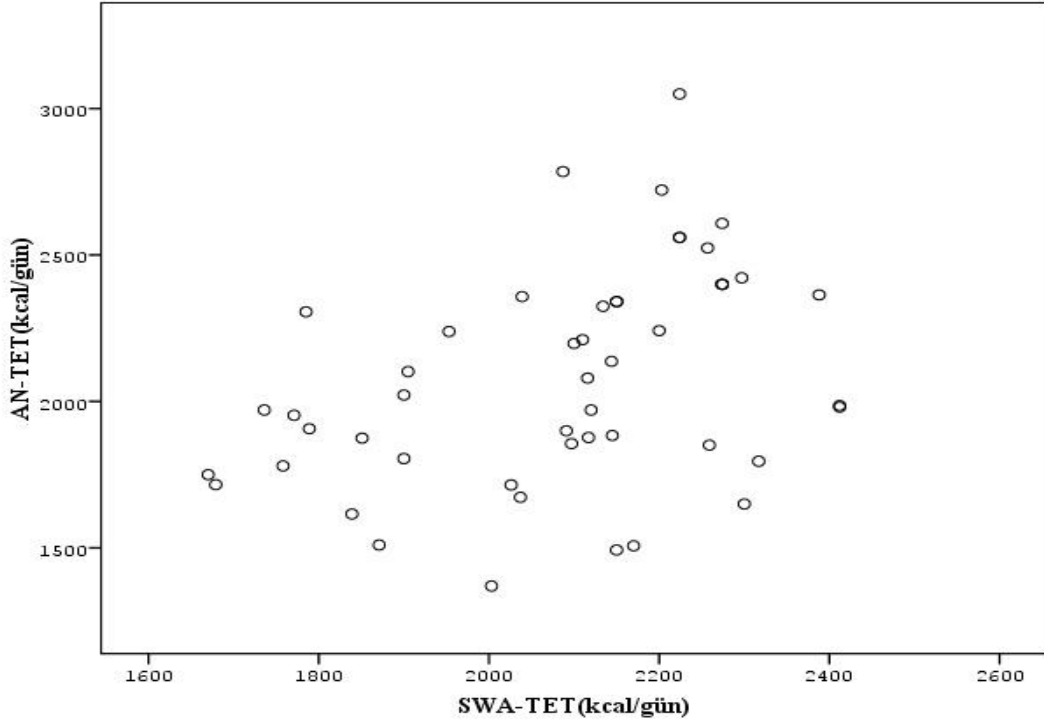
<b>n=50</b>	<b>X</b>	<b>SS</b>	<b>r</b>	<b>p</b>
<b>SWA-STEP (adım/gün)</b>	10941,50	2236,66	,735	P<0,001
<b>PEDO-STEP (adım/gün)</b>	9170,78	2377,39		



**Şekil 1.** Çok sensörlü kol bandı ve pedometre ile hesaplanan adım sayıları değerlerinin dağılım grafiği

**Tablo 3.** Toplam enerji tüketimleri (TET) değerleri

<b>n=50</b>	<b>X</b>	<b>SS</b>	<b>r</b>	<b>P</b>
<b>SWA-TET(kcal/gün)</b>	2084,12	197,33	,394	0,005
<b>AN-TET (kcal/gün)</b>	2081,80	370,86		



Şekil 2. Çok sensörlü kol bandı ve anket ile hesaplanan toplam enerji tüketim değerlerinin dağılım grafiği

Tablo 4. Hafta içi ve hafta sonu adım sayıları değerleri

n=50	Hafta içi	Hafta sonu	p
	X±SS	X±SS	
SWA-STEP (adım/gün)	11398,42±2190	8996,88±3633	P<0,001

\*p<0,001 Bağımlı gruplarda t-testi

Tablo 5. Hafta içi ve hafta sonu toplam enerji tüketim (TET) değerleri

n=50	Hafta içi	Hafta sonu	p
	X±SS	X±SS	
SWA-TET(kcal/gün)	2096,32±210,66	2059,22±255,76	,272

Bağımlı gruplarda t-testi



**Tablo 2.** Tanımlayıcı özelliklerine göre fiziksel aktivite seviyelerinin karşılaştırılması

n=50	Fiziksel aktivite seviyesi (FAS)		P
	Min.-Maks.	Ortanca	
<b>Sigara Kullanım Durumu</b>			
Evet	1,40-1,55	1,45	,609
Hayır	1,00-1,83	1,49	
<b>Medeni Durum</b>			
Bekar	1,00-1,57	1,40	,007*
Evli	1,28-1,83	1,49	
<b>Eğitim Durumu</b>			
Önlisans/Lisans	1,00-1,64	1,45	,395
Yüksek Lisans/Doktora	1,28-1,83	1,49	
<b>Gelir Düzeyi (TL)</b>			
1000 - 1499	1,00-1,54	1,41	,460
1500 - 1999	1,22-1,83	1,51	
2000 - 2499	1,28-1,64	1,47	
>2500	1,40-1,54	1,45	
<b>Çocuk Sayısı</b>			
Çocuk yok	1,00-1,57	1,40	,001*
1 çocuk	1,37-1,83	1,49	
2 çocuk	1,32-1,64	1,55	
<b>Çocuk Yaş Kategorileri</b>			
<12 yaş çocuğu olanlar	1,40-1,83	1,52	,074
>13 yaş çocuğu olanlar	1,37-1,54	1,45	
12,13 yaş ve üstü çocuğu olanlar	1,32-1,62	1,54	

\*p<0,05 Kruskal Wallis Testi ve Mann-Whitney U Testi

## TARTIŞMA

Çalışmamızda katılımcıların BKİ ortalaması  $24,61 \pm 2,77$  kg/m<sup>2</sup> olarak belirlenirken banka çalışanları ile yapılan benzer bir çalışmada katılımcıların BKİ değerleri  $24,9$  kg/m<sup>2</sup> olarak belirtilmiştir (Akdevelioğlu, 2012, s. 19). Bu durum çalışmamız ile benzerlik göstermektedir. FA ve adım sayısı ilişkisine bakıldığında ortalama adım sayısı  $10941 \pm 2236$  adım/gün olarak belirlenirken Kanada'da yapılan diğer bir araştırmaya göre çalışanların günde yaklaşık 7000 adım/gün attıkları belirtilmiştir (Chan ve diğ. 2004, s. 1217). Araştırmamızda adım sayısının yüksek çıkma nedeni, bireylerin sağlık sektöründe çalıştıklarından farkındalık düzeylerinin yüksek olması ve kurumun içinde bulunduğu fiziki ve sosyal çevrenin şehir içi ve alışveriş için uygun olmasından kaynaklandığı düşünülmüştür. Çalışmamızda katılımcıların adım sayıları 10.000 ve üzeri olmasına rağmen FAS'ları (1,45) düşük bulunmuştur. Banka çalışanları-

la yapılan benzer bir çalışmada FAS'larının düşük (1,37) bulunması çalışmamız ile benzerlik göstermektedir (Akdevelioğlu, 2012, s. 17). Marshall ve ark. (2009) yaptıkları çalışmalarında orta şiddette yapılan yürüyüşün yaklaşık 100 adım/dk<sup>-1</sup> eşit olduğu görüşünü belirtmesi egzersizin şiddetinin önemini göstermektedir (Marshall ve diğ. 2009, s. 410), Katılımcıların ortalama adım sayıları farklı ölçüm araçlarıyla hesaplandığında pedometre ve SWA arasında yüksek ilişki ( $r=0,735$ ) bulunmuş olup iki ölçüm arasındaki fark ise istatistiksel olarak anlamlıdır ( $p<0,001$ ). Bu sonuç her iki ölçüm aracının birbirinin yerine kullanılabilirliğini göstermektedir. 65 yaş ve üzeri bireylerde yapılan bir çalışmada akselometre ve pedometre arasında  $r=0,88$ 'lik ilişki bulunmuş olup enerji tüketimi tahmininde anketler yerine akselometre veya pedometre kullanılmasını önermiştir (Colbert ve diğ. 2011, s. 872). Bununla birlikte evli bireylerin bekarlara göre aktivite seviyelerinin yüksek olması ( $p<,007$ ) çalışmamızın diğer bir sonucunu göstermektedir. Çocuk sayısı ile FAS arasındaki farka bakıldığında bir çocuğa sahip olanların çocuk sahibi olmayanlara göre ( $p<,012$ ), iki çocuğa sahip olanların çocuk sahibi olmayanlara göre FAS'larının daha fazla olduğu görülürken 2 çocuk sahibi olanlar diğer gruplara göre en aktif grup olarak bulunmuştur ( $p<,005$ ).

Hafta içi ve hafta sonu elde edilen adım sayıları arasında istatistiksel olarak anlamlı fark bulunurken ( $p<0,05$ ) sonuçlar literatürle paralellik göstermektedir. Yapılan çalışmalar hafta içi FA'nın hafta sonuna göre daha fazla olduğunu göstermektedir (Scheers ve diğ. 2012, s. 1659). Hafta içi ve hafta sonu TET arasındaki farklılığa bakıldığında hafta içi kalori tüketimlerinin daha fazla olduğu görülmüştür ( $p>0,05$ ). Çalışmamızda katılımcıların enerji harcamaları 7-g-FADA (kcal/gün) ve SWA (kcal/gün) ile hesaplandığında TET ortalama değerlerinin birbirine yakın olduğu görülmesine rağmen ilişkinin düşük ( $r=0,394$ ) bulunmasının nedeninin SS değerinin fazla olmasından kaynaklanabileceği düşünülmüştür. Bu sonuçlar doğrultusunda her iki ölçüm aracının çalışmalarda birbirinin yerine kullanılmayacağı fakat geçerlilik çalışmalarının mutlaka farklı meslek, yaş kategorileri ve daha fazla katılımcı ile yapılması gerektiği sonucuna varılmıştır.

## SONUÇ

Sonuç olarak; FAS'ın belirlenmesinde tek başına anket, pedometre veya çok sensörlü kol bandı ile elde edilen sonuçların yeterli olmadığı, bir arada kullanılmalarından elde edilecek sonuçlarla daha doğru değerler elde edilebileceği, pedometrelerin ucuz, kolay kullanılabilen ve motivasyonel araçlar olduğu düşünülmüştür. Ayrıca katılımcıların 10.000 adımdan daha fazla adım atmalarına rağmen FAS'ın düşük çıkması yapılan egzersizin şiddetinin de önemli olduğunu göstermiştir. 10.000 adım önerilerinin DSÖ 2010 rehberi önerilerine (30 dakika X 5 gün aerobik egzersiz) uyarlanarak; bireyin sağlık durumuna göre 3000-3500 adım/30 dk; 5 gün/hafta olacak şekilde yapılması durumunda daha ileri sağlık faydası elde edilebileceği konusunda bilgilendirmelerin yapılması gerektiği sonucuna varılmıştır.

\*Bu araştırma Ankara Üniversitesi Spor Bilimleri Fakültesi ve Herkes İçin Spor Federasyonu desteği ile yürütülmüş olan doktora tezidir.

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## **Evaluation of Fitness Instructors' Knowledge about Exercise Prescription and Evaluation in South-South Nigeria**

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### **Abstract**

In Nigeria, people are becoming more health conscious. The number of fitness enthusiasts is increasing at an astonishing rate due to the fact that health benefits of exercise apply to people of all ages. The purpose of this study is to evaluate the knowledge of fitness instructors about exercise prescription and evaluation. The study employed a descriptive research design. A hypothesis was formulated and a self-structured questionnaire was used to collect data from 108 fitness instructors that were selected using a purposive sampling technique in three of the South-South states in Nigeria. The study revealed that most (76.9%) of the Fitness Instructors had no significant knowledge about exercise prescription and evaluation as against the 23.1% that had significant knowledge about exercise prescription and evaluation. It was concluded that fitness instructors in South-South Nigeria are not knowledgeable about exercise prescription and evaluation. Hence, it was recommended the need for re-orientation and certification of fitness instructors in South-South Nigeria.

## **A Prospective Study of Sports Injury among Students of Football Academies In Nigeria**

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### **Abstract**

Injury is an unwanted phenomenon whose occurrence lowers efficiency in sports. It is inevitable in sports, therefore knowledge of pathokinesiology of structures involved and the causes are useful. This study prospectively investigated sports injuries among students of football academies in Nigeria. Participants of this study were 109 male and female students purposively sampled from three football academies in Nigeria. A self-developed sports injury data form was validated for the purpose of data collection. Data on sports injuries commonly sustained, body parts affected, events during which injuries occurred and the severity of injuries sustained were collected on the participants for a period of 16 weeks. Data collected were analyzed using frequency counts, simple percentage and bar chart pictorial presentation. Findings showed that sprain, strain, dislocations and muscle cramps were types of sports injury mostly sustained and body parts mostly affected were knees and ankles. Most of injuries sustained were during training session and their severity were minor, mild and moderate.

## Sport, Health and the Millennium Development Goals (MDGS)

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### **Abstract**

Sport plays significant roles in physical, social, intellectual, emotional, economic, spiritual and mental health that are requisites to the achievements of individual and collective goals and potentials. Participating in sports involves physical activities that ultimately results in both the children and adults good physical health. High self-esteem and self-confidence are achieved through sport as it brings about equality and reduction of stigma associated with HIV and AIDS, disabilities and poverty. Engagement in sport activities improves children's attendance and enrollment to school, and academic achievement. Anti-social behaviours: drug and alcohol abuse, unhealthy sexual behaviours with antecedent to unwanted pregnancy, HIV/AIDS, STIs, low-esteem, aggression, stealing that may cause destruction of health, future and insecurity are combated through sport. Sport is a source of economic empowerment for athletes and individuals through employment and business. Sport is associated with physical fitness, team spirit, obedience, harmony, tolerance, peace and unity which are all makeup of total health. This paper reveals sports as an instrument in the achievement of Millennium Development Goals. The paper recommends that sports Centres and facilities should be built around community to serve as motivator in sport participation. Government and schools should provide sport arena and facilities and also encourage the school children to engage in sports and physical education in order to achieve the MDGs.

*Keywords: Sports, Health and Millennium Development Goals*

### **Introduction**

Sport is inherently about drawing on, developing and showcasing people's strengths and capacities, shining a light on what people can do, rather than what they cannot do, sport consistently empowers, motivates and inspires individuals and their communities in a way that promotes hope and a positive outlook for the future; it is an ingredient that is essential to the success of all development and peace endeavours. Sport is a tool through which an individual and the community can maximize their potentials thereby becoming an asset to self and the society. Sport plays a significant role in human's physical, economic, intellectual, emotional, social

and mental health and development. The effect of these positive health and development of the individual is seen in cooperation, team spirit, obedience, harmony, tolerance, peace and unity. These healthy behaviours in the life of sportsmen and women have carryover values outside the sport world thereby contributing to cordial relationships, friendliness and security that brings about growth, development and security in the community.

Sport is also a powerful means of promoting physical and mental health, providing opportunities for enjoyment and personal development, building self-esteem, and fostering positive social connection with others, it is a factor in promoting and maintaining health and well-being. Sport play valuable role in all development and it is peace tools in preventing conflict. It is increasingly being used to promote health and prevent disease, strengthen child and youth development and education, foster social inclusion, foster gender equity, enhance inclusion of persons with disabilities, and promote employment and economic development. Moreover, people of all ages are encouraged to become more physically active through sport (United Nations, 2003). However, participation in physical activity is limited, United Nations (2003) and WHO (2003), reported that globally, 60 percent of adults and over two-thirds of young people do not participate in a sufficient amount of sport and physical activity which are beneficial to their health, largely due to changes in lifestyle such as inactivity at work, sedentary forms of recreation, like television and computers, and excessive use of “passive” modes of transport.

Sport is “all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport, and indigenous sports and games, (United Nations, 2003). Physical activity is any bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure (Casperson, Powell and Christensen, 1985).

## **Sport and Health**

Healthy human development is a necessary foundation for all development progress. Without healthy populations, the achievement of development objectives will be out of reach. Good health is fundamental to the ability of individuals to realize their full human potential. It is also a crucially important economic asset. Low levels of health impede people’s ability to work and earn a living for themselves and their families. When someone becomes ill, an entire family can become trapped in a downward spiral of lost income and high health-care costs. On a national scale, poor population health diminishes productivity and impedes economic growth, while investment in better health outcomes is generally seen as an investment in economic growth. Health is also understood to be a contributing factor to achieving the remaining five MDGs, particularly those related to education, gender equality and the eradication of extreme poverty and hunger. Achieving the MDGs, however, remains a daunting challenge. If the trends observed since 2000 continue, most low-income countries will require additional resources and assistance to meet their health-related MDGs. (United Nations, 2003).

On the other hand, health is being threatened as the world is witnessing a significant increase of the global burden of non-communicable diseases (NCDs) such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases. Today in the entire world, with the exception of sub-Saharan Africa, chronic diseases are now the leading causes of death. The World Health Organisation (WHO) estimates that mortality, morbidity and disability attributed to NCDs, and currently they account for approximately 60% of all deaths and 43% of the global burden of diseases; they are expected to account for 73% of all deaths and 60% of the global burden of disease by 2020. The increasing global epidemic of these diseases relates closely to respective changes in lifestyle mainly tobacco use, physical inactivity and unhealthy diet. Nevertheless, physical inactivity is the most common of all cardiovascular risk factors across countries. After tobacco use, inactivity is the greatest contributor to mortality and morbidity from all causes. (United Nations, 2003, WHO, 2003). Physical inactivity, Warburton, Nicol and Bredin (2006), is a modifiable risk factor for cardiovascular disease and a widening variety of other chronic diseases, including diabetes mellitus, cancer (colon and breast), obesity, hypertension, bone and joint disease (osteoporosis and osteoarthritis), and depression. They further stated that the prevalence of physical inactivity (among 51% of adult Canadian) is higher than that all other modifiable risk factors. Physical inactivity is estimated to cause 1.9 million deaths globally; about 10-16% of cases of breast cancer, colon and rectal cancers, and diabetes mellitus, and about 22% of ischemic heart disease, and that the risk of getting a cardiovascular disease increases up to 1.5 times in people who do not follow minimum physical activity recommendations, (WHO, 2003).

Sport and physical activity are essential for improving health and well-being, and a tool in the achievement of the MDGs. Appropriate forms of sport and physical activity can play a significant role to prevent as well as help cure many of the world's leading non-communicable diseases. Evidence shows that regular participation in physical activity programme provides all people with a range of physical, social and mental health benefits. Hence, physical activity is an effective method of disease prevention for the individual and, for nation a cost-effective way to improve public health. Sport's unique and universal power to attract, motivate and inspire makes it a highly effective tool for engaging and empowering individuals, communities and even countries to take action to improve their health. Sport can also be a powerful means of mobilizing more resources in the global fight against disease, but this potential is only just beginning to be realized. According to the WHO, experience and scientific evidence show that regular participation in appropriate physical activity and sport provides people of both sexes and all ages and conditions, including persons with disabilities, with a wide range of physical, social and mental health benefits. Physical activity and sport support strategies to improve diet and discourage the use of tobacco, alcohol and drugs. As well, physical activity and sport help reduce violence, enhance functional capacity, and promote social interaction and integration. (United Nations, 2003, WHO, 2003).



## **Sport and Heart**

US Department of Health and Human Services, (1996) reported that the US Surgeon General stated that cardiovascular health benefits occur at moderate levels of physical activity and increase at higher levels of physical activity and fitness. People who participate in regular physical activity are at much less risk of suffering a major coronary event such as a heart attack. Small incremental increases in physical fitness can reduce an individual's risk of cardiovascular-related death. Similarly, people with established cardiovascular disease can reduce their risk of negative outcomes by over 60% participating in regular physical activity. Evidence also suggests that physical activity benefits children's cardiovascular health and can help to lower blood pressure in children and adolescents. Epidemiological research suggests there may be a direct relationship between physical activity and HDL-C levels (levels of beneficial cholesterol) in children, and that children at high risk of developing coronary heart disease may benefit from physical activity.

## **Improving brain function**

Aerobic exercise helps the heart pump more blood to the brain, increasing the flow of oxygen and nourishment to brain cells. At the same time, as muscles work, they send chemical signals to the brain that trigger the production of brain-derived neurotrophic factor (BDNF). With regular exercise, the body builds up BDNF and the brain's nerve cells start to branch out, join together and communicate with each other in new ways. This is the fundamental physiological process underlying all learning — every added connection between brain cells signifies a new fact or skill that has been learned and saved for future use. BDNF makes this learning process possible. Consequently, brains with more BDNF have a greater capacity for knowledge, while brains that are low in BDNF have difficulty absorbing new information, (United Nations, 2003)

## **Sport and Diabetes**

Over 180 million people live with diabetes all over the world. WHO, (2006) Current research indicates that both aerobic and resistance (strength) exercise are associated with a decreased risk of type 2 diabetes, which affects an estimated 5.9% of the world's adult population. Exercise helps to reduce the likelihood of developing the diabetes among populations at high risk due to being overweight. Exercise interventions also help manage diabetes by stabilizing blood sugar levels, (United Nations, 2003). WHO, (2003) stated that diabetes affects more than 70 million women in the world and this figure is likely to double by 2025. However, recent studies show that modest physical activity and changes in diet can prevent more than half of the cases of non-insulin dependent diabetes.

## **Sport and Obesity**

Obesity is an abnormal and excessive accumulation of fat that impair an individual's health, (WHO, 2006, International Platform on Sport and Development, 2009). In 2005, it was estimated that 400 million people in the world were obese and by 2015, this figure is expected to rise to 700 million.<sup>75</sup> This trend is largely due to a shift in diet (to energy dense foods low in vitamins) and decreased physical activity, (WHO, 2006, International Platform on Sport and Development, 2009) United Nations (2003) and WHO (2003), reported that 60 percent of adults do not participate in a sufficient amount of sport and physical activity; adolescence boys and girls, children and the disabled which are beneficial to their health, largely due to changes in lifestyle such as inactivity at work, sedentary forms of recreation, like television and computers, and excessive use of "passive" modes of transport. Such lifestyle also contributes to obesity. Research has found that obese individuals with moderate cardio-respiratory fitness have lower rates of cardiovascular disease than normal-weight unfit peers, and an all-cause death rate 50% lower than the individuals in the unfit category, (WHO, 2006, International Platform on Sport and Development, 2009).

## **Sport and Cancer**

Cancer includes over 100 diseases involving the rapid growth of abnormal cells that invade the body and spread to other organs, causing death. The WHO estimates that 7.6 million people died from cancer worldwide in 2005, with 70% of these deaths occurring in low- and middle-income countries. It is estimated that 40% of all cancers can be prevented by a healthy diet, physical activity, and not using tobacco. Physical inactivity is a distinct risk factor, while routine physical activity can help reduce the risk of specific types of cancer, (WHO, 2006). Physically active men and women exhibit a 30%–40% reduction in the risk of developing cancer, relative to those less active (Warburton, Nicol, and Bredin, 2006). Moderate levels of activity offer a greater protective effect than lower levels of activity.

## **Sport and Bone**

Osteoporosis is the deterioration of bone tissue leading to loss of bone mass and a higher risk of bone fractures. Osteoporosis is a disease in which bones become fragile and more likely to break. Physical activity can greatly help prevent and manage osteoporosis, (2003). Physical activity increases force on bones and bones respond by increasing their mass so that the force is spread over a larger area. Physical activity has a positive effect on bone health across the age spectrum, but this effect is greatest in previously inactive individuals. Weight-bearing exercise, particularly resistance exercise, is the most effective form of physical activity for achieving this effect. Physical activity also helps to improve balance and coordination. Several studies<sup>85</sup> have found that exercise training significantly reduces the risk and number of falls. Improved strength, flexibility and posture also help reduce pain and allow older individuals to carry out daily tasks more easily, (Warburton, Nicol, and Bredin, 2006).

## **Sport, Physical Activity and Children**

Physical activity is important to children's current and future health, and adherence to the physical activity guidelines produces a range of direct and indirect benefits. It assists in the control of body weight by increasing energy expenditure, this is important in teaching children and young people how to achieve a healthy 'energy balance' and avoid developing adult obesity. It reduces the risk of developing premature cardiovascular disease, type-2 diabetes, metabolic syndrome and some site specific cancers. Weight bearing physical activity is important in bone formation and remodeling. Participation in physical activity reduces depression and anxiety especially in shy children, enhances mood, self-esteem and quality of life. It is also known to reduce rule-breaking behaviour, to improve attention span and classroom behavior, and can positively affect academic performance. Involvement in sport and physical education can play a significant role in the enrichment of a child's social life and the development of social interaction skills. Physical skills acquired during participation in sport and physical activities in childhood and adolescence are more likely to be maintained throughout life span thereby making the individual to be active at old age, (WHO, 2003, Wood, Tannehill and Walsh, 2010).

Participation in play and sport, WHO,(2003), gives young people opportunities for natural self-expression, self-confidence, relief of tension, achievement, social interaction as well as learning the spirit of solidarity and fair play. These positive effects also help counteract the risks and harm caused by the demanding, competitive, stressful and sedentary way of life that is so common in young people's lives today. Involvement in properly guided physical activity and sports can also foster the adoption of other healthy behavior such as avoidance of tobacco, alcohol and drug use and violent behaviour as well as the adoption of healthy diet, adequate rest and better safety practices. Young children acquire social skills through participation in team games and play.

Sport can be an effective way to reach out to people, especially youth, and to encourage healthy lifestyle behaviours that will help protect them against HIV and other diseases. Sport can be used to empower children and youth by conveying appropriate prevention messages, teaching the skills necessary to establish and sustain healthy behaviour patterns, and increasing their resilience in the face of life challenges.

## **Sport & Disabilities**

The goal is to help persons with disabilities improve their physical health, psychological well-being and quality of life. This can be achieved by increasing their ability to perform daily living activities, giving them opportunities to acquire life skills and leadership experiences, and enhancing their social inclusion, (**United Nations, 2003**). Providing such opportunities requires training sport and education personnel in adaptive sports, making adapted sport equipment available at low cost, and removing barriers preventing persons with disabilities from accessing, and travelling to and from, public sport and recreation facilities.

## **Sport and Mental, Emotional Health and Self-esteem**

Exercise and, by extension, sport have long been known to produce beneficial effects on mental health, enhance self-esteem, help to manage stress and anxiety, and alleviate depression, (Ruiz, 2004). In patients with psychiatric disorders, physical exercise has been shown to diminish clinical symptoms, especially for depression, (Knechtle, 2004). More recently, breakthrough research has shown that exercise may also improve brain functions such as memory and learning and reduce the risk of cognitive loss through Alzheimer's and small strokes, (Carmichael, 2007). Regular participation in sport and exercise programs can play an important role in supporting the formation of self-concept in adolescents, (Seiler and Birrer, 2001) and building self-esteem and self-confidence in people of all ages, (Vail, 2005). While investigations of the short-term effects of sport show that it largely results in positive mood changes, ongoing physical activity results in the same improvements to well-being, and improved perception of one's health status and a higher satisfaction with one's health, (Seiler and Birrer, 2001) All these effects are important determinants of health because they influence individuals' perceptions of their self-worth and their ability to respond to life's challenges. Regular participation in an exercise program is also associated with measurable increases in self-esteem in children and adults, (Macauley, 1994), and with the maintenance of positive self-esteem in older age, (Vail, 2005). A study of wheelchair-mobile individuals participating in tennis found that they were more confident about performing tennis skills and general wheelchair mobility tasks than non-participants.

Through sport self-esteem can be built. Self-esteem is defined as a person's overall self-appraisal and feeling of self-worth. Self-esteem is critical to health because it motivates self-care and can contribute to healthy lifestyle behaviours. In disadvantaged communities and populations, where people are often defined in terms of their needs and deficits, sport provides a powerful counter-balance to these perceptions. Hence, engaging these marginalized person or groups, such as persons with disabilities, people with HIV and AIDS, and former child combatants in sport activities with other community members, sport creates a shared space and experience that helps break down negative perceptions and social stigma experienced and this enables the people to focus on what they have in common. Participating in sport draws on people's strengths and assets — energy, enthusiasm, natural and acquired skills, the desire to excel — and the universal capacity for fun and enjoyment. This is an important step in enhancing these individuals' self-concept and emotional health. For individuals deeply affected by poverty, disease, disability or conflict, the development of self-esteem can be a profound psychological shift that enables and motivates them to adopt healthier lifestyle behaviours.

Lazarus and Folkman, (1998) stated that physical activity as a coping strategy for stress, and also help to prevent anxiety, Canadian Fitness and Lifestyle Research Institute (1995), reported that regular exercise may have the ability to reduce anxiety on a daily basis and, hence, prevent the development of chronic anxiety”

## **Sport and the Millennium Development Goals**

The MDGs were established by the international community at the UN Millennium Summit in September 2000. The MDGs comprise eight benchmarks with supporting targets that aim to eradicate or reduce poverty, hunger, child mortality, and disease, and to promote education, maternal health, gender equality, environmental sustainability and global partnerships, and 2015 is set as the target date for achieving the MDGs, United Nations, (2003) . The fundamental right to health articulated by the World Health Organization (WHO) in 1946 remains integral to development today. This right is strongly reflected in the Millennium Development Goals (MDGs), the guiding international development framework adopted by the United Nations (UN) in 2000, and the Human Development Index used to measure the progress of all nations against universal human development goals.

The MDGs 3 and 5 address the need to promote gender equity and empower girls and women and improvement of maternal health. Through structured sport programs, girls and women can become more physically active, benefiting their physical and mental health including the reduced risk they will suffer from chronic diseases, depression and anxiety, and engaging in health risk behaviours that are associated with MDGS 5 which is concerned with improvement of maternal health. Sport is a tool that addresses MDGs 2 and 3, "achievement of primary education and promotion of gender equality and empowerment of women" that is, through sport programs social isolation and exclusion that many girls and women experiences are reduced, particularly those that cannot attend school and live in poverty. Sport programs can provide girls and women with safe places to gather, help them to build social networks, offer social support, and connect them to health, education and employment information, services, and opportunities that can help to address their marginalization in society. Sport can be a catalyst that liberates girls and women from gender inequality. Sport programs can enhance the empowerment process by challenging gender norms, reducing restrictions and offering girls and women greater mobility, access to public spaces, and more opportunities for their physical, intellectual and social development.

Sport can also be a powerful health information and education platform, connecting girls and women with the information, skills and strategies they need to reduce health risks in their lives, particularly in connection with their sexual and reproductive health. Sport can help increase self-esteem in girls and women that give them opportunities to learn new skills, engage in positive relationships, acquire achievements, engage in volunteer service and receive public recognition. It provide women and girls opportunities to voice decision-making, training, and leadership and advocacy, and take greater control over their own lives. Sport can empower girls and women within their communities, provide positive health and welfare outcomes, and ultimately transform gender norms. Sport can lead to a more egalitarian world by unleashing the productive, intellectual and social power of women. Sport offers multiple avenues to address these health challenges and can promote good health for girls and women. In developed nations, sport participation has been linked with delayed sexual activity and reduced risk of teen pregnancy, (United Nations, 2003).

## **Preventing and addressing youth delinquency and crime with MDGs**

There is considerable evidence to suggest that youth who participate in sport are less likely than non-participants to engage in delinquent behavior, (Donnelly, 1981, Hastad, 1984, Melnick, Vanfossen, & Sabo, 1998, Segrave, 1983 and Segrave and Hastad, 1982) Youth active in sport also have reduced rates of criminal arrest and anti-social behaviour. After-school activities, like sport, and graduation incentives for at-risk youth encourage disadvantaged teens to complete high school, reduce youth arrests by 71%, and increase attendance at post-secondary education by 26%. (International Conference for the Prevention of Crime, 1999). Sport programs use different approaches to divert young people from crime and anti-social behaviour, (Burrows, 2003). Sport programs offer significant value as alternatives to membership in criminal gangs, (Clark, 1992). Initiation into sports at a young age can fill a void in the lives of vulnerable youth at a critical stage — which may prevent them from becoming involved in delinquent or criminal activity. Through early intervention, sport programs can help to move youth onto a positive life trajectory. This reduces the risk of future involvement in delinquency which, if not prevented, can continue over a lifetime, (Laub, 1994).

## **Sport & Education**

One of the MDGs is “access to achievement universal of primary education”. Building physical education, sport and play into school curricula can be an effective means to increase the number of children enrolled in school and boost their retention rates especially for children in developing nations who do not attend school. Sport can help erode stigma preventing children with disabilities from attending school, (United Nations, 2003).

## **Sport and Economy**

Sport helps participants to realize their potential as productive employees and citizens, (Dobosz, and Bealy, (1999). Conference of Canada Board, (2005) reported that on the socio-economic benefits of sport participation, sport is an important tool through which participants, particularly young people, gain and enhance a range of skills that are transferable to important parts of adult life. The knowledge, life skills, health, and physical abilities generally developed through appropriate sport experiences can benefit participants by improving their chances of finding employment, raising their level of income, and making them more optimistic and willing to volunteer in the community, (DiColo, 2006). Sport is a source of economic empowerment; professional athletes make their living through sport as they are paid for participating in sporting activity, while the amateurs are giving financial honorarium. During sport competitions, individuals, communities, associations, and companies market and sell their goods and services is bring about economic sustainability. Therefore, through sport MDGs 1 which is “eradication of extreme poverty and hunger “ is achieved.

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## Knowledge and Use of Food Supplement among Athletes in Lagos State, Nigeria

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### **Abstract**

The study aimed at examining the knowledge and use of food supplements by sport men and women in Lagos State, Nigeria. The instrument used for the study was a self -developed questionnaire with a reliability value of .72. Questionnaires on the knowledge and use of food supplements were administered to the athletes at different sporting arenas during their training sessions. The sample consisted of 300 male and female athletes selected through random sampling technique. The data collected were analyzed using frequency, percentage and chi-square. The result revealed that a high percentage of the athletes got their first knowledge of food supplements from the sport dietitian and their coaches, and a high percentage came about the use of food supplements from co-athletes and successful athletes.

## **Disease Prevention and Health Promotion through the Instrument of Sports in Nigeria**

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### **Abstract**

Health is a fundamental human need for a meaningful and fulfilling existence. Performing various functions capable of promoting a productive existence might be difficult without good health. Health can be seen therefore as an invaluable asset for optimal functioning. Health is defined by the World Health organization as a state of complete physical, mental, social, emotional and spiritual well being and not merely the absence of disease or infirmity. Man is not just a physical being but has other components which good health must extend to. This is important because whatever is wrong with an aspect of man has the ability of affecting others adversely. Disease prevention leads to health promotion. Sports can serve as a vital instrument for disease prevention and health promotion. Victims of various disease conditions can never underestimate the value of good health. No self loving human being will desire to live with disease conditions for all of the discomforts, life limitations, economic and social costs. With the inevitable role of good health for a meaningful and productive existence in mind, it becomes necessary to discuss sports as an instrument for disease prevention and health promotion. The main objective of this paper is to describe how sports can serve as an instrument for disease prevention and health promotion. In achieving therefore stated objective, the paper addresses the importance disease prevention plays in maintaining health.

## Assessment of Fluid Hydration of Selected Nigerian Footballers

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### Introduction

The physiological drive for fluid intake during exercise is perceived through ‘thirst mechanism’s and it has long been known that when given access to fluid, these mechanisms compels people to drink at a rate that replaces approximately one-half of their fluid losses and at best two-thirds (Hubbard et al, 1984). In any exercise task lasting longer than 30-40 minutes, it has been observed that carbohydrate depletion, elevation of body temperature and reduction in the circulating fluid volume are likely to be important factors in causing fatigue and reducing performance and all these conditions can be manipulated by the ingestion of fluids.

Fluid is a liquid substance which when taken, changes body chemistry and water is a main ingredient. For example, Sports drink has a variety of nutrients and other substances which are dissolved in the water to make the final consumed product. The main role of fluid is to provide large amount of water in addition to other components which could otherwise be obtained from food. In the 1960’s, athletes were generally advised ‘to drink only a little water during exercise, ignore their thirst and to replace a small percentage of lost fluid (Wyndham and Strydom, 1969). It was not until 1970’s that athletes were generally advised to ingest something more than just ‘a little water’ during exercise because of its physiological benefits. In 1975, the American College of Sports Medicine (ACSM) published its first position stand entitled ‘prevention of heat injury during distance running. In 1985, the ACSM published another position advising runners to drink 100-200ml of fluid after every 2-3km (Coyle, 2004). Convertino et al (1996), reported that the ACSM in 1996, recommended that during exercise, athletes should start drinking early and a regular intervals in an attempt to consume fluids at a rate sufficient to replace all water lost through sweating (body weight loss), or consume the maximal amount that can be tolerated without gastrointestinal discomfort. In the opinion of National Athletic Trainers Association (2000), fluid replacement should approximate sweat and urine losses and at least maintain hydration at less than 2% body weight reduction.

Fluid replacement during exercise has been studied extensively and the importance of carbohydrate-containing drinks, in particular, on performance and prevention of dehydration is well established (Mont Fort-Steiger and Williams, 2007; Ostojie and Mazie, 2002), with exogenous carbohydrate supplementation being important in maintaining plasma glucose levels

during exercise and refilling emptied muscle glycogen stores (Casa et al, 2000; Sawka et al; 2007). Individuals are encouraged to consume drinks before and during exercise in order to delay depletion of glycogen stores and replace water loss in sweat and thus delay exhaustion (Maughan and Sheriffs, 2008). Certain occurrences emanating from competition and in Nigeria witnessed how athletes either collapse during or after a race or competition, suffer from severe undetermined cramp or leg pains, while some had actually died from complications arising from chronic dehydration, water shortage, fluid deficit and exhaustion (Onwuama, 2008). The purpose of this study is to determine fluid hydration level of a Nigerian Football Club who were camped for National tournament.

## Method

The participants for this study were thirty footballers from Shooting Stars Sport Club (3SC), between the ages of 16-28 years. Prior to testing, the testing procedure and protocols for measurement were explained to the footballers. The order of testing is as follows: resting blood pressure values, physical characteristics such as age, height and weight path so pometric measures of body fat percent, body mass index, lean body mass and Visceral fasting blood sugar test, resting metabolic rate for nutritional status of footballers and urine test for hydration status body composition which includes- Fat. Consent of participants was obtained through Glaxo-SmithKline Company. After the explanation of the testing procedure, participant had their heart rate and blood pressure taken using the electronic blood pressure monitor. Stadiometer was used to obtain the height of the subjects in centimeters. The height of the subject was measured to the nearest 0.00cm. The OMRON Body composition monitor BF 511 was used to obtain the Body fat (in%), visceral fat (up to 30 levels), Body Mass Index (BMI), lean Body mass (in%) and weight of the subjects (in kg). The Athletes pre-exercise hydration status was determined using Urine Specific Gravity (USG).

## Results

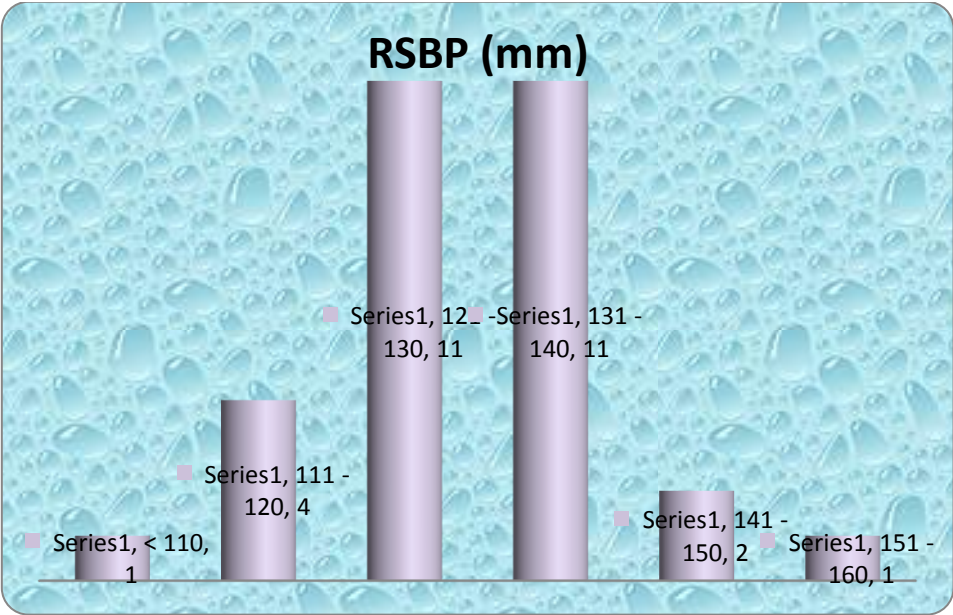
Results are presented as mean, standard deviation, range and percentages.

**Table 1:** Resting Values of Footballers

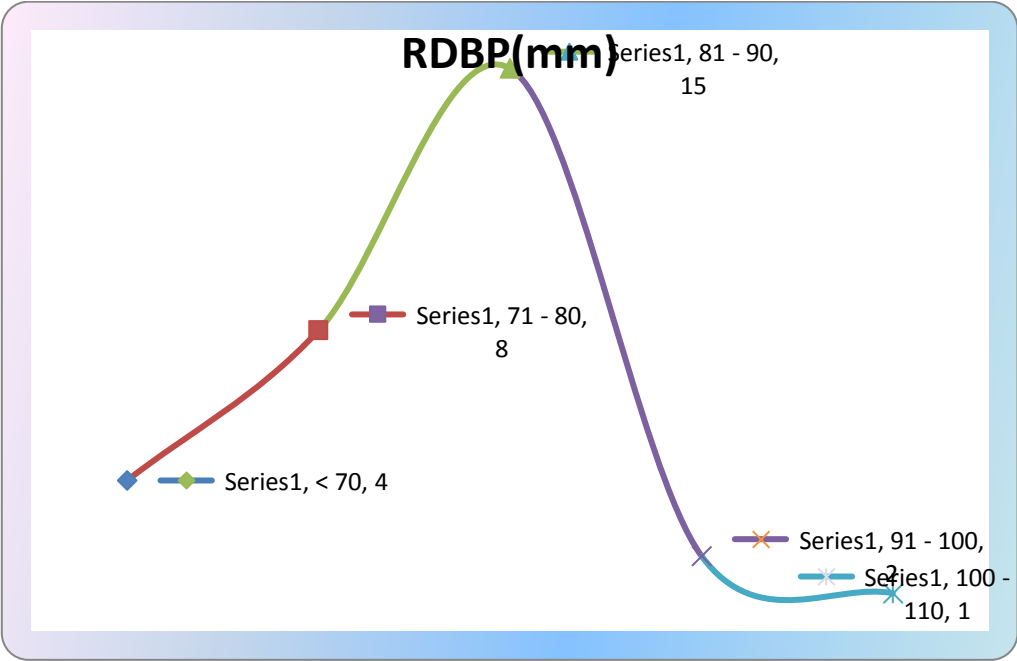
<b>Variables</b>	<b>Range</b>	<b>Mean</b>	<b>Standard Deviation</b>
RSBP(mmHG)	54	129.97	11.09
RDBP(mmHG)	42	81.97	9.084
RPR(bpm)	47	60.9	9.125

**Key: RSBP- Resting Systolic Blood Pressure**  
**RDBP- Resting Diastolic Blood Pressure**  
**RPR- Resting Pulse Rate**

Table 1 shows that mean pulse rate, resting systolic and diastolic blood pressure of footballers are within the normal range for sports men. However, only 10% (3) had higher resting values.



**Fig 1:** Resting Systolic Blood Pressure of Footballers



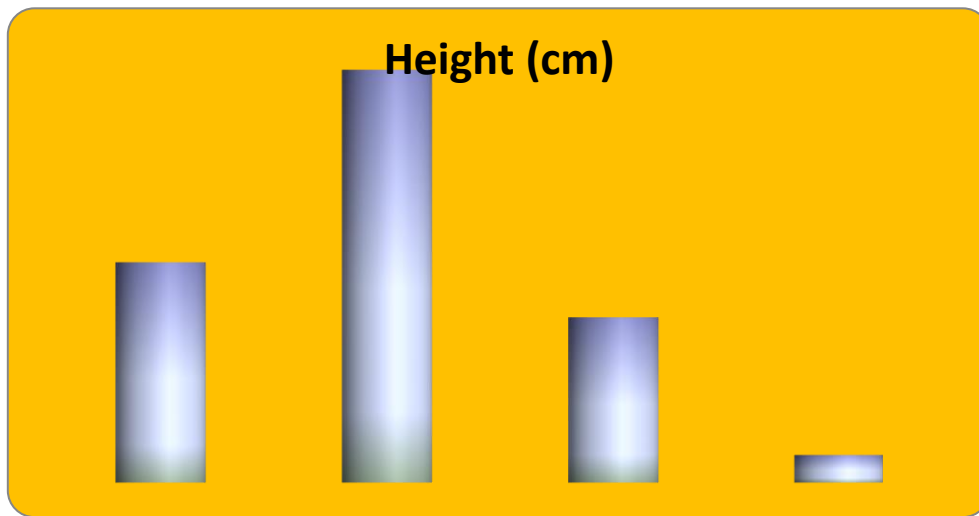
**Fig 2:** Resting Diastolic Blood Pressure of Footballers

**Table 2:** Physical Characteristics of Footballers

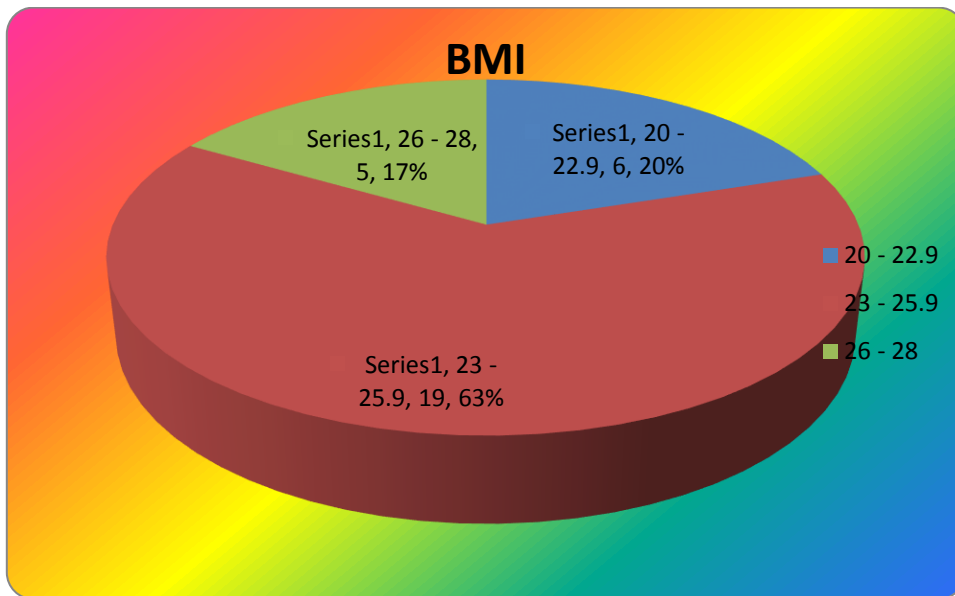
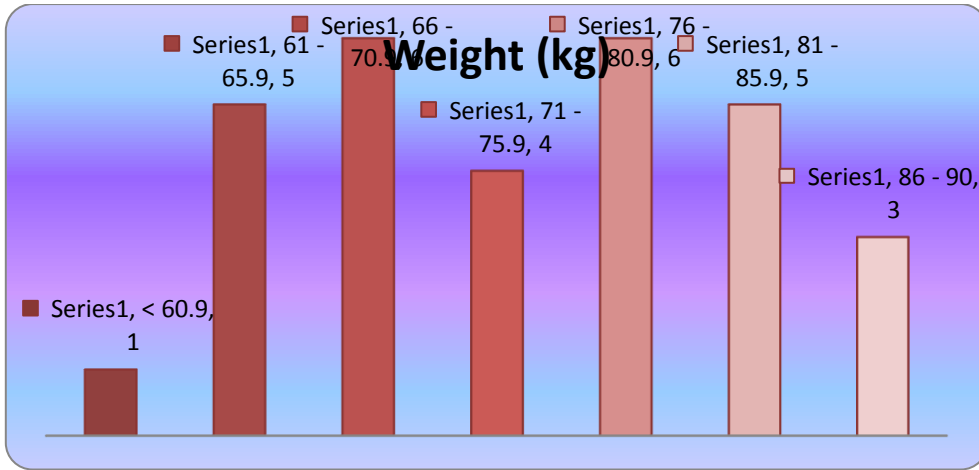
<b>Variables</b>	<b>Range</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Age(yrs)</b>	12	22	3.572
<b>Ht(cm)</b>	27	175.62	6.763
<b>Wt(Kg)</b>	29	74.51	8.283
<b>BMI(Kg/m<sup>2</sup>)</b>	7	24.09	1.831

Key: Ht- Height, Wt- Weight, BMI- Body Mass Index

Table 2 presents the physical characteristics of footballers. The mean age is 22 years. The youngest is 16years while the oldest is 28years. The average height of footballers is 175.62cm while weight is 74.51kg. The mean Body Mass Index of 24.09kg/m<sup>2</sup> was obtained by the players.



**Fig 3:** Height of Footballers



**Fig 5:** Body Mass Index of Footballers

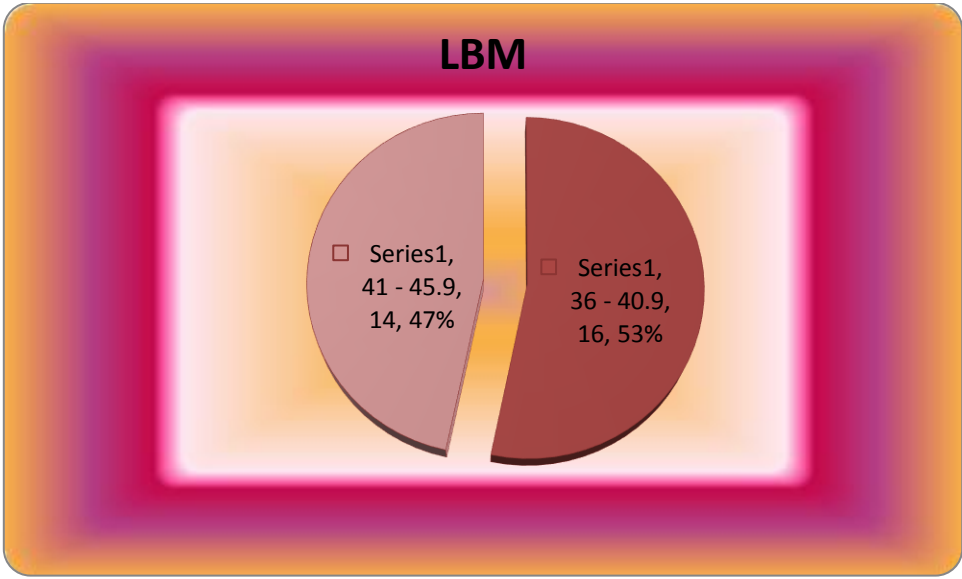
**Table 3:** Body Composition of Footballers

Variables	Range	Mean	SD
<b>BF%</b>	12	18.67	3.389
<b>LBM</b>	9	41.07	1.951
<b>VFL</b>	9	5.63	1.884

Key: LBM - Lean Body Mass, VFL- Visceral Fat Level



Table 3 shows the body fat percent, lean body weight and visceral fat to be within the normal range for athletes.



**Fig 6:** Lean Body Mass of Footballers

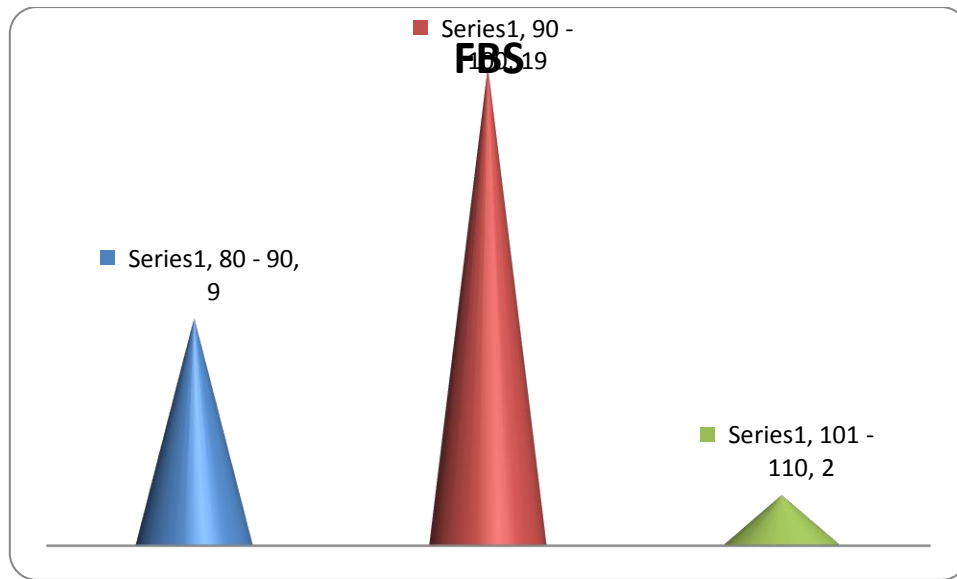
**Table 4:** Nutritional Characteristics Footballers

Variables	Range	Mean	Standard Deviation
FBS	25	92.03	6.568
URINE	3	2.77	0.568
RMR	391	1724.77	104.889

Key: FBS- Fasting Blood Sugar, Urine- Urine Analysis

**RMR-Resting Metabolic Rate**

Table 4 indicates that the mean fasting blood sugar level of 92.03 is within normal and players are at very low risk for the development of diabetes. The mean result of 2.77 obtained in urine analysis of the players shows that they are dehydrated, while mean resting metabolism rate are within normal.



**Fig 7: Fasting Blood Sugar Analysis of Footballers**

## Discussion

Result from the resting values of the footballers indicates that the mean pulse rates, resting systolic and diastolic blood pressure are within the normal range for sport men. Only 10% (3) had higher resting values. The normal resting values of the footballers is an indication of a strong heart resulting from the daily physical training they had. It has been known that participating in regular physical activity improves and strengthens the cardiovascular system (Hoeger and Hoger 2007), and also reduce blood pressure (Robergs and Keteyian, 2003).

The physical characteristics result of the footballers is an indication of participation in competitive sport within the right age bracket when a physiological function is to their advantage. this is a good age for active participation in sport. The mean body mass index of obtained by the 3sc player. This shows that athletes are not overweight and therefore not at risk of cardiovascular disease. Scientific evidence indicates that risk for disease starts to increase when BMI exceeds 25(Steven, Cai, Pamuk, Williamson,Thun,and Wood, 1998). Fasting blood sugar level falls within normal. This is an indication that the pancreases and insulin are functioning well and athletes are at very low risk for the development of diabetes. A diagnosis of diabetes is usually made when a blood sugar test is consistently above 125mg% or 7.0 mmol/L after an eight-hour fast (Ludington and Diehl, 2005).

Pre-urine analysis of 2.77 showed that the footballers are dehydrated. Determining athletes' pre-exercise hydration status is relevant to fluid balance and urine specific gravity is a commonly-used measure that is considered practical, non-invasive and a reliable parameter. Ensuring adequate hydration includes starting exercise in an euhydrated state and fluid intake should be sufficient in order to preserve body mass loss to less than 2% of the pre-exercise mass The National Athletic Trainer's Association (NATA) recommends that athletes should

begin all exercise sessions well hydrated with a urine specific gravity at or below 1.020 g.ml<sup>-1</sup> (Casa, Armstrong, Hillman, Montain, Reiff, Rich, Roberts and Stone, 2000).

Dehydration's impact on a variety of cardiovascular and thermoregulatory functions is measurable early in exercise (e.g., within 30 min) at a body mass loss of approximately 1%. As the level of dehydration increases, deterioration in physiological function progressively rises (Swaka, Burke, Eichner, Muaghan, Mountain and Stachenfeld, 2007). Individuals are encouraged to consume drinks before and during exercise in order to delay depletion of glycogen stores and replace water lost in sweat, and thus delay exhaustion.

## **Conclusion**

Drinking sufficient volumes of fluid before and during physical activity to minimize dehydration is the simplest and most effective means of sustaining physiological function and improving physical performance.

## **Recommendations**

Fluid should be taken by athletes in little sips and this should be done intermittently. This should aim at replacing the amount lost during exercise. Athletes should begin all exercise sessions well hydrated and should avoid taking copious amount of water especially during exercise. To ensure proper pre-exercise hydration, the athlete should consume approximately 500 to 600 mL (17 to 20 fl oz) of water or a sport drink 2 to 3 hours before exercise and 200 to 300 mL (7 to 10 fl oz) of water or a sports drink 10 to 20 minutes before exercise.

Fluid replacement should approximate sweat and urine losses and at least maintain hydration at less than 2% body weight reduction. This generally requires 200 to 300 mL (7 to 10 fl oz) every 10 to 20 minutes. Post exercise hydration should aim to correct any fluid loss accumulated during the practice or event. Rehydration should contain water to restore hydration status, carbohydrates to replenish glycogen stores, and electrolytes to speed rehydration. The primary goal is the immediate return of physiologic function.

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## Obesity: The Causes and Consequences

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### **Abstract**

Past estimates have indicated that obesity is a serious concern. Future estimates indicate that obesity is expected to increase. For example, the World Health Organization projections for 2015 indicate that approximately 2.3 billion adults will be overweight and more than 200 million individuals will be obese. Several reasons for the development of obesity include but are not limited to the following: over consumption of foods that are high in fat, lack of physical activity or a sedentary life style, any change in diet, life style changes, social changes, transportation, a lack of education, any change in health condition, drug intake due to illness requirement, and genetics. Overweight and obesity have detrimental consequences. For example, the Center for Disease Control and Prevention claims that an increase in weight to the level of overweight or obesity sets the individual at risk for many diseases, such as coronary heart disease and type-two diabetes. In addition, obesity sets the victims at risk for many cancers such as breast cancer, endometrial cancer, and colon cancer. Further, other consequences with heavy weight are high levels of cholesterol, stroke, liver and gall bladder diseases, sleep apnea, and respiratory problems. Furthermore, the weight issue sets the individuals at risk for gynecological problems such as abnormal menstrual cycles, and infertility. The focus of this particular study is to research a few of the many possibilities contributing to this deadly disease by researching family backgrounds, genetics and demographics and also, the paper will study the consequences of obesity. We will use the data from Center for Disease Control, the World Health Organization, and the General Social Survey to perform t-tests and Pearson correlations to statistically test whether certain demographic conditions contribute to obesity and to whether there is a correlation between obesity and certain physical and psychological diseases.

## **Effect of Carbohydrate Supplementation on T Lymphocyte Subgroup Response Following Combination Exercise among College -Female Non-Athletes**

Ensiyeh Zoghiyan <sup>a</sup>

<sup>a</sup> Islamic Azad University of Karaj, Iran

### **Abstract**

The purpose of this study was to determine the effect of consuming carbohydrate with combination exercise on some selected immune system parameters (CD4, CD8, and CD4/CD8 ratio). Twenty-four female non-athletes from the college of physical education *were* randomly divided into three groups consuming carbohydrate and exercise (group 1), placebo and exercise (group 2) and control (group 3). Experimental groups (group 1&2) participated in combining exercise (continuous-aerobic) and per each session (intermittent- aerobic) for eight weeks, three sessions a week with each lasting for 60 to 90 minutes. Exercise experimental groups consumed a 5% glucose solution (group 1) and placebo solution (group 2) each session (half an hour prior to the exercise and during the exercise). Blood samples (2cc) were collected 24 hours before and 24 hours after the termination of each exercise program from antecubital vein. The results indicated no significant difference of CD4, CD8 and CD4/CD8 ratio after eight weeks of combining exercise ( $p > 0.05$ ). Therefore it seems that carbohydrate supplementation in this exercise with given intensity and volume had no effect on some of the immune system factors in the rest time.

## **Effect of Chess Tournament on the Cortisol Density and Mood of Elite Male Players in Super League Championship**

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<sup>a</sup> *Islamic Azad University of Karaj, Iran*

### **Abstract**

This recent study was carried out for the purpose of studying the effect of super League chess games on the density of salivary cortisol and behavior in elite male players. The population consisted of 60 participants, 35 of them within ages 20-40 were selected through the way of selection method. Within this research, the cause and effect relation between dependent and independent variables was in mind, but some factors were out of control. So we therefore categorized this as semi-experimental research. Poms questionnaire in order to subject's profile of mood states and salivary cortisol sampling for measuring the density of salivary cortisol were carried out in eight steps between 9 to 14 pm. (before one week beginning of games, before and next every game, and next one week game). The result has shown that during whole chess games density of salivary cortisol in the majority of periods existed, with the most amount of cortisol' density present in the second half of competitions. Another result related to behavior modification which increased during the games. The reason for increased behavior modification was heavy pressure and limitation of time in the chess competition in which the duration of competition has a direct relationship with the increasing of behavior modification. Generally, chess competitions had a noticeable (visible) effect on density of salivary cortisol, but it had no effect on total behavioral disorders of participants. There was no noticeable relationship between salivary cortisol and behavior.

## The Effect of Eight Weeks of Yoga Training on Flexibility and Dynamic Balance of Inactive Elderly Women

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The purpose of this study was to evaluate the effect of yoga on flexibility and dynamic balance in inactive women aged 60-70 years. Therefore, a number of 30 elderly women have been attended in this study as volunteer, who referred to parks and cultural centers for leisure in the city of Karaj and also did not participate in sports program before. Firstly, the samples were examined by a physician and cardiologist and their health has been approved. Samples were with a mean age (experimental  $63/40 \pm 3/22$ ) (control,  $63/46 \pm 3/86$ ) years old, average weight (experimental  $73 \pm 14.79$ ) (control  $71.33 \pm 14.22$ ) kg, and mean height (experimental  $154.06 \pm 6.51$ ) (control  $155.46 \pm 4.79$ ) cm. After the pre-test, subjects were randomly assigned to two experimental (n=15) and control (n=15) groups. The experimental group participated in 3 sessions per week for 8 weeks (24 sessions) of yoga (including asana, pranayama, and meditation) and the control group continued their normal activities only. After the sessions, Re-testing of samples was taken and information contained flexibility and dynamic balances in both groups were measured and findings were analyzed (by electronic devices). In order to analyze the results, T-test was used for special independent groups and dependent on a significant scale ( $p < 0.05$ ). The results showed that eight weeks of yoga training has had a positive and significant impact on flexibility ( $p = 0.000$ ) and dynamic balance ( $p < 0.05$ ) of inactive elderly women. Physical exercise has been shown to improve balance in elderly women; therefore it can be concluded that yoga has improved the dynamic balance in elderlies. Thus, however, this can also reduce the risk of bone fractures as well as the other health problems. Therefore, it is recommended that elderlies should include yoga training on their daily program and educators use these techniques in relation to the activities of the elderlies as well.

**Keywords:** Yoga, flexibility, dynamic balance, elderly, inactive women

### Introduction

Since inception, health and happiness have been the desire of all human beings. To achieve these goals, human beings have done anything and traveled different paths. Health, happiness and inner peace requires some techniques that human beings have always tried to achieve a healthy body and mind by appealing to them. These tools and techniques were



called “eternity and relies on its inherent nature”, “Brahman”, “cosmic consciousness” and “Nirvana”. But one of the very old which dating back to several thousand years ago and has been considered as the science of space, is yoga. According to the narrative and scientific reasons discussed in the “Cheriest of the gods” and “The gold of the gods” (by Erich von Daniken), ancient cosmonauts have traveled to Earth from another celestial plants and been communicating with human beings. The result of this communication has been development of a comprehensive science which been followed the progress of human beings. Yoga is one of the sciences of the universe that emerged in Asia and made a great spiritual flow that its abstracts have been reflected gradually over the world, especially in India by over eighty thousand verses in “The Upanishads” book. In summary it can be stated that yoga is the most ancient science which have already existed in the world and is still expanding as well. The science pays a special attention to the mind and body and shows a profound understanding of human nature. In order to enter the path of human evolution, body and mind must necessarily be in a balance. Yoga techniques are a certain way to create the balance and lead the person to peace of mind and understanding of truth through becoming aware of himself/herself (Shyvananda, 1389, p 11). What has been proven is the fact that the evolutionary process of human body system had an upward or positive trend at a point of life; and in this point, however, the effects of aging appears in humans (2). When the effects of aging on the various systems of the human body are evaluated, we would find a public curve for aging that shows a decrease in the body's ability to adapt (6). The body's physiological and mechanical reduction-especially after age 60- are the most significant changes that appear (1). The loss of muscle mass by reducing the number and size of muscle fibers are the effects of aging (8). In elderly age, flexibility decreases due to hardening of connective tissue and reducing mobility and poverty of movement. Lack of flexibility in the major joints may limit performance and proper operation. An elderly person who has little flexibility may not react to loss of balance or sudden changes. When the effects of aging on the various systems of the human body are evaluated, we would find a public curve for aging that shows a decrease in the body's ability to adapt (Rahimi, 1382, p 10). Research shows that about %50 of the negative effects of aging are associated with physical inactivity rather than aging process itself (8). The purpose of the research on aging is to increase the useful and productive years of life. Although one cannot claim that the physical activity can delay the aging process, however, we believe that regular exercise can result in activity and mobility of elderly people. The purpose of physical activity is to increase the mobility and activity during again (1). Moreover, we can prevent ailments of aging by gradual change in the pattern of bad habits and strengthen the body through regular and dramatically activities (7). Since the rehabilitation or secondary prevention programs are devoted to only a very small percentage of the elderly population and also a small percentage of the elderlies start running, swimming or other sports activities with high intensity after heart - cardiovascular and other chronic diseases, therefore yoga is one of the activities that need to deal with most of elderly people at any time and place to reduce the risk of injury. Considering that elderly people are affected by numerous injuries due to poor mobility physical activity, maintain and de-

velop these capabilities may impact the quality of healthy elderly and plays an important role in fulfilling their daily activities.

Given the above, this study seeks to answer the question” do a yoga program can effect on flexibility and dynamic balance of inactive elderly women?” and thereby take a step toward improving the health and quality of life of elderly people.

## **Methodology**

The conducted research is a quasi-experimental study. The population is included inactive elderly women (non- athlete) with age range of 60 to 70 years who referred to parks and cultural centers for leisure in the city of Karaj. A number of 30 elderly women have been attended in this study as volunteer who were randomly assigned to two experimental (n=15) and control (n=15) groups by mean age of 63. The experimental group participated in 3 sessions per week for 8 weeks (24 sessions) of yoga and the control group continued their normal activities only. The independent variable in this study is yoga training and dependent variables are including dynamic balance and flexibility.

Flexible electronic devices and Star test are used to measure the flexibility and dynamic balance, respectively.

Firstly, the samples were examined by a physician and cardiologist and their health has been approved, then all the subjects were participated in the pretest and the results were recorded separately. In the next step, the experimental group participated in 3 sessions per week for 8 weeks (24 sessions) of yoga and the control group continued their normal and daily activities. After twenty-fourth session, the aforementioned parameters were measured again.

In this study, in order to test the hypotheses, inferential statistical methods including T-test for independent and correlated groups were used. The calculations were performed using the software spss17 and graphs were plotted using EXCEL software.

## **Findings**

- 1- The first hypothesis: Yoga exercises have significant effect on dynamic balance of inactive elderly women.

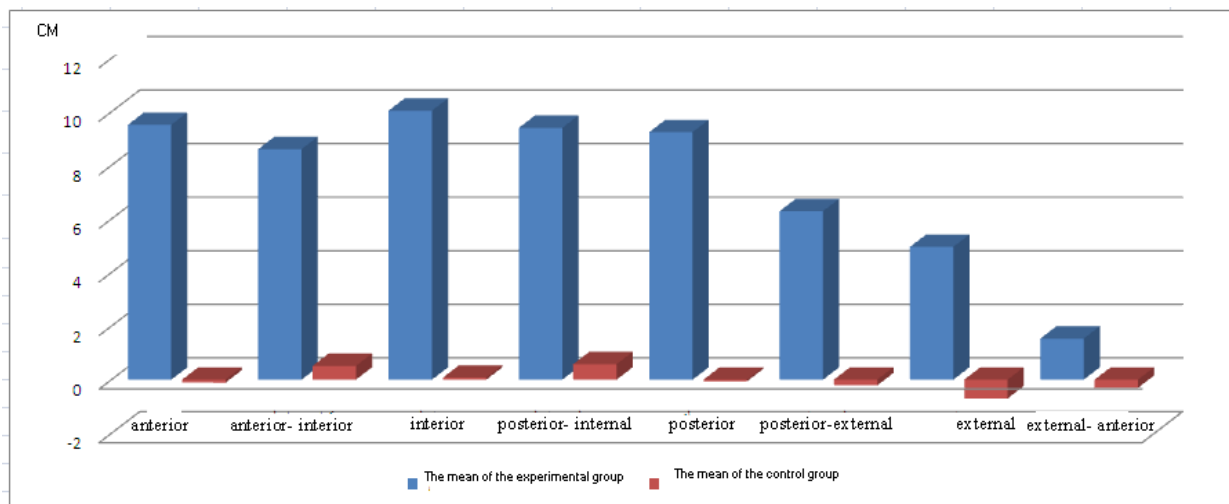
Statistical null hypothesis: Yoga exercises have not any significant effect on dynamic balance of inactive elderly women.

**Table 1:** The results of Independent samples of t-test to study the effect of yoga on dynamic balance on samples according to 8 concepts

Significant level	Mean difference	T value	Degrees of freedom	Mean difference	
0/829	0/110	0/220	14	anterior	Control
0/059	-0/510	-2/057	14	anterior- interior	
0/799	-0/074	-0/260	14	interior	
0/155	-0/576	-1/505	14	posterior- internal	
0/876	0/062	0/159	14	posterior	
0/591	0/213	0/550	14	posterior-external	
0/085	0/700	1/855	14	external	
0/490	0/304	0/709	14	external- anterior	
0/000	-9/510	-5/278	14	anterior	Experimental
0/001	-8/603	-4/396	14	anterior- interior	
0/005	-10/040	-3/339	14	interior	
0/006	-9/399	-3/277	14	posterior- internal	
0/002	-9/238	-3/863	14	posterior	
0/000	-6/287	-4/871	14	posterior-external	
0/000	-4/954	-6/454	14	external	
0/001	-1/532	-4/680	14	external- anterior	

Due to significant levels in Table 1, it can be seen that the test was significant in 8 concepts. In “anterior” concept: test is significant at a level beyond 0.000,  $t=5.278$ . In “anterior- interior” concept: test is significant at a level beyond 0.001,  $t=4.396$ . In “interior” concept: test is significant at a level beyond 0.005,  $t=3.339$ . In “posterior- internal” concept: test is significant at a level beyond 0.006,  $t=3.227$ . In “posterior” concept: test is significant at a level beyond 0.002,  $t=3.863$ . In “posterior-external” concept: test is significant at a level beyond 0.000,  $t=4.871$ . In “external” concept: test is significant at a level beyond 0.000,  $t=-6.454$ . In “external- anterior” concept: test is significant at a level beyond 0.001,  $t=-4.480$ .

Therefore, the null hypothesis is rejected and we conclude that significant changes in dynamic balance in subjects were due to the significant impact of yoga program. Due to significant levels, no significant change was observed in the control group.



**Figure 1.** The mean pre & post difference changes in dynamic balance of participants

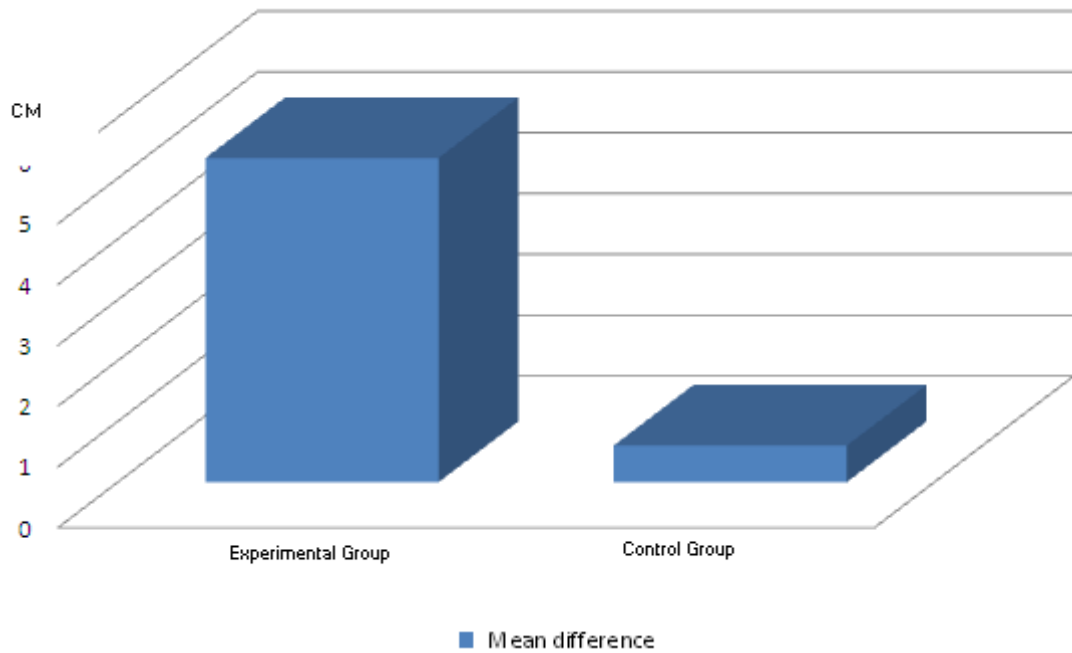
2- The second hypothesis: Yoga exercises have significant effect on flexibility of inactive elderly women.

Statistical null hypothesis: Yoga exercises have not any significant effect on flexibility of inactive elderly women.

**Table 2:** Results of t-test for independent samples on flexibility of participants

Significant level	Mean difference	T value	Degrees of freedom	Group
0/199	-0/600	-1/348	14	Control
0/000	-5/330	-4/933	14	Experimental

Due to the significance level, Table 2 shows that the test is significant at a level beyond 0.05. Therefore, the null hypothesis is rejected and we conclude that the difference in flexibility of participants was due to the significant impact of yoga program ( $t=-4.933$ ,  $p<0.005$ ).



**Figure 2.** Mean changes of participates' flexibility

## Conclusion and Discussion

### 1- The effect of yoga training on participates' flexibility

The results of this study showed that there is a significant difference between the mean values of pre-and post-test experimental group according to flexibility. This indicates a significant effect of yoga exercises on flexibility. According to the data presented in Table (4-15), there is a significant difference between the mean values of pre-and post-test giving to flexibility. This shows the significant effect of yoga on flexibility of flexor muscles in the elderly people ( $t=-4.933 \mid p<0.05$ ).

The results of the conducted study are consistent with the results of Dantas A.H et al (2010), Nagendra H. R., et al (2010), Joseph F. et al (2006), Thomas S. (2004), M. Brown (1993) and Falah Kish (1387). Based on the results of these studies it can be concluded that Yoga stretching flexibility exercises can improve the flexibility of elderly people due to the increased range of motion in joints.

### 2- The effect of yoga training on participates' dynamic balance

According to the data presented in Table (2), there is a significant difference between the mean values of pre-and post-test according to dynamic balance. This indicates a significant effect of yoga exercises on dynamic balance in this study. "Anterior"  $p=0.000$ , "anterior- interior"  $p= 0.001$ , "interior"  $p= 0.005$ , "posterior- internal"  $p=0.006$ , "posterior"  $p= 0.002$ , "posterior-external"  $p= 0.000$ , "external"  $p= 0.000$ , "external- anterior"  $p= 0.001$ .

The results of the conducted study are consistent with the results of Pour Dehkordi (1389), Ghasemi, Azamian (1389), Hnachy (1389) Garshasbi (1379), Zaghry (1382), Virtue G.M. (2011), Askmid (2012) J. Judy et al (1993), Butcher et al (1997), Towzen F. et al (2006) and Brown M. Halouzi (1993).

As mentioned earlier, one of the factors affecting the balance is physical exercise; as a result, Yoga exercise has improved the balance of people due to physical exercise. Therefore, given the present results it can be concluded that Yoga exercises include a variety of balance exercises such as trees, mountains, dance mode, triangle and angle improve the dynamic balance and thus, reducing the risk of injuries in elderly people. Physical exercise has been shown to improve balance in elderly people; therefore it can be stated that the eight-week yoga practices have improved the dynamic balance in elderly people and can also reduce the risk of bone fractures as well as the other health problems such as falling injuries.

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**A PROSPECTIVE STUDY OF SPORTS INJURY AMONG STUDENTS OF  
FOOTBALL ACADEMIES IN NIGERIA**

**TONY DANSU, RAFIU O. OKUNEYE**

**ABSTRACT**

Injury is an unwanted phenomenon, and its occurrence lowers efficiency in sports. It is inevitable in sports, therefore adequate knowledge of pathokinesiology of structures involved and the causes are needed. This study investigated sports injury among students of football academies in Nigeria. Participants were 109 male and female students purposively sampled from 3 football academies in Nigeria. A self-developed sports injury data form was validated for the purpose of data collection. Data on injuries commonly sustained, body parts affected, events during which injuries occurred and the severity of injuries sustained were collected on the participants for the period of 16 weeks. Data collected were analyzed and presented using frequency counts, percentage and bar chart. Findings showed that sprain, strain, dislocations and muscle cramp are the types of sports injury mostly sustained, while body parts affected mostly were knees and ankles. Most of the injuries sustained were during training session and their severities were minor, mild and moderate.

*Keywords: Sports Injury, Football Academy, Severity.*

**Introduction**

All over the world, injury via accident represents one of the leading causes of death and substantial source of disability. Although most of the deaths are linked with traffic accidents [Gieck, 2004], sports represent an important source of relatively less serious injury that often lead to impairment in physical and social activities [Michard, Renaud & Narring, 2001]. According to Pray and Pray [2004], sports account for up to seven million injuries among Americans; with the highest incidence of such injury in children who are within the age-range of 5 and 15 years, having 59.3 injuries per 1,000; compared to 25.9 injuries per 1,000 in the general population. Also adolescents and young adults within the age range of 15 to 24 years recorded 56.4 per 1,000 incidences of injury.

Football [soccer], among all sports has been reported to have recorded the highest percentage of sports injury at any point in time [FIFA Medical Assessment and Research Centre F-MARC, 2006; Medical News Today, 2005; Egwu, Uche-Nwachi and Adeniran, 1994; Onifade, Agbojinmi and Ososanya, 1991]. According to Medical News Today [2005], football players are far more likely to have injury than other sportsmen. A study on injury among people with long term sports involvement reveals that significantly more football players (6.3%) sustained injury during active sports than others. Egwu, Uche-Nwachi and Adeniran [1994] reported the occurrence of injury in football as being responsible for 50% to 60% of all sports injury; and 3.9% to 10% of all injury treated in hospitals.

In the game of football, most injury occur through contact with another player; some are caused by contact with the ball or ground, and the others result from excessive pressure being placed upon a body part, e.g. when straining a muscle or twisting a joint beyond its normal



range of movement [Gall, Carling & Reilly, 2008; Krivickas, & Feinberg, 1996]. Children can suffer from all types of sports injury that are seen in adults. They can also suffer from a number of additional injuries related to their stage of development. This means that some injuries are only seen in children and the relative frequency of many other injuries differ between children and adults [Ivarsson, 2008; Hagglund, Walden, Bahr & Ekstrand, 2005; Nclatchie, 2004; Bird, Black & Newton, 1997].

According to Bird, Black and Newton [1997], many children participate in serious competitive sports from a very young age and in order to achieve success at a young age, they are given very strenuous and demanding training schedules that are more suitable to adults. Indeed, many authorities would emphasize that children are not miniature adults since their growing bodies are unable to take the physical stresses that an adult body can endure [Ivarsson, 2008; Bird, Black & Newton, 1997].

The risk of injury in football is very high, and may even be higher in children and adolescents. A study [Hagglund, Walden, Bahr & Ekstrand, 2005] evaluated the injury pattern and its risk in football; it was found out that the overall risk was higher for players than for high risk industrial occupation. According to Jacobson [2006], injury in football, in general, are all types of physical damage to the body occurring in relation to football. However, risks may vary with position played or intensity and nature of activity during training or competition. This study specifically appraised sports injury among students of football academies in Nigeria. It focused on the following variables:

- i. types of sports injury commonly sustained
- ii. body parts commonly affected
- iii. events during which injury occurred; and
- iv. severity of sports injury.

## Methods and Procedure

### Participants

Participants were purposively selected from three football academies at two different locations in Nigeria. The academies were selected using students' population, availability of personnel/facilities and programmes/curricula as criteria. The academies are:

- I. *Pepsi Football Academy, Agege Lagos*
- II. *FAKREM Football Academy, Surulere, Lagos; and*
- III. *Kwara Football Academy, Ilorin.*

The table below shows the pattern of sample selection from the academies

**Table 1**

### Frequency and Percentage distributions of the Sample Size

Academy	Initial Sample	Mortality	Completion Sample
<b>Pepsi [Male]</b>	44 [34.4%]	8 [6.3%]	36 [28.1%]

<b>Pepsi [Female]</b>	11 [8.6%]	3 [2.3%]	8 [6.3%]
<b>KFA</b>	46 [35.9%]	3 [2.3%]	43 [33.6%]
<b>FAKREM</b>	27 [21.1%]	5 [3.9%]	22 [17.2%]
<b>Total</b>	128 [100%]	19 [14.8%]	109 [85.2%]

Table 1 shows that the initial research sample was 128 with mortality of 19 [14.8%] while the sample that completed the study was 109 [85.2%]. Of this sample size, 44 [34.4%] were male students from Pepsi with mortality rate of 8 [6.3%], while only 11 [8.6%] were female students from Pepsi Academy with mortality rate of 3 [2.3%]. From Kwara Football Academy (KFA), there were 46 [35.9%] students with 3 [2.3%] mortality rate, and 27 [21.1%] from FAKREM Football academy, having a mortality rate of 5 [3.9%].

The selection of participants was achieved through documentary analysis of the records of the academies, using regular attendance as the basis for sampling, in order to reduce mortality rate. In the case of Pepsi and FAKREM Academies, all the students who were regular at training and were free from injury at the time of study served as sample of the study. But for Kwara Football Academy [KFA], only the junior and intermediate categories that were free from injury were involved in the study, excluding the senior category due to tight schedule of its programme.

### **Data Collection**

For the purpose of data collection, height and weight of the participants were measured following standards described by International Society for the Advancement of Kinanthropometry (ISAK, 2001). Their ages were sought from the official records of the academies and were cross-checked via interview. These were recorded in years to the nearest birthday. A self-developed data recording form titled *Sports Injury (SI) Data Form* was designed by the researchers. This form is in two parts. Part A records information on physical characteristics and personal data which include age, height, weight, and sex. Part B of the form records data on sports injury, which include date of injury, type of injury, affected part of body and severity of injury.

The process of data collection spanned over the period of sixteen weeks. Physical characteristics and personal data were taken at the initial stage of the study. Duplicate copy of Sports Injury [SI] data form for each participant was kept with a designated officer in each of the academies who was trained to serve as research assistant for recording and keeping records of injury sustained by each participant. The original copies of the data forms were often updated as at when due by the researchers.

### **Data Analysis**

The injuries sustained by the participants of this study were scored based on their severity as defined by Federation Internationale de Football Association [FIFA] Medical Assessment and

Research Centre [F-MARC, 2006], and Union of European Football Association [UEFA] Consensus Discussion [Hagglund, Walden, Bahr, & Ekstrnad, 2005]. The cut-off points for the different categories of injury severity were then allotted points as follows:

- ✓ *slight [1-3 days] =1 point*
- ✓ *minor [4-7 days] =2 points*
- ✓ *mild [8-15 days] =3 points*
- ✓ *moderate [16-28 days] =4 points; and*
- ✓ *major [above 28 days] =5 points.*

*Note: Days in the brackets indicate number of days the injured players spent out of active participation.*

All data collected were coded and subjected to statistical analysis. Descriptive statistics of frequency counts, percentage, mean, range, standard deviation were carried out, while component bar chart was used to describe the results.

## Results

**Table 2**

**Results of Mean, Standard Deviation and Range Analyses on Participants' Ages, Weight and Height**

Characteristics	$\bar{x}$	sd[ $\pm$ ]	R
Age [yrs]	15.62	1.72	12-22
Weight [kg]	61.56	6.74	45.00-79.00
Height [cm]	160.55	7.39	140.20-187.00

Table 2 shows that the mean age of the participants was 15.62 [ $\pm$  1.72] within the range of 12 and 22 years. The mean weight of the students was 61.56 [ $\pm$  6.74] within the range of 45.00 and 79.00 kg, and their mean height was 160.55 [ $\pm$  7.39] within the range of 140.20 and 187.00 cm.

**Table 3**

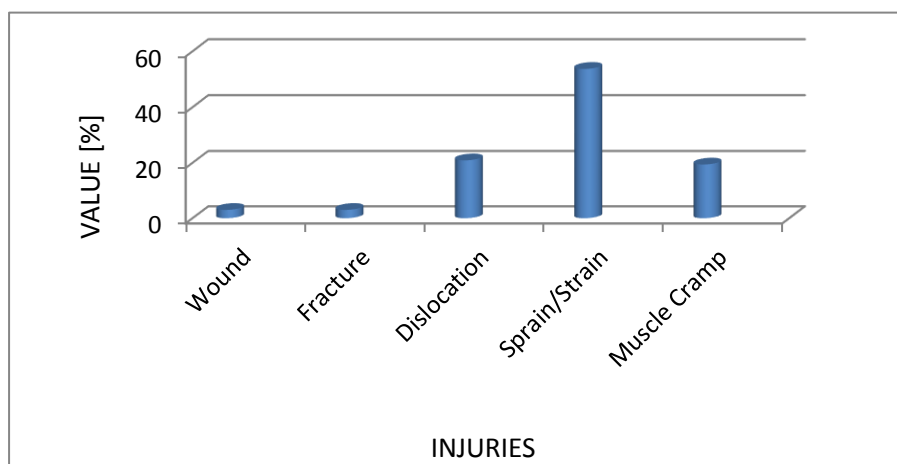
**Frequency and Percentage distributions on Types of Injury Commonly Sustained**

Injury Type	Frequency	Percentage
Wound	2	3.0

<b>Fracture</b>	2	3.0
<b>Dislocation</b>	14	20.9
<b>Sprain/Strain</b>	36	53.7
<b>Muscle Cramp</b>	13	19.4
<b>Total</b>	67	100

Result in Table 3 shows that wound and fracture were 2 [3.0%] each. There were 14 [20.9%] dislocations, and 13 [19.4%] muscle cramp. Sprain and strain were 36 [53.7%]. Figure 1 further describes this distribution.

Figure 1 describes distribution on types of injury sustained by the participants



**Figure 1:** Component bar chart on types of injury sustained by students

Figure 1 shows that Wound and fracture recorded lowest percentage of occurrence, while sprain and strain had the highest percentage value.

**Table 4**

**Frequency and Percentage Distributions of Body Parts Affected by Injury**

<b>Body Parts</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Foot</b>	8	11.9

<b>Ankle</b>	25	37.3
<b>Shin</b>	2	3.0
<b>Knee</b>	18	26.9
<b>Thigh</b>	11	16.4
<b>Hand</b>	3	4.5
<b>Total</b>	67	100

Table 4 shows that injuries sustained in the study spreads across some parts of the body. Of these injuries, 8 [11.9%] affected the foot, while 25 [37.3%] affected the ankle. The knee had 18 [26.9%] of the total number of injuries sustained, while 2 [3%] and 11 [16.4%] affected the shin and thigh respectively. Only 3 [4.5%] of the injuries affected the hand.

Table 5 presents results on distribution of the sports injury sustained in the study by events the participants were engaged in.

**Table 5**

Frequency and Percentage Distributions of Injury Sustained by Event

<b>Event</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Training Session</b>	40	59.7
<b>Training Match</b>	25	37.3
<b>Tournament Match</b>	2	3.0
<b>Total</b>	67	100

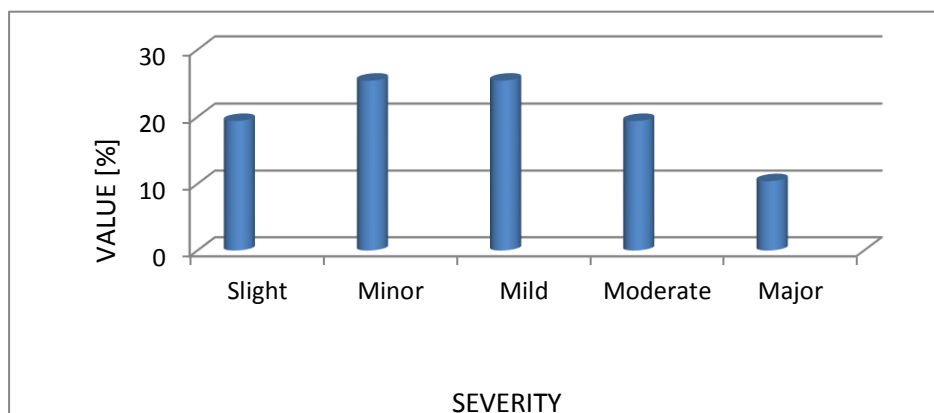
Table 5 shows that of the 67 injuries sustained in this study, 40 [59.7%] were sustained during training session, while 25 [37.3%] were sustained during training matches. Only 2 [3.0%] were sustained during tournament matches.

**Table 6**

Frequency and Percentage Distributions of injury by Severity

Severity	Frequency	Percentage
Slight	13	19.4
Minor	17	25.4
Mild	17	25.4
Moderate	13	19.4
Major	7	10.4
Total	67	100

Table 6 shows that of the 67 injuries sustained in this study, 13 [19.4%] were slight and moderate injuries, while 17 [25.4%] were minor and mild injuries. Major injuries sustained by the participants were 7 [10.4%]. Figure 3 further describes this result.



**Figure 3:** Component bar chart on severity of injury sustained

Figure 3 shows that minor and mild injuries recorded the highest percentage of injury while major injury recorded lowest percentage.

## Discussion

Findings of this study showed that sprain and strain recorded the highest percentage of injury sustained by the participants of this study, with ankle and knee recording the most affected parts of the body [see figures 1 & 2]. This finding is in line with the report of Turner, Balow and Healthcote-Elliott [2000] that the most common injuries in football are sprains and strains; affecting mainly the ankle and knee joints. According to Turner, Balow and Healthcote-Elliott [2000], knee injury, particularly cruciate ligaments (anterior-ACL and Posterior-PCL),

accounted for nearly half (49%) of all injury in enforced premature retirement from active football. In the same line of argument, Walker [2003] in a report stated that ankle sprain is the commonest injury among professional football players; accounting for more than 1 in every 10 of total injury.

The finding of this study showed that most of the injuries sustained were during training sessions. This did not come as a surprise, since the participants were students in various academies, and most of their active football periods were during training session. Interview and observations showed that matches and competitions were relatively few in comparison with trainings.

It is further shown in this study that minor and mild severity levels of injury recorded the highest percentage; although slight and moderate levels were also high [see figure 3]. In a similar study by Jackson and Feagin [2013], it was found that 47 of 65 injuries recorded were mild, while 7 were moderate. The trend may be expected even during competitions, that is minor or mild severity levels. In a prospective study by Chomiak et al [2000], only 16.5% were very severe. In the past, Hawkins and Fuller [1998] had reported moderate and minor injury to be of high percentage among players in premier league and first division league matches of 1996/1997 and 1994- 1997 respectively. Injury however, is one of the major reasons why people quit sports; therefore, it is very essential to employ every means of preventing sports injury, especially in young sportsmen. Authors [Carol & Eustice, 2006; Nader, 2005; Okuneye, 2001] have emphasized the need to pay serious attention to various strategies for preventing sports injury.

From an economic point of view, the fact remains that huge amounts of money are spent on players as sign-on fees, wages and allowances at professional levels. Therefore, club owners and managers, fans and all stakeholders will expect long lasting and regular performance that brings about satisfactory financial gains from players on whom such huge amount of money is spent. This implies that the club and players must definitely guard against any factor particularly injury that may limit the performance or keep the players off the pitch.

According to Nader [2005], sports injury is preventable if factors that predispose players are identified and dealt with. Carol and Eustice [2006] identify some of these factors to include poor training methods, improper facilities and equipment, lack of conditioning and insufficient warm-up. Many authors [Ruddock, 2007; Ratzloff, Gillies & Kochoorn, 2007; Gieck, 2004; Conti, 2004; Bello, 2000; Verstappen, Tweller, Hartgens & Van-Mechelen, 1998] assert that physical fitness is a strong factor in the prevention of sports injury. Identifying areas of consideration for injury prevention, Gieck [2004] emphasised preseason-screening process, which should focus mainly on physical fitness. Ratzlaff, Gillies and Kochoorn [2007] stated that being physically fit is strongly associated with lower risk of strain injury.

## **Conclusion and Recommendations**

Based on the findings of this study, it is concluded that sprain and strain were the most sustained injury by the participants of this study, with ankle and knee being the most affected parts of the body. Also most of the injuries sustained were during training session, and minor and mild severity levels of injury were common; although slight and moderate levels of injury were also high among the participants.

It is therefore recommended that coaches and trainers in football academies should pay serious attention to sports injury prevention among students. All factors that predisposed players to injury should be identified and treated with utmost priority. Physical fitness level of the students should be developed and maintained as there is strong link between the two variables. In addition, the students should be regularly educated on the essence of injury prevention in sports. Intensive care of footballers with injury should be ensured by medical department of football academies and clubs; relevant personnel should also be employed to this department. This will enable quick and full recovery from injury and resumption to trainings and competitions.

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No.151

## KNOWLEDGE AND USE OF FOOD SUPPLEMENT AMONG ATHLETES IN LAGOS STATE, NIGERIA

AZUBUIKE, Chinedu, ADEMIJU, Pauline Urenwa, ONWUAMA, Mercy, A.C., ADEFUYE, Michael

### ABSTRACT

The study examined knowledge and use of food supplement by sport men and women in Lagos State, Nigeria. The research design was descriptive survey research method. The instrument used was questionnaire with reliability value of 0.72. The sample use consisted of three hundred male and female athletes selected through simple random sampling technique during their training and competition sessions. The data collected was analysed using descriptive statistics of frequency, percentage and inferential statistics of chi-square to test the hypothesis. The result revealed that few participants got first knowledge of use of food supplement from the sport dietician and their coaches, and high percentage came about the use of food supplement from co-athletes and successful athletes.

### Key words

Knowledge, Usage, Athletes, Food supplements

### Introduction

The life of man is activity oriented, walk, run, and jump in the process of carrying out his or her developmental task. Sometimes, this activity oriented life goes beyond meeting the developmental tasks but call for more organized, structured and regulated competitive activity. This competitive activity that draw out certain natural potential in the individual is sport. People engage in sporting activity either for recreation purpose, for health or for competition. When a person engages in competitive sporting activity, the ultimate goal of the individual, the coach, and other related persons is to excel in the sporting activity of the athlete's choice. In order to excel the individual engages in physical training that will enable him or her to achieve the goal. However, some people will combine physical training with other substances known as ergogenic aids to increase the body action in order to excel or top the other athletes.

Ergogenic aids are substances or devices that enhance energy production, use or recovery and provide athletes with a competitive advantage. (Ahrendt, 2001). Ergogenic aids are nutrients, drugs, warm-up exercises, hyprosis, stress management, blood doping, oxygen breaking, music, and extrinsic biomechanical aids (Power, and Howley, 2009). Ergogenic aid is a physical, mechanical, nutritional, psychological, or pharmacological substance or treatment that is intended to directly improve exercise performance (Wardlaw, Smith and Linderman, 2012).

Nutritional ergogenic aids refer to substances that enhance performance and are either nutrients, metabolic byproducts of nutrients, food (plant extracts) or substances commonly found in foods (caffeine and creatine) that are provided in amounts more concentrated than normally occur in the natural food supply (Benardot 2006). A dietary supplement is further defined, FDA (1995) "as a product that is intended to supplement the diet that bears or contains one or

more of the following ingredients: a vitamin, a mineral, an herb or other botanical, an amino acid, a dietary substance for use by man to supplement the diet by increasing the total daily intake, or a concentrate, metabolite, constituent, extract or combination of these ingredients”.

Diet manipulation to improve athletic performance is not a new innovation. As long as 30 years in American football players were encouraged on hot practice days to “tough up” for competition by consuming salt tablets before and during practice and by not drinking water. This practice is too dangerous to the athlete’s health. Just as their predecessors they are likely experiment with any substance that promises a competitive advantage (Wardlaw, Smith and Lindeman, 2012). However, athletes of today benefit in the use of dietary substances such as water, lots of carbohydrates, and a balanced and varied diet that has the ergogenic properties that adhere to the food guide pyramid (Wardlaw, 1999).

From the time people began to participate in sports competition, Molinero and Marquez, (2009), nutrition has been perceived as an integral component of physical performance. Today, supplement use is a widespread and accepted practice by athletes, with a high prevalence of use and a large range of different types and brands of products. Global supplement use in athletes is estimated to range from 40 to as high as 88 percent, with over thirty thousand supplements being commercially-available in the USA. More than 3 million people in the USA alone use, or have used, ergogenic supplements, and supplement use is also widespread among athletes at high school and collegiate levels. The use of nutritional supplements in sport is widespread and few serious athletes do not, at some stage in their career, succumb to the temptation to experiment with one or more nutritional supplements. Athletes who uses nutritional supplements often consumes these in amounts far in excess of those normally ingested and usually concerned primarily with the effectiveness of any supplement used: the amount and timing of supplement and the specific exercise conditions under which its effects may be optimized must be considered. A second concern relates to whether there is a possibility of contravening the rules imposed by the governing bodies of sport, which might lead to suspension from competition. Thirdly, and perhaps most important of all, the safety of supplement must be considered (Maughan, 1999).

Nutritional ergogenic aids are aimed primarily at enhancing performance (either by affecting energy metabolism or by an effect on the central nervous system), at increasing lean body mass or muscle mass by stimulation of protein synthesis and at reducing body fat content (Maughan, 1999). Sobal and Marquart, (1994) reported that study have shown that 76 percent of body college athletes, and 100 percent of body builders take supplements. It is estimated that nearly 60% of all elite athletes use one or more dietary supplements (Schroder et al. 2002). People appear to be using these supplements at an earlier age. Today, close to 45% of collegiate athletes consume one or more dietary supplements, most often multivitamin/mineral supplements and creatine (Beck, Housh, Schmidt, Johnson, Coburn, & Malek, (2006) Jonnalagadda, Rosenbloom & Skinner 2001).

Supplement use is widespread in sport. A recent report of supplement use among 100 Norwegian national-level competitors from various sports revealed that 84 % of all the athletes surveyed used some form of micronutrient supplement (Ronsenet al.1999). Reviews of the published literature suggest that the use of supplements is more prevalent in athletes (46 %) than in the general population (35 ±40 %), while among elite athletes 59 % report supplement use (Sobal & Marquart, 1994).

## **Statement of Problem**

There is no short cut to reaching the top in international sport. Optimal physical performance requires a well design and nutrition program, commitment and working very hard and smart than your competitors. Once these essential elements are in place, nutrition supplements may provide an edge or slight advantage over your competition (National Sport Centre, 1990). The aim of every athlete, the coach, the scientific and medical adviser is to excel in any sporting events of the athlete choice. In pursuit of the success of physiological, biochemical, psychological and nutritional factors limit exercise performance have been identified, therefore, the athletes, the coach, the scientific and medical adviser seek ways to identify ways of minimizing their potential impacts on the athletes. The effect of this the widespread use of nutritional strategies of varying degrees of efficacy usually referred to as ergogenic aids (Williams, 1983), Maughan (1999) observed that there is excessive consumption of dosage, timing, specific exercise under which its effects may be optimized. Also, the safety and the rules governing the supplement are not considered. The effect of this behavior has caused the suspension of some athletes by the sport's governing body.

## **Research Question**

To what extent is the knowledge of food supplement of athletes in Lagos State, Nigeria?

To what extent is the utilization of food supplement of athletes in Lagos State, Nigeria?

What is the first source of knowledge of food supplement of athletes in Lagos State, Nigeria?

What is the source of food supplement usage of athletes in Lagos State, Nigeria?

What is the motivating factor of the usage of food supplement among athletes in Lagos State, Nigeria?

## **Hypothesis**

H<sub>i</sub> Knowledge of food supplement of athletes in Lagos State, Nigeria is not a significant factor in the athletes sport performance.

H<sub>a</sub>: Utilization of food supplement of athletes in Lagos State, Nigeria is not a significant factor in the athletes sport performance.

## **Methodology**

The research design used for the research study was descriptive research design. The researchers went to four sport venues within Lagos metropolis where they administered the questionnaire to the athletes during their training and competition sessions using simple random sampling technique. The instrument used for collection of data from the athletes is questionnaire designed in two sections. The first section was in Likert-type, strongly agreed, agreed, disagreed and strongly disagreed, and this was used to elicit athletes' responses on knowledge and usage of food supplement. The second section of the questionnaire required the athletes to indicate the source of the first knowledge of food supplement, what motivate them to use of food supplement and who introduce them to the use of food supplement. The responses were analysed using differential statistical tools of frequency, average and percentage, while inferential statistical tool of chi-square was used to test the hypotheses. The results on the source of the first knowledge of food supplement, what motivate them to use of food supplement and who introduce them to the use food supplement were also represented in bar chart.

## **Purpose of the Study**

The study was designed to assess the extent of knowledge and utilization of food supplements a subset of ergogenic aids by athletes in Lagos State, Nigeria.

**Hypotheses 1: Knowledge of food supplement of athletes in Lagos Metropolis of Lagos State, Nigeria is not a significant factor in the athletes sport performance.**

**Table 1: Knowledge of food supplement by athletes in Lagos Metropolis of Lagos State, Nigeria**

Responses	Average	Percentage	Df	Cri. X <sup>2</sup>	Cal. x <sup>2</sup>	decision	Level of Sig.
Strongly Agreed	93	31	21	32.67	68.41	Reject H <sub>i</sub>	0.05
Agreed	126	42					
Disagreed	55	18					
Strongly Disagreed	26	9					

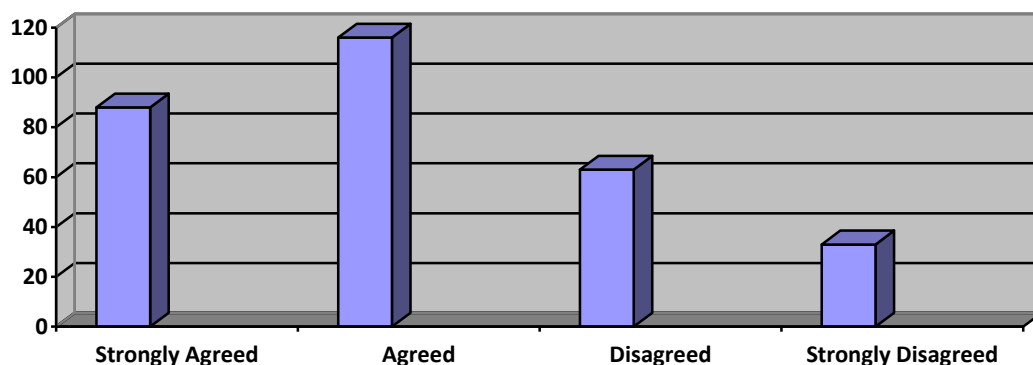
The result on Table 1 revealed that 93(31%) of the respondent strongly agreed that the knowledge of food supplement, 126(42%) respondents agreed that, they have knowledge of food supplement, while 55(18%) respondents disagreed and 26(9%) respondents strongly disagreed of the knowledge of food supplement. The test for hypothesis showed that the calculated x<sup>2</sup> value of 68.41 is greater than the critical x<sup>2</sup> value of 32.67. Since the calculated x<sup>2</sup> value is higher than the critical value x<sup>2</sup>, the null hypothesis which stated that knowledge of food supplements of athletes in Lagos Metropolis of Lagos State, Nigeria is not a significant in the athletes support performance is significant in the athletes support performance is rejected. The result showed that athlete's knowledge of food supplement plays significant role in their sport performance.

**Hypotheses 2: Utilization of food supplement of athletes in Lagos Metropolis of Lagos State, Nigeria is not a significant factor in the athletes sport performance.**

**Table 2: Utilisation of food supplement by athletes in Lagos Metropolis of Lagos State, Nigeria**

Responses	Average	Percentage	Df	Cri. X <sup>2</sup>	Cal. x <sup>2</sup>	decision	Level of Sig.
Strongly Agreed	88	29.4	21	32.67	89.33	Reject H <sub>o</sub>	0.05
Agreed	116	38.60					
Disagreed	63	21					
Strongly Disagreed	33	11					

*Figure 1: Bar Chart showing utilisation of food supplement by athletes in Lagos Metropolis of Lagos State, Nigeria*



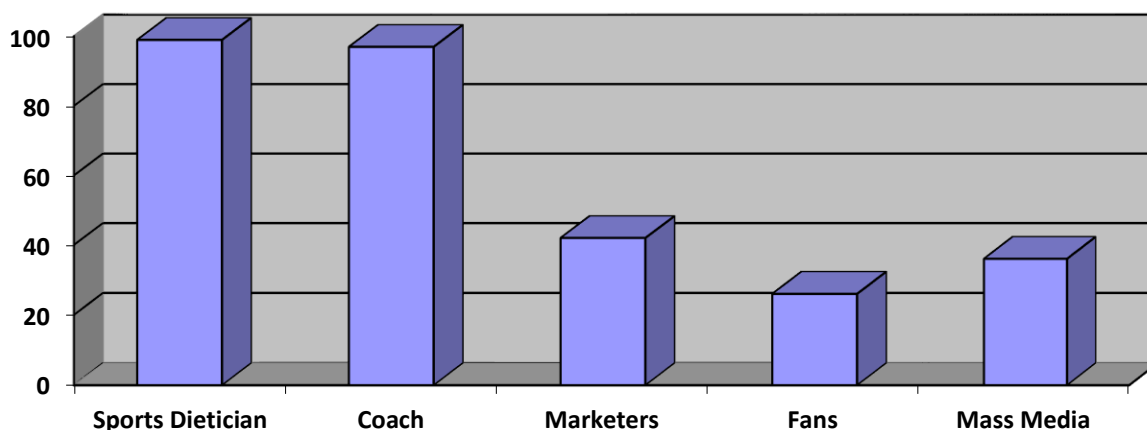
The analysis on Table 2 revealed that 88(29.4%) respondents indicated that they strongly agreed and 116(38.60%) of respondents agreed that utilization of food supplement is a factor in athlete's sport performance. However, 63(11%) respondents strongly disagreed that food supplement is a factor in athlete's sport performance. The result of the chi-square in testing the hypothesis, revealed that the calculated  $\chi^2$  89.33 is greater than the critical value of 32.67. Therefore, since the calculated  $\chi^2$  is greater than the critical  $\chi^2$ , the null hypothesis which stated that utilization of food supplement by athletes in Lagos Metropolis of Lagos State, Nigeria is not a significant factor in athletes sport performance is rejected. This shows that athletes believe that food supplement is necessary in sport performance.

**Research Question 3: What is the first source of knowledge of food supplement of athletes in Lagos State, Nigeria?**

**Table 3: Athlete's first source of knowledge of food supplement.**

S/N	ITEMS	RESPONSES
1	Sports dietician	99 (33)
2	Coach	97 (32.33)
4	Marketers	42 (14)
5	Fans	26 (8.66)
6	Mass Media	36(12)
	<b>Total</b>	<b>300(100%)</b>

*Figure 1: Bar Chart showing Athletes first source of Knowledge of Food Supplement at First Instance*

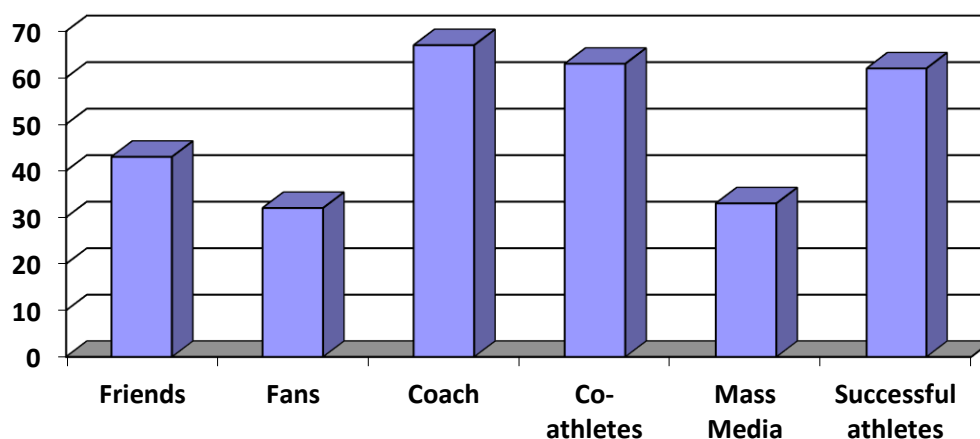


The result on Table 3 revealed that 99(33%) of the athletes source of first knowledge of food supplement is sports dietician, followed by 97(32.33%) respondents indicated that source of the first knowledge of food supplement is coach. 26(8.66%) of the respondents indicated that their first knowledge of food source is from their fans.

**Research Question 4:** What is the source of food supplement usage of athletes in Lagos State, Nigeria?

**Table 4: Athlete's Sources of Food Supplement Usage**

S/N	ITEMS	RESPONSES
1	Friend	43(14.33)
2	Fans	32(10.66)
4	Coach	67(22.33)
5	Co-athletes	63(21.00)
6	Mass Media	33(11.00)
7	Successful athletes	62(20.66)
	<b>Total</b>	<b>300(100%)</b>



*Figure 2: Bar chart showing sources of Food Supplement Usage*

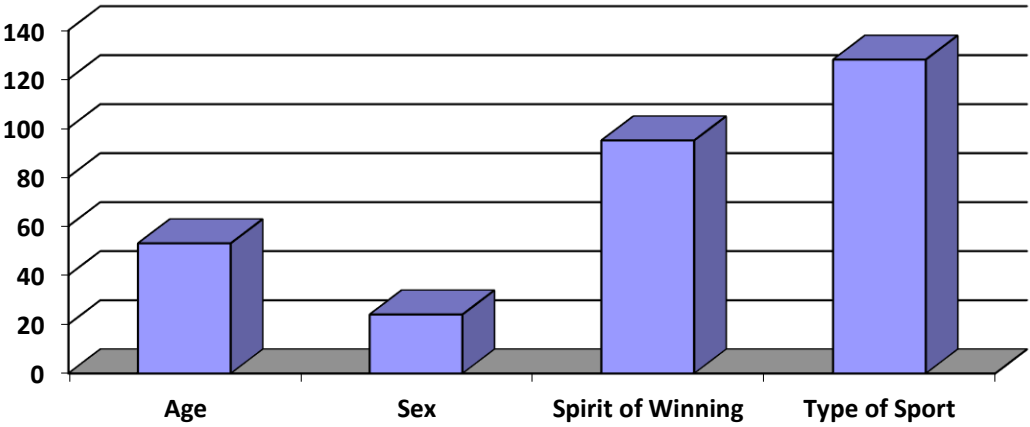
Table 4 statistical analysis showed that 67(22.33%) of the respondents sources of supplement usage from the coach, 63(21.00%) respondents indicated that the sources of food supplement usage is from co-athletes and 62(20.66%) respondents reported that the source of supplement

utilization is from successful athletes. 33(10.00%) and 32(10.66%) of the respondents indicated that the source of food supplement usage are from mass media and fans respectively. The result showed that the coach played great role in the use of food supplement by athletes. The next factors are the co-athletes and mass media are the least factors that the athletes source the use of food supplement from.

**Research Question 5: What is the motivating factor of the usage of food supplement among athletes in Lagos State, Nigeria?**

**Table 5: Factors that Influence usage of Food Supplement**

S/N	ITEMS	RESPONSES
1	Age	53(17.67)
2	Sex	24(8)
4	Spirit of wining	95(31.67)
5	Type of sport	128(42.67)
	<b>Total</b>	<b>300(100%)</b>



*Figure 3: Bar Chart showing Factors that Influence Usage of Food Supplement*

The results of the data revealed that the type of sport is the factor that motivates the athlete most when performing sport activities. The result showed that 128(42.67%) respondents indicated that type of sport influence the use of food supplement. The next influencing factor is spirit of winning, with 95(31.07%) respondents, 53(17.67%) respondents indicated age a factor while 23(8%) respondents indicated that sex of athletes was the least factor that influence usage of food supplement.

**Discussion**

The use of food supplement alongside with physical training has been part of athletes, especially when preparing for highly competitive championship. The purpose is to remain physically strong, excel and possibly out shine other athletes. A large number of recreational and elite athletes use nutritional supplements in hopes of improving performance. Aggressive marketing has led millions of recreational and elite athletes to use nutrition supplements in hopes of improving performance. Physicians who deal with athletes should be aware of the supplements being utilized by athletes, the athletes’ desired effects and the



efficacy of the supplement, the adverse effects, and whether the supplement is banned by leagues or organizations in which the athletes are competing. When working with athletes they need to ask about drug or supplement use. Nutrition supplements appeal to a large number of consumers willing to pay for alleged benefits that are too good to be true. The study of Molinero and Marquez, (2009) on factors influencing nutritional supplement use by 509 high school students, significant differences between supplement use by gender and sports category were observed. and greater knowledge about supplements was associated with less use, suggesting that education about supplements can be a deterrent to use. (Molinero and Marquez, 2009). There is an ever-increasing range of supplements and sports foods that are easily accessible to athletes and coaches (Molinero and Marquez, 2009). Surveys find that the overall prevalence and the types of supplements used vary with the nature of the sport, the sex of the athletes, and the level of competition. In some surveys, 100 % of weightlifters use some form of nutritional supplementation (Burke & Read, 1993).

The pressure to win at all costs, extensive coverage in lay publications, and hype from manufacturers with exciting and emotive claims all favour the use of supplements by young athletes, (Molinero and Marquez, 2009).

### **Recommendation**

Effective education programs can reduce adolescents' intentions to use dietary supplements, therefore, education should be available to them that will assist them on the need to use food supplement.

Physicians, dietitians and coaches should be exposed to nutrition education that will help them to advise the athletes better on the need for food supplement. Sport education

Sports nutrition professional should have good working knowledge of the various sports foods supplements in order to provide sound advice about the supplement to use, the safety, benefits and side effects.

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No.160

**COMPARATIVE EFFECT OF RESISTANCE AND AEROBIC TRAINING PROGRAMMES ON SELECTED KINANTHROPOMETRIC VARIABLES OF STUDENTS IN A COLLEGE OF EDUCATION IN LAGOS STATE NIGERIA**

**ABASS ADEMOLA, ADELOYE EMILY, AJAO ADEWALE**

**Abstract**

This study was carried out to determine Comparative effect of Resistance and Aerobic Training Programmes on selected kinanthropometric variables of student in a college of Education in Lagos state. The study adopted pretest, posttest, control group experimental design. Simple random sampling technique was used to select forty active and apparently healthy volunteer students of Adeniran Ogunsanya college of Education. The participant had a mean of 26.5 years and standard deviation of 1.05 years. They were randomly assigned to two experimental (resistance and aerobic training group) and one control group four standardized instruments were used, namely sphygmomanometer ( $r = 0.97$ ), sliding calipers  $r = 0.70$ , weighing scale  $r = 0.96$  and skin fold calipers  $r = 0.70$ , weighing scale  $r = 0.96$  four hypotheses were tested at 0.05 level of significance. Data were analyzed using analysis of covariance. There were significant difference in resting systolic blood pressure ( $f(2,37) = 5.90$ ,  $p < 0.05$ ), diastolic blood pressure ( $f(2,37) = 3.50$ ,  $p < 0.05$ ) and percent body fat ( $f(2,37) = 3.50$ ,  $p < 0.05$ ) only on female college students. This shows that female college student had more tendencies for physiological adaptation and improvement with aerobic training on those variables than male college students. However, the result of kinanthropometric variables shows that significant effects of training were noted in media calf ( $f(3, 176) = 6.82$ ,  $p < 0.05$ ), girth ( $f(3,176) = 5.65$ ,  $p < 0.05$ ) and body mass index ( $f(3,176) = 6.22$ ,  $p < 0.05$ ), among female college students. Similarly, male group recorded significant effects in the kinanthropometric variables of media calf ( $f(3,176) = 5.92$ ,  $p < 0.05$ ), girth ( $f(3, 176) = 6.65$ ,  $p < 0.05$ ) and body mass index ( $f(3, 176) = 5.28$ ,  $p < 0.05$ ). This is an indication that resistance and aerobic training had similar training effects in kinanthropometric variables among male and female college students. This shows that resistance and aerobic training differently improved kinanthropometric variables among male and female participants in those variables. Administration of resistance and aerobic training programmes were effective in fostering physiological performance and health status. Athletes and coaches should therefore be educated in the use of resistance and aerobic training programmes in order to enhance their fitness and health as well as performances.

**Introduction**

More technological and scientific developments have decreased the physical demands of human routine physical activities, such as ordinary cleaning, washing and even going to work. What would have once required several man hours of physical work can be achieved in minutes, improved means of transportation and increased automation have made it possible to have more leisure time than humans had before. Unfortunately, available research evidence suggests that most people utilize the new found leisure time for sedentary pursuits (Heywar, 1998; Nieman, 1990), whereas the human body is designed for strenuous physical activity. As exercising regularly has not been an integral part of the average life style, the human body cannot be expected to function optimally and effi-

ciently to remain healthy for prolonged period of time. Physical inactivity has thus led to the increased incidence of degenerative metabolic disorders; like coronary heart disease, arteriosclerosis, hypertension, hypercholesterolemia, obesity, overweight, diabetes, cancer, lower back pain, osteoporosis and osteoarthritis. It is therefore, not clear whether different types of physical training have similar benefits in cardio-respiratory functions. It is also not clear whether a given mode of exercise can produce similar effects in male and female adults. In addition, the moderating influence of gender on the effects of exercise training on different kinanthropometric variables has not yet been clarified especially in Nigeria. This investigation therefore, attempted to asses the Comparative effect of Resistance and Aerobic Training programmes on selected kinanthropometric variables of students in a college of education in Lagos state.

Kinanthropometric is an emerging scientific specialization concerned with the application of measurement to appraise human size, shape, proportion composition , maturation and gross function (international society for the advancement of kinanthropometric, ISAK,2007) as related to nutrition, growth, exercise and sport performance (Amusa, Igbanugo and Toriola, 1998). Kinanthropometric is defined as the quantitative interface between anatomy and physiology. It puts the individual athlete into objective focus and provides a clear appraisal of his or her structural status at any given time, or more importantly, provides for quantification for differential growth and training influences.

In developed countries, population specific kinanthropometric data are used to identify individual's status of the healthy patients (Roche, 2001). In Africa, where famine, war and other natural disorders are not uncommon, kinanthropometric data have potential for clinical use to evaluate the biology impact of food deprivation. Considering the increasing rate of health problems in adult Nigerian such as obesity, heart disease, diabetes, hypertension and low back pain etc and due to paucity of research on kinanthropometric variables of college student, the researchers decided to carry out a research on comparative effect of resistance and aerobic training programme on selected kinanthropometric variables of college students.

### **Hypotheses**

The following null hypotheses were tested in thus study

1. There will be no significant difference in the pretest-posttest body mass, stature, triceps and biceps of college students following resistance and aerobic training programmes.
2. There will be no significant difference in the pretest- posttest resting systolic and diastolic blood pressures of college student following resistance and aerobic training programmes.
3. There will be no significant difference in the pretest- posttest body mass index and percent body fat of college students following resistances and aero training programmes.
4. There will be no significant difference in the pretest-posttest media calf, gluteal (hip) girth, calf and footlight of college students following resistance and aerobic training programmes.

### **Methods and Materials**

**Study location:-** This study was carried out at Adeniran Ogunsanya College of Education, Otto- Ijankin Lagos, Nigeria. Official request was made to the management, parent/ guardians of the subject

consents had earlier been sought by writing to allow them take part in the training and tests, this was also granted.

## Population

The population for the study comprised all the active and apparently healthy students of Adeniran Ogunsanya college of Education, Ijanikin. Lagos

## Sample and Sampling Technique

The sample for this study was sixty (60) active and a apparently healthy volunteer students of Adeniran Ogunsanya College of Education, Ijanikin, Lagos. The participants were than randomly assigned to two experimental and one control group with (20) participants in each group. All the participants signed the informed consult from which clearly indication the benefit and potential hazards of taking part in the study. After signing the form, simple random sampling was used to group them into experimental and control group. The experimental group and the control group were involved in both the pre-test measurements. However, only the experimental groups were involved in the training programme.

## Instrumentation

The following research instruments were used in this study for collection of data.

- ⇒ Weighing scale, Hana portable weight measuring scale ( ) made in Ireland were used.
- ⇒ Stadiometer, model NJ 07072 by Pfizer Inc. USA
- ⇒ Tape rules, the non-elastic horse brand, model 51542
- ⇒ Stop watches, SWISS Model 0482 manufactured by Santoco Inc.
- ⇒ Skinfold calipers, the lange skinfold caliper model G03 in this study the anthropometrical measurements of the subjects were taken in accordance with the protocol of the international working Group on kinanthropometry (1WDAK) as described by ROSS and Marfell-Jones (1983).
  1. **Weight:** A portable bathroom-type Hanson scale, model BISOIA made in Ireland was used to measure the subjects weight to the nearest kilogram with subjects wearing very light clothes and no shoes (APHERA, 1990)
  2. **Height:** The subjects heights were measured where standing erect looking straight ahead and barefooted against the stadiometer. A horizontal ruler was rested on the head of each subject against the instrument. Their heights were then read to the nearest centimeter. Their height and weight measure were used to calculate the Body mass index (BMI) using the Quetelet Index- weight (kg) by Height (metres) squared (wt/Ht<sup>2</sup>) plowman and smith, 1997) and the BMI values were read on a Nomogram for BMI reprinted from (Bray, 1988).
  3. **Skinfold measurement:** All skin fold values were taken from the subjects right side of the body on the sites namely triceps, front thigh, suprailiac and subscapular as recommended by (Heyward, 1998). The triceps skin fold thickness was measured at the vertical fold at the middle line of the upper arm. The oblique fold just below the bottom tip of the sub scapular bone was used to measure the subscapular skinfold thickness. The sacroiliac

skin fold thickness was measured at the slightly oblique fold above the hip bone while the front thigh skinfold thickness was measured half way between the knee and the hip joint. While taking the measures, the skinfold were firmly grasped between the thumb and the forefinger of the left hand and gently lifted a centimeter above the measured site. The jaws of the caliper were then placed perpendicular to the fold at approximately below the fingers. Three measures were taken from each site in rotational order and the median of the scores were recorded to the nearest centimeter (ADPHERD, 1990). The subjects skinfolds were used to estimate body density using the Sloan's (1962) regression equation for young college students thus:  $BD = 4044 - 0.001327$  (thigh skinfold)  $- 0.001310$  (sub scapular skin fold), where BD = Body Density for the females, the triceps and suprailiac skinfolds were fed into Sloan et al (1962) regression equation for females thus:  $BD = 40764 - 0.0081$  iliac skinfold)  $- 0.00088$  (Triceps skinfold). A correlation of coefficient  $r$  of .85 was reported for the equation when compared with body density from hydrostatic weighing (Heyward, 1998). The body density value were then used to estimate the percent Body fat (% BF) using the Brozek's (1963) regression equation as reported by Plowman and Smith (1997) thus:

$$\% BF = (4.570) - 4.142 \times 100$$

BD

The % BF obtained from this equation correlates highly  $r = 0.74$  with BMI and between .58 to .85 with % BF from the hydrostatic weighing (Plowman and Smith, 1997).

**Resting Heart Rate-** The resting heart rate of the subjects was measured before and after the training programmes using the palpation method after making sure the subjects were comfortably seated, truly rested and free from any form of excitement, the heart rate was thus obtained. The tester places the tip of the middle and index fingers on the carotid artery in the neck just lateral to the larynx. The stopwatch is simultaneously started with the pulse beat counting the first beat as zero then for thirty (30) seconds which was later multiplied by two. While palpating the carotid site, care was taken not to apply too much pressure as bar receptors at the carotid arteries have been found to detect such heavy pressure and react by causing a reflex slowing down of the heart rate.

### **Training Protocols**

For this study, the training programs were started after the subjects have been randomly assigned to the two training groups – aerobic and resistance groups. The aerobic group participated in continuous running and jogging on the school athletic track while the resistance training group carried out their training on a designated part of the field in dynamic resistance exercises using dumbbells in a circuit of eight stations. Each training session was conducted between four o'clock pm and six o'clock pm on alternate days, divided into warm-up exercises, the training proper and warm down as recommended by ACSM (1990).

For aerobic groups, the continuous running and jogging was started from a duration of thirty minutes per session, this was accompanied with a lot of encouragement and motivation to enable the subjects sustain the training throughout the duration so that the exercise could have physiological impact. During the subsequent weeks, the duration of the training sessions were increased thus: 3<sup>rd</sup> to 4<sup>th</sup> weeks with duration of thirty-five minutes, 5<sup>th</sup> to 8<sup>th</sup> weeks with duration of forty minutes, and 9<sup>th</sup> to 12<sup>th</sup> weeks with duration of forty-five minutes. The training intensities were simultaneously

increased using the % heart rate method (Heyward, 1998) coupled with the rating of perceived Exertion (RPE) method monitored by the research assistants. The initial weeks was pegged at 15 minutes for each session on alternate days. This was to gradually introduce their body to the training so as to reduce the aches and pains to the minimal and also to avoid drop-outs (Fox and Matthews, 1971). During the subsequent weeks, training sessions were increased thus, 3<sup>rd</sup> – 4<sup>th</sup> week lasting 20 minutes per session, 5<sup>th</sup> – 8<sup>th</sup> week lasting 25 minutes per session, while the 9<sup>th</sup> to 12<sup>th</sup> weeks lasted for 30 minutes per session. The training intensities were simultaneously increased along with the sessions using the %HR method from the formular  $220 - \text{age in years of the subject}$  (Heyward, 1998). Then multiplying the value by 1.15 correction factor (ACSM, 1996) coupled with the Rating of perceived Exertion (RPE) method to obtain and sustain the training intensities from 60-80%. HRmax as monitored. With the efforts of the twenty (20) research assistants. The Rating of perceived Exertion (RPE) is another method of prescribing the intensity of an exercise program.

The response to graded exercise corresponds closely to cardio respiratory and metabolic variables and is considered a valid and reliable indicator of the level of exertion during steady state exercises and are best suited for kind based exercises in a moderate environment (ACSM, 1990) subjects were encouraged throughout the duration of the training program to run continuously, but never to stop until the expiration of time, the instruction they adequately complied with. The resistance training group was similarly made up of 20 subjects while aerobic group was made up of 20 subjects and 20 subjects for control group. The resistance training group involve in different dynamic resistance exercises arranged in a circuit with dumb bells where applicable in eight stations. The activities, the duration and rest periods with repetitions were specifically modified to provide intensive activity comparable to that of the aerobic training.

### **Research Assistants**

Research assistants were trained to take different measurements of the subjects during the study such as heart rate, blood pressure; skin-fold thickness as Spotters, cap scorers, Body Girth measurements and to monitor the suspects and ascertain maintenance of the exercise intensities. The research assistants worked under the direct supervision of the researcher.

### **Statically Analyses**

Data collected from the pre and post training programs of this study were analysed using the statistical package for social sciences (SPSS). The data collected were analysed using the descriptive statistics of mean, standard deviation and inferential statistics of analysis of covariance (ANCOVA) to test the null hypotheses at 0.05 level of significance.

### **Hypothesis 1**

There will be no significant difference in the pretest, posttest body mass, stature, triceps and biceps of college students following resistance and aerobic training programs.

**Table 1:** ANCOVA result showing the effect of aerobic exercise and resistance exercise on body mass, stature, triceps and biceps of the participants.



Source of variation	Sum of squares	Df	Mean	F	Sig. of freedom	Remark
Covariates	11.208	1	11.208	10.655	0.01	
Main effects of treatment Groups	491.419	2	245.709	233.600	.000	Sig
Explained	502.626	3	167.542	159.255	.000	
Residual	185.124	176	1.052			
<b>Total</b>	<b>687.750</b>	<b>179</b>	<b>3.842</b>			

Table 1 showed the result of ANCOVA on the effect of aerobic and resistance exercise training on body mass, stature, triceps and biceps of college students in Lagos. The main effects of the test on the participants (experimental groups and control group) were statistically significant at 0.05 significant level ( $F_{3, 176} = 233.6$ ,  $p < 0.05$ ). There were significant differences in the effects of aerobic and resistance exercises on body mass, stature, triceps and biceps. Hence, the hypothesis was rejected. The mean score for the RE group was 4.90, AE was 4.27 and control group was 1.08 while grand mean score was 3.42.

## Hypotheses 2

There would be no significant difference in the pre-test –post test resting systolic and diastolic blood pressure of College students following resistance and aerobic training programmes.

**Table 2:** ANCOVA result showing the effects of aerobic exercise and resistance exercise on resting systolic and diastolic blood pressures of the participants.

Source of variation	Sum of squares	Df	Mean	F	Sig. of freedom	Remark
Covariates	.370	1	0.37	.137	.000	
Main effects of treatment Groups	805.211	2	402.605	148.712	.000	Sig
Explained	805.581	3	268.527	99.187	.000	
Residual	476.480	176	2.707			
<b>Total</b>	<b>1282.061</b>	<b>179</b>	<b>7.162</b>			

Table 2 revealed that there was significant difference in the resting systolic and diastolic blood pressure of college students in Lagos exposed to each of the experimental groups and control group ( $f_{3, 176} = 148.712, p < 0.5$ ). With this value of  $f$ , the hypothesis was rejected. This indicated that there were significant differences in the effect of the trainings on systolic and diastolic blood pressures of college students. This is because the  $f$ -test at  $p < 0.05$  showed that a significant difference existed among the three groups.

### Hypotheses 3

There would be no significant difference in the pre-test-post test body mass index and percent body fat of college students following resistance and aerobic training programmes.

**Table 3:** ANCOVA result showing the effect of aerobic exercise and resistance exercise on body mass index and percent body fat of the participants.

Source of variation	Sum of squares	Df	Mean	F	Sig. of freedom	Remark
Covariates	162.658	1	162.658	1.237	.267	
Main effects of treatment Groups	1802.820	2	901.410	6.858	.001	
Explained	1965.478	3	655.159	4.984	.002	
Residual	23133.967	176	131.443			
<b>Total</b>	<b>25099.444</b>	<b>179</b>	<b>140.220</b>			

Table 3 revealed that there was significant difference in the body mass index and percent body fat of college students in Lagos exposed to each of the experimental groups and control group ( $f_{3, 176} = 6.858, p < 0.05$ ). With this value of  $f$ , the hypothesis was rejected. This indicated that there were significant differences in the effect of the training on body mass index and percent body fat of college students. This is because the  $f$ -test at  $p < 0.05$  showed that a significant difference existed among the three groups.

**Table 4:** ANCOVA result showing the effect of aerobic exercise and resistance exercise on medial calf, gluteal hip, girth and foot-length of the participants.

Source of variation	Sum of squares	Df	Mean	F	Sig. of freedom	Remark
Covariates	12.274	1	12.274	10.260	.000	
Main effects of	354.698	2	177.349	148.243	.000	Sig

treatment Gro- ups						
Explained	366.972	3	122.324	102.249	.000	
Residual	210.555	176	1.196			
<b>Total</b>	<b>577.528</b>	<b>179</b>	<b>3.226</b>			

Table 4 revealed that there was significant difference in the medial calf, Gluteal (hi), calf, girth and foot-length of college students in Lagos exposed to each of the experimental groups and control group (cf3, 176) = 148.243,  $p < 0.05$ ). With this value of  $f$ , the hypothesis was rejected. This indicated that there were significant difference in the effect of the training on medial calf, gluteal (hip) calf, girth and foot-length of college students. This is because the  $f$ -test at  $p < 0.05$  showed that a significant difference existed among the three groups.

### Discussion

In this study, there was a significant effect of aerobic and resistance exercise training programs on selected kinanthropometric variables of students in a College of Education in Lagos state. The results of this study revealed that out of the 60 participants used in the study, 14(23.4%) were in level 1, 28(46.6%) were in level 2 and 18(30%) were in level 3. majority of the participants 35 (58.4%) were males compared to 25(41.6%) that were females. The result confirmed the fact that male's enrolment in physical activities is more than the females as research suggests that females as a group are not so active as the males as a group and many females tend to drop out of physical activities than boys as observed. This finding agrees with Toriola, 1984, Anderson and Haraldsottir, 1995, Adewumi and Amusa 1992 who documented from their investigations some significant reductions in percent Body fat consequent to training in various age groups, Adewumi and Amusa (1992) studied the effects of 2 modes of training on body fat reduction in 16 subjects. They found the program of aerobic exercise to be superior to cellulife energizer machine in reducing percent body fat on the right thigh skinfold among their subjects. However, some investigators have reported no significant response among male and female groups in their percent Body fat irrespective of sizes. (Wilmore and Costill, 1994). The reason for the differential response with regard to percent Body fat in their subjects they saw might be due to the higher level of fat in females among the subjects.

Kinanthropometric variables of the participants were prior to the training program very poor, and they were underfat based on %BF and wider weight as regards BMI. However, significant improvement occurred after training. They have normal SBP, DBP and HR. the findings of this study indicated that aerobic exercise and resistance exercise training modalities have significant effect on kinanthropometric variables of college students but AE had better effect. The results agree with the observations of Bryne and Watson (2002) that exercise training, whether aerobic or resistance leads to positive functional changes of increase in skeletal muscle, fat free mass and fat mass. They further opined that the addition of resistance exercise to aerobic training can help achieve the targets in shorter time than achievable by isolated aerobic exercise alone.

It should be noted that other investigations that when little time is spent engaged in vigorous activities with the great portion of time devoted to sedentary or low level activity, the resultant effect is the negative effects on kinanthropometric variables. This was confirmed by (Thomas and Nelson, 2011). Higher levels of physical activities have been associated with outdoor play which Bryman, (2001). The positive effect of an outdoor environment on activity levels of college students may have important implications because of the greater tendency for large muscle motor activity to improve on higher levels of physical activity in comparison to indoor environments (Bouchard, Skepherd, Stephens, 2004). What was interesting about this study was that the control group did not change from pre-to-post intervention since it was not subjected to any structured intervention. The fact that the two experimental groups had received physical exercise three times per week throughout the intervention period confirmed the efficacy of the interventions.

### **Recommendations**

Based on the findings of this study, the following recommendations are made:

1. The training programme used in this study should be adopted for use in the training of our athletes for the development of their kinanthropometric variables.
2. College students should participate in moderate intensity resistance and aerobic training two to three days per week, with one set of eight to 15 repetitions at a moderate exertion level and using eight to ten different exercises so that each major muscle group is recruited.
3. A norm should be established in Nigeria on the anthropometric parameters of college students to serve as reference standards in future researches.
4. Other training methods should be used with the variables under study to determine the body composition, BMI and percent body fat of college students.
5. The aerobic training programme should be adopted for weight reduction.

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## THE EFFECT OF AN EXERCISE PROGRAM ON HYPERTENSIVE REHABILITATION.

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### Abstract

This study investigated the effects of a three-month aerobic exercise program on the rehabilitation of hypertensive patients at the Lagos University Teaching Hospital. Eighty Hypertensive patients were randomly selected and used as subject for the study. Descriptive statistics of X, SD, and range as well as the inferential statistics of ANCOVA were the statistical tools employed for data analysis. The findings of this study indicated that aerobic exercises are effective in decreasing fat weight and improving body mass index of hypertensive patients when the program is well supervised.

### Introduction

Many recent studies have shown that regular aerobic (work outs like brisk walking that use large muscles for an extended period) over several months may modestly lower blood pressure (Franklin and Wappes, 1996). Makoff and Schoenfield (2004) reported that a two week regular exercise programme revealed benefits in patients with high blood pressure. However, exercise in black individuals resulted in significantly greater reduction in systolic (top chamber) blood pressure, whereas Asian individuals had a greater reduction in diastolic (bottom chamber) blood pressure as compared to white participants. The result of the study shows that aerobic exercise is a suitable treatment and can even play a role in the prevention of hypertension.

Makoff and schoenfield, (2004) further contend that without changes in body weight, those individuals who participated in aerobic exercise regularly tend to have reductions in resting blood pressure. Aerobic exercise appeared to have a slightly greater effect on blood pressure in hypertensive individuals than in individual without hypertension.

It is interesting that the decrease in systolic and diastolic BP associated with aerobic exercise in this study seemed to be greater than the BP decrease associated with salt reduction, potassium supplementation and alcohol intake reduction (Makoff and Schoenfield, 2004).

High blood pressure results from either an increased output of blood by the heart, often as a result of overweight or increased resistance to blood flow in the arteries (American Heart Association, 2000). In those individuals with high blood pressure, the heart must work harder than normal to force blood through the arteries, thereby straining both the heart and the arteries.

In most cases, hypertension cannot be cured, but it can be controlled and the key of avoiding the complication of hypertension is to have your blood pressure checked regularly and to follow your physician's advice about lifestyle changes and medication. Many patients are diagnosed with high blood pressure in the doctor's office simply because they are experiencing anxiety in that setting.

This effect known as white-coat hypertension, is not a serious health threat, patients should be re-tested later to determine whether their blood pressure has returned to normal levels.

The primary goal of exercise in the management of high blood pressure is to get the blood pressure within normal limits. An exercise programme involving large muscle groups in dynamic activities is recommended for borderline hypertension (Fahey, Insel and Roth, 2001). The fitness leader should avoid activities that involve small muscles groups or require people to hold their breath. Given that exercise can bring about the same effect by causing a large sweat loss, it is important for the fitness leader to educate fitness participants who take diuretics to be especially aware of the need to replace fluids during and after exercise.

Exercises that condition the heart and lungs should have a central role in the fitness program. The best exercises for reducing high blood pressure and developing cardio respiratory endurance are those that stress a large portion of the body's muscles mass for a prolonged period of time.

### **Methodology**

The population of this study was made up of male and female hypertensive patients between the ages of 18-69 years registered at the Lagos University Teaching Hospital, Lagos. A sample of 116 volunteers was used for the study. They were given an informed consent form for aerobic exercise training after they had been briefed. They were then randomly assigned to the experimental and control groups.

The SECA Electronic Stadiometer was used to obtain both the weight and height of the subjects in kilograms and centimeters respectively. The weight of the subjects was measured to the nearest 0.005kg and their height was measured to the nearest 0.01cm.

The LANGE SKINFOLD caliper, model 3003 was used to measure skinfold thickness. It is calibrated from 0-67mm and has a constant pressure of 10g/mm<sup>2</sup> throughout the range of skinfold thickness. The three site equations utilizing triceps, suprailiac and abdominal skinfolds for adult female; and chest, abdomen and thigh for adult males were utilized for this study.

**Females:** % BF (YMCA) = 0.41563 (sum of 3 skinfold) – 0.0012 (Sum of 3 skinfolds) squared to 0.03661 (Age) + 4.03653 for the females, the sum of 3 skinfolds correlated with hydrostatically determined body density 0.83 (Pollock, Schmidt and Jackson, 1980).

**Males:**  $D_B = 1.1093800 - 0.0008267 (\text{sum of 3 skinfolds}) + 0.0000016 (\text{sum of 3 skinfolds})^2 - 0.0002574 (\text{Age})$

The above Jackson and Pollock (1978) equation have been found to have a correlation coefficient of 0.91.

The percent body fat was predicted using the equation by (Brozek, Grande, Anderson and keys, 1963).

$$\% \text{ BF} = \frac{(4.570 - 4.142)}{D_B} \times 100$$

$D_B$

Body mass index (BMI), otherwise known as the Quetelets index were determined before data collection and stratified according to Metropolitan life Insurance tables. The following formular was used to calculate the BMI; BMI= weight (kg)

$$\text{Height}^2 \text{ (m)}$$

It is fairly closely related to amount of body fat 0.80.

### Training Program

**Training program.** The Training consisted of 3-months aerobic exercise training. The intensity of the exercise was graduated by increasing the speed, frequency and duration of the exercise according to the condition of individual subjects. The exercise protocol was carried out two times a week, Tuesdays and Thursdays between 3.50pm and 6.00pm at the Department of Medicine, College of Medicine, LUTH, Lagos. The training session for the hypertensive patients was made up of the following components:

- (1) Warm-up (muscular conditioning)
- (2) Aerobic exercise (walking and jogging)
- (3) Cool-down

The data was subjected to statistical analysis of means, standard deviation and analysis of covariance (ANCOVA).

**Table 1: Descriptive Statistics of Experimental Group**

	Pre-test (N=40)			Post-Test (N=40)		
	X	SD	RANGE	X	SD	RANGE
Age (yrs)	48.72	11.72	18-69	48.72	11.72	18-69
Wt (kg)	77.92	12.92	51-121.2	75.91	12.14	55.2-114
%BF	28.67	9.52	9.33-40.20	26.05	10.01	8.93-44.14
BMI/m/kg <sup>2</sup> )	28.28	4.72	19.56-36.92	26.58	4.38	21.12-37.40

**Table 2: Descriptive Statistics of Control Group**

	Pre-test (N=40)			Post-Test (N=40)		
	X	SD	RANGE	X	SD	RANGE
Age (yrs)	49.94	10.68	22-69	49.94	10.68	22-69
Wt (kg)	77.61	14.51	48-110	79.32	14.82	49.3-11.83
%BF	1.67	0.07	1.48-1.81	1.67	0.07	1.47-1.80



BMI/m/kg <sup>2</sup> )	28.12	4.95	18.75-42.71	28.70	5.07	19.75-45.07
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**Table 3: Summary of the ANCOVA results of the hypertensive patients**

Variables	Ss Covariance	Ss Treatment	Ss cdg	Ss 2-ways inters	Ms treat- ment	Df treat- ment	Df	F
Weight (Wt)	14026.535	269.426	0.117	3.248	269.426	1	76	22.390
Percent body fat (%BF)	5725.371	288.689	2.294	36.277	288.689	1	76	20.182
Body mass index (BMI)	1693.792	34.003	0.277	2.052	34.004	1	76	19.639

\*Significant at 0.05 alpha level.

## Result and Discussion

The pre- and post – test means and standard deviations of body weight (wt), percent body fat (% BF), and body mass index (BMI) of the patients are presented in Tables 1 and 2.

Table 3 shows the F-ratios of wt, % Bf and BMI. For Wt, the F-ratio due to the post – test difference (due to treatment) between experiment and control group was (F1, 76) = 22.390 P < 0.05. This shows that there was a significant difference in body weight. For % Bf, the F- ratio due to the post –test difference between the experimental and control groups was (F1, 76) = 20. 182, p < 0.05. This also shows that there was a significant difference in % BF. Moreover, in the BMI, the F-ratio due to treatment between experimental and control groups was (F1,76)= 19.639, p<0.05. This reveals that there was a significant difference in BMI.

Makoff and Schoenfield (2004) posited that body weight may decrease over long period of time, that is, three months or longer, it is not usual for body weight to change very little during the initial few months of exercise. This lack of substantial change in the early phase of an exercise programme is primarily the result of alterations in body composition, that is, losses in body fat accompanied by similar gains in fat –free weight.

Emeahara and Okpeze (1997) observed a modest reduction in body weight of University of Ibadan female academic and non-academic staff after eight weeks of aerobic exercise. After the fourth week of training mean weight of the subjects dropped from 72.40kg to 71.33kg. The percentage

reduction in the weight of the subject was 1.48%. By the eight week of the training the mean weight of the subjects fell to 69.38kg. The percentage reduction in the eight-week was 4.17%.

The result of weight in this study shows that hypertensive patients without medical complications if carefully trained can equally lose weight just like the apparently healthy populations, though; careful attention should be given to the exercise intensity recommended for hypertensive patients.

The decrease in the %BF of the experimental group subjects under study may be attributed to the duration and frequency of the training programme. The patients trained 2-3 times per week for a duration of 30-50 minutes.

Brooks, Fahey, White and Balddwin (1999) submitted that exercise intensity may be important for increasing metabolic rate. They noted that several studies have shown that intensive exercise increases metabolic rate in Obese subjects, while moderate exercise does not. Stewarts (2002) also observed that changes in body composition and fat distribution are mediators of improvements in blood pressure and glycemic control and may help improve the cardiovascular abnormalities that accompany hypertension and type 2 diabetes.

There is more information in various literatures on weight loss than on any other aspect of human energetic. Pickering (2001) noted that although blood pressure tends to increase with age, this process is not inevitable and one of its modifiable risk factors is body weight, Miller, Koleja and Hamilton (1997) carried out a study on the meta-analysis of the past 25 years of weight loss research using diet, exercise or diet plus exercise intervention. Exercise studies were of a shorter duration, used young subjects who weighted less, had lower BMI and percentage of body fat values.

It has been shown that a person's medical care costs are directly proportional to his or her BMI (Queenberry, Caan and Jacobson 1998) cited in Pickering (2001). According to Pollock, Lowenthal, Graves and Carroll (2000) many of the aerobic fitness guidelines of the American college of sports medicine showed a modest, but significant decrease of body mass. The average loss was less than the average of 1.5kg found in 32 studies on young and middle age subjects.

As a result of paucity of literature to compare the findings of this study on hypertensive patients, one could readily postulate that the significant decrease in body mass index of the patients could therefore be attributed to the improvement in body weight and percent body fat.

### **Conclusion and Recommendation**

From the results obtained while investigating the effects of a 3 month aerobic exercise on the physical parameters of hypertensive patients, the following conclusions were drawn.

Aerobic exercise at minimum frequency of 2-3 sessions per week and 20-40 minute duration at each session, will significantly lower body weight, percent body fat and body mass index. Moreover, it is possible that moderate aerobic exercise could be a useful adjunct to therapeutic measured used in the rehabilitation of these patients. However, caution is necessary in this context; any exercise programme must be supervised.

Finally, it is recommended that hypertensive patient should be engaged in well-supervised endurance exercise training program of moderate intensities and longer duration in order to elicit the required physical and metabolic responses.

In addition, further research should be carried out to determine the effect of aerobic exercise in improving triglycerides, low-density lipoprotein (LDL), high-density lipoprotein (HDL) and Cholesterol levels of hypertensive patients in Nigeria and sub-Saharan Africa.

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**RELATIONSHIP BETWEEN LEVEL OF PHYSICAL ACTIVITY AND PRIMARY DYSMENORRHOA AMONG FEMALE UNDERGRADUATES OF LAGOS STATE UNIVERSITY, NIGERIA**

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**ABSTRACT**

*This study examined the association of physical activity (PA), body mass index (BMI), waist circumference (WC), and body surface area (BSA) with occurrence of primary dysmenorrheal (PD). Matched case control experimental was the design, consecutive non-probability sampling technique was employed to get information on height and weight using height meter and weighing scale respectively, while WC was measured with a tape measure. BMI and BSA were derived from measured height and weight using a standard formula. Data were analyzed using mean and standard deviation as well as cross tabulation and chi-square. All hypotheses were tested at 0.05. The mean ages of cases and controls were  $21.33 \pm 2.01$  and  $20.89 \pm 1.71$  while the mean BMI were  $22.65 \pm 2.7$  and  $22.53 \pm 2.7$  respectively, mean BSA were  $1.69 \pm 0.12$  and  $1.68 \pm 0.13$  for case and control respectively whereas mean WC were  $76.64 \pm 6.41$  and  $73.87 \pm 6.56$  respectively. PA was not significantly associated ( $P > 0.05$ ) with occurrence of PD whereas WC, BMI, and BSA showed significant associations ( $p > 0.05$ ) with occurrence of PD. The odd ratio of individuals who were sedentary to those who were physically active having PD was 1.77 whereas the odd ratio individuals who were overweight to those who had normal weight having PD was 1.24. It was concluded that WC, BMI and BSA had a strong association with occurrence of PD and the most prevalent accompany symptom was lower abdominal pain. It was recommended that body weight should be controlled to reduce the chance of having PD.*

**Key words:** *Primary dysmenorrhea, menstruating women, body mass index (BMI), Physical activity, wellbeing, waist circumference (WC), body surface area (BSA).*

**Introduction**

Menstruation is the shedding of the lining of the uterus (endometrium) accompanied by bleeding. It occurs approximately in monthly cycles throughout a woman's reproductive life. The cycle has three phases: follicular phase (before egg release), ovulatory phase (egg release) and luteal phase (after egg release)(Rosenblatt, 2007).

The interaction between the pituitary hormones and ovarian hormones gives rise to a stereotyped pattern of relative hormone levels at each stage of the menstrual cycle, and the accompanying sequence of events is determined by these hormones levels (Guyton & Hall, 2006). Menstrual bleeding lasts 3 to 7 days, with an average of 5 days. The pituitary hormones regulating the cycle are luteinizing hormone and promote ovulation and stimulate the ovaries to produce estrogen and progesterone (Waugh & Grant, 2006). Dysmenorrhoea is the pain occurring at or about the time of menstruation. It does not usually start until 2-3 years after menarche (Llewellyn-Jones, 1989).

Primary dysmenorrhoea is the occurrence of painful menstrual cramps of uterine origin which occurs in the absence of any obvious underlying disease (Akin, Weing, Hengehold, Goodale, Hinkle & Smith, 2001). Secondary dysmenorrhoea, on the other hand, is menstrual pain associated with some underlying disease or structural abnormality either within or outside the uterus (Jenner, 2004).

Primary dysmenorrhoea is chronic, cyclic, pelvic, spasmodic pain associated with menstruation in the absence of any identifiable pathology and is typically known as cramps or period pain (Daley, 2008). It is the most common gynecological disorder in menstruating women (Protocor, Murphy, Pattison, Suckling & Farquhar 2007). The onset of primary dysmenorrhoea is at adolescence, usually within four or five years of the first menstrual period. Painful menstruation becomes less as woman's age advances (Smith & Kkaunitz, 2007). The pain is felt mainly in the lower abdomen, but it may radiate to the back and along the thighs and there maybe associated synthetic symptoms like nausea, vomiting, diarrhea/constipation, headache, dizziness, lightheadedness, fatigue and syncope (Jenner, 2006). The pain usually begins on or just before the menstrual bleeding and gradually diminishes over 1-3 days. The pain might be intermittent and may range from mild to severe (Llewellyn-Jones, 1989).

Physical activity is any bodily movement that is produced by contraction of skeletal muscles which invariably leads to energy expenditure. It is relating to physical fitness while its level for an individual is important for performance of activities or daily living (Moy, Mcfarlene, Scragg & Robinson, 2003). Physical activities could be measured in terms of frequency, intensity, duration, type of activity and or context (Leisure, occupational, incidental) (Moy, Mcfarlene, Scragg & Robinson, 2003) and does not need to be strenuous to achieve health benefits. Individuals, irrespective of their age, will benefit from a moderate amount of physical activities as it improve quality of life, extends longevity, protect against cardiovascular diseases, stroke, obesity, type 2 diabetes, osteoporosis colon cancer and depression (Doyle, 2000).

Anecdotal accounts and unsystematic reports have suggested that women who exercise regularly have fewer pre menstrual symptoms and less severe dysmenorrheal than their counterparts (Choi and Salmon, 1995). Furthermore, there is a body composition in relation to pre menstrual symptoms and dysmenorrheal. This study is therefore, aimed at examining the influence of physical activity level and its relationship with primary dysmenorrheal among female undergraduate of Lagos state University, ojo, Lagos, Nigeria.

## **METHODS AND PROCEDURE**

The participants were recruited using a consecutive non-probability sampling technique. Purposive sampling techniques was used to select One hundred and twenty two (122) female undergraduates from the department of physical and health education of Lagos State University, Nigeria who participated in the study. They were made up of 83 (cases) participants with a history of primary dysmenorrhoea and 39 (control) participants without a history of primary dysmenorrhoea. The research design for this study was matched case-control independent group design.

### **Procedure for Data Collection**

Data were collected using, Height Meter: (Seca Model) for each participant's height to the nearest meter. Bathroom weighing scale was used for the weight to the nearest kilogram. (Hana Model, made in China) and Tape Measure to measure each participant's waist circumference to the nearest centimeters.

Before commencement of this study informed consent were obtained from each participant. Upon arrival at the research venue, each participant was made comfortable, after which some measurements were taken. The measurement obtained were height, weight, waist circumference, information about age was also obtained along with each participant's self-report activity level.

The obtained information and measurements were used to compute the Body Mass Index (MBI), Body Surface Area (BSA), and Percentage Body Fat (PBF). The testing and measurement procedure as well as derivation formulae for variables were as follows:

**Bio Data:** Information concerning their age was obtained to the last birthday age

**Height:** This was measured to the nearest 0.01 decimal place using a height meter (Seca, Model 786, Germany). The participants were measured barefooted and erect with measurement taken from the level of the scalp.

**Weight (kg):** This was measured to the nearest 0.01 decimals placing using the bathroom scale (Hana, Model BR9011, 120 x 0.001kg, China). The participants were measured with minimal clothing and bare foot.

**Body Mass Index (BMI) (kg/m<sup>2</sup>):** From the measured height and weight, each participant respective BMI was calculated using the following relation,  $BMI = \text{weight (kg)}/\text{height (m)}^2$  (Bray and Gray, 1988).

**Body Surface Area (BSA) (m<sup>2</sup>):** From the measured height and weight, each participant respective (BSA) was calculated using the following  $BSA (m^2) = \text{weight (kg)} \times \text{height (m)}^2$  (Mosteller, 1978).

**Physical Activity Level:** This was assessed by asking questions about their physical activity level, answer obtained were recorded. Example of question: do you engage in daily/regular exercise, if yes, for how long in a min/hour.

## Data Presentation, Analysis and Discussion

The data obtained on age was summarized using mean and standard deviation while the ones obtained for symptoms of dysmenorrhoea; perceived pain intensity was summarized using percentage and frequency. Cross tabulation was used to determine the odd ratio of having primary dysmenorrhoea from all the perceived causes (BMI) greater than 25kg/m. PA lesser than 500m/min/week; WC greater than 85cm, and body surface area greater than 1.6m. Chi-square was used to determine the association between occurrence of primary dysmenorrhoea and each physical activity, body mass index, waist circumference and body surface area.

**Table 1: Physical Activity/Characteristics of Participants**

Variable	Case/ Experimental group	Control Group
AGE	21.33 ± 2.07	20.88 ± 1.71
BMI	22.65 ± 2.7	22.53 ± 2.7
BSA	1.69 ± 0.12	1.68 ± 0.13
WC	74.64 ± 6.41	73.87 ± 6.56
PA	2606.41 ± 2274.65	2216.47 + 2109.6

Table 1 above shows the means of the physical activity level of participants and their characteristics. It shows the mean age of the case group as 21.33 ± 2.07 as compared with the mean age of the control group which is 20.88 ± 1.71 with range of 17-30 years. The mean score of BMI (Body Mass Index) was 22.65 ± 2.7 and 22.53 ± 2.7 for the case and control group respectively.

The mean BSA (Body Surface Area) of the case and control groups is 1.69 ± 0.12 and 1.68 ± 0.13 respectively. The mean weight circumference of the case and control group is 74.64 ± 6.41 and 73.87 ± 6.56 respectively. This portends a greater mean WC of the case group in relations to the control group. The mean physical activity level of the case group and the control group are 2606.41 ± 2274.65 and 2216.47 ± 2109.6 respectively.

**Table 2: Frequency table showing distribution of pain intensities**

Pain Intensity	Frequency	Percent
Mild	16	19.3



Moderate	47	56.6
Severe	20	24.1
<b>Total</b>	<b>83</b>	<b>100</b>

Table 2 above shows the frequency distribution of pain intensities under the headings; mild, moderate and severe. From the table above, it could be seen that the frequency represented by those whose pain intensity is mild is 16 which represents a total of 19.3% of the total participants. Also, 47 of the total participants are categorized under the moderate perspective of the pain intensity and this represents a total of 56.6% which is above half the total number of participant. Finally, the number of participants whose pain intensity is classified under severe is 20 representing 24.1%.

It is glaring that participants whose pain intensity is moderate has the highest frequency and could be seen as the modal group followed by the severe group and mild group respectively.

**Table 3: Cross tabulation of physical activity and occurrence of primary dysmenorrhoea**

<b>Physical Activity</b>	<b>Control Group</b>	<b>Case /Experimental group</b>	<b>Total</b>
<b>Meters/min/week</b>			
Less than 1500m	20	35	55
1500m and above	19	48	67
<b>Total</b>	<b>39</b>	<b>83</b>	<b>122</b>

The relationship between physical activity level and the occurrence of primary dysmenorrhoea is represented in table 3 above. The number of participants whose physical activity level is 1500 meters/min/week is 20 and 35 for the control and case group respectively. While those whose physical activity level of 1500m and above is 19 and 48 for the control and case group respectively.

**Table 4: Cross tabulation of body mass index and occurrence of primary Dysmenorrhoea**

<b>BMI</b>	<b>Control group</b>	<b>Case / Experimental group</b>	<b>Total</b>
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Abnormal weight	08	14	22
Normal weight	31	69	100
<b>Total</b>	<b>39</b>	<b>83</b>	<b>122</b>

The relationship between the mass index and the occurrence of primary dysmenorrhoea is represented in table 4 above. The number of participants with abnormal weight of the control group and case group is 8 and 14 respectively while that of normal weight is 31 and 69 respectively.

**Table 5: Cross tabulation of waist circumference and occurrence of primary dysmenorrhoea**

Waist Circumference	Control group	Case / Experimental group	Total
Abnormal WC	05	20	25
Normal WC	34	63	97
<b>Total</b>	<b>39</b>	<b>83</b>	<b>122</b>

Table 5 above shows the relationship between the waist circumference of abnormal waist circumference and the occurrence of primary dysmenorrhoea. It shows that participants with abnormal waist circumference of the control and case group are 5 and 20 respectively. Similarly, participants with normal waist circumference totals 34 and 63 for control and case group respectively.

**Table 6: Cross tabulation of body surface area and occurrence of primary Dysmenorrhoea**

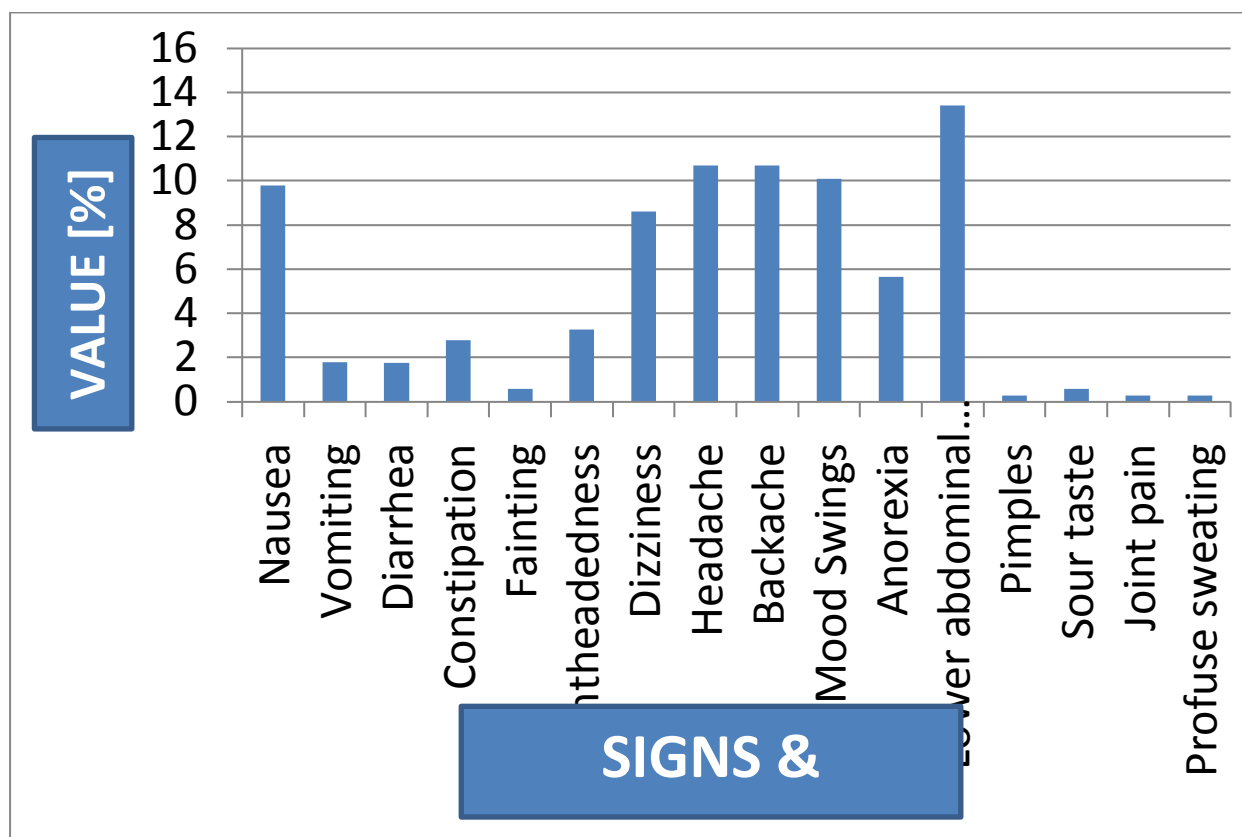
Body Surface Area	Control group	Case Experimental group	Total
Abnormal BSA	31	69	100
Normal BSA	8	14	22
<b>Total</b>	<b>39</b>	<b>83</b>	<b>122</b>

The relationship between the body surface and occurrence of primary dysmenorrhoea is shown in table 6 above. The abnormal body surface area of the control is 31 while that of the case group is 69. Similarly, the normal body surface of the control group is 8 while the case group is 14.

The association between physical activity, body mass index, waist circumference, body surface area, and occurrence of primary dysmenorrhoea showed that there was no significant association between physical activity and primary dysmenorrhoea, whereas body mass index waist circumference, and body surface area showed significant association with occurrence of primary dysmenorrhoea.

Table 7 shows the prevalence of signs and symptoms experienced by dysmenorrhoea participants. The symptoms and signs with the highest prevalence was lower abdominal pain (13.4%), while the signs and symptoms with the least prevalence were pimples, joint and profuse sweating (0.29%).

**Figure 1**  
**prevalence of associated signs and**  
**symptoms accompanying primary dysmenorrhoea**



**Table 8: Chi-square value of hypothesis tested**

Hypothesis	p-Value	Unit Square	Judgments
Physical activity	0.39	4.27	Accepted
BMI	0.00	88.29	Accepted
WC	0.00	64.51	Rejected
BSA	0.00	86.29	Rejected

$P \leq 0.05$

### Discussion

The aim of this study was to provide information about physical activity in relation to the occurrence of primary dysmenorrhoea among female undergraduates of Lagos State University, Nigeria

from the Department of Physical and Health Education. 122 females in the study, 83(68.1%) experienced primary dysmenorrhoea and constituted cases while, 39(32.9%) with no history of primary dysmenorrhoea constituted the controls. The most prevalent associated symptom was lower abdominal pain (13.4%), while the least prevalent are pimples, joint pain and profuse sweating (0.29%).

The outcome of this study showed that cases had a higher physical activity level than controls. It also revealed that physical activity had no significant association with occurrence of primary dysmenorrhoea as reported by Golomb, Solidum & Warren (1998).

The outcome of this study showed that body mass index had a significant association with the occurrence of primary dysmenorrhoea. This finding is in conformity with the result of the study by lee, Chen, lee and Kaur, (2006) which stated that premenstrual syndrome was more common in female adolescents who were overweight than those who had normal weight.

The finding that there was a significant association between waist circumference and occurrence of primary dysmenorrhoea implies that waist circumference may have a role of play in dysmenorrhoea, it is simply reported that relating waist circumference (>85cm) is associated with development a myriad of diseases (Hitze, West-Phal, Bielfeldt, Settler, Monin, Muller, 2008).

The finding that there was significant association between body surface area and the occurrence of primary dysmenorrhoea implies that body surface area may have a role to play in determining the occurrence of primary dysmenorrhoea.

This study, about 56.6% of cases experienced moderate intensity of pain while 24.4% reported pain severe enough to limit physical activity, and since moderate/severe pain intensity in this study constituted 81.0%, this finding, in a way, conforms with the findings from a study by Avido (2008) which stated that the pain intensity in primary dysmenorrhoea causes a decrease in physical activity.

One of the limitations of the study was that the results were based on self reports of their physical activity and symptoms of dysmenorrhoea. Although every effort was made to ensure the students that their responses would be kept confidential, the possibility still remains that some students may have under-reported or over-reported physical activity level, symptoms and intensity of pain to present a good image. Another limitation of this study was that data were only collected among undergraduates in Lagos State University from the Department of Health and Physical/Health Education, so the results cannot be generalized to individuals beyond the age of 30 years. However, since individuals beyond the age of 30 years hardly experience primary dysmenorrhoea such generalization may not arise.

Until recently, as reported by Protocor and Farquhar, (2006) several factors have been implicated in the aetiology of primary dysmenorrhoea; such factors include emotional and psychological problems, dietary intake, lifestyle and certain beliefs about menstruation. Anecdotal accounts and unsystematic reports have suggested that women who exercise experience fewer premenstrual symptoms and less severe dysmenorrhoea than women who are sedentary (Choi and Salmon, 1995).

The result of this study was consistent with the belief that women who exercise may be to some extent protected from deterioration of mood before and during menstruation. This however, is not the same for competitive sports women (Choi and Salmon, 1995).

## **Conclusions**

The study showed that physical activity was not associated with occurrence of primary dysmenorrhoea while waist circumference, body mass index and body surface area have significant association with the occurrence of primary dysmenorrhoea. The study also showed that the most prevalence associated symptoms of primary dysmenorrhoea was lower abdominal pain. Furthermore, the odd of individuals who were overweight having dysmenorrhoea was higher than for those who had normal weight.

It was concluded that body mass index, waist circumference and body surface area are strongly associated with occurrence of primary dysmenorrhoea. Also, there was a higher chance of individual who were sedentary or overweight having dysmenorrhoea compared to physically active and normal weight individuals respectively.

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**No.151**

**SPORT, HEALTH AND THE MILLENNIUM DEVELOPMENT GOALS (MDGS)**

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**ABSTRACT**

Sport plays significant roles in physical, social, intellectual, emotional, economic, spiritual and mental health that are requisites to the achievements of individual and collective goals and potentials. Participating in sports involves physical activities that ultimately results in both the children and adults good physical health. High self-esteem and self-confidence are achieved through sport as it brings about equality and reduction of stigma associated with HIV and AIDS, disabilities and poverty. Engagement in sport activities improves children's attendance and enrollment to school, and academic achievement. Anti-social behaviours: drug and alcohol abuse, unhealthy sexual behaviours with antecedent to unwanted pregnancy, HIV/AIDS, STIs, low-esteem, aggression, stealing that may cause destruction of health, future and insecurity are combated through sport. Sport is a source of economic empowerment for athletes and individuals through employment and business. Sport is associated with physical fitness, team spirit, obedience, harmony, tolerance, peace and unity which are all makeup of total health. This paper reveals sports as an instrument in the achievement of Millennium Development Goals. The paper recommends that sports Centres and facilities should be built around community to serve as motivator in sport participation. Government and schools should provide sport arena and facilities and also encourage the school children to engage in sports and physical education in order to achieve the MDGs.

**KEYWORDS**

Sports, Health and Millennium Development Goals

Introduction

*Sport and the Millennium Development Goals*

*The MDGs were established by the international community at the UN Millennium Summit in September 2000. The MDGs comprise eight benchmarks with supporting targets that aim to eradicate or reduce poverty, hunger, child mortality, and disease, and to promote education, maternal health, gender equality, environmental sustainability and global partnerships, and 2015 is set as the target date for achieving the MDGs, United Nations, (2003) . The fundamental right to health articulated by the World Health Organization (WHO) in 1946 remains integral to development today. This right is strongly reflected in the Millennium Development Goals (MDGs), the gui-*

*ding international development framework adopted by the United Nations (UN) in 2000, and the Human Development Index used to measure the progress of all nations against universal human development goals.*

Sport is inherently about drawing on, developing and showcasing people's strengths and capacities, shining a light on what people can do, rather than what they cannot do, sport consistently empowers, motivates and inspires individuals and their communities in a way that promotes hope and a positive outlook for the future; it is an ingredient that is essential to the success of all development and peace endeavours. Sport is a tool through which an individual and the community can maximize their potentials thereby becoming an asset to self and the society. Sport plays a significant role in human's physical, economic, intellectual, emotional, social and mental health and development. The effect of these positive health and development of the individual is seen in cooperation, team spirit, obedience, harmony, tolerance, peace and unity. These healthy behaviours in the life of sportsmen and women have carryover values outside the sport world thereby contributing to cordial relationships, friendliness and security that brings about growth, development and security in the community.

Sport is also a powerful means of promoting physical and mental health, providing opportunities for enjoyment and personal development, building self-esteem, and fostering positive social connection with others, it is a factor in promoting and maintaining health and well-being. Sport play valuable role in all development and it is peace tools in preventing conflict. It is increasingly being used to promote health and prevent disease, strengthen child and youth development and education, foster social inclusion, foster gender equity, enhance inclusion of persons with disabilities, and promote employment and economic development. Moreover, people of all ages are encouraged to become more physically active through sport (United Nations, 2003). However, participation in physical activity is limited, United Nations (2003) and WHO (2003), reported that globally, 60 percent of adults and over two-thirds of young people do not participate in a sufficient amount of sport and physical activity which are beneficial to their health, largely due to changes in lifestyle such as inactivity at work, sedentary forms of recreation, like television and computers, and excessive use of "passive" modes of transport.

Sport is "all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport, and indigenous sports and games, (United Nations, 2003). Physical activity is any bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure (Casperson, Powell and Christensen, 1985).

#### Sport and Health

Healthy human development is a necessary foundation for all development progress. Without healthy populations, the achievement of development objectives will be out of reach. Good health is fundamental to the ability of individuals to realize their full human potential. It is also a crucially important economic asset. Low levels of health impede people's ability to work and earn a living for themselves and their families. When someone becomes ill, an entire family can become trapped in a downward spiral of lost income and high health-care costs. On a national scale, poor population health diminishes productivity and impedes economic growth, while investment in better health outcomes is generally seen as an investment in economic growth. Health is also un-

derstood to be a contributing factor to achieving the remaining five MDGs, particularly those related to education, gender equality and the eradication of extreme poverty and hunger. Achieving the MDGs, however, remains a daunting challenge. If the trends observed since 2000 continue, most low-income countries will require additional resources and assistance to meet their health-related MDGs. (United Nations, 2003).

On the other hand, health is being threatened as the world is witnessing a significant increase of the global burden of non-communicable diseases (NCDs) such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases. Today in the entire world, with the exception of sub-Saharan Africa, chronic diseases are now the leading causes of death. The World Health Organisation (WHO) estimates that mortality, morbidity and disability attributed to NCDs, and currently they account for approximately 60% of all deaths and 43% of the global burden of diseases; they are expected to account for 73% of all deaths and 60% of the global burden of disease by 2020. The increasing global epidemic of these diseases relates closely to respective changes in lifestyle mainly tobacco use, physical inactivity and unhealthy diet. Nevertheless, physical inactivity is the most common of all cardiovascular risk factors across countries. After tobacco use, inactivity is the greatest contributor to mortality and morbidity from all causes. (United Nations, 2003, WHO, 2003). Physical inactivity, Warburton, Nicol and Bredin (2006), is a modifiable risk factor for cardiovascular disease and a widening variety of other chronic diseases, including diabetes mellitus, cancer (colon and breast), obesity, hypertension, bone and joint disease (osteoporosis and osteoarthritis), and depression. They further stated that the prevalence of physical inactivity (among 51% of adult Canadian) is higher than that all other modifiable risk factors. Physical inactivity is estimated to cause 1.9 million deaths globally; about 10-16% of cases of breast cancer, colon and rectal cancers, and diabetes mellitus, and about 22% of ischemic heart disease, and that the risk of getting a cardiovascular disease increases up to 1.5 times in people who do not follow minimum physical activity recommendations, (WHO, 2003).

Sport and physical activity are essential for improving health and well-being, and a tool in the achievement of the MDGs. Appropriate forms of sport and physical activity can play a significant role to prevent as well as help cure many of the world's leading non-communicable diseases. Evidence shows that regular participation in physical activity programme provides all people with a range of physical, social and mental health benefits. Hence, physical activity is an effective method of disease prevention for the individual and, for nation a cost-effective way to improve public health. Sport's unique and universal power to attract, motivate and inspire makes it a highly effective tool for engaging and empowering individuals, communities and even countries to take action to improve their health. Sport can also be a powerful means of mobilizing more resources in the global fight against disease, but this potential is only just beginning to be realized. According to the WHO, experience and scientific evidence show that regular participation in appropriate physical activity and sport provides people of both sexes and all ages and conditions, including persons with disabilities, with a wide range of physical, social and mental health benefits. Physical activity and sport support strategies to improve diet and discourage the use of tobacco, alcohol and drugs. As well, physical activity and sport help reduce violence, enhance functional capacity, and promote social interaction and integration. (United Nations, 2003, WHO, 2003).

Sport and Heart

US Department of Health and Human Services, (1996) reported that the US Surgeon General stated that cardiovascular health benefits occur at moderate levels of physical activity and increase at higher levels of physical activity and fitness. People who participate in regular physical activity are at much less risk of suffering a major coronary event such as a heart attack. Small incremental increases in physical fitness can reduce an individual's risk of cardiovascular-related death. Similarly, people with established cardiovascular disease can reduce their risk of negative outcomes by over 60% participating in regular physical activity. Evidence also suggests that physical activity benefits children's cardiovascular health and can help to lower blood pressure in children and adolescents. Epidemiological research suggests there may be a direct relationship between physical activity and HDL-C levels (levels of beneficial cholesterol) in children, and that children at high risk of developing coronary heart disease may benefit from physical activity.

#### Improving brain function

Aerobic exercise helps the heart pump more blood to the brain, increasing the flow of oxygen and nourishment to brain cells. At the same time, as muscles work, they send chemical signals to the brain that trigger the production of brain-derived neurotrophic factor (BDNF). With regular exercise, the body builds up BDNF and the brain's nerve cells start to branch out, join together and communicate with each other in new ways. This is the fundamental physiological process underlying all learning — every added connection between brain cells signifies a new fact or skill that has been learned and saved for future use. BDNF makes this learning process possible. Consequently, brains with more BDNF have a greater capacity for knowledge, while brains that are low in BDNF have difficulty absorbing new information, (United Nations, 2003)

#### Sport and Diabetes

Over 180 million people live with diabetes all over the world. WHO, (2006) Current research indicates that both aerobic and resistance (strength) exercise are associated with a decreased risk of type 2 diabetes, which affects an estimated 5.9% of the world's adult population. Exercise helps to reduce the likelihood of developing the diabetes among populations at high risk due to being overweight. Exercise interventions also help manage diabetes by stabilizing blood sugar levels, (United Nations, 2003). WHO, (2003) stated that diabetes affects more than 70 million women in the world and this figure is likely to double by 2025. However, recent studies show that modest physical activity and changes in diet can prevent more than half of the cases of non-insulin dependent diabetes.

#### Sport and Obesity

Obesity is an abnormal and excessive accumulation of fat that impair an individual's health, (WHO, 2006, International Platform on Sport and Development, 2009). In 2005, it was estimated that 400 million people in the world were obese and by 2015, this figure is expected to rise to 700 million.<sup>75</sup> This trend is largely due to a shift in diet (to energy dense foods low in vitamins) and decreased physical activity, (WHO, 2006, International Platform on Sport and Development, 2009) United Nations (2003) and WHO (2003), reported that 60 percent of adults do not participate in a sufficient amount of sport and physical activity; adolescence boys and girls, children and the disabled which are beneficial to their health, largely due to changes in lifestyle such as inactivity at work, sedentary forms of recreation, like television and computers, and excessive use of "passive" modes of transport. Such lifestyle also contributes to obesity. Research has found that obese individuals with mode-

rate cardio-respiratory fitness have lower rates of cardiovascular disease than normal-weight unfit peers, and an all-cause death rate 50% lower than the individuals in the unfit category, (WHO, 2006, International Platform on Sport and Development, 2009)

#### Sport and Cancer

Cancer includes over 100 diseases involving the rapid growth of abnormal cells that invade the body and spread to other organs, causing death. The WHO estimates that 7.6 million people died from cancer worldwide in 2005, with 70% of these deaths occurring in low- and middle-income countries. It is estimated that 40% of all cancers can be prevented by a healthy diet, physical activity, and not using tobacco. Physical inactivity is a distinct risk factor, while routine physical activity can help reduce the risk of specific types of cancer, (WHO, 2006). Physically active men and women exhibit a 30%–40% reduction in the risk of developing cancer, relative to those less active (Warburton, Nicol, and Bredin, 2006). Moderate levels of activity offer a greater protective effect than lower levels of activity.

#### Sport and Bone

Osteoporosis is the deterioration of bone tissue leading to loss of bone mass and a higher risk of bone fractures. Osteoporosis is a disease in which bones become fragile and more likely to break. Physical activity can greatly help prevent and manage osteoporosis, (2003). Physical activity increases force on bones and bones respond by increasing their mass so that the force is spread over a larger area. Physical activity has a positive effect on bone health across the age spectrum, but this effect is greatest in previously inactive individuals. Weight-bearing exercise, particularly resistance exercise, is the most effective form of physical activity for achieving this effect. Physical activity also helps to improve balance and coordination. Several studies 85 have found that exercise training significantly reduces the risk and number of falls. Improved strength, flexibility and posture also help reduce pain and allow older individuals to carry out daily tasks more easily, (Warburton, Nicol, and Bredin, 2006).

#### Sport, Physical Activity and Children

Physical activity is important to children's current and future health, and adherence to the physical activity guidelines produces a range of direct and indirect benefits. It assists in the control of body weight by increasing energy expenditure, this is important in teaching children and young people how to achieve a healthy 'energy balance' and avoid developing adult obesity. It reduces the risk of developing premature cardiovascular disease, type-2 diabetes, metabolic syndrome and some site specific cancers. Weight bearing physical activity is important in bone formation and remodeling. Participation in physical activity reduces depression and anxiety especially in shy children, enhances mood, self-esteem and quality of life. It is also known to reduce rule-breaking behaviour, to improve attention span and classroom behavior, and can positively affect academic performance. Involvement in sport and physical education can play a significant role in the enrichment of a child's social life and the development of social interaction skills. Physical skills acquired during participation in sport and physical activities in childhood and adolescence are more likely to be maintained throughout life span thereby making the individual to be active at old age, (WHO, 2003, Wood, Tannehill and Walsh, 2010).

Participation in play and sport, WHO,(2003), gives young people opportunities for natural self-expression, self-confidence, relief of tension, achievement, social interaction as well as learning the spirit of solidarity and fair play. These positive effects also help counteract the risks and harm caused by the demanding, competitive, stressful and sedentary way of life that is so common in young people's lives today. Involvement in properly guided physical activity and sports can also foster the adoption of other healthy behavior such as avoidance of tobacco, alcohol and drug use and violent behaviour as well as the adoption of healthy diet, adequate rest and better safety practices. Young children acquire social skills through participation in team games and play.

Sport can be an effective way to reach out to people, especially youth, and to encourage healthy lifestyle behaviours that will help protect them against HIV and other diseases. Sport can be used to empower children and youth by conveying appropriate prevention messages, teaching the skills necessary to establish and sustain healthy behaviour patterns, and increasing their resilience in the face of life challenges.

#### Sport & Disabilities

The goal is to help persons with disabilities improve their physical health, psychological well-being and quality of life. This can be achieved by increasing their ability to perform daily living activities, giving them opportunities to acquire life skills and leadership experiences, and enhancing their social inclusion, (United Nations, 2003). Providing such opportunities requires training sport and education personnel in adaptive sports, making adapted sport equipment available at low cost, and removing barriers preventing persons with disabilities from accessing, and travelling to and from, public sport and recreation facilities.

#### Sport and Mental, Emotional Health and Self-esteem

Exercise and, by extension, sport have long been known to produce beneficial effects on mental health, enhance self-esteem, help to manage stress and anxiety, and alleviate depression, (Ruiz, 2004). In patients with psychiatric disorders, physical exercise has been shown to diminish clinical symptoms, especially for depression, (Knechtel, 2004). More recently, breakthrough research has shown that exercise may also improve brain functions such as memory and learning and reduce the risk of cognitive loss through Alzheimer's and small strokes, (Carmichael, 2007). Regular participation in sport and exercise programs can play an important role in supporting the formation of self-concept in adolescents, (Seiler and Birrer, 2001) and building self-esteem and self-confidence in people of all ages, (Vail, 2005). While investigations of the short-term effects of sport show that it largely results in positive mood changes, ongoing physical activity results in the same improvements to well-being, and improved perception of one's health status and a higher satisfaction with one's health, (Seiler and Birrer, 2001) All these effects are important determinants of health because they influence individuals' perceptions of their self-worth and their ability to respond to life's challenges. Regular participation in an exercise program is also associated with measurable increases in self-esteem in children and adults, (Macauley, 1994), and with the maintenance of positive self-esteem in older age, (Vail, 2005). A study of wheelchair-mobile individuals participating in tennis found that they were more confident about performing tennis skills and general wheelchair mobility tasks than non-participants.

Through sport self-esteem can be built. Self-esteem is defined as a person's overall self-appraisal and feeling of self-worth. Self-esteem is critical to health because it motivates self-care and can contribute to healthy lifestyle behaviours. In disadvantaged communities and populations, where people are often defined in terms of their needs and deficits, sport provides a powerful counter-balance to these perceptions. Hence, engaging these marginalized person or groups, such as persons with disabilities, people with HIV and AIDS, and former child combatants in sport activities with other community members, sport creates a shared space and experience that helps break down negative perceptions and social stigma experienced and this enables the people to focus on what they have in common. Participating in sport draws on people's strengths and assets — energy, enthusiasm, natural and acquired skills, the desire to excel — and the universal capacity for fun and enjoyment. This is an important step in enhancing these individuals' self-concept and emotional health. For individuals deeply affected by poverty, disease, disability or conflict, the development of self-esteem can be a profound psychological shift that enables and motivates them to adopt healthier lifestyle behaviours.

Lazarus and Folkman, (1998) stated that physical activity as a coping strategy for stress, and also help to prevent anxiety, Canadian Fitness and Lifestyle Research Institute (1995), reported that regular exercise may have the ability to reduce anxiety on a daily basis and, hence, prevent the development of chronic anxiety”

*The MDGs 3 and 5 address the need to promote gender equity and empower girls and women and improvement of maternal health. Through structured sport programs, girls and women can become more physically active, benefiting their physical and mental health including the reduced risk they will suffer from chronic diseases, depression and anxiety, and engaging in health risk behaviours that are associated with MDGS 5 which is concerned with improvement of maternal health. Sport is a tool that addresses MDGs 2 and 3,” achievement of primary education and promotion of gender equality and empowerment of women” that is, through sport programs social isolation and exclusion that many girls and women experiences are reduced, particularly those that cannot attend school and live in poverty. Sport programs can provide girls and women with safe places to gather, help them to build social networks, offer social support, and connect them to health, education and employment information, services, and opportunities that can help to address their marginalization in society. Sport can be a catalyst that liberates girls and women from gender inequality. Sport programs can enhance the empowerment process by challenging gender norms, reducing restrictions and offering girls and women greater mobility, access to public spaces, and more opportunities for their physical, intellectual and social development.*

*Sport can also be a powerful health information and education platform, connecting girls and women with the information, skills and strategies they need to reduce health risks in their lives, particularly in connection with their sexual and reproductive health. Sport can help increase self-esteem in girls and women that give them opportunities to learn new skills, engage in positive relationships, acquire achievements, engage in volunteer service and receive public recognition. It provide women and girls opportunities to voice decision-making, training, and leadership and advocacy, and take greater control over their own lives. Sport can empower girls and women within their communities, provide positive health and welfare outcomes, and ultimately transform gender norms. Sport can lead to a more egalitarian world by unleashing the productive, intellectual and social power of women. Sport offers multiple avenues to address these health challenges and can promote good health for girls and women. In developed nations, sport participation has been linked with delayed sexual activity and reduced risk of teen pregnancy, (United Nations, 2003).*

#### Preventing and addressing youth delinquency and crime with MDGs

There is considerable evidence to suggest that youth who participate in sport are less likely than non-participants to engage in delinquent behavior, (Donnelly, 1981, Hastad, 1984, Melnick, Vanfossen, & Sabo, 1998, Segrave, 1983 and Segrave and Hastad, 1982) Youth active in sport also have reduced rates of criminal arrest and anti-social behaviour. After-school activities, like sport, and graduation incentives for at-risk youth encourage disadvantaged teens to complete high school, reduce youth arrests by 71%, and increase attendance at post-secondary education by 26%. (International Conference for the Prevention of Crime, 1999). Sport programs use different approaches to divert young people from crime and anti-social behaviour, (Burrows, 2003). Sport programs offer significant value as alternatives to membership in criminal gangs, (Clark, 1992). Initiation into sports at a young age can fill a void in the lives of vulnerable youth at a critical stage — which may prevent them from becoming involved in delinquent or criminal activity. Through early intervention, sport programs can help to move youth onto a positive life trajectory. This reduces the risk of future involvement in delinquency which, if not prevented, can continue over a lifetime,(Laub, 1994).

#### Sport & Education

One of the MDGs is “access to achievement universal of primary education”. Building physical education, sport and play into school curricula can be an effective means to increase the number of children enrolled in school and boost their retention rates especially for children in developing nations who do not attend school. Sport can help erode stigma preventing children with disabilities from attending school, (United Nations, 2003).

#### Sport and Economy



Sport helps participants to realize their potential as productive employees and citizens, (Dobosz, and Bealy, (1999). Conference of Canada Board, (2005) reported that on the socio-economic benefits of sport participation, sport is an important tool through which participants, particularly young people, gain and enhance a range of skills that are transferable to important parts of adult life. The knowledge, life skills, health, and physical abilities generally developed through appropriate sport experiences can benefit participants by improving their chances of finding employment, raising their level of income, and making them more optimistic and willing to volunteer in the community, (DiColo, 2006). *Sport is a source of economic empowerment; professional athletes make their living through sport as they are paid for participating in sporting activity, while the amateurs are giving financial honorarium. During sport competitions, individuals, communities, associations, and companies market and sell their goods and services is bring about economic sustainability. Therefore, through sport MDGs 1 which is “eradication of extreme poverty and hunger “ is achieved.*

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No.003

## AN ASSESSMENT OF THE EFFECTIVENESS OF LAWMA TOWARDS ERADICATION OF HEALTH HAZARDS AMONG LAGOSIANS

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### Abstract

Studies have confirmed that health and safety issues arise from improper solid waste management and that insect and rodent vectors are attracted to the waste and can spread diseases like cholera, dengue, hepatitis etc. Several studies on waste management have been carried out generally, but there is relatively low studies as regards to effective waste management in Lagos state, Nigeria. This study therefore assessed the effectiveness of Lagos State Waste Management Authority (LAWMA) towards eradication of health hazards among the residents in Lagos. Descriptive survey research design was used for the study. Stratified random sampling technique was used to sample 800 residents in and 100 Waste Management workers (LAWMA) in Somolu Local Government of Lagos-Nigeria. The instrument used was a validated questionnaire with 0.70 as reliability co-efficient. Five hypothesis were developed and tested using Chi-square statistical tool at 0.05 significant level. The results showed that waste generation constitutes health problems to Lagosians ( $\chi^2 = 122.71, p < 0.05$ ), adequate facilities greatly improve waste management in the state ( $\chi^2 = 47.30, p < 0.05$ ), enlightenment and awareness influence the management of waste ( $\chi^2 = 23.30, p < 0.05$ ). The findings also showed that competent and qualified personnel promote proper waste management ( $\chi^2 = 16.60, p < 0.05$ ) and indiscriminate disposal of waste affects the input of LAWMA ( $\chi^2 = 76.03, p < 0.05$ ). From the above findings, it is clear that Lagos State government is doing a great job through LAWMA in terms of managing wastes being generated in the state by the residents. It is however, concluded that government should intensify at curbing indiscriminate wastes disposal. In view of the above, the following recommendations were made that, government should create a comprehensive action plan, discourage single use bags within the city, provide accessible recycle bins in districts, create waste reduction and recycling programmes in the schools, including a waste lunch programme and provide more qualified personnel to handle the job.

Key Words: Waste management, Health hazards, LAWMA.

### Introduction

In Nigeria, urban refuse management particularly in the large cities has confined to be of great dumped on the streets with no adequate means of collection. These heaps of garbage undergo bacterial decomposition giving rise to offensive odours which produce a serious health hazards (Woodwell, 2001). Waste management on its own is both capital and economic intensive, which means huge capital outlay is required. Where there is availability of funds,

the issue of waste management also has to be given priority. For instance, what is Lagos State budget for waste management? According to Joseph (2002) the large chunk of waste management in Lagos gulps between 20-25% of government funds on the average. He emphasized on the working within a projected population of 130 million in Nigeria while Lagos state alone had a projected population of 12-18 million. He stressed further that waste management should occupy priority position in Nigeria, because of the multiplier effects. Apart from funding, there are other important problems people face which include indiscriminate waste disposal, littering, poor hygienic practices and responsible institution arrangements. The thing is do we have irresponsible institutional arrangement put in place by the government? What kind of funding do they get and the managerial ability of the people in charge of it? Joseph (2002) affirmed that in Nigeria presently, the availability and the capacity of waste managers is lacking.

Olawande (2004) submitted that solid and particulates waste materials are generated from both domestic and industrial origins in Nigeria.

These wastes have constituted a worry site in our urban, sub-urban and industrial centers most especially in Lagos State. Solid waste became a serious problem in Nigerian in 1979 as a result of the oil boom, which led to the establishment of more industries and the consequent expansion of towns and cities (Adeleye, 2001). It is therefore obvious that as long as man uses resources, wastes are inevitable informed with it. Woodwell (2001) noted that everything modern man touches turns to waste product sooner or later. He went further, that when wastes accumulate beyond a certain limit, it becomes impossible for natural processes in the ecosystem to harbour them. He also said that, waste becomes a nuisance and can even be toxic. Refuse has remains a permanent feature along our urban roads especially in Lagos State, with some even completely blocking roads. It suffices to say, the management of solid waste has been a major concern of people that know the dangerous implication this poses on their wellbeing. Akpati (1999) listed some of the several techniques in the management of solid waste which include, **open dumping; burning of wastes, sanitary landfills, incineration, composting, grinding of sewer of wet gabbage, salvaging and reclamation, feeding of animals and spreading on farms disposal in ocean, lakes and rivers.**

Nbaekwe (2006) submitted that in all countries where waste disposal management has been successful, the private sector is the brain behind it. He continued that it is the private sector that can marshal the drive, the commitment and the ingenuity that can make waste disposal management a success. Many health problems have arisen as a result of failure to produce all the consequences of technology, individual and government are continually making decisions based on uncertainty and complexity in the basic environmental issues, as well as a lack of social values and priority. The environmental conditions of a given area may be affected by waste management, the process used to dispose of garbage and how waste is disposed varies based on living conditions and the accepted standard of living in a geographical area. Solid waste mismanagement can lead to respiratory syndrome coronal virus as a result of its airborne.

Nbaekwe (2006) said that, some communities provide waste water treatment and trash collection, others do not, which reduces the ability to control the well-being of the environment and its people. When waste is not removed and treated properly, pollution may lead to the spread of diseases and when proper disposal and treatment methods are followed, diseases and pollution can usually be reduced. Such wastes that cause health hazards can either be physical, microbiological, biological or chemical agents of disease. Wastes that can cause

health problems are human and animal faeces, solid wastes, domestic wastewater sewage, sullage, greywater, industrial wastes and agricultural wastes. United States Environmental Protection Agency (2002) defined waste as any garbage, rubbish and other discharged materials resulting from industrial, commercial, domestic, mining and agricultural activities. The agency further concluded that, waste is regarded as any material discarded as having no consumer value to the person abandoning it. World Health Organization (1948) said that sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. WHO went further that inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health, both in households and across communities. It also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal.

The Lagos State Waste Management Authority (LAWMA) formerly Lagos State Refuse Disposal Board, was established under Edict Number 9 of 1st April, 1977 (LAWMA Handbook, 2001). In its inception, a firm of pollution control experts, Messrs. P.D. and Pollution Control were contracted to set up the board. The contract of the company expired in November 1984. Between 1977 and 1999, the board became an authority for the purpose of commercialisation, it has handled responsibilities such as drainage, the relief and collection of derelict vehicles, apart from its statutory domestic and industrial waste collection. With the creation of Private Sector Participation (PSP) for domestic waste collection and Highway Managers Limited, for waste in the highways in Lagos, the authority (LAWMA) now provides complementary services in domestic wastes collection. Lagos State Waste Management Board was commercialised and remained as Lagos State Waste Management Authority in 1991 (Lawma Handbook, 2001).

LAWMA engages, coordinates and evaluates the activities of the Private Sector Participation (PSP) in Municipal Solid Waste collection. The PSP operation is statewide. PSP collects household wastes once or twice a week. The Lagos State Government provides 240 trillion bin for households after annual payment of land use charge through Land Records Company (LRC). Waste management cuts across several institutional structures and policies, as well as sectors. The Lagos Waste Management Authority (LAWMA) is the catalyst for transforming the Waste Management sector in the West African sub region (LAWMA Handbook, 2001). The LAWMA Recycling Bank is the latest initiative towards the adoption of recycling as a veritable option to landfill. A bank which serves as a store house for paper, can, glass and plastic waste is situated in every estate within Lagos metropolis. In 1999 Lagos State Waste Management Authority was designated as the only authority permitted by law to undertake commercial, industrial and trade waste collection services in Lagos State. The purpose of this study is therefore, to create more awareness on the methods of waste disposal among the people living in Lagos State. Also, this study is sought to sensitize the staff of LAWMA, as well as the private companies in charge of waste disposal to intensify their efforts as several constant complaints are made by the public on air, especially on Radio Continental on every Thursday between 9.00am and 10.00am

### **Health hazards**

Health is globally viewed as been wealth. According to WHO (1948) that health is a complete state of physical, emotional, mental and social wellbeing of an individual and not merely the absence of disease or infirmity. Scope of practice in environmental health means the practice of environmental health by registered environmental health specialists in the public and private sector which is not limited to, organization, management, education, enforcement,

consultation, and emergency response for the purpose of prevention of environmental health hazards and the promotion and protection of the public health and the environment in the following areas: food protection; housing; institutional environmental health; land use; community noise control; recreational swimming areas and waters; electromagnetic radiation control; solid, liquid, and hazardous materials management; underground storage tank control; on-site septic systems; vector control; drinking water quality; water sanitation; emergency preparedness; and milk and dairy sanitation (Howard, John, & Fransisco, 2010).

## **Sanitation**

Sanitation is a basic, as well as a long-standing, public health issue. When early peoples settled in communities and started to cultivate crops and raise animals, sanitation became a primary concern for society. Today, as urban areas grow, more pressure has been put on local water supplies, for the quality of the water that is available to a community greatly impacts all aspects of health. Woodwell (2001) conceived environmental sanitation as the discipline of protecting man from the natural man-made hazards which surround him. In the opinion of Horny (2010) that environmental sanitation is the arrangement to protect public health in the area and house we live in. He stressed further that sanitation is the science and practice of healthful hygienic condition, the study and the use of measures such as housing and ventilation, lighting, water supply, food and disposal of sewage. Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes. Hazards can be physical, microbiological, biological or chemical agents of disease.

Wastes that can cause health problems are human and animal faeces, solid wastes, domestic wastewater (sewage, sullage, grey water), industrial wastes and agricultural wastes. Hygienic means of prevention can be by using engineering solutions (e.g. sewage and wastewater treatment), simple technologies (e.g. latrines, septic tanks), or even by personal hygiene practices (e.g. simple hand washing with soap). World Health Organization (2003) affirmed that sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. It stressed further that inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal. The term sanitation can be applied to a specific aspect, concept, location or strategy, such as:

- Basic sanitation - refers to the management of human faeces at the household level. This terminology is the indicator used to describe the target of the Millennium Development Goal on sanitation.
- On-site sanitation - the collection and treatment of waste is done where it is deposited. Examples are the use of pit latrines, septic tanks, and Imhoff tanks.
- Food sanitation - refers to the hygienic measures for ensuring food safety.
- Environmental sanitation - the control of environmental factors that form links in disease transmission. Subsets of this category are solid waste management, water and wastewater treatment, industrial waste treatment and noise and pollution control.
- Ecological sanitation - an approach that tries to emulate nature through the recycling of nutrients and water from human and animal wastes in a hygienically safe manner.

## **Waste management**

Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and the process is generally undertaken to reduce their effects on health, the environment or aesthetics. Waste management is a distinct practice from resource recovery which focuses on delaying the rate of consumption of natural resources. The management of wastes treats all materials as a single class, whether solid, liquid, gaseous or radioactive substances, and tried to reduce the harmful environmental impacts of each through different methods (CASSAD,1998). The urban management of solid waste related to the total strategy for the collection and removal of this pollutant of the environment from the time it is generated to the time it is adequately disposed off. For total success to be recorded, strategy should involve the cooperation of a number of institutions starting with the generation of the wastes, through the agencies for the collection to those concerned with its eventual disposal (George & Frank, 2002). Waste management practices differ for developed and developing nations for urban and rural areas, and for residential and industrial producers.

Management for non-hazardous waste residential and institutional waste in metropolitan areas is usually the responsibility of local government authorities, while management for non-hazardous commercial and industrial waste is usually the responsibility of the generator. The primary producers of solid waste are notably the household and the firm. Both of these represent the first level of organisation in the process of collecting, processing and disposal of solid waste. Waste management is becoming an alarming problem in many towns of the country. Gilberton (2005) envisaged that today, the environment is being polluted as never before by the accumulation of solid waste, a staggering burden born of influence, nurtured by rising population, foster by technology.

Refuse and domestic waste will constitute a strange sight to Lagosians whose streets are littered with tons of garbage from animal to human carcasses. At present, private sector waste disposal operators diligently visit homes and carry away refuse bags, load them into waiting trucks and cart them away for final disposal. "That is good" the residents say. They however worry that a lot of littering goes on in the environment and on the streets and avenues may have been ignored and not cleared. It has been observed that household account for about half of the solid wastes generated, that is, by weight in the third world cities, which includes Lagos. It has also been noted that domestic waste disposal management has received considerable attention not only in Lagos State but Nigeria generally. Though, Nbaekwe (2006) affirmed that despite this, laudable attention, collection, disposal processing, treatment, recycling and utilization have defied solution. For instance in Lagos State, the estimated daily generation is about 764 tons in all the 20 local government areas including the 37 developmental districts.

The major problem caused by wastes to the environment is pollution characterized by various types of solid wastes which include paper, textile plastic, metals, glass, bone, wood, vegetal matter and food remnant of multiple consistency. It has been pointed out that the generation of waste materials is a problem that is not peculiar to Lagos alone. This problem is prevalent in the world as noted earlier. This problem is not peculiar to the third world alone



but cuts across the industrialized countries of the world where the pollutant effects of domestic and industrial wastes have caused considerable concern to environmental scientists. Our problems emanate from solid waste essentially. There are wastes from discarded materials generated from domestic and community activities or from industrial, commercial and agricultural operations (Longe & Williams, 2006).

## **Methodology**

### **Research Design**

The study adopted a descriptive survey research method. The study was conducted in Shomolu Local Government area of Lagos State, using purposive selection of eight hundred participants from Somolu Local Government area of Lagos State and purposive sampling technique was used to pick a hundred staff of LAWMA.

### **Procedures**

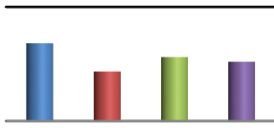
The instrument used for collecting data from the participants was a validated questionnaire by at least, four experts which yielded 0.70 as reliability coefficient. Data were analysed using descriptive statistics of frequency counts and percentages for demographic profiling of the participants while inferential statistics of Chi-square was used to test the five hypotheses at 0.05 alpha level. Descriptive survey research design was used for the study.

## **Result**

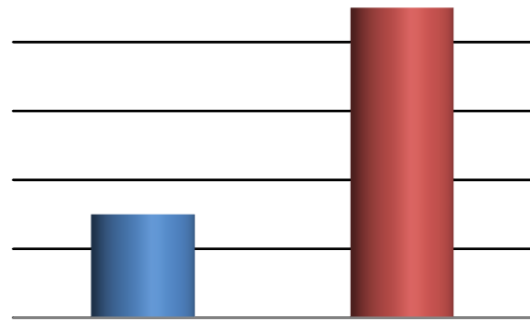
### Participants' Demographic variables

The results are shown through providing demographic variables of the participants, Age, Sex, Marital Status, Religion, Residency, Educational Qualification and Distribution of the participants

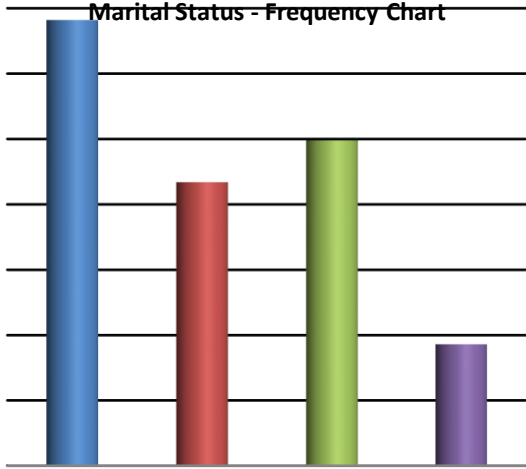
**Age - Frequency Chart**



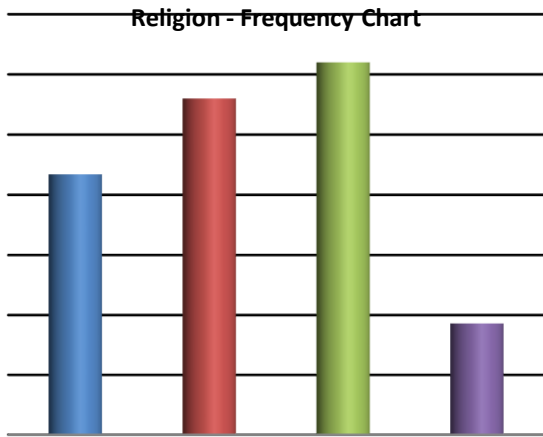
**Gender Distribution: Frequency Chart**

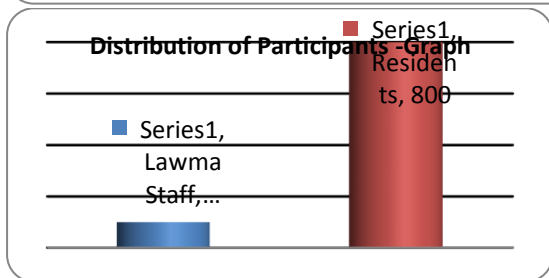
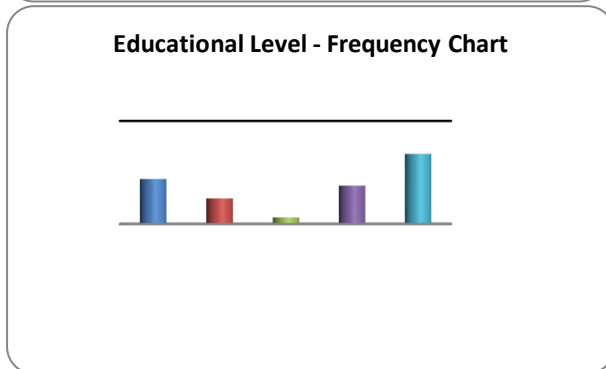
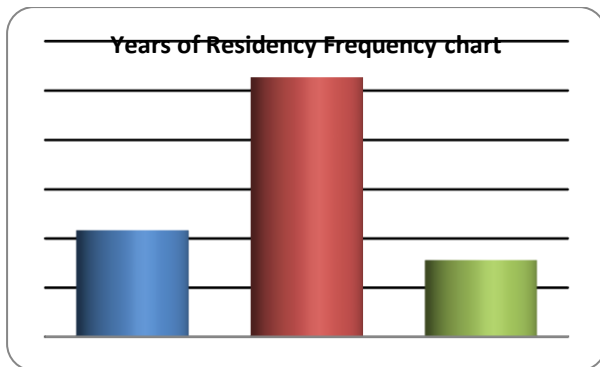


**Marital Status - Frequency Chart**



**Religion - Frequency Chart**





On the age characteristics, graph 1 showed that 341 (37.9%) of the total participants were below 18years, 217 (24.1%) were 20-25years, 280 (31.1%) were 26-30years while 62 (6.9%) were 31-35years respectively. In terms of sex , the graph further showed that 435 (48.3%) of the total participants are male while 465 (51.7) were female respectively About the marital status, the table showed that 341 (37.9&%) of the total participants are single, 217 (24.1%) are married, 249 (27.1%) were divorced while 93 (10.3%) were others respectively. The table further showed that 217 (24.1%) of the total participants were christian, 280 (31.1%) were muslim, 310 (34.4%) were traditionalist while 93 (10.3%) constitute others respectively. The Table above also showed that 217 (24.5%) of the total participants have spent 1-5years, 527 (58.6%) 6-10years, while 156 (17.3%) are within 11-15years respectively.

The table also showed that 218 (24.2%) of the participants had no formal education, 124 (13.8%) had primary education, 32 (3.6%) had secondary education, 186 (20.7%) had college/polytechnic education while 340 (37.7%) had university education respectively. The table also revealed that 100 (13.10%) of the total participants are LAWMA staff while 558 (86.90%) are residents respectively.

Results of the statistical analysis

Refuse wastes significantly constitute health hazards among the Lagos state residents	Facilities significantly affect wastes disposal management in Lagos state	Enlightenment and awareness significantly influence wastes disposal management among Lagos state residents.	Unqualified personnel significantly influence wastes disposal management	There is indiscriminate refuse disposal among Lagos state residents
x <sup>2</sup> 122.7	x <sup>2</sup> 47.30	x <sup>2</sup> 23.80	x <sup>2</sup> 16.60	x <sup>2</sup> 76.03
Df 9	Df 9	Df 9	Df 9	Df 9
L.S. 0.05	L.S. 0.05	L.S. 0.05	L.S. 0.05	L.S. 0.05

## Discussion of findings

### Hypotheses Testing

#### Hypothesis 1:

The  $x^2$  value of 122.71 is significant 5% ( $P < 0.05$ ). The hypothesis which stated that refuse waste will not significantly constitute health hazards to Lagos State residents is hereby rejected. This means that refuse wastes significantly constitute health hazards to Lagos state residents. This finding was supported by Longe & Williams, (2006) who pointed out that the generation of waste materials is a problem which is not peculiar to Lagos alone. They stressed further that this problem is not peculiar to the third world alone but cuts across the industrialized countries in the globe where the pollutant effects of domestic and industrial wastes have caused considerable concern to environmental scientists and that our problems emanate from solid wastes essentially. However, there are wastes from discarded materials generated from domestic and community activities or from industrial, commercial and agricultural operations.

#### Hypothesis 2:

The  $x^2$  value of 47.30 is significant at 5% ( $P < 0.05$ ). The hypothesis which stated that facilities will not significantly affect wastes disposal management in Lagos State is hereby jettisoned. This implies that facilities significantly affect wastes disposal management in Lagos state. Oshinowo (2001) submitted that the ministry of the environment is now charged with the promotion of qualitative environment in Lagos State through provision of facilities and other materials needed to carry out these functions. He continued that industrial waste being a major concern in the state is now on top of the priority list of the ministry and that a typical example of such site is located at *Olusosun* around *Ojota*, very close to the former toll gate. He however, emphatically pointed out that this strategy is not being correctly practiced. Joseph (2006) corroborated the above assertion that the state has established State Environ-

mental Protection Agency (LASEPA) which liased with the defunct Federal Environmental Protection Agency (FEPA).

#### Hypothesis 3:

The  $x^2$  value of 23.80 is significant at 5% ( $P < 0.05$ ). The hypothesis which stated that enlightenment and awareness will not have any significant influence on Lagos State residents towards wastes disposal managent is hereby rejected. This implies that enlightenment and awareness significantly influence wastes disposal management among Lagos state residents. Bassey, Benta-Coker & Aluyi, (2006) concluded that the recognition of the presence of a variety of stakeholders such as the market women, industrialists, youth organizations, traders, school children, food sellers, scavengers, artisans such as mechanics, hair dressing salon owners among others are major contributors to the wastes management problem of the state which makes the delivery of public awareness campaigns quite important in Lagos State. They continued that government therefore, regularly engages these stakeholders in various environmental enlightenment activities. For instance, there have been series of radio and television jingles and drama sketches which the relevant government agencies have developed. Such campaign materials are now being aired on both the state television and radio in English, Pidgin English and other indigenious languages that are peculiar to the state (Aluyi, 2006).

#### Hypothesis 4:

The  $x^2$  value of 16.60 is significant at 5% ( $P < 0.05$ ). The hypothesis which stated that unqualified personnel will not have any significant influence in wastes disposal management among Lagos State residents is hereby rejected. This means that unqaulifed personnel signifi- cantly influnce wastes disposal management. In support of this finding, Joseph (2006) sum- mitted that the problems arising from ineffective management of wastes and other environ- mental problems in Lagos State over time has continued to bring about a seemingly unending restructuring of the institutions charged with the responsibility of addressing these problems. He continued that there has been a serious transformation in this sector over time. For instan- ce, the Lagos State Waste Disposal Board was transformed to Lagos State Waste Manage- ment Authority (LAWMA) when it was recognized that the business of taking care of the en- vironment goes beyond mere disposal of waste. Government felt the need for a sustainable and viable management scheme, which includes the recruitment of qualified personnel, choice of disposal system, maintenance of dumpsites and waste recycling, hence, the upgrading of the former waste disposal board to a waste management authority (Adeleye, 2001).

#### Hypothesis 5

The  $x^2$  value of 76.03 is significant at 5% ( $P < 0.05$ ). The hypothesis which stated that indiscriminate disposal of wastes among Lagos State residents will not significantly affect the activities of LAWMA is hereby rejected. This revealed that there is indiscriminate refuse disposal among Lagos state residents. In the opinion of Oshinowo (2010) who submitted that the rate at which people dump their wastes shows that they lack adequate knowledge about the inherent danger of such habit to their health and general wellbeing. He continued that se-

minars and workshops with the themes drawn from different environmental problems and attitudes of Lagosians to waste management should be regularly held for different target audience in the state. He further affirmed that these are meant to promote more positive attitude and responsive environmental actions among the teeming populace in and around the state.

### **Conculsion and Recommendations**

Health of the people cannot be underrated, as most living souls yearn for it. Success at work or play is best enhanced by a sound healthy state, and ailing body cannot work or perform efficiently and cannot achieve a success. The findings showed that sanitation of the environment is of paramount importance as this will not only enhance wellness of the total populace but will also contribute to the economic and national development. It is therefore recommended that, government and private companies should create a comprehensive waste action plan, educate the public on the inherent dangers of indiscriminate dumping of refuse through seminars, workshops, conferences, provide qualified personnel to handle refuse waste for effective management, discourage single use bags within the city, provide accessible recycle bins in public places and businesses and partner with local school districts to create waste reduction and recycling programme in the schools, including a waste lunch programme. But, most importantly, Lagos State government should please advise these private companies in charge of refuse management to kindly intensify their efforts because a lots of complaints are being made by Lagosians, especially when you listen to Radio Continental that LAWMA vehicles come to pick these refuse once a while and when they manage to come, they don't wait for residents to dump their refuse.

### **Acknowledgement**

The following people are worthy to be acknowledged for the completion of this study; Mr. J. Dicson the statistician, Olanrewaju Ayeni who wordprocessed the work, Mr. Chidizie Chukwudere, as well as others not mentioned.

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**MOVEMENT AND  
TRAINING SCIENCES  
ORAL PRESENTATION**

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## Investigation of the 48 Hours Change of Hrv After 1 Hour Running Exercise in Trained Adults

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### **Abstract**

Heart Rate Variability (HRV) is an indicator, defines the duration between consecutive heart beats and used to estimate of cardiac autonomic regulation. The purpose of this study is to investigate the HRV after 1 hour running in trained people throughout 48 hours. 8 healthy male voluntarily participated to this study. Each participant ran 1 hour with their individual HR range (%70 of HR by VO<sub>2</sub>max test). HRV measurements took 5 min for each person and those were applied before (Be) and 30 minutes (30min), 24 hours (24h), 48 hours (48h) after the 1 hour-running. According to the test results; HR was found significantly higher in 30 min results than others and LF/HF than Be and 24 h either. For SDNN, TP and HF; 30 min results were significantly lower than others. SDDSD, RMSSD results were significantly lower in 30 min than 24 h and 48 h. For HFnu results it was found that 30 min was significantly lower than Be, for LF results 30 min was significantly lower than 24 h and LFnu was found significantly higher in 30 min than the values in resting period. The rise on HR and LF/HF and the decline on SDNN, SDDSD, RMSSD, TP, HF, HFnu and LF were the indicators of the sympathetic system activity are still activated 30 min after the running. Another result for this study is the effects of an intense physical activity on heart were come down in 24 hours, so it means the heart recovers in that period.

*Key words: Heart rate variability, Recovery.*

### **Giriş**

Kalp hızı değişkenliği (KHD) veya ülkemizde de sıkça kullanılan İngilizce karşılığıyla ‘‘Heart Rate Variability’’ (HRV) ardışık kalp atımları arasındaki zamanı gösteren bir büyüklüktür (Borresan ve Lampert, 2008; Lewis ve ark., 2007; Yıldız ve ark., 2004; Lombardi, 2002) ve kalbin otonom fonksiyonlarının değerlendirilmesinde kullanılan (Silvilairot ve ark., 2011; Kaikkonen ve ark., 2008; Sandercock ve Brodie, 2006; Mourot, 2004) non-invazif bir yöntemdir (Myllymaki ve ark., 2012; Chen ve ark., 2011; Oliveira ve ark., 2011; Bailon ve ark., 2010).

HRV, Otonom Sinir Sistemi'nin (OSS) kalp üzerindeki etkisi sonucu ortaya çıkar (Haddah ve ark., 2009; Yılmaz ve Yıldız, 2009; Borresan ve Lampert, 2008; Yıldız ve ark., 2004). OSS, kalp çalışmasını düzenleyici etkiye sahiptir ve OSS'nin değerlendirilmesi kardiyak sempatik ve vagal denge hakkında bilgi verir (Chen ve ark., 2011; Tarvainen ve ark., 2009; Alyan ve ark., 2008). Dinlenme anında parasempatik aktivite, fiziksel ve zihinsel aktiviteler ile stresli anlarda ise sempatik aktivite baskındır (Yıldız, 2006).

HRV analizi klinik ortamda büyük öneme sahiptir. Kronik kalp yetmezliği olan ve miyokard infarktüsü geçirmiş kişilerde HRV'de görülen düşüş, ani kardiyak ölümlerin göstergesi kabul edilmektedir (Silvilairat ve ar., 2011; Borresan ve Lampert, 2008; Alyan ve ark., 2008). Ayrıca HRV'nin diyabetes mellitus, yüksek yansiyon ve obezite ile de ilişkili olduğu bilinmektedir (Okan, 2009; Gilder ve Ramsbottom, 2008).

HRV farklı yöntemlerle analiz edilebilmektedir. Bunlar; zaman-alan ölçümleri, frekans-alan ölçümleri ve doğrusal olmayan ölçümlerdir (Satya, 2009; Pumprla ve ark., 2002; Parati ve ark., 1995). Bu ölçümler kısa süreli (2-15 dk) ve uzun süreli (24 sa) olabilmektedir. Kısa kayıtlar herhangi bir değişkenin akut etkisi incelenmek istediğinde daha kullanışlı bulunurken, sağlık amaçlı kardiyak taramalarda veya egzersizin kronik etkilerinin incelenmesinde uzun süreli kayıtlar tercih edilmektedir. Bununla birlikte spor bilimleri alanında sıklıkla zaman ve frekans alan ölçümleri kullanılmaktadır.

#### HRV'ye ait zaman-alan parametreleri şöyledir:

SDNN (ms): RR aralıklarının standart sapmasıdır.

SDANN (ms): 5 dakikalık kayıtlarda elde edilen ortalama RR aralıklarının standart sapması.

RMSSD (ms): RR aralıkları farklarının karesinin ortalamasının karekökü.

SDNN indeksi (ms): 5 dk'lık segment RR aralıklarının standart sapmasının ortalaması.

SDSD (ms): Komşu RR aralıkları farklarının standart sapması.

NN50 (adet): 50 ms'den daha büyük RR aralıkları farklarının aralık sayısı.

pNN50 (%): RR aralıklarının toplam sayısının NN50'ye bölünmesi ile elde edilen orantı katsayısı.

Geometrik Yöntemler: Bu yöntemlerin kullanılabilmesi için en az 20 dk, genellikle de 24 saatlik ölçümler tercih edilmektedir.

HRV trianguler indeksi: Toplam RR aralık sayısının histogram yüksekliğine oranı.

TINN (ms): Trianguler kesiştirilmiş RR aralık histogramının bazal genişliği (Yazgı, 2010; Akgül ve ark., 2007).

#### HRV'ye ait frekans-alan parametreleri şöyledir:

TP (ms<sup>2</sup>): ULF+VLF+LF+HF (>0.4 Hz)

LF/HF: Sempatovagal denge.

HF (ms<sup>2</sup>): 0.15-0.4 Hz.  
LF (ms<sup>2</sup>): 0.04-0.15 Hz.  
VLF (ms<sup>2</sup>): 0.003-0.04 Hz.  
ULF (ms<sup>2</sup>): <0.003 Hz.  
HF (nu): HF/TP-VLF.  
LF (nu): LF/TP-VLF (Yazgı, 2010; Akgül ve ark., 2007).

Ancak her araştırmada tüm bu zaman ve frekans-alan parametreleri kullanılmamaktadır. Bunlardan hangisinin kullanılacağı hem alınan ölçümün süresine hem de ölçüm cihazına bağlı olarak değişmektedir. Bu çalışmada; SDNN, SDDSD, RMSSD,TP, HF, HFnu, LF,, LFnu, LF/HF ve VLF parametreleri değerlendirilmiştir.

HRV parametrelerinin bazıları sempatik bazıları ise parasempatik aktivitenin baskınlığıyla ilgilidir.

HF'deki artışın vagal aktiviteyle ilişkiliyken (Malliani ve ar., 1991; Pomeranz ve ark., 1985), LF hem sempatik hem de parasempatik aktivite hakkında bilgi vermektedir (Lee ve Mendoza, 2012; Kelly ve ark., 2011; Appel ve ark., 1989) ve aynı LF/HF oranı gibi sempatovagal denge hakkında bilgi vermektedir. VLF, ULF gibi parametrelerin ise hangi fizyolojik ve sinirsel süreçlerle ilişkili olduğu bilinmemektedir (Akgün ve ark., 2007). Ancak bazı kaynaklarda VLF'nin termal ve hormonal mekanizmalarda etkili olduğu, OSS ile ilişkili olmadığı belirtilmiştir (Masek, 2009; Satya, 2009; Clifford, 2002). HRV'ye ait zaman-alan parametrelerindeki (SDNN, SDDSD, RMSSD) artış ise parasempatik aktiviteyle ilişkilidir. Artan sempatik etki bu değerlerin düşmesine neden olmaktadır.

HRV analizleri spor bilimleri alanında fiziksel aktivitenin akut veya egzersizin kronik fizyolojik etkilerinin değerlendirilmesinde kullanılmakta (Barak ve ark., 2009), buradan elde edilen yanıtlar genetik farklılıklara rağmen kalbin otonom düzenlenmesinde önemli bir parametre olarak kabul edilmektedir (Kiviniemi ve ark., 2010).

Bu bilgiler çerçevesinde bu araştırmanın amacı; egzersiz yapan kişilerin HRV'sini, %70 yoğunlukta yapılan 1 saatlik koşu sonrasında belirli aralıklarla 48 saat boyunca incelemektir. Böylece bu ve benzeri yorgunluk oluşturan fiziksel aktivitelerden sonra kalp fonksiyonlarında meydana gelen değişiklikler ve bu fonksiyonların normale dönme zamanı hakkında bilgi sahibi olunabilecektir. Elde edilen bilgiler yüklenme-toparlanma ilişkisi hakkında bilgi verecektir.

## **Yöntem**

### Katılımcılar

Araştırmaya Ankara Üniversitesi Spor Bilimleri Fakültesinde öğrenim gören 8 sağlıklı yetişkin erkek gönüllü olarak katılmıştır.

Katılımcıların; ortalama yaşları 22,75 yıl ( $\pm 1,48$ ), boy uzunlukları 171,01 cm ( $\pm 6,72$ ), vücut ağırlıkları 67,00 kg ( $\pm 7,05$ ) ve yağ oranları % 18,77 ( $\pm 7,40$ ) olarak ölçülmüştür. Maksimal oksijen tüketimleri ve maksimal kalp atım hızları ise sırasıyla 55,28 ( $\pm 5,15$ ) ml.kg.dk ve 194,62 ( $\pm 7,85$ ) atım/dk olarak bulunmuştur.

### Kullanılan araçlar

Vücut ağırlığı ve vücut kompozisyonu, Avis 333 plus (South Korea) analizör ile boy uzunluğu ise 1 mm aralığa sahip Holtain marka stadiometre ile (Holtain, U.K.) ölçülmüştür. Bir saatlik koşu şiddetinin belirlenebilmesi için deneklere Bruce test protokolü uygulanmış, Jaeger Masterscreen CPX (Hoechberg, Germany) koşu bandı ve gaz analizörü ile maksimal  $O_2$  tüketimi hesaplanmıştır. Katılımcıların dinlenik KAH'ları ve HRV'ye ait hep zaman hem de frekans alan parametrelerinin ölçümü için Omegawave 800 (Oregon, USA) model cihaz kullanılmıştır. Bir saatlik koşu sırasında ise KAH'lar Polar Team 2 Pro sistemi transmitterler ve Polar RS 100 (Kempele, Finland) ile takip edilmiştir.

### İşlem sırası

Katılımcılar tarafından ilk olarak ‘‘Bilgilendirilmiş Onam’’ formu doldurulmuştur. Bu çalışmanın onayı Ankara Üniversitesi Tıp Fakültesi Klinik Araştırmalar Etik Kurulu'ndan alınmıştır.

Daha sonra sırasıyla; boy uzunlukları, vücut ağırlıkları ve vücut kompozisyonları ölçülmüştür. Eğimin % 10 ve koşu hızının 2,7 km/sa ile başladığı ve her üç dakikalık etaplarda, eğimin % 2 ve koşu hızının da yaklaşık 1-1,5 km/sa arttığı Bruce koşu bandı test protokolü ile kişilerin maksimal aerobik güçleri ve maksimal kalp atım hızları değerlendirilmiştir.

Bruce test protokolünden elde edilen sonuçlara göre her katılımcının  $VO_{2maks}$ 'ının % 70'ine denk gelen kalp atım hızının + ve - 5'iyle elde edilen aralık bir saatlik koşularda şiddet olarak belirlenmiştir. Koşular sırasında bir araştırmacı sürekli hazır bulunmuş ve deneklerin KAH'larını monitörden takip edip, koşu bandı hızını ayarlayarak kişilerin istenilen KAH aralığında aktivite yapmasını sağlamıştır.

Tüm bu ölçümler Performans Laboratuvarı'nda alınmış ve ölçümler sırasında oda sıcaklığı iklimlendirici ile 20-22 C° ve nem oranı da % 60'ın altında tutulmuştur.

Katılımcıların dinlenik KAH'ları ve HRV ölçümleri kişiler üzerlerinde yalnızca şort varken, sedye üzerinde sırt üstü yatar pozisyondayken alınmıştır. Ölçüm sırasında kullanılan toplam 7 elektrotun 3'ü göğse yerleştirilen Wilson ve diğer 4'ü ise el ve ayak bileklerine yerleştirilen Limb elektrotlarıdır. Elektrotlar jel sürülerek vücuda sabitlenmiştir. Her bir EKG ve HRV kaydı 5 dakika sürmüştür. Bu ölçümler sırasında kişilerin üşümesini engellemek için oda sıcaklığının yüksek olmasına dikkat edilmiş ve deneklerde ölçüm sırasında konuşmalarını ve hareket etmemeleri konularında uyarılmıştır. Bu ölçüm her kişi için toplamda dört kez farklı

zamanlarda alınmıştır. İlk ölçüm bir saatlik koşu öncesinde, ikinci ölçüm koşudan 30 dk sonrasında, üçüncü Ölçüm koşudan 24 saat sonrasında ve dördüncü ölçüm ise koşudan 48 saat sonrasında alınmıştır. Kişi ilk ölçümden hemen sonra koşuya başlamış ve koşu sonrasında özel bir beslenme, aktivite veya toparlanma programı uygulamamıştır.

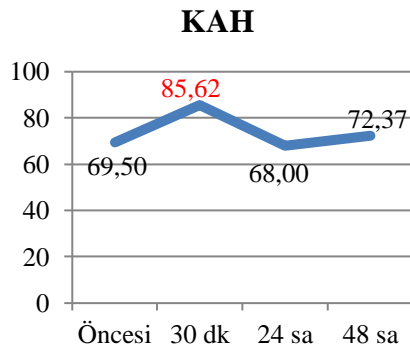
Verilerin analizi için SPSS (sürüm 20) istatistik programı kullanılmıştır. Parametrik veya non-parametrik testlerden hangisinin kullanılmasına gerektiğine karar vermek için verilerin dağılımı incelenmiş, kişi sayısı 50'den az olduğu için normallik, Shapiro Wilk ile test edilmiştir. Farklı zamanlarda alınan ölçümlerin ortalama karşılaştırması, normal dağılım gösteren parametrelerde Repeated Measures ANOVA ve normal dağılıma sahip olmayan parametrelerde de Friedman testi ile değerlendirilmiş farkın hangi gruptan kaynaklandığının anlaşılması için de Wilcoxon testi kullanılmıştır. İstatistiksel analizlerin tamamında alfa değeri 0,05 olarak kabul edilmiştir.

## Bulgular

**Tablo 1.** Kalp atım hızındaki değişiklikler

	Aktivite öncesi	30 dakika sonrası	24 saat sonrası	48 saat sonrası
<b>KAH</b>	69,50 ±7,48	85,62 ±6,73	68,00 ±9,77	72,37 ±7,34

Tablo 1’de, katılımcılardan dört farklı zamanda elde edilen dinlenik KAH sonuçları bulunmaktadır. Aktiviteden 30 dk sonra alınan değer aktivite öncesine göre ( $p<0,11$ ), 24 saat sonrasına göre ( $p<0,005$ ) ve 48 saat sonrasına göre ( $p<0,38$ ) anlamlı olarak yüksek çıkmıştır.



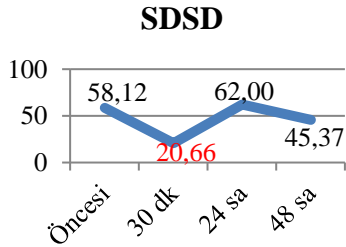
**Şekil 1.** Değişen KAH grafiği.

**Tablo 2.** HRV’ye ait zaman alan parametreleri

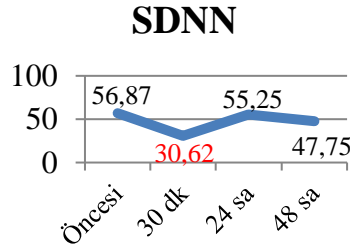
	Aktivite öncesi	30 dakika sonrası	24 saat sonrası	48 saat sonrası
<b>SDNN</b>	56,87 ±33,03	30,62 ±10,84	55,25 ±20,83	47,75 ±10,37
<b>SDSD</b>	58,12 ±36,82	20,66 ±11,12	62,00 ±31,9	45,37 ±16,03
<b>RMSSD</b>	45,62 ±29,65	16,25 ±8,31	48,87 ±25,14	35,75 ±12,17

Tablo 2’de HRV’nin zaman alan parametrelerinin dört farklı zamana ait değişimleri görülmektedir.

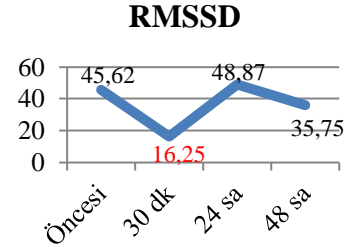
SDNN incelendiğinde koşudan 30 dk sonra alınan ölçümün öncesine göre ( $p<0,012$ ), 24 saat sonrasına göre ( $p<0,017$ ) ve 48 saat sonrasına göre ( $p<0,021$ ) anlamlı olarak düşük çıktığı görülmüştür. SDDSD incelendiğinde koşudan 30 dk sonra alınan ölçümün 24 saat sonrasına göre ( $p<0,016$ ) ve 48 saat sonrasına göre ( $p<0,017$ ) anlamlı olarak düşük çıktığı görülmüştür. RMSSD ise koşudan 30 dk sonra, 24 saat sonraki ölçüme göre ( $p<0,018$ ) ve 48 saat sonrasına göre ( $p<0,015$ ) anlamlı olarak düşük çıkmıştır.



Şekil 2. SDDSD grafiği.



Şekil 3. SDNN grafiği.



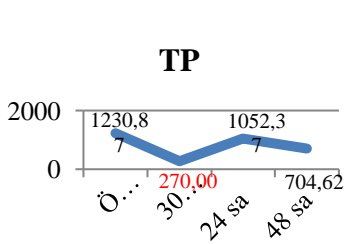
Şekil 4. RMSSD grafiği.

Tablo 3, HRV'nin frekans alan parametrelerinde dört farklı zamana ait değişimleri göstermektedir.

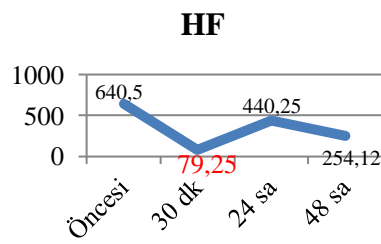
Tablo 3. HRV'ye ait frekans alan parametreleri

	Aktivite öncesi	30 dakika sonrası	24 saat sonrası	48 saat sonrası
<b>TP</b>	1230,87 ±1147,20	270,00± 170,97	1052,37 ±558,04	704,62 ±258,94
<b>HF</b>	640,5 ±819,82	79,25 ±62,38	440,25 ±258,83	254,12 ±115,73
<b>HFnu</b>	45,87 ±18,14	33,12 ±12,47	46,50 ±7,76	40,37 ±14,47
<b>LF</b>	498,62 ±308,22	147,87 ±110,31	505,25 ±263,13	368,37 ±156,08
<b>LFnu</b>	53,12 ±18,14	65,87 ±12,47	52,62 ±7,72	58,62 ±14,47
<b>LF/HF</b>	1,55 ±1,22	2,37 ±1,31	1,17 ±0,36	1,72 ±0,96
<b>VLF</b>	91,62 ±68,45	43,00 ±19,7	107,12 ±59,24	82,00 ±41,08

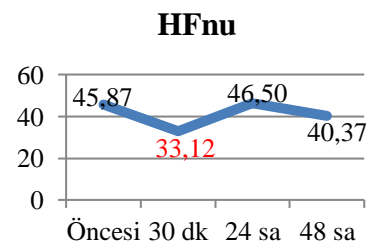
TP'nin 30 dk sonraki ölçümü aktivite öncesine göre ( $p<0,012$ ), 24 saat sonrasına göre ( $p<0,017$ ) ve 48 saat sonrasına göre ( $p<0,012$ ) anlamlı olarak düşük çıkmıştır. HF'nin 30 dk sonraki ölçümü aktivite öncesine göre ( $p<0,012$ ), 24 saat sonrasına göre ( $p<0,017$ ) ve 48 saat sonrasına göre ( $p<0,012$ ) anlamlı olarak düşük çıkmıştır. HFnu için; koşudan 30 dk sonraki değerlerin egzersiz öncesine göre anlamlı olarak düşük çıktığı ( $p<0,047$ ) görülmüştür.



Şekil 5. TP grafiği.

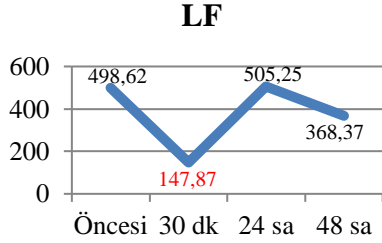


Şekil 6. HF grafiği.

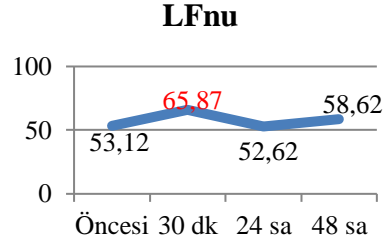


Şekil 7. Değişen HFnu grafiği.

LF, egzersizden 30 dk sonraki ölçümde, 24 saat sonraki ölçüme göre anlamlı olarak düşük çıkmıştır ( $p<0,028$ ). LFnu ise egzersizden 30 dk sonraki ölçümde, koşu öncesine göre anlamlı olarak yüksek kaydedilmiştir ( $p<0,047$ ).

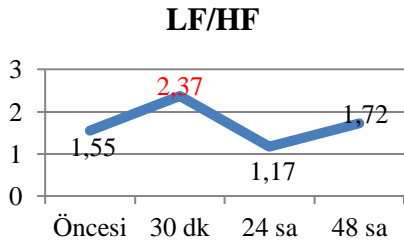


Şekil 8. Değişen LF grafiği.

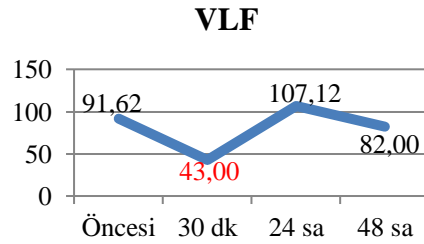


Şekil 9. LFnu grafiği.

LF/HF incelendiğinde koşudan 30 dk sonra alınan ölçümün, koşu öncesine ( $p<0,046$ ) ve 24 saat sonrasına göre ( $p<0,038$ ) anlamlı olarak düşük çıktığı görülmüştür. VLF'de görülen anlamlı ortalama farkı koşudan 30 dk sonrası ile 24 saat sonrasında ortaya çıkmıştır ( $p<0,017$ ).



Şekil 10. LF/HF oranı grafiği.



Şekil 11. VLF grafiği.

## Tartışma

Bulgular bölümü incelendiğinde KAH ve HRV parametrelerinde istatistiksel olarak anlamlı değişiklikler gözlenmiştir.

Bu değişikliklerden KAH'ın, koşudan 30 dk sonra yüksek çıkması yapılan aktivitenin kalpte oluşturduğu yorgunluğu göstermektedir. KAH'la birlikte HRV parametrelerinden, sempato-vagal denge hakkında bilgi veren LF/HF oranının da koşu sonrasında yüksek olması sempatik etkinin baskınlığını göstermektedir. LF/HF oranı sağlıklı yetişkinlerde 1-2 arasında olmalıdır ve bu değer gün içerisinde sürekli değişmektedir. Genellikle LF gündüzleri, HF ise geceleri yüksek çıkmaktadır (Akgül ve ark., 2007).

Sempatik ve parasempatik süreçlerden etkilenen bir diğer parametre olan LF'de, parasempatik aktiviteyi gösteren HF'de ve ULF+VLF+LF+HF'nin bileşeni olan TP'de gözlenen düşüşler de, koşudan 30 dk sonra sempatik aktivitenin arttığını göstermektedir.



Zaman alan parametrelerinin tamamında (SDNN, SDDSD, RMSSD) koşudan 30 dk sonra devam eden azalmalar da kalp üzerinde vagal etkinin baskınlığının azalmasının sonucudur ve frekans-alan ölçümleriyle uyum göstermektedir.

Literatür incelendiğinde farklı sürelerde ve şiddetlerde yapılan yüklenmeler sonrasında da benzer sonuçlara ulaşılmaktadır. Bir araştırmada 50 m sprint yüzme sonrasında genç erkeklerde SDNN, SDDSD, RMSSD, HF, LF, TP değerlerinde azalma görülürken KAH ve LF/HF oranlarında artış gözlenmiştir (Aras ve ark., 2012). Dolayısıyla aynı sempatik etkinin kısa süreli ve yüksek şiddetli aktivitelerden sonra da görüldüğü söylenebilir.

Benzer bir çalışmada % 70 şiddette 1 saat yapılan koşu sonrasında CHO alımına bağlı toparlanma değişikliklerini HRV üzerinden incelemek için yapılmıştır. Bu çalışmada aktivite sonrasında kişilerin vücut ağırlıklarının kg'ı başına aldıkları 1 gr CHO'nun toparlanmaya etkisinin olmadığı, kişilerin aktiviteden 24 saat sonra başlangıç değerlerine ulaşıldığı gözlenmiştir (Aras ve Akça, 2013).

Literatürde düşük şiddetli ve kısa süreli aktivitelerden sonra HRV'de başlangıç seviyesine dönüş için birkaç dakikaya ihtiyaç duyulduğu (Sandercock ve Brodie., 2006), yüksek şiddetli yüklenmelerden sonra ise toparlanma süresinin uzadığı savunulmaktadır (Borresan ve Lampert, 2008). Bir araştırmada kişilere iki farklı zamanda dörtlü ve tekli Wingate testi yaptırılarak HRV'deki değişiklikler izlenmiştir. Araştırma sonucunda dörtlü Wingate testinden sonra HRV'de daha fazla düşüş görülmüş aynı zamanda her iki uygulamadan 2 saat sonra HRV'de başlangıç düzeyine ulaşamadığı kaydedilmiştir (Millar ve ark., 2009).

Bu araştırmadan çıkarılabilecek önemli başka bir sonuç ise; yoğun fiziksel aktivitenin kalp üzerindeki etkilerinin 24 saat içerisinde normale döndüğü, dolayısıyla kalbin bu süre içerisinde toparlandığıdır. Hem zaman hem de frekans-alan parametrelerinin neredeyse tamamında 30 dk sonra sempatik etkinin artışıyla devam eden değişiklikler, 24 saat sonrasında koşu öncesi değerlere ulaşabilmiştir.

Literatürde toparlanma döneminde yapılan aktivitenin şeklinin ve cinsiyetin de HRV'yi etkilediği görülmektedir. Bu nedenle konuyla ilgili farklı gruplarda daha fazla katılımcı ile çalışma yapılması HRV'nin daha doğru yorumlanmasını sağlayabilir.

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## Cardiovascular Responses of University Students to a Wellness Curriculum

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### **Abstract**

A wellness curriculum involves the physical, intellectual, emotional, social, occupational and spiritual dimensions. We sought to determine the impact of a wellness class on cardiovascular fitness outcomes. We hypothesized that this class would have a positive impact on cardiovascular fitness as assessed by a pre and posttest 1.5 mile walk, run along with target heart rate telemetry and Borg RPE assessment. After obtaining informed consent, and participation in a 3-week preparation training period, we recorded pretest times on a 1.5 mile run monitoring heart rate and Borg RPE. Following 11 weeks of training and participation in the curriculum, the students repeated the pretest. The Spearman Rank Order correlation was .785. The difference between the pre and posttest run were not significant ( $r = .85$ ,  $t = .981$   $p > .342$ ) with an average improvement of only 40 seconds. Pretest and posttest heart rates and Borg RPE were not significantly different. We found that three subjects regressed dramatically (< 5 minutes) in their 1.5 mile posttest impacting the measurement error substantially. We also concluded based on the Spearman Rho test that students performed at the same relative levels on both tests. Regarding the three subjects who dramatically underperformed on the posttest we looked at other studies from our student population and we found similar results regarding a small number of under performers on the post test. This lack of improvement could have been because three students may have adopted the wellness lifestyle rejection identity, which should be studied in future projects.

## **Comparative Effect of Resistance and Aerobic Training Programs on Selected Kinanthropometric Variables of Students in a College of Education In Lagaos State, Nigeria**

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<sup>b</sup> *Ekiti State University*

<sup>c</sup> *Adeniran Ogunsanya College Of Eduaction*

### **Abstract**

This study was carried out to determine the comparative effect of Resistance and Aerobic Training programs on selected kinanthropometric variables of students in a college of Education in Lagos State. The study adopted pretest, posttest, control group experiment design. Simple random sampling technique was used to select 40 active and apparently healthy volunteer students of Adeniran Ogunsanya College of Education. The participants had a mean age of 26.5 years and standard deviation of 1.05 years. They were randomly assigned to two experimental (resistance and aerobic training) groups and one control group. Four standardized instruments were used, namely sphygmomanometer ( $r=0.97$ ), sliding calipers  $r=0.70$ , weighing scale  $r=0.96$  and skinfold calipers  $r=0.70$ , weighing scale  $r=0.96$  and skin fold calipers  $r=0.99$ . Four hypotheses were tested at the 0.05 level of significance. Data were analyzed using analysis of covariance. Results showed there were significant differences in resting systolic blood pressure ( $f(2,37)= 5.90$ ,  $p<0.05$ ), diastolic blood pressure ( $f(2,37)=3.50$ ,  $p<0.05$ ) and percent body fat ( $f(2, 37)=1.72$   $p < 0.05$  only in female college students. This shows that female college students had more tendencies for physiological adaptation and improvement with aerobic training on those variables than male college students did. Administration of resistance and aerobic training programs were effective in fostering physiological performance and health status.

## Effects of Plyometric Training on Selected Motor Performance Variables of College Track and Field Athletes

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### **Abstract**

Plyometrics –is any exercise in which the muscles are repeatedly and rapidly stretched and then contracted. Plyometrics exercise can be employed to develop power and explosive responsiveness, using the Stretch-Shorten Cycle (SSC). Track and Field events are sports of explosive movements that require strength, speed, muscular endurance, power, agility, balance, flexibility and reaction time. Plyometric exercises involve hops, bounds, and depth jumping for the lower extremities and the use of medicine balls and other types of weighted equipment for the upper extremities. Randomized pretest-posttest experimental research design was used for this study using purposive sampling technique to select 60 participants (20 sprinters, and 10 high jumpers form the experimental group and 20 sprinters, and 10 high jumpers in the control group). The experimental group was exposed to an eight-week, plyometrics training. Data were analyzed using descriptive statistics of mean, range, and standard deviation for demographic data while inferential statistics of analysis of covariance (ANCOVA) was used to test the effects of the treatment at 0.05 level of significance. The results revealed that all the variables of the study showed significant improvements through plyometric training. The mean score for experimental sprinters was  $5.04 \pm 0.45$  and  $5.84 \pm 0.58$  in the experimental jumpers. Based on the findings of this study, it was recommended that athletic coaches should be encouraged to include plyometrics in their training sessions and that it should form a major focus of their training regimes.

## Issues Related to the 20-meter Shuttle Run during Physical Fitness Tests

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### **Abstract**

The present study attempted to show evidence that questions the validity of physical fitness tests (PFTs). In many countries PFTs are used to help determine one's physical abilities and to promote better quality of life for citizens. However, it seems that the 20-meter shuttle run test, one of the PFTs administered to estimate systemic endurance of basic physical abilities, is more related to motivation or will power than the other tests. Eighty-five participants from a university participated in a two-round 20-meter shuttle run test (pre and advanced test). The pre-test was performed using the basic method described by a CD's manual on a random group of males and females (10–15 subjects). An advanced test was performed under a wide variety of smaller, non-random grouped conditions, such as by sex, similar running ability (4–6 subjects), similar pre test performance results, similar age and average performance record on the 2013 National Survey of Physical Fitness, etc. The advanced test scores were significantly higher than the pre-test scores, indicating certain effects by one and/or some of these conditions. It is likely that these specific conditions should be taken into account in developing guidelines for physical fitness tests that seek to identify raw physical fitness.



## **Effect of Calisthenics Exercises on Percent Body Fat of Undergraduate Students at the University of Lagos, Nigeria**

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### **Abstract**

The purpose of the study was to determine the effect of calisthenic exercises on percent body fat of undergraduate students. The participants were 37 male and female students of the University of Lagos, Akoka, Nigeria. Their age ranged from 16 to 29 years. Simple random sampling technique was used to select the participants. The pre-test and post-test research design was employed. A 12-week intervention program, consisting of calisthenics exercises lasting 30 minutes, performed three times a week, was employed. One hypothesis was tested at 0.05 level of significance. Data were collected on body weight, skinfold and body girth of participants using bathroom weighing scale, skinfold calipers and anthropometric tape. Mean, standard deviation and t-test were used to analyze the data. There was no significant difference in the percent body fat of the participants,  $t = -1.178$  ( $t_c = 2.04$ ,  $df = 36$   $P > 0.05$ ). Increase in means were observed for males' percent body fat from 7.78 to 8.83 and that of females from 18.90 to 18.97. The increase was due to the inability of the participants to loose fat, their fat level has not reached the threshold of a healthy state fat level, thereby promoting an increase in body fat required for physiological functions. It is recommended that undergraduate students should take part in moderate intensity calisthenics exercises, two to three times a week, so as to increase their fitness level.

## The Effect of Hydrotherapy on Recovery of Soccer Players

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### **Abstract**

This study was conducted with the aim of investigating the effect of hydrotherapeutic implementation on lactate levels of active soccer players after exercise; and determining the most effective method in recovery by using 3 different methods in order to remove the fatigue created by shuttle run test and to provide recovery in a shorter time. 10 Amateur soccer players were voluntarily participated in the study. During the study, the shuttle run test was applied to the subjects on 3 alternate days to create fatigue on the subjects. The subjects made active recovery (jogging), hydrotherapeutic passive recovery, and hydrotherapeutic active recovery in the 1., 2., and 3. day, respectively. The lactate levels were determined using the blood samples obtained shortly after the exercise and in the 5., 10., 15. and 30. minute of the implementation. In the pool where hydrotherapy was applied, the water temperature was 28-32°C and the pool was grouped as 3 different implementation, namely, A (Hall Active), B (Pool Passive), and C (Pool Active). ANOVA test was applied to determine the significant difference between the groups and Tukey test was applied to determine between which groups there is a significant difference. To determine in-group differences, ANOVA test was used and to determine the measure causing difference Benferroni test was used. The significance level of the analysis is 0,05. According to the results of the study, the lactate level of Group C is significantly less than Group A 5 minutes after the exercise, and it is determined that the lactate level of group A is significantly less than Group B 30 minutes after the exercise. According to in-group differences, there is no significant difference between 15. and 30. minutes after the exercise in the Lactate levels of Group A. For the other measurement times, it is determined that there are significant differences at the  $P < 0,05$  level of significance. It is also determined that while there is no significant difference between the measures at 10., 15., and 30. minute after the exercise, there are significant differences between the other measurement times at  $P < 0,05$  level. For the Group C, it is determined that while there is no significant difference between the measure before the exercise and the measure 30 minutes after the exercise, there are significant differences between the other measurement times at  $P < 0,05$  level. In conclusion, it can be said that active recovery in and out of water is more effective than passive recovery in terms of lactate levels.

**Keywords:** exercise, hydrotherapy, lactate, recovery, soccer

## GİRİŞ VE AMAÇ

Spor aktivitelerinin şiddet ve süreleri göz önüne alındığında, her aktivite için hangi enerji sisteminin ne oranda kullanılabileceği yaklaşık olarak tahmin edilebilmektedir. Spor aktivitelerinde performans değerlendirilirken çoğu kez enerji kaynaklarının ve sistemlerinin ne kadar hızla tekrar eski durumuna döndüğüne de bakılmalıdır(1). Ayrıca Yüklenme ve uyum sürecinin yönlendirilmesi, yalnız yüklenmenin öğelerine bağlı olmayıp dinlenme sonucuna da bağlıdır. Antrenmanın etkisi ve buna bağlı olarak uyum süreci büyük ölçüde uygulanmış olan yüklenmeye göre düzenlenen amaca yönelik dinlenme safhalarına bağlıdır (2).

Egzersiz başında enerji gereksinimi daha çok kas içinde hazır bulunan ATP lerden sağlanmaktadır. Daha sonra egzersizin şiddet ve süresine göre üç enerji sistemi devreye girmektedir. Egzersiz bittikten sonrada organizmada enerji tüketimi bir süre daha hızla devam etmektedir (3). Egzersiz sonrasında organik faaliyetler istirahat düzeyine hemen dönmekte ve toparlanma periyodunda da oksijen tüketimi yüksek miktarda devam etmektedir(4). Ayrıca toparlanma süresinin uzunluğu da yapılan egzersizin tipi, şiddeti, süresi ve yoğunluğuna göre değişmektedir(5).

Egzersiz sonrası toparlanmanın amacı, tüm vücudu ve kasları dinlendirmek, egzersiz öncesi şartlara yeniden döndürmektir(6). Diğer bir deyişle egzersiz sonrası dinlenmenin amacı kasların ve vücudun bütünüyle antrenman öncesi konuma dönmesini sağlamaktır(7,8).

Dinlenme sırasında vücudun kendini toparlayabilmesi, harcanan enerjinin yenilenmesi ve antrenman sırasında biriken laktik asitin giderilmesine bağlıdır. Her ikisinde de ATP enerjisine gereksinim vardır. Laktik asitin kan ve kasta birikmesine yol açan ağır antrenmanlardan sonra tam anlamı ile dinlenebilmek için antrenman esnasında kanda ve kasta biriken bu laktik asitin tamamen uzaklaştırılması gerekir. Antrenman esnasında ve sonrasında kasta ve kanda biriken laktik asitin dinlenirken atıldığını ve bunun da aktif toparlanma yapıldığında daha kolay olduğu bilinmektedir(1,8).

Araştırmanın amacı da spor biliminin, antrenörlerin ve sporcuların üzerinde önemle durduğu müsabakalar ve antrenmanlar sonrası veya arası hızlı toparlanmaya ve yorgunluğu geciktirmeye alternatif yöntemler geliştirilmeye çalışılmasıdır.

## MATERYAL VE YÖNTEM

Çalışmaya yaş ortalamaları 20.25 yıl, boy ortalamaları 176 cm, vücut ağırlığı ortalamaları 71,5 kg olan Konya İhsaniye Gençlerbirliği Amatör futbol kulübünde futbol oynayan 10 tane futbolcu gönüllü olarak katıldı. Denekler doktor kontrolünden geçtikten sonra belirtilen ölçümler yapıldı.

Araştırmada sporcular üç farklı günde gün aşırı shuttle run (20 m mekik testi) testi ne tabi tutulmuşlardır. 1. gün test sonrası deneklere aktif dinlenme (Jogging), (30 dk) yaptırılarak toparlanma düzeyleri belirlendi. 2. gün aynı test sonrası normal sıcaklıktaki (28-32 °C) suda pasif dinlenme yapıldı (30 dk) 3. gün test sonrası deneklere aynı suda (28-32 °C) yürüyüş egzersizi ile aktif dinlenme (30 dk) yaptırılarak toparlanma düzeyleri belirlendi.

### Laktat Ölçümleri

Sporcuların kan laktat değerleri, parmak ucundan Lactate scout Analyzer cihazı (Made in Germany) ile ölçülmüştür. Egzersiz testinden hemen sonra ve toparlanma uygulamalarının 5.,

10., 15. ve 30. dakikalarında sporcuların parmak ucundan kan alımı yapılmış, alınan kan 10 saniye içerisinde lactate scout cihazı ile analiz edilmiştir. Elde edilen değerler mmol. l<sup>-1</sup> cinsinden kaydedildi.

### İstatistiksel Analiz

Elde edilen sonuçların istatistikî analizlerin yapılmasında SPSS paket program kullanıldı. Tüm deneklerin ölçülen parametreleri ortalama değerleri ve standart hataları hesaplandı. Gruplar arası farklılıkların karşılaştırılmasında ANOVA farklılığın hangi gruptan kaynaklandığını ortaya koymak için Tukey testi yapılmıştır. Gruplar içi farklılıkların karşılaştırılmasında tekrarlı ölçümlerde ANOVA testi, farklılığın hangi ölçümden kaynaklandığını ortaya koymak için benfer-roni testi yapılmıştır. Bu çalışmada hata düzeyi 0.05 olarak değerlendirilmiştir.

### BULGULAR

**Tablo 1.** Araştırmaya katılan deneklere ilişkin laktat değerlerinin gruplar bakımından çoklu karşılaştırılması (N:10)

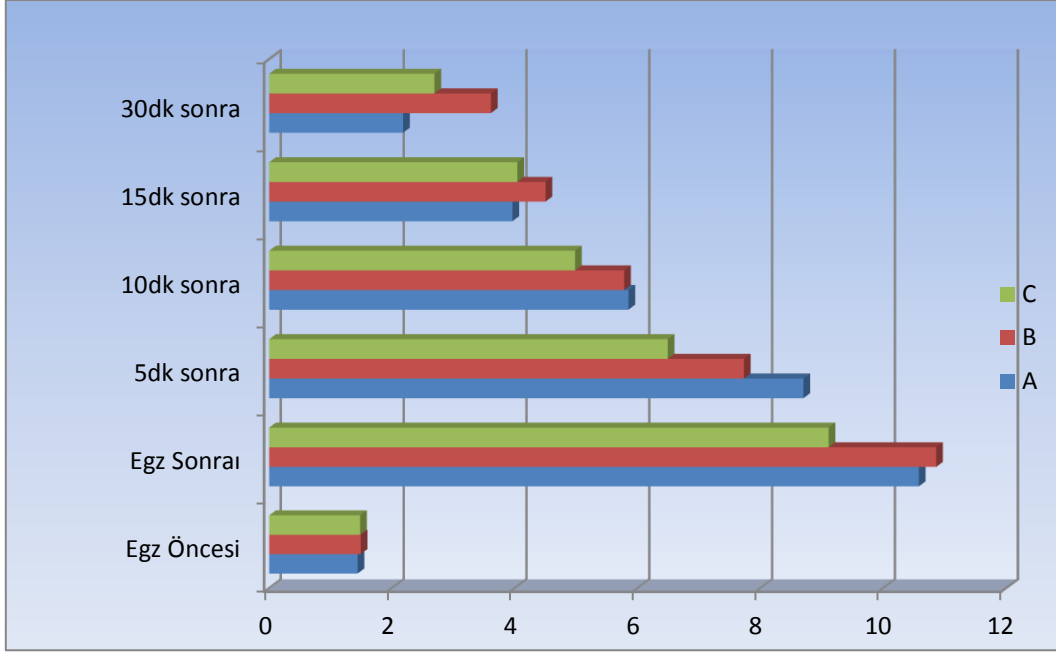
Değişkenler	Guruplar	Mean± Stan sap	F	P	Fark
Egzersiz öncesi	A	1,41±0,43	0,070	0,932	
	B	1,49±0,38			
	C	1,48±0,47			
Egzersiz sonrası	A	10,58±1,62	2,150	0,141	
	B	10,86±2,15			
	C	9,11±1,61			
5 dakika sonra	A	8,70±1,35	6,781	0,005*	A-C
	B	7,73±1,04			
	C	6,49±1,20			
10 dakika sonra	A	5,85±1,99	0,846	0,443	
	B	5,78±1,08			
	C	4,98±1,23			
15 dakika sonra	A	3,96±1,63	0,444	0,647	
	B	4,50±0,54			
	C	4,04±1,28			
30 dakika sonra	A	2,18±0,89	5,051	0,016*	A-B
	B	3,61±0,72			
	C	2,69±1,10			

\*P<0,05

A: Salon Aktif

B: Havuz Pasif

C: Havuz Aktif



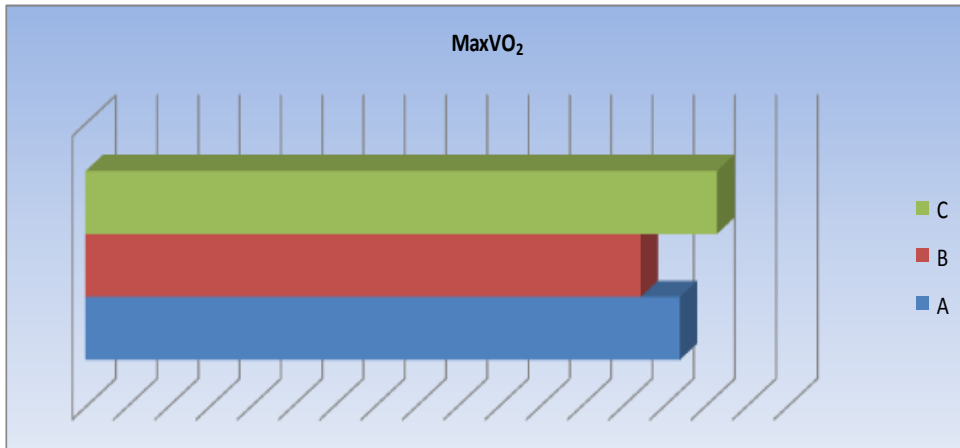
A: Salon Aktif B: Havuz Pasif C: Havuz Aktif

**Grafik 1.** Araştırmaya katılan deneklere ilişkin laktat değerlerinin gruplar arası karşılaştırılması

**Tablo 2.** Araştırmaya katılan deneklere ilişkin MaxVo<sub>2</sub> değerlerinin gruplar bakımından çoklu karşılaştırılması (N:10)

Değişkenler	Guruplar	Mean± Stan sap	F	P
MaxVo <sub>2</sub>	A	46,78±3,70	0,780	0,471
	B	45,06±2,98		
	C	47,06±3,66		

\*P<0,05 A: Salon Aktif B: Havuz Pasif C: Havuz Aktif



**Grafik 2.** Araştırmaya katılan deneklere ilişkin MaxVo<sub>2</sub> değerlerinin gruplar arası karşılaştırılması

**Tablo 3.** Araştırmaya katılan deneklere ilişkin laktat değerlerinin ölçümler bakımından karşılaştırılması

Guruplar	Pillai's Trace Değeri	F	P
A	0,998	255,10	0,000
B	0,993	81,111	0,002
C	0,979	27,338	0,010

\*P<0,05

A: Salon Aktif

B: Havuz Pasif

C: Havuz Aktif

**Tablo 4.** Salon aktif egzersiz gurubuna ilişkin laktat değerlerinin ölçümler bakımından çoklu karşılaştırılması (N:10)

	(I) Ölçümler	(J) Ölçümler	Ortalama fark (I-J)	Std. Hata	P
SALON AKTİF (A)	Egzersiz öncesi	Egzersiz sonrası	-9,162	0,543	0,000*
		Egz 5 dakika sonra	-7,288	0,513	0,000*
		Egz 10 dakika sonra	-4,438	0,783	0,011*
		Egz 15 dakika sonra	-2,550	0,642	0,081
		Egz 30 dakika sonra	-,763	0,335	0,853
	Egzersiz sonrası	Egzersiz öncesi	9,162	0,543	0,000*
		Egz 5 dakika sonra	1,875	0,311	0,008*
		Egz 10 dakika sonra	4,725	0,658	0,003*
		Egz 15 dakika sonra	6,612	0,469	0,000*
		Egz 30 dakika sonra	8,400	0,440	0,000*
	5 dakika sonra	Egzersiz öncesi	7,288	0,513	0,000*
		Egzersiz sonrası	-1,875	0,311	0,008*
		Egz 10 dakika sonra	2,850	0,466	0,007*
		Egz 15 dakika sonra	4,737	0,281	0,000*
		Egz 30 dakika sonra	6,525	0,295	0,000*
	10 dakika sonra	Egzersiz öncesi	4,438	0,783	0,011*
		Egzersiz sonrası	-4,725	0,658	0,003*
		Egz 5 dakika sonra	-2,850	0,466	0,007*
		Egz 15 dakika sonra	1,888	0,279	0,004*
		Egz 30 dakika sonra	3,675	0,686	0,016*
15 dakika sonra	Egzersiz öncesi	2,550	0,642	0,081	
	Egzersiz sonrası	-6,612	0,469	0,000*	
	Egz 5 dakika sonra	-4,737	0,281	0,000*	
	Egz 10 dakika sonra	-1,888	0,279	0,004*	
	Egz 30 dakika sonra	1,788	0,495	0,130	

\*P<0,05

A: Salon Aktif

B: Havuz Pasif

C: Havuz Aktif

**Tablo 5.** Havuz pasif egzersiz gurubuna ilişkin laktat değerlerinin ölçümler bakımından çoklu karşılaştırılması (N:10)

	(I) Ölçümler	(J) Ölçümler	Ortalamalar farkı (I-J)	Std. Hata	P
<b>HAVUZ PASİF (B)</b>	Egzersiz öncesi	Egzersiz sonrası	-9,375	0,684	0,000*
		Egz 5 dakika sonra	-6,238	0,407	0,000*
		Egz 10 dakika sonra	-4,288	0,418	0,000*
		Egz 15 dakika sonra	-3,012	0,168	0,000*
		Egz 30 dakika sonra	-2,125	0,172	0,000*
	Egzersiz sonrası	Egzersiz öncesi	9,375	0,684	0,000*
		Egz 5 dakika sonra	3,138	0,652	0,029*
		Egz 10 dakika sonra	5,088	0,756	0,004*
		Egz 15 dakika sonra	6,363	0,750	0,001*
		Egz 30 dakika sonra	7,250	0,654	0,000*
	5 dakika sonra	Egzersiz öncesi	6,238	0,407	0,000*
		Egzersiz sonrası	-3,138	0,652	0,029*
		Egz 10 dakika sonra	1,950	0,263	0,002*
		Egz 15 dakika sonra	3,225	0,361	0,001*
		Egz 30 dakika sonra	4,112	0,409	0,000*
	10 dakika sonra	Egzersiz öncesi	4,288	0,418	0,000*
		Egzersiz sonrası	-5,088	0,756	0,004*
		Egz 5 dakika sonra	-1,950	0,263	0,002*
		Egz 15 dakika sonra	1,275	0,324	0,084
		Egz 30 dakika sonra	2,162	0,475	0,040*
15 dakika sonra	Egzersiz öncesi	3,012	0,168	0,000*	
	Egzersiz sonrası	-6,363	0,750	0,001*	
	Egz 5 dakika sonra	-3,225	0,361	0,001*	
	Egz 10 dakika sonra	-1,275	0,324	0,084	
	Egz 30 dakika sonra	0,888	0,240	0,115	

\*P<0,05

A: Salon Aktif

B: Havuz Pasif

C: Havuz Aktif

**Tablo 6.** Havuz aktif egzersiz gurubuna ilişkin laktat deęerlerinin ölçümler bakımından çoklu karşılaştırılması (N:10)

	(I) Ölçümler	(J) Ölçümler	Ortalamalar farkı (I-J)	Std. Hata	P
<b>HAVUZ AKTİF (C)</b>	Egzersiz öncesi	Egzersiz sonrası	-7,637	0,604	0,000*
		Egz 5 dakika sonra	-5,013	0,482	0,000*
		Egz 10 dakika sonra	-3,500	0,466	0,002*
		Egz 15 dakika sonra	-2,563	0,483	0,017*
		Egz 30 dakika sonra	-1,213	0,395	0,272
	Egzersiz sonrası	Egzersiz öncesi	7,637	0,604	0,000*
		Egz 5 dakika sonra	2,625	0,446	0,009*
		Egz 10 dakika sonra	4,137	0,586	0,003*
		Egz 15 dakika sonra	5,075	0,599	0,001*
		Egz 30 dakika sonra	6,425	0,634	0,000*
	5 dakika sonra	Egzersiz öncesi	5,013	0,482	0,000*
		Egzersiz sonrası	-2,625	0,446	0,009*
		Egz 10 dakika sonra	1,513	0,303	0,024*
		Egz 15 dakika sonra	2,450	0,295	0,001*
		Egz 30 dakika sonra	3,800	0,433	0,001*
	10 dakika sonra	Egzersiz öncesi	3,500	0,466	0,002*
		Egzersiz sonrası	-4,137	0,586	0,003*
		Egz 5 dakika sonra	-1,513	0,303	0,024*
		Egz 15 dakika sonra	0,937	0,089	0,000*
		Egz 30 dakika sonra	2,287	0,209	0,000*
15 dakika sonra	Egzersiz öncesi	2,563	0,483	0,017*	
	Egzersiz sonrası	-5,075	0,599	0,001*	
	Egz 5 dakika sonra	-2,450	0,295	0,001*	
	Egz 10 dakika sonra	-0,937	0,089	0,000*	
	Egz 30 dakika sonra	1,350	0,229	0,009*	

\*P<0,05

A: Salon Aktif

B: Havuz Pasif

C: Havuz Aktif

## TARTIŞMA VE SONUÇ

Araştırma; aktif futbolcular üzerinde, hidroterapik uygulamanın egzersiz sonrası lactate düzeylerine etkisi amacı ile yapılmıştır. Çalışma ayrı günlerde A, B, C olarak gruplandırılıp, yapılan shuttle run testi sonrası aktif ve pasif toparlanma 30 dk tekrarlı ölçümler ile belirlen-



meye çalışıldı. A, B, C gruplarının (günlerinin) kendi içinde incelendiğinde egzersiz öncesi ve sonrası arasında her üç grupta da  $P<0,05$  düzeyinde önemli farklılık görüldü. Shuttle run testi çok aşamalı bir test olup yorgunluk ve bitkinlik oluşturmak (9) amacı ile yapılmıştır. Glikolitik reaksiyonlar sonucu  $O_2$  nin yeterli düzeyde sağlanamaması lactate ve  $H^+$  iyonlarının birikmesi metabolik yorgunluğa sebep olmaktadır(10). Dolayısı ile egzersiz öncesi ve sonrası bu farklılığın olması beklenen bir sonuçtur. Her üç ayrı günde yapılan shuttle run testleri arasında önemli farklılık görülmemiştir.

Çalışmada tekrarlı ölçümler sonrası lactat düzeyleri bakımından grup içi farklılıklar incelendiğinde A grubu (salon aktif) egzersiz öncesi ile egzersizden 15 dk ve 30 dk sonrasında önemli farklılığın olmadığı, dolayısı ile salonda aktif dinlenmenin egzersizden 15 dk. sonra lactate düzeylerinin normal aralığa yaklaştığı görülmektedir. B grubu incelendiğinde havuzda pasif toparlanma süresince bütün ölçüm zamanlamaları arasında  $P<0,05$  düzeyinde önemli farklılığın olduğu görülmektedir. Benzer olarak yapılan bir çalışmada % 40 max  $VO_2$  şiddetinde bisiklet egzersizi sonrası aktif ve pasif dinlenme değerlendirilmiş egzersizden 20 dk sonra aktif dinlenmenin laktatın uzaklaştırılmasında daha etkili olduğu bildirilmiştir(10). C grubunun grup içi tekrarlı ölçümleri değerlendirildiğinde ise Egzersiz öncesi ve 30 dk sonrası lactate düzeylerinin benzer olduğu, diğer zamanlamalar arasında ( $P<0,05$ ) önemli bir farklılığın olduğu görülmüştür. Grup içi farklılıklar değerlendirildiğinde yapılan submaximal düzeydeki bitkinlik egzersiz testi sonrası lactate düzeylerindeki artış literatürlerde de belirtildiği üzere beklen bir artıştır.

Araştırmada üç farklı günde yapılan test sonrası tekrarlı ölçümlerin gruplar baz alınarak değerlendirildiğinde egzersizden 5 dk sonra C (Havuz aktif) grubunun lactate düzeyi A (Salon Aktif) grubundan önemli ( $P<0,05$ ) düzeyde düşük olduğu, egzersizden 30 dk sonra A (Salon Aktif) grubunun lactate düzeyi B (Havuz pasif) grubundan ( $P<0,05$ ) düşük olduğu görülmektedir. Diğer zamanlamalar arasında ki farkın ise önemli olmadığı görülmektedir. Gruplar bakımından tablo 1 genel olarak incelendiğinde ise istatistiksel manada farklılığın olmadığı zamanlamalarda gerek salon aktif, gerekse havuz aktif lactate düzeylerinin havuz pasif düzeylerinden daha düşük olduğu görülmüştür. Dolayısı ile hidroterapik veya hidroterapik olmayan aktif dinlenmelerin pasif dinlenmeye oranla daha avantajlı olduğunu söyleyebiliriz.

Benzer olarak; Sanders, profesyonel hokeyciler üzerinde yaptığı araştırmada, sporculara uyguladığı wingate testi sonrası toparlanma hızlarını ölçmek amacı ile aynı testi, farklı günlerde uygulamış ve her farklı günde farklı toparlanma metodlarını uygulayarak hangisinin daha etkili olduğunu öğrenmeye çalışmıştır. Toparlanma yöntemleri olarak, Aktif, pasif dinlenme ve contrast (sıcak-soğuk) terapi uygulamıştır. Sonuç olarak ise, aktif dinlenme ve contrast terapinin, pasif dinlenmeye oranla önemli ölçüde daha hızlı bir toparlanma gerçekleştirdiğini ifade etmiştir(11). Benzer şekilde Kuvvet, pliometric, sprint antrenmanları sonrası, 10-20 dakika Normal ısıdaki suya girme terapisinin ağrı hissini azalttığını, toparlanma sonrası sinir-kas sisteminin fiziksel performans kapasitesini arttırdığını rapor edilmektedir(12).

Çalışmada hidroterapi normal su sıcaklığında ( $28^0-32^0C$ ) yapılmıştır, farklı olarak hidroterapik uygulamalarda Cryotherapy (soğuk), Contrast (sıcak-soğuk) yöntemleri de kullanılmaktadır. Cryotherapy'nin, kas ağrısı ve kas hasarlarının tedavisinde önemli rolü olduğu da bildirilmektedir. Contrast therapy ise vücudun soğuk-sıcak suya maruz kalmasından dolayı kan akımı ve dolaşımın arttığı laktik asit ve toksit maddelerin daha çabuk uzaklaştığı da bildirilmektedir(13). Rowsell ve arkadaşları ise Cryoterapinin kas ağrılarını azalttığı ve toparlanmayı hızlandırdığı fakat aynı çalışmanın  $34^0C$  de yapıldığında etkisiz olduğu da bildirilmiştir(14).

Sonuç olarak laktat düzeyleri bakımından suda ve su dışında yapılan aktif toparlanmanın pasif toparlanmadan daha etkili olduğu söylenebilir. Yapılan çalışmalarda her ne kadar karışık görüşler bildirilse de genel olarak normal ısıda ki hidroterapik uygulamanın toparlanma üzerinde özellikle pasif dinlenmeye oranla daha etkili olduğu söylenebilir. Bunun yanında suda dinlenmenin eğlenceli ve rahatlatıcı oluşu hidroterapik uygulamayı daha cazip hale getirmektedir.

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## Motion Analysis of the Stand Technique for 63 kilogram Women's Judo

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### Abstract

The motions of the stand techniques of 63 kilogram woman participants were analyzed by using “British Judo Open Championship” video data. This video data was disassembled into frame data called AVI, which is a file format developed by Microsoft Corp. The motions performed by participants were analyzed by using a software system implemented by us based on the “Open CV” which is an open source library developed by Intel Corp. When the opponents were thrown down, their downward velocities were statistically analyzed according to “Ippon”, “Waza-ari”, and “Yuko”. In addition to these, a new criteria of an opponent's downward posture, which means the position of the upper body in contact with the “Tatami” was introduced. It was classified into five numbered data according to the position of the body in contact with the “tatami” when thrown down. These numbered data were also statistically analyzed according to “Ippon”, “Waza-ari”, and “Yuko”. The mean value and standard deviation were calculated for the velocity and posture. Then, using mean velocity and standard deviation, mean posture numbered data and its standard deviation, Gauss curves were drawn as membership functions of fuzzy-logic for “Ippon”, “Waza-ari”, and “Yuko” respectively. If one Gauss curve represents “Ippon”, and another Gauss curve represents “Waza-ari,” the intersection area was dealt with as an area judged as either “Ippon” or “Waza-ari” according to the precept of fuzzy-logic. This is a case study of the motion analysis of Judo using downward velocity and posture examined from the video data.

## Motion Analysis of One Hundred Meter Dash

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### **Abstract**

The body motions performed during the 100 meter dash were analyzed bio-mechanically using 18 athletes. The start reaction time and the force for both legs was measured and analyzed. The apparatus used for these was a DTLDS by “Seiko Time System Inc.”. For gathering other data, commercially available digital cameras were used. They were located at five meter intervals up to 30 meters. The athlete’s stride, pitch, and velocity were calculated from zero to 30 meters every 5 meters. Toe angle variations from zero to five meters were visually examined. The angles between the thigh and the lower leg were calculated from zero to 30 meters. The condition of the athlete’s back, which is hunched over while accelerating, was visually examined. This video data was disassembled into frame data called AVI which is a file format developed by Microsoft Corp. The position of a part of the body was indicated manually on to the AVI pictures based on the “frame by frame playback” technique, then put into a computer. By repeating these, the positions of the body were traced according to the video frame rate. The compensation of pixel values to the real space size was performed using the distance of the batons located every five meters beforehand in the AVI picture. The motions performed by participants were analyzed by using a software system implemented by us based on the “Open CV” which is an open source library developed by Intel Corp.

## Evaluation of Aerobic and Anaerobic Capacities of Elite Soccer Players

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### **Abstract**

The purpose of this study was to evaluate the aerobic and anaerobic capacities of an immigration football club of Port Harcourt by playing positions. The quasi-experimental design was adopted and a sample size of 35 players was used. The instruments used were Cooper's Aerobic 12 minute – run/walk test for aerobic capacity and the National Conditioning Association's 300 yard run for anaerobic capacity. The student t-test and analysis of variance (ANOVA) were used to test the hypotheses. Where ANOVA was significant, the Scheffé multiple test was used to determine the significant means. Results showed significant difference by playing positions in favor of midfielders in aerobic capacity. There were no differences in anaerobic capacities. Results further showed that aerobic capacity decreased with age while anaerobic capacity was not affected by age. It was recommended that midfielders be trained more aerobically for more effective play.

## Investigation of The Relationship Between Anaerobic Performance and Jumping Performance in Young Athletes

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The purpose of this study was to investigate the relationship between anaerobic power/capacity and jumping performance in young apparently healthy athletes. 24 athletes who were students at sports high school participated in this study (n=13 males; n=11 females; age: 15.79±0.83 years; height: 166.78±9.77 cm; weight: 57.44±13.42 kg; BMI: 20.45±3.01 kg/m<sup>2</sup>; body fat percentage (%): 18.80±5.55; training: 6 week/day, 2 day/h). The day that anthropometric measurements were done the 12min Cooper test was performed to estimate VO<sub>2</sub>max (group mean: 41.73±6.92 ml/kg.min). After 3-7 days the subjects first applied counter movement jump (CMJ) and squat jump (SJ) (Sport Expert™ MPS-501, Turkey) for the following 3 parameters: (1) the maximum jumping height [SJh and CMJh], (2) the total work produced by the body in each jumping condition [SJw and CMJw: weight (kg) x jumping height (m)] and (3) the anaerobic performance [CMJpower and SJpower (kg.m/s):  $P = \sqrt{4.9 \times \text{weight (kg)} \times \sqrt{\text{jumping height (m)}}$ ]. Then classical Wingate anaerobic test (WAnT) was applied (894Ea, Monark, Sweden) (30sec, load 7.5%). The correlations between jumping performance and anaerobic power performance was evaluated using the Pearson Product Moment Correlation and statistical significance was set at p<0.05. CMJh, SJh, CMJw, SJw, CMJpower and SJpower were significantly correlated with WAnT load, peak power (w/kg), and anaerobic capacity (w and w/kg) (p<0.05 and p<0.01). In addition except CMJh and SJh, there was significant relationship between fatigue index and CMJw, SJw, CMJpower and SJpower (p<0.01). In conclusion in field conditions the trainers may predict anaerobic performance using the jumping properties.

**Keywords:** *Young Athletes, Jumping, Anaerobic Performance*

## **Impact of Aerobic Exercise On Selected Physiological Parameters for Promoting Quality of Life And Wellness of Elementary School Children in Ibadan metropolis Nigeria**

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### **Abstract**

The study examined the impact of aerobic exercise on selected physiological parameters for promoting quality of life and wellness of elementary school children in Ibadan metropolis, Nigeria. The ex-post-facto research design was used. 360 apparently active and healthy school children drawn from the 3 selected primary elementary schools within Ibadan metropolis with an age- range between 3-13 years old were recruited for the study. This was made up of 180 boys and 180 girls, n=60 boys and n=60 girls from each of the selected schools used for the study with two predetermined group viz experimental and control. Physiological parameters were assessed using Bench-stepping activities and body composition was measured using the Lange Skinfold Caliper. The variable included in the regression models were age, height, weight, H.R., B.P, % fat, and VO<sub>2</sub>max respectively. Subjects did not vary significantly (P<0.05) on the Bench step-test and peak VO<sub>2</sub> scores. In general, only VO<sub>2</sub>max correlated significantly with (P<0.05) with Bench step-test. The study also indicated that physiological measures were the best and only predictor of Bench step-test activity ( $r^2=0.030$ , P<0.05). In conclusion, the findings of this study indicated that physiological responses contributed 1.77% variation to aerobic exercise. Based on the results, aerobic exercise are effective in decreasing fat weight and improving blood pressure and VO<sub>2</sub> max of elementary school children in Ibadan when the programme is well supervised.

**Keywords:** Bench step, Physiological parameters, Quality of life, Wellness and School children

### **Introduction**

Aerobic exercise tests are widely used for evaluating maximal or peak aerobic power (VO<sub>2</sub> peak) in children and young adults. Indeed they form important components of physical fitness tests for children and youth. (Satcher, 2000; Yngve, 2000 and Bangkok Post, 2007). Aerobic exercise, however, has been widely reported as a sure route to physical fitness and a significant contributor to good health status (O'Brien, 2005, Mayo Clinic Staff, 2004, Adeogun, Satonji & Dansu, 2003, Okuneye, 2002; Emiola, Talabi & Ogunsakin, 2002). According to Corbin, Pangrazi and Franks (2002), regular exercise that is performed in most

days of the week reduces the risk of developing or dying from some of the leading causes of illness and death. Scores of aerobic exercise tests have been interpreted as indicating physiological endurance or cardiovascular efficiency, implying that individual differences in aerobic exercise performance predominantly reflects variations in physiological parameters (Di Nallo, Jackson and Mahar, 2000).

Previous studies have reported that body composition, age, body fat, body size, and running economy may also contribute to individual differences in aerobic exercise performance ability of children and youths. (Emiola, 2000, Plowman & Smith, 2003; Wagner & Heyward, 2000, and Ainsworth, 2000).

Studies have shown the productive effects of physical activity for a number of degenerative chronic diseases such as non- insulin dependent diabetes, hypertension, osteoporosis and colon-cancer Hoeger and Hoeger, (2002). In contrast, some other studies have shown the impact of inactivity leading to a higher rate of cardiovascular events and a higher death rate in those individual with low levels in physical fitness. Me Ardle, Katch and Katch, 2000; United States Public Health Services, (1996). Research evidence reported that as many as 250 000 deaths per year in the United States are attributed to (poor cardiovascular function) a lack of regular physical activities among children or young adults.

## **Hypotheses**

The researcher hypothesized that physiological parameters of elementary school children significantly affect their fitness and health.

## **Methodology**

A sample of 360 apparently active and healthy subjects were recruited from three selected primary schools within Ibadan metropolis, whose ages ranged from 05-13 years old. They were randomly assigned into the experimental and control groups respectively. It was ensured that none of the subjects ever participated in organized sporting activities before they were recruited for this research. The purpose and procedure of the tests were explained to the children after due permission was obtained from headmasters of the schools. Written informed consent form of aerobic exercise training and procedure for data collection were given to the subjects. All the subjects completed the tests and their data were statistically analyzed.

## **Procedure for Training Programme**

Regular exercise training took place 3 times a week, for eight weeks (Tuesday, Thursdays and Fridays) in the morning between the hours of 8:00-9:00 am. All training sessions were preceded by a warm up session, and the regular aerobic exercise- training given was made up of six aerobic exercises. (cycling in the air, Brisk-walking, running on the spot, hooping, rope-skipping and Bench stepping). The frequently, total time of each exercise and rest periods



between each aerobic exercise were given as recommended by Fox (1979). The aerobic exercise adopted the progressive workload.

### **Procedure for data collection**

Subject's height was measured on Seca Stadiometer without shoes and to the nearest 0.5 cm, while weight was measured on Seca Weighing Scale without shoes to the nearest 0.1kg. Subjects training heart rates were recorded, while the subjects were made to sit down quietly for about 10 minutes with the aid of stethoscope. These were recorded in beats per minute after listening for the heart beat for 30 seconds and multiply the number of beats by 2. Maximal oxygen uptake ( $\dot{V}O_2$  max) was estimated using aerobic Bench step test according to the standard procedures of Cooper Institute for Aerobic Research (1999). The subject's systolic and diagnostic blood pressure was measured with the aid of sphygmomanometer in conjunction with the stethoscope, this was recorded in mmHg.

### **Test item and Protocols**

**Age:** was recorded in years as of last birthday.

**Height:** Subjects in standing position dressed in light clothing without shoes, and stand erect with heels together, knees extended and back against the stadiometer; height was read off on the stadiometer to the nearest centimeters.

**Body Weight:** Subject dressed in light apparel and stood barefoot on the Seca weight scale platform with feet together. Body weight was recorded to the nearest 0.1 kilogram.

**Heart Rate:** The subject's heart rate was measured in sitting position, dressed in light clothings, looking straight ahead. The headpiece of the stethoscope was put over the mitral area of the subjects without too much too heard, the heart sound Lubb-dubb, will be counted for fifteen (15) seconds. The counted number was multiplied by four (4) to make one minute count and recorded.

**Maximal Oxygen Consumption:** The subject's oxygen uptake was estimate using aerobic Bench step activity the subject in standing position with light clothings step up and down with right and left foot one after the other on the bench step for 3 minutes, heart rate was taken for 15 seconds interval from 5-20 seconds into recovery. Recovery heart rate was converted to beats per minute (multiply 15 seconds heart rate by 4). Maximal oxygen uptake ( $\dot{V}O_2$  max) in Ml/kg/min was be estimated according to the following equation.

Male  $\dot{V}O_2$  max  $111.33 - (0.42 \times \text{recovery heart rate in beats per minute})$

Female  $\dot{V}O_2$  max =  $65.81 - (0.1847 \times \text{recovery heart rate in beats per minute})$ .

Adapted from McArdle Protocol (1986)

**Systolic and Diastolic Blood Pressure:** The subject's in sitting position with the cuff of the sphygmomanometer wrapped evenly and snugly around the right arm at 2.5 cm above the heart level. The pressure at which the 1st sound is heard, was recorded as the systolic sound was heard, while deflating the cuff nothing the point when the last sound was heard as diastolic blood pressure both in mmHg. The cuff finally deflated and removed from the subject's arm.

## Statistical Analysis

Data for this study were analyzed using both descriptive (means,  $\pm$ SD and standard error) and inferential statistics of one – way analysis of variance (ANOVA) and stepwise multiple regression analysis. ANOVA was used to test for significant differences.

## Results

The statistics showing the mean, standard deviation, standard error for selected physical characteristics are presented in tables 1 and 2

**Table 1.** Descriptive statistics of the physical characteristics of the subjects for experimental group

Variables	Means	Standard	Standard Error	Mean	Standard Deviation	Standard error
Age (Yrs)	6.6054	2.91093	0.15342	6.7196	4.04072	0.21296
Body weight (kg)	29.63333	5.05226	0.26628	30.0306	5.12875	0.27031
Height (cm)	1.27355	0.07324	0.0253	1.32522	0.51062	0.5326

Although there was no significant difference in age between the pretest (6.60 yrs) and the post test (6.72yrs), as well as in Height between pretest (1.27m) and post test (1.32m) the pretest and post test values were not significantly different in Body Weight (29.6kg) and (30.0kg).

**Table 2.** Descriptive statistics of physiological of the subjects for experimental group

Variables	Means	Standard	Standard Error	Mean	Standard Deviation	Standard error
Heart Rate (secs)	1.3955	0.04968	0.00262	1.5955	0.05015	0.00264
BP (mmhg)	64.07278	9.57820	0.50482	67.5222	9.93879	0.52382
VO2 max ml/kg/min	21.2233	18.85533	0.99376	28.5183	2.75383	0.19784

Pretest post test value of H. R (1.3955secs) and 1 .5955secs). Significant differences occurred among the pretest posttest BP (64.07278 mmHg) and (67.5222 mmHg) and VO<sub>2</sub>max (21.2233ml/kg/min) and 28.5 183 ml/kg/min).

**Table 3.** Composite effect of aerobic exercise on physiological parameter showing the ANOVA summary of the regression analysis is presented as follows:

Model Sig	Sum of Squares	df	Mean Square	F
Regression	28.389	10.368	2.839	1.092
Residual	907.566	349		
<b>Total</b>	<b>935.956</b>	<b>359</b>	2.600	

R = 177

R<sup>2</sup> = .030

Ajd R<sup>2</sup> = .030

standard Error = 1.61260

Results in table 3 shows a composite effect of the independent variables. The composite effect yielded a predictive value of Adj R<sup>2</sup> = 0.030, df 10, p<0.5. i.e, F = (10,349) =1.092< 0.05. therefore, the hypothesis which states that physiological parameters of elementary school children significantly affect their fitness and health is hereby rejected.

The statistics showing the mean standard deviation and correlation matrix among the variables.

**Table 4.** Correlation matrix among the variables (N 360)

Variables	Mean	SD	Age	Height	Weight	H.R	B.P	VO <sub>2</sub> max
Age	6.6056	2.91093	1.000					
Height	1.3955	.04968	.05027	1.000				
Weight	29.6333	5.0522	.27031	26.304	1.000			
Calf	7.8278	2.63854	.13906	6.962	.360	1.000		
Triceps	.7.8069	2.83326	.14933	.360	0.12	.826	1.000	
Heart rate	1.3957	.05016	.00264	.003	.933	-.004	.332	1.000
Blood pressure	67.5222	9.93879	67.5222	9.93879	.59382	98.779	-.053	.360
VO <sub>2</sub> max	38.5183	3.75383	.19784	14.091	-.004	.935	.360	.818

\*Correlation is significant at the 0.05 level (2 tailed)

The correlation matrices of measured variable for physical characteristics and physiological parameter are shown in table 4 respectively. Among the variables, age was significantly and positively correlated with body weight and blood pressure)  $P < 0.05$ ). Almost all the physiological parameter  $P < 0.05$ ).  $V_{O_2\max}$  vs height (14.091); b.p VS height (9.93879) and weight vs height (26.304). Weight is also similarly highly significantly correlated with physiological parameters of heart rate (0.933); B.P (0.59382); it is worth noting that H.R is highly and positively significantly correlated with B.P (0.360); and  $V_{O_2\max}$  (0.630).

## **Discussion of Findings**

Findings of this study show that elementary school children had significantly higher mean values in B.P,  $V_{O_2\max}$ , and body weight respectively.

Results of findings indicated that physical and Physiological parameters had a significant relationship to children's aerobic exercise performance ( $P < 0.05$ ). The finding is in agreement with the observation of Mc-Weigh et al (2004) that the South African children were generally more active and had greater ability for aerobic performance when compared with the children in this study.

The present study has clearly shown that aerobic exercise performance affects physiological differences among elementary school children. Similarly, aerobic exercise performance affects the physical responses and physiological fitness among elementary school children under effective supervision.

The study recommends that there is need for studies to be carried out on the effect of aerobic exercise on the impact of aerobic exercise on fitness among children in order to further clarify the importance of aerobic exercise as it affects for individual differences among elementary school children.

The results from physical characteristics is an indication that the experimental subjects improved on physiological parameters since the exercise muscles in children and younger adults perform excellently at posttest compared with the case at the pretest in this study.

## **Conclusion and Application**

Aerobic exercise at minimum frequency of 2-3 sessions per week and 20-40 minutes duration at each session will significantly enhance physiological effect. More-over, it is possible that moderate aerobic exercise could be a useful adjunct to Bench stepping test used in this study.

Finally, it is recommended that elementary school children should be engaged in a well supervised endurance exercise training programme of moderate intensities and longer durations in order to elicit the required physical and metabolic responses. In addition, further research should be carried out to determine the individual differences in Nigeria and sub-Saharan Africa.

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## Effect of Aerobic Exercise on Respiratory Indices of Elementary School Student Athletes in Ibadan, Nigeria

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### **Abstract**

This study focused on the effect of aerobic exercise on selected respiratory indices of elementary school student athletes in Ibadan, Nigeria. Participants were 128 elementary school pupils, [Male; n =64; Female;= 64 ) purposively selected from public and private schools in Ibadan Nigeria. Randomized pretest-posttest control group experimental design was used. Participants were randomly assigned to experimental and control groups. The experimental group experienced aerobics training while the control group went through a placebo, which mimicked resistance training. Four hypotheses were formulated based on the main variables of the study, which included; Forced Vital Capacity (FVC), Forced Expiratory Volume (FEV1), Peak Expiratory Flowrate, (PEF) and Maximum volume of Oxygen (V02 max). The Dry Pocket Spirometer and the Mini Wright peak flow meter were used to collect data on the respiratory indices used for the study. Mean, range and standard deviation were used to describe data collected for the study, while t-test and Analysis of Covariance (ANCOVA) were used to test the hypotheses. Results showed significant differences between experimental and control groups in FVC ( $F(4,123) = 3.122, P < 0.05$ ) and V02 max ( $F(4,123) = 4.740, P < 0.05$ ). A significant gender difference was also recorded in FVC, with females ( $\bar{x}1.53$ ), performing significantly better than their male counterparts. It was recommended that more specialized training aimed at improving cardiorespiratory fitness should be built into the training program of participants.

## Tüm Beden Vibrasyon Antrenmanlarının İzokinetik Bacak Kuvvetine Etkisi

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### ABSTRACT

The aim of present study was to evaluate the effect on the muscle strength of the whole body vibration training combined different strength training methods, and to determine the loss of the strength gained after training period. Participants were divided into five groups randomly selected university students: vibration and static strength (VS), vibration and dynamic force (VD), the dynamic force (D), static force (S) and control (C). Two-month-long training program, the dynamic and static strength training protocol (Squat), 3 days / week was as often. Training intensity, a maximum repetition 80%. VS and VD groups were given vibration frequency is 50 Hz and amplitude of 4 mm. Outcome measures of isokinetic strength measurement (leg strength) at the beginning of the study, and training after the end of each month during the training was done to 4 month. Groups were age, height, weight, body mass index (BMI), body fat (% fat), thigh length and calf length of the field with the values and isokinetic muscle strength values were found to have similar values at the beginning of the study ( $p > .05$ ). 8-week process, particularly as a result of the performance of the force were increased significantly as the VS and VD groups. In conclusion, 8 weeks of strength training protocols applied to increase the force to be effective, this increase in force between the two groups differ, and showed the most change and development in VS and VD groups, but were lost during detraining.

**Key Words :** *Whole body vibration, static strength, dynamic strength, vibration training.*



## GİRİŞ VE AMAÇ

Kuvvet ile ifade edilen nöromuskuler performans sportif etkinlikler ve günlük yaşam için oldukça önemlidir. Son 20 yıldır yaygın olarak kullanılan Tüm Beden Vibrasyonu Antrenmanı (TBVA), tek başına ya da klasik kuvvet antrenmanı ile birlikte kullanılan nöromuskuler antrenman yöntemi olarak bilinmektedir. Araştırmalar tüm vücudun düşük amplitüdü yüksek frekanslı uyarımıyla kas kuvveti, kas gücü ve dengenin geliştirilebildiğini ve kemiklerin mekanik yeterliliğinin arttığını göstermektedir (Mester 2006, Luo 2005, Mester 2002, Delecluse 2003). TBVA'nın nöral dürtüyü arttırdığı ve aktif olmayan motor ünitelerde rekrutmana neden olduğu düşünülmektedir (Luo 2005, Jordan 2005, Issurin 1998). Vibrasyon sırasında motor ünitelerin rekrutman eşiği istemli kasılmalara göre daha düşük olduğu için yüksek eşikli hızlı zincir motor ünitelerin daha hızlı aktive olması ve sonuçta daha büyük antrenman uyarısı ortaya çıkması olasıdır (Luo 2005, Rittweger 2000, Romaguere 1993). Nöromuskuler sistemdeki bu etkiler, klasik kuvvet antrenmanına kıyasla daha büyük yüklenmelere (Mester 2006) ve harcanan efor algılamasının daha az olmasına (Liebermann 1997) neden olacaktır.

TBVA'nın kuvvette, hızda ve güçte artış olduğunu bildiren araştırmaların yanı sıra (Torvinen 2002, Bosco 1999, Runge 2000), performansta azalma olduğu ya da değişiklik olmadığı şeklinde sonuç veren bilimsel yayınlar da vardır (Cochrane 2004, Delecluse 2005, Torvinen 2002). Bilimsel literatürde TBVA etkinliğine ilişkin araştırma sonuçlarındaki tutarsızlığının en önemli nedeni, farklı vibrasyon antrenman protokollerinin kullanılması (vibrasyon özellikleri -frekans ve amplitüd-, vibrasyon uygulanan süre, vibrasyon uygulaması bitimi ve uygulama sonu ölçümlerin yapılması arasındaki süre) ve antrenman özelliklerinin (şiddet, kapsam, alıştırmalar, tipleri, v.b.) net açıklanmamasıdır. Dolayısıyla TBVA'nın performans etkileri ile ilgili hiçbir araştırma, seçtiği protokolün diğerine üstünlüğü konusunda net bir açıklama getirememektedir.

Tüm bu nedenlerle, yaptığımız bu çalışmanın amacı; vibrasyon antrenmanının kuvvet gelişimine etkisini belirlemek, vibrasyon antrenmanı sırasında yapılacak statik ya da dinamik alıştırmaların kuvvete etkisini karşılaştırmak ve vibrasyon antrenmanı ile sağlanan kuvvet gelişiminin ne kadar sürdürüldüğünü saptamaktır.

## MATERYAL METOD

*Akdeniz Üniversitesi Tıp Fakültesi Daimi Etik Kurul onayı [Etik Kurul Tarih; 12/11/2008, Sayı; B.30.2.AKD.0.01.00.00/Etik-494] ile çalışmaya katılacak olan gönüllüler; Akdeniz Üniversitesi'nde son altı ay içerisinde bir spor kulübüne bağlı ya da kendi başına düzenli olarak antrenman yapmayan öğrenciler arasından seçildi.*

Araştırmaya; 17-21 yaş arasında, erkek, fiziksel aktivite programına katılmasında sakınca olmadığı hekim tarafından belirlenen, başka herhangi bir spor aktivitesine katılmayan, kalça ve diz normal eklem hareket açıklığına sahip olan ve beden kütle indeksi (BKİ) normal sınırlar içinde olan gönüllüler alındı. Fiziksel aktivite programına devam etmek istemeyen,

testlere veya fiziksel aktivite programına katılmasını engelleyecek yeni bir sağlık sorunu ortaya çıkan, ardışık 3 antrenmana 2 kez gelmeyen, il değiştiren ve çalışmadan ayrılmak isteyen katılımcılar araştırmadan çıkarıldı.

Örneklem toplam 390 öğrenci evren büyüklüğünden, Holmes ve arkadaşlarının çalışmalarından elde ettikleri 60°/s hızda izokinetik kuadriiceps femoris kas kuvveti ilk ölçümü dikkate alınarak (Holmes 1984); alfa 0.05 , beta 0.05 ve örneklem hatası(d) 0,10 ile çalışma % 95 güç öngörülerek örneklem büyüklüğü 61 olarak hesaplandı. [PASS (NCSS 2004 and PASS 2002 Citation Hirtze, J. (2001), NCSS and PASS. Number Cruncher Statistical Systems, Kaysville, Utah, www.NCSS.com)]. Araştırmada denek kaybı olacağı da düşünülerek örneklem büyüklüğü 75 birey olacak şekilde arttırıldı. Denekler excel programında rasgele numara verilerek eşit sayıda gruplara ayrıldı. Gruplar; Grup 1, vibrasyon + statik kuvvet antrenman grubu (VS); Grup 2, vibrasyon + dinamik antrenman grubu (VD); Grup 3, dinamik kuvvet antrenman grubu (D); Grup 4, statik kuvvet antrenman grubu (S) ve Grup 5, kontrol grubu (K) şeklinde oluşturuldu. Grupların ölçümleri antrenman başında, antrenman ortası döneminde (1.ay sonunda), antrenman sonunda (2.ay sonunda) ve detraining döneminde (4.ayda) yapıldı.

## Ölçümler

Boy ölçümü, duvar skalasında verteks noktasından 0,1 hassasiyetle, deneğin ayakları çıplak, topuklar birleşik pozisyonda, beden dik ve baş frankfort düzleminde tutularak, başın verteks noktası ile yer arasındaki mesafe ölçülerek kaydedildi (Lohman 1988).

Ağırlık, BKİ, %Yağ, FFM ve TBW ölçümlerinde Tanita (Model TBF-300) beden kompozisyon analizörü kullanıldı. Bu yöntemle vücuda düşük düzeyde elektrik akımı (Sabit frekansla 50-KHz) verilerek impedans ölçüldü. Analiz için cihazın istediği kişiye özel bilgiler (yaş, cinsiyet, boy, antrenman düzeyi, giysi ağırlığı) girildi ve cihazın üzerine çıkmaları istendi. Ölçümler deneğin üzerinde hafif bir giysi varken ve çıplak ayakla yapıldı. Cihazın ölçümü tamamlamasıyla denek indirildi ve ölçümle ilgili test çıktısı cihazdan alındı (Özer 2001).

Uzunluk ölçümleri ekstremite boyu ve kas fibril uzunluğu arasındaki ilişkinin kas kuvvetine etkisi nedeniyle (Maeda 2001), örneklemdeki homogenliği sağlamak amacıyla yapıldı. Uyluk uzunluğu; anatomik olarak kalça-diz uzunluğunu tanımlar. Patellanın proksimal ucu ile inguinal (kasık) ligamentin orta noktası arasındaki uzaklık esnek olmayan mezura ile ölçülerek kayıt edildi. Baldır uzunluğu; tibial medial condyle noktası ile medial malleus noktası arasındaki uzaklık denek bacak bacak üstüne atmış durumda otururken ölçüldü. Ölçüm noktaları belirlendikten sonra antropometrenin kolları bu noktalara yerleştirildi ve ölçüm yapılarak kayıt edildi (Özer 1993)

Kas kuvvetinin, dayanıklılığını ve gücünü belirlemek (Lohman 1988) için izokinetik dinamometre (1995-1996 Cybex International, Inc. Ronkonkoma, New York) kullanıldı. Kuadriiceps ve hamstring kaslarının konsantrik kasılma ile ortaya çıkardığı kuvvet, 60°/s ve 90°/s hızlarda, zirve kuvvet (peak tork) kullanılarak değerlendirildi (Cybex Norm). Ölçümler, çalışmanın başında antrenmanlara başlamadan önce, antrenmanların ortasında(1.ayın

sonunda), antrenmanların sonunda (2.ayın sonunda) ve antrenmanların bitiminden sonraki detraining döneminde (4.ayda) yapıldı. İzokinetik test ölçümünden önce 5 dakika süreyle bisiklet ergometresi ile ısınma ve ardından ilgili kas gruplarına 5 dakika da germe uygulandı. Daha sonra ölçüme alınan denek, pelvis ve kalçası ile dizleri 90° ve tilt açısı 0° olacak şekilde izokinetik cihazın koltuğuna oturdu ve bacak aparatı(ped) diz eklemının lateral kısmının rotasyon merkezi ile medial malleusun iki parmak üstü arasına yerleştirildi. Ölçüm öncesi, ölçüm yapılacak açıda 5 tekrarlı 3 deneme uygulandı. Kuadriseps kasına 60°/s hızda, her bir hız için 5 tekrarlı konsantrik kasılma yaptırıldı ve tekrarlar arasında 1 dakika dinlenme verildi. Antrenman gruplarına haftada 3 gün, toplam 8 hafta süre ile çalışma yaptırıldı. Antrenmanlar öncesinde skuat çalışması için bireylerin kuadriceps femoris kas kuvvetinin 1TM' leri hesaplanarak yoğunluk yüzdeleri antrenman programı doğrultusunda belirlendi. Antrenman için ısınma ve soğuma süresi 20 dakika olarak uygulandı.

### **Antrenman Programı;**

VS grubunun antrenmanı 90° ve 135° açılarda 1TM' nin %80' i ile 50 Hz frekans, 4 mm amplitüdle 5 set, 6 tekrar (6-8 sn bekle ve ikinci pozisyona geç) ve setler arası 2 dakika dinlenme yapılarak uygulandı.

VD grubunun antrenmanı 90° açıda 1TM' nin %80' i ile 50 Hz frekans, 4 mm amplitüdle 5 set, 6 tekrar ve setler arası 2 dakika dinlenme yapılarak uygulandı.

D grubunun antrenmanı 90° açıda 1TM' nin %80' i ile 5 set, 6 tekrar ve setler arası 2 dakika dinlenme yapılarak uygulandı.

S grubunun antrenmanı 90° ve 135° açılarda 1TM' nin %80' i ile 5 set, 6 tekrar (6-8 sn bekle ve ikinci pozisyona geç) ve setler arası 2 dakika dinlenme yapılarak uygulandı.

K grubu hiçbir çalışma yapmamıştır.

### ***İstatistiksel Çözümleme***

Verilerin istatistiksel analizi için SPSS 10.0 (Statistical Package Program for Social Science) paket programı kullanıldı. Verilerin tanımlayıcı istatistikleri yapıldı ve tekrarlı ölçümlerde varyans analizi kullanıldı.

## **BULGULAR**

Çalışmaya katılan öğrencilerin yaş ortalaması 20.17±1.79 yıldır. Tüm grupların yaş, boy, ağırlık, BKİ, %Yağ, uyluk uzunluğu ve baldır uzunluğu değerleri incelendiğinde gruplar arasında istatistiksel olarak anlamlı bir fark olmadığı tespit edilmiştir(p>.05). Yine gruplar arasında 60°/sn hızda sağ (60SADE) ve sol (60SODE) diz ekstansor kaslarının konsantrik zirve kuvveti ile iki ekstremite arasındaki zirve kuvveti farkı (60SASODEF) yönünden anlamlı bir fark olmadığı tespit edilmiştir(p>.05). Literatüre göre çalışmaya katılanların an-

trenman öncesi antropometrik özelliklerinin farklı çalışmalardaki aynı yaş grubu ile benzer olduğu (Paradisis 2007, Da Silva 2009, Giminianni 2009). gruplar arasında istatistiksel olarak anlamlı fark olmadığı belirlenmiştir.

## Antrenmana Bağlı Değişim Sonuçları

### Katılımcıların İzokinetik Test Değerleri

Çizelge. Katılımcıların 60SADE ölçümleri.

Grup	60SADE1 A.O.± S.S	60SADE2 A.O.± S.S	60SADE3 A.O.± S.S	60SADE4 A.O.± S.S	Zaman	Grup*Zaman	Grup
VS	224.92±67.17	276.69±63.26	321.92±61.54	236.30±31.96	$F_{(3,50)}=$ 10.103 <b>p&lt;.001</b>	$F_{(12,156)}=$ 5.086 <b>p&lt;.001</b>	$F_{(1,52)}=$ 6.606 <b>p&lt;.001</b>
VD	226.50±64.22	252.75±66.36	281.08±64.78	215.16±54.57			
D	226.72±62.73	186.09±53.71	209.09±35.02	177.81±41.34			
S	229.00±49.40	167.30±33.29	180.00±34.99	212.40±53.63			
K	225.18±52.54	179.36±25.28	175.63±26.61	194.63±83.36			

60SADE değerlerinin grup içi test sonuçlarına göre, 8 haftalık antrenman programı sürecinde istatistiksel olarak anlamlı değişim gösterdiği ortaya çıkmıştır (p<.001). Tüm grupların zaman içindeki değişim yapılarının birbirinden farklı olduğu, yani grup değişkeni x zaman etkileşiminin olduğu belirlenmiştir (p<.001). 60SADE değerlerinde grup x zaman ve zamanla gerçekleşen değişimin etkileşiminin kaynağını belirlemek için, gruplar kendi içinde incelenmiştir. Yapılan istatistiksel analiz sonucunda;

- VS grubunun 60SADE 2. ölçüm değeri 1. ölçüm(p<.01) değerinden yüksek, 3.ölçüm değeri 2. ölçüm(p<.01) değerinden yüksek, 3. ölçüm değeri 2. ölçüm(p<.01) değerinden yüksek ve 3. ölçüm değeri de 4. ölçüm(p<.01) değerinden daha yüksektir. 60SADE VS grubunda antrenman ortası dönemde artış % 23.02 , antrenman sonunda % 43.13' tür. Antrenman bittikten sonra 4.ayda ise % 26.60 azalmıştır. 1. ve 4. ölçüm ile 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır(p>.05).
- VD grubunun 60SADE 3. ölçüm değeri 1. ölçüm(p<.01), 2. ölçüm(p<.01) ve 4. ölçüm(p<.01) değerlerinden daha yüksektir. 60SADE, antrenman ortası dönemde VD grubunda % 11.59 ve antrenman sonunda ise % 24.10 oranında artmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu ölçümlerine göre % 23.45 oranında azalmıştır. 1. ve 4. ölçüm ile 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır(p>.05).
- S Grubunun 60SADE 1. ölçüm değeri 2. ölçüm(p<.01) değerinden daha yüksektir. 60SADE, antrenman ortası dönemde S grubunda % 26.94 ve antrenman sonunda ise % 21.40 oranında azalmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu

ölçümlerine göre ise % 18 oranında artmıştır. 1. ve 3.ölçüm, 1. ve 4.ölçüm, 2. ve 3.ölçüm, 2. ve 4.ölçüm, 3. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).

- K Grubun ise 60SADE 1. ölçüm değeri 2. ölçüm( $p<.01$ ) ve 3.ölçüm ( $p<.01$ ) değerinden daha yüksektir. 60SADE, antrenman ortası dönemde K grubunda % 20.35 ve antrenman sonunda ise % 22 oranında azalmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu ölçümlerine göre ise % 10.82 oranında artmıştır. 1. ve 4.ölçüm, 2. ve 3.ölçüm, 2. ve 4.ölçüm, 3. ve 4. ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- D grubunun 60SADE testinde elde etmiş olduğu tüm değerler arasında istatistiksel olarak anlamlı fark olmadığı belirlenmiştir ( $p>.05$ ).

Gruplar arası inceleme sonucunda, grupların 60SADE zirve kuvvet testinin değerleri arasında istatistiksel olarak anlamlı fark olduğu belirlenmiştir ( $p<.001$ ).

Grup farklılıklarının hangi ölçümden kaynaklandığını belirlemek için yapılan analiz sonucuna göre, gruplar arasında 1. ve 4. ölçüm açısından fark olmadığı ( $p>.05$ ), 2. ve 3. ölçüm değerlerinde grup farkı olduğu saptanmıştır( $p<.001$ ).

Post hoc Tukey testine göre, VS grubunun 60°/sn hızda konsantrik sağ diz ekstansor zirve kuvveti 2.ölçümünün D, S ve K gruplarından yüksek olduğu ( $p=.001$ ,  $p<.001$  ve  $p<.001$ , sırasıyla); yine VD grubunun 2. ölçümünün D, S ve K gruplarından yüksek olduğu belirlenmiştir( $p=.028$ ,  $p=.003$  ve  $p=.012$ , sırasıyla). VS grubunun 60°/sn hızda konsantrik sağ diz ekstansor zirve kuvveti 3. ölçümünün D, S ve K gruplarından yüksek olduğu( $p<.001$ ,  $p<.001$  ve  $p<.001$ , sırasıyla) ve VD grubunun 3.ölçüm sonuçları yine D, S ve K gruplarından daha yüksek olduğu belirlenmiştir.( $p=.007$ ,  $p<.001$  ve  $p<.001$ , sırasıyla). VS-VD, D-S, D-K ve S-K gruplarının 60°/sn hızda konsantrik sağ diz ekstansor zirve kuvvet 2. ve 3.ölçüm sonuçları arasında fark görülmemiştir( $p>.05$ ).

**Çizelge.** Katılımcıların 60SODE ölçümleri.

Grup	60SODE1 A.O.± S.S	60SODE2 A.O.± S.S	60SODE3 A.O.± S.S	60SODE4 A.O.± S.S	Zaman	Grup*Zaman	Grup
VS	210.23±68.52	243.76±52.44	325.84±48.43	217.69±65.70	$F_{(3.156)}=$ 13.436 $p<.001$	$F_{(12.156)}=$ 8.157  $p<.001$	$F_{(1.52)}=$ 4.918  $p<.001$
VD	203.16±78.57	200.41±51.68	297.50±58.97	195.00±66.52			
D	204.27±31.20	174.36±36.38	207.00±45.45	168.63±51.78			
S	209.00±44.43	210.10±53.16	189.40±33.97	206.70±57.22			
K	206.90±42.14	168.45±61.57	161.90±58.63	179.09±68.66			

60SODE değerlerinin grup içi test sonuçlarına göre, 8 haftalık antrenman programı sürecinde istatistiksel olarak anlamlı değişim gösterdiği ortaya çıkmıştır ( $p<.001$ ). Tüm grupların zaman içindeki değişim yapılarının birbirinden farklı olduğu, yani grup değişkeni x zaman etkileşiminin olduğu belirlenmiştir ( $p<.001$ ). 60SODE değerlerinde grup x zaman ve zamanla

gerçekleşen değişimin etkileşiminin kaynağını belirlemek için, gruplar kendi içinde incelenmiştir. Yapılan istatistiksel analiz sonucunda;

- VS grubunun 60SODE 3. ölçüm değeri 1. ölçüm( $p<.01$ ), 2.ölçüm( $p=.01$ ) ve 4. ölçüm( $p=.01$ ) değerlerinden daha yüksektir. 60SODE, antrenman ortası dönemde VS grubunda % 15.95 ve antrenman sonunda ise % 54.99 oranında artmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu ölçümlerine göre ise % 33.19 oranında azalmıştır. 1. ve 2.ölçüm, 1. ve 4.ölçüm, 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- VD grubunun 60SODE 3. ölçüm değeri 1. ölçüm( $p<.01$ ), 2.ölçüm( $p<.01$ ) ve 4. ölçüm( $p<.01$ ) değerlerinden daha yüksektir. 60SODE, antrenman ortası dönemde VD grubunda % 1.35 oranında bir azalma varken antrenman sonunda ise % 46.44 oranında artmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu ölçümlerine göre ise yine % 34.45 oranında bir azalma görülmüştür. 1. ve 2.ölçüm, 1. ve 4.ölçüm, 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- K grubunun 60SODE 1. ölçüm değeri 3. ölçüm( $p<.01$ ) değerinden daha yüksek bulunmuştur. 60SODE, antrenman ortası dönemde K grubunda % 18.58 ve antrenman sonunda % 21.75 oranında azalmıştır. Antrenman bittikten sonra 4.ayda antrenman sonu ölçümlerine göre ise % 10.62 oranında artmıştır. 1. ve 2.ölçüm, 1. ve 4.ölçüm, 2. ve 3.ölçüm, 2. ve 4.ölçüm, 3. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- D ve S gruplarının 60SODE testinde elde etmiş olduğu tüm değerler arasında istatistiksel olarak anlamlı fark olmadığı belirlenmiştir( $p>.05$ ).

Gruplar arası inceleme sonucunda, grupların 60SODE zirve kuvvet testinin değerleri arasında istatistiksel olarak anlamlı fark olduğu belirlenmiştir ( $p<.001$ ).

Grup farklılıklarının hangi ölçümden kaynaklandığını belirlemek için yapılan analiz sonucuna göre, gruplar arasında 1. ve 4. ölçüm açısından fark olmadığı ( $p>.05$ ), 2. ve 3. ölçüm değerlerinde grup farkı olduğu saptanmıştır( $p<.001$ ).

Post hoc Tukey testine göre, VS grubunun 60°/sn hızda konsantrik sol diz esktansor zirve kuvveti 2. ölçümünün D ve K gruplarından yüksek olduğu belirlenmiştir( $p=.015$  ve  $p<.007$ , sırasıyla). VS ve VD, S; VD ve D, S, K; D ve S, K; S-K grupları arasında fark yoktur( $p>.05$ ). VS grubunun 60°/sn hızda konsantrik sol diz esktansor zirve kuvveti 3. ölçümünün D, S ve K gruplarından yüksek olduğu belirlenmiştir( $p<.001$ ,  $p<.001$ ,  $p<.001$ , sırasıyla). Yine VD grubunun 60°/sn hızda konsantrik sol diz esktansor zirve kuvveti 3. ölçümünün D, S ve K gruplarından yüksek olduğu belirlenmiştir( $p=.001$ ,  $p<.001$  ve  $p<.001$ , sırasıyla.). VS-VD; D ve S, K; S-K gruplarının 60°/sn hızda konsantrik sol diz esktansor zirve kuvveti 2. ve 3.ölçüm sonuçları arasında fark görülmemiştir( $p>.05$ ).

**Çizelge.** Katılımcıların 60SASODEF ölçümleri.

Grup	60SASODEF1 A.O.± S.S	60SASODEF2 A.O.± S.S	60SASODEF3 A.O.± S.S	60SASODEF4 A.O.± S.S	Zaman	Grup*Zaman	Grup
VS	-33.53±5.45	-28.84±5.14	-10.53±3.95	-35.46±8.62	$F_{(3,50)}=$ 62.015 $p<.001$	$F_{(12,156)}=$ 8.875 $p<.001$	$F_{(1,52)}=$ 6.094 $p<.001$
VD	-34.58±7.99	-31.33±8.00	-14.08±3.34	-38.16±10.26			
D	-34.27±7.32	-31.54±6.81	-29.90±5.24	-37.00±6.78			
S	-34.20±7.51	-34.50±7.02	-36.90±7.68	-37.80±7.95			
K	-34.36±6.12	-38.18±6.09	-36.81±6.80	-40.45±6.21			

60SASODEF değerlerinin grup içi test sonuçlarına göre, 8 haftalık antrenman programı sürecinde istatistiksel olarak anlamlı değişim gösterdiği ortaya çıkmıştır ( $p<.001$ ). Tüm grupların zaman içindeki değişim yapılarının birbirinden farklı olduğu, yani grup değişkeni x zaman etkileşiminin olduğu belirlenmiştir ( $p<.001$ ). 60SASODEF değerlerinde grup x zaman ve zamanla gerçekleşen değişimin etkileşiminin kaynağını belirlemek için, gruplar kendi içinde incelenmiştir. Yapılan istatistiksel analiz sonucunda;

- VS grubunun 60SASODEF 1. ölçüm değeri 2. ölçüm( $p<.01$ ) ve 3. ölçüm( $p<.01$ ) değerinden düşük; 2.ölçüm değeri 3.ölçümden( $p<.01$ ) düşük ve 4.ölçümden( $p=.01$ ) yüksek ve 3.ölçüm değeri de 4.ölçüm( $p<.01$ ) değerinden yüksektir. 1. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- VD grubunun 60SASODEF 1. ölçüm değeri 2. ölçüm( $p<.01$ ) ve 3. ölçüm( $p<.01$ ) değerinden düşük; 2.ölçüm değeri 3.ölçümden( $p<.01$ ) düşük ve 3.ölçüm değeri de 4.ölçüm( $p<.01$ ) değerinden yüksektir. 1. ve 4.ölçüm, 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- D grubunun 60SASODEF 3.ölçüm değeri 1. ölçüm( $p=.04$ ) ve 4.ölçüm( $p=.01$ ) değerlerinden daha yüksektir. 1. ve 2.ölçüm, 1. ve 4.ölçüm, 2. ve 3.ölçüm, 2. ve 4.ölçüm değerleri arasında fark saptanmamıştır( $p>.05$ ).
- K grubunun 60SASODEF 1.ölçüm değeri 2.ölçüm( $p<.01$ ), 3.ölçüm( $p=.03$ ) ve 4.ölçüm( $p<.01$ ) değerlerinden daha yüksektir. 2. ve 3.ölçüm, 2. ve 4.ölçüm, 3. ve 4.ölçüm arasında fark saptanmamıştır( $p>.05$ ).
- S grubunun 60SASODEF testinde elde etmiş olduğu tüm değerler arasında istatistiksel olarak anlamlı fark olmadığı belirlenmiştir ( $p>.05$ ).

Gruplar arası inceleme sonucunda, grupların 60SASODEF zirve kuvvet testinin değerleri arasında istatistiksel olarak anlamlı fark olduğu belirlenmiştir ( $p<.001$ ).

Grup farklılıklarının hangi ölçümden kaynaklandığını belirlemek için yapılan analiz sonucuna göre, gruplar arasında 1. ve 4. ölçüm açısından fark olmadığı ( $p>.05$ ), 2. ve 3. ölçüm değerlerinde grup farkı olduğu saptanmıştır( $p<.001$ ).

Post hoc Tukey testine göre, VS grubunun  $60^{\circ}/sn$  hızda konsantrik sağ-sol diz ekstansor zirve kuvveti farkı 2. ölçümünün K grubundan yüksek olduğu belirlenmiştir( $p=.010$ ). VS ve VD, D, S; VD ve D, S, K; D ve S, K; S ve K grupları arasında 2.ölçüm sonuçları yönünden fark görülmemiştir( $p>.05$ ). VS grubunun  $60^{\circ}/sn$  hızda konsantrik sağ-sol diz ekstansor zirve kuvveti farkı 3. ölçümünün D, S ve K gruplarından yüksek olduğu belirlenmiştir( $p<.001$ ,  $p<.001$ ,  $p<.001$ , sırasıyla). Yine VD grubunun D, S ve K gruplarından yüksek olduğu belirlenmiştir( $p<.001$ ,  $p<.001$  ve  $p<.001$ , sırasıyla). Ayrıca D grubunun da S ve K gruplarından yüksek olduğu belirlenmiştir( $p=.041$  ve  $p=.038$ , sırasıyla). VS-VD ve S-K grupları arasında 3.ölçüm sonuçları yönünden fark görülmemiştir( $p>.05$ ).

## TARTIŞMA

İnsan vücudunda, periyodik olarak mekanik bir salınım uygulayan vibrasyon, hem bilimsel alanda hem de pratikte ilginç ve özel sonuçlar vermektedir. 19. yüzyılın başından beri artarak devam eden vibrasyon çalışmalarının popüleritesi 2000 yılından itibaren üst seviyelere çıkmıştır (İssurin 2005). Vibrasyon çalışmaları birçok alanda kullanıldığı gibi sportif alanda da, özellikle, alt ekstremitede genel kuvvet kapasitesini arttırdığından dolayı önerilmektedir (Cardinale 2005).

Çalışmamızda VS ve VD gruplarında  $60^{\circ}/s$  hızda ekstansor kas zirve kuvvetinin sağ dizde 1. ayda artmaya başladığı, sol dizde ise antrenman sonunda arttığı saptanmıştır. VS grupta sağ dizde  $60^{\circ}/s$  hızda ekstansor kas zirve kuvveti artış miktarı %43, sol dizde %55; VD grupta ise sağ dizde %24 ve sol dizde %46'dır. Sol dizdeki artış miktarının daha fazla olması, sol diz başlangıç değerlerinin sağ dize göre daha düşük olmasına bağlanmıştır. Hem VS hem de VD gruplarında detraining dönemde, antrenmanla kazanılan yarar kaybedilmiş ve antrenman öncesi ölçüm sonuçlarıyla detraining dönem ölçüm sonuçları arasında fark saptanmamıştır. Sol diz  $60^{\circ}/s$  hızda ekstansor kas zirve kuvvetinin D ve S gruplarında antrenmana bağlı anlamlı değişim göstermediği belirlenmiştir. Sağ diz  $60^{\circ}/s$  hızda ekstansor kas zirve kuvveti ise D grupta değişmemiş, S grupta antrenman ortasında azalmış (%27), ancak antrenman sonu ile antrenman öncesi arasında anlamlı fark görülmemiştir. K grupta ise hem sağ, hem de sol diz  $60^{\circ}/s$  hızda ekstansor kas zirve kuvveti antrenman öncesi ölçüm sonuçlarına göre, 2.ay sonunda anlamlı düzeyde azalmıştır.

VS ve VD gruplarda  $60^{\circ}/s$  hızda sağ ve sol diz ekstansor kas zirve kuvvet farkı antrenman öncesi dönemde fazla iken, antrenman ortasından itibaren azalmaya başlamış, antrenman sonunda farkın daha da azaldığı saptanmıştır. Antrenman bittikten sonra ise, detraining dönemde yapılan ölçümde iki dizin  $60^{\circ}/s$  hızdaki ekstansor zirve kuvvet farkının arttığı ve antrenman öncesine göre anlamlı fark göstermediği belirlenmiştir. D grupta ise, iki dizin  $60^{\circ}/s$  hızdaki ekstansor zirve kuvvet farkının antrenman ortası dönemde değişmediği, antrenman sonunda azaldığı, detraining dönemde antrenman öncesi ile farklı olmadığı görülmüştür. S



grupta, antrenman döneminde ve detraining döneminde iki dizin 60<sup>0</sup>/s hızdaki ekstansör zirve kuvvet farkı ölçütünde bir değişiklik olmamıştır. K grubunda ise ilginç olarak antrenman başında, 1.ay ölçümlere göre iki dizin 60<sup>0</sup>/s hızdaki ekstansör zirve kuvvet farkı daha az bulunmuş, 2.ayda ve 4.ayda farkın arttığı belirlenmiştir.

Özetle; VS ve VD gruplarında yer alan katılımcıların her iki diz 60<sup>0</sup>/s hızda ekstansör kas zirve kuvvetlerinde anlamlı düzeyde gelişim olduğu, vibrasyon çalışmayan gruplarda ise anlamlı bir değişimin olmadığı belirlenmiştir. K grubunda ise hem sağ hem de sol diz 60<sup>0</sup>/s hızda ekstansör kas zirve kuvveti, antrenman öncesi ölçüm sonuçlarına göre, 2.ay sonunda anlamlı düzeyde azalmıştır.

Literatürde, çalışmamızdaki yaş grubuna benzer olan katılımcılarda, TBV'nin diz ekstansör kas zirve kuvveti gelişimine olan etkisini değerlendiren, çalışmamızda uyguladığımız vibrasyon ve kuvvet antrenman yöntemlerine benzer olan ve antrenmanların etkilerini izokinetik testle değerlendiren sınırlı sayıda çalışmaya rastlanmıştır (Mahieu 2006).

Çalışmamızın sonuçlarına paralel olarak, Mahieu ve arkadaşları(2006), 6 hafta süreyle uyguladıkları TBVA programının, 60<sup>0</sup>/sn ve 180<sup>0</sup>/sn hızda ölçülen izokinetik sağ diz ekstansiyon ve fleksiyon, konsantrik zirve kuvvet değerlerinin, ilk ölçümlere göre anlamlı düzeyde yüksek olduğunu bildirmişlerdir. Bunun yanı sıra, TBV'nin kas zirve kuvveti gelişimine etkisini, farklı yöntemlerle değerlendiren çalışmalar incelendiğinde, elde edilen sonuçların, çalışmamızdan elde edilen sonuçlarla da benzerlik gösterdiği belirlenmiştir (Delecluse 2003, Torvinen 2003, Bosco 1998).

Delecluse ve arkadaşları (2003) da 12 hafta süre ile TBVA ve ağırlık makineleriyle yapılan geleneksel kuvvet antrenmanını karşılaştırdıkları çalışmalarında, dinamometre ile ölçülen diz ekstansör kas kuvvetindeki artışı, geleneksel kuvvet antrenmanı grubunda %14,4 , vibrasyon grubunda ise %16,6 olarak belirlemişlerdir. Ayrıca, vibrasyon grubunun sıçrama yüksekliğinin de anlamlı pozitif bir gelişim gösterdiğini bildirmişlerdir.

Torvinen ve arkadaşları(2003) da, 8 ay uyguladıkları TBVA programının kas kuvveti üzerine etkisini inceledikleri çalışmalarında, alt ekstremitte kuvvet gelişimi için uyguladıkları vibrasyon antrenmanları sonunda dikey sıçrama ölçütünde % 7,8 oranında bir gelişme olduğunu bildirmişlerdir.

Bosco ve arkadaşlarının(1998) TBV antrenmanının sıçrama performansına etkisini inceledikleri çalışmalarında, maksimal sıçrama yüksekliğinin vibrasyon çalışmasından sonra arttığını bildirmişlerdir. Yine Bosco ve arkadaşları(1999) vibrasyon çalışmalarının iskelet kas kuvvetine etkisini inceledikleri çalışmalarında vibrasyon çalışmaları sonunda bacak ekstansör kas kuvvetinde artış olduğunu saptamışlardır.

Torvinen ve arkadaşları(2002) da 4 ay uygulanan TBVA programının vibrasyon grubunda, sıçrama yüksekliğinin %8,5 ve dinamometre ile ölçülen diz ekstansör kuvvetinin %3,7 oranında arttığını, ancak kazanılan kuvvetin antrenmanlardan sonraki 2. ayda, detraining döneminde kaybedildiğini belirtmişlerdir.

Çalışmamızda K grupta, 2. ayda ortaya çıkan her iki diz 60<sup>0</sup>/s hızdaki ekstansor zirve kuvvetindeki azalmanın nedeni tam olarak açıklanamamakla birlikte literatürde bu tür çelişkili sonuçların olduğu görülmüştür (Giminiani 2009).

Savelberg ve arkadaşları(2007), 8 hafta boyunca üniversite öğrencileriyle yaptıkları çalışmalarında, farklı frekansta vibrasyon uygulayan grubun, aynı şiddette vibrasyon uygulayan gruba göre skuat jump performansında % 11 oranında artış olduğunu bildirmişlerdir. Kontrol grubunun kuvvet gelişiminde ise % 2 oranında anlamlı değişim olduğunu saptamışlardır. Literatürle benzer olarak, çalışmamızın kontrol grubundaki bu çelişkili sonucun nedeni açıklanamamaktadır.

Çalışmamızda tüm grupların, antrenmanlarla kazanılan ekstansor zirve kuvvet gelişimlerinin, detraining döneminde benzer oranda azaldığı belirlenmiştir. Çalışmamıza benzer olarak, Lemmer ve arkadaşları (2002), 9 hafta süre ile haftada 3 gün uygulanan vibrasyon çalışmasının, genç ve yetişkin erkekler üzerindeki detraining etkilerini inceledikleri çalışmalarında, kuvvetin azalmasında 9 haftalık dönemdeki detraining etkisinin anlamlı olmadığını ancak 31 haftalık dönemdeki detraining etkisinin istatistiksel olarak anlamlı olduğunu bildirmişlerdir. Çalışmamızdan elde edilen bulgular, Lemmer ve arkadaşlarının (2002) yaptıkları çalışma ile benzerlik göstermektedir.

Vibrasyon kullanılarak gerçekleştirilen çalışmalar incelendiğinde farklı protokoller uygulansa da çoğunluğunda performans artışının olduğu gözlenmiş ve TBVA' nın akut çalışmalardan çok, uzun dönemli çalışmalarda kullanılması gerektiği öne sürülmüştür. Kombine antrenman yöntemleriyle yaptığımız çalışmamızda elde ettiğimiz sonuçlar, literatürde vibrasyon kullanılarak yapılan çalışmalarda elde edilen performans artışı sonuçlarıyla benzerlik göstermektedir (Paradis 2007, Bosco 1998, Mahieu 2006, Ronnestad 2004, Colson 2010, Wyon 2010). Çalışmamızdan elde edilen izokinetik ölçüm sonuçlarına göre performans artışının, özellikle vibrasyon çalışan gruplarda daha yüksek olduğu bulunmuştur. Bu sonuç literatürde bildirilen, vibrasyon çalışmaları kuvvet artışı sağlar bilgisini destekler niteliktedir.

Sonuçta, çalışmamızda 8 hafta boyunca uygulanan kombine antrenmanlarla vibrasyonun kuvvet gelişimine etkisi olduğu belirlenmiştir. Bu kuvvet artışı, etkisini hem 4. haftada hem de 8. haftada göstermiş ancak en iyi değerler 8.hafta sonunda elde edilmiştir. Buna karşın antrenmanların bitimini takip eden 4.ayda yapılan ölçümlerde kazanılan kuvvetin kaybedildiği ve kuvvet değerinin antrenman öncesi değerine gerilediği belirlenmiştir.

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## Effects of Tennis on the Postural Alignment and Upper Body Strength Ratio of Dominant and Non-Dominant Limbs in Elite Tennis Players

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### **Abstract**

The understanding that participation in sports and games would have both positive and negative effects in the participant is rife. Tennis, being a physically demanding sport and requiring a great deal of body displacement and movement, prompted the researchers to study its effects on the postural alignment and upper body strength ratio of the dominant and contra-lateral upper-limbs of male elite tennis players. The subjects included 117 professional male tennis players aged 18-40 years, selected on the basis of having either represented their state or country (Nigeria) at national and international competitions. The postural factors that were considered included: the degree of scoliosis; the muscle bulks of dominant and non-dominant upper limbs; the shoulder muscle bulk of the dominant and non-dominant upper-limbs; the values of the biceps/triceps muscle bulk ratio; and the difference in the dominant and non-dominant forearm muscle bulk of the athletes. The data were analyzed using descriptive statistics (percentages) and the pair sample “t” test at 0.05 level of significance. Findings showed that tennis had an effect on the postural alignment of the elite players and also had an effect on the upper body muscle bulk and grip strength ratio. It was recommended that postural alignment should be regularly assessed by medical professionals and exercise scientists to avert debilitating postural problems and to promote the use of compensatory activities to ameliorate postural problems.

### **Araştırma Grubu**

Bu çalışmaya Ankara'daki bir basketbol kulübünün Yıldız Erkek Takımında oynayan 25 sporcu (Yaş: 15.33 ±0.48yıl, Boy: 187.82±1.80 cm, VA: 73.85±14.47kg, Yağ: 10.03±4.82 %) gönüllü olarak katılmıştır. Çalışma Öncesinde sporculara çalışma ile ilgili bilgi verilmiştir.

### **Veri Toplama Araçları**

Çalışmaya katılan katılımcıların boy uzunlukları hassaslık derecesi ± 0.01 mm olan stadiometre (Seca 707, Almanya) ile vücut ağırlığı ölçümleri ise hassaslık derecesi ±0.1 kg

olan elektronik baskülle (Seca 707, Almanya) ölçülmüştür. Tekrarlı Sprint testi (Newtest powertimer 3000 Finlandiya) 3 kapılı telemetrik zamanlayıcı ile alınırken Wingate Anaerobik Güç testi Monark marka bisiklet ergometresi kullanılarak, Skuat ve Aktif Sıçrama performansları sıçrama matı (Newtest powertimer 3000 Finlandiya) kullanılarak tespit edilmiştir.

## İşlem Yolu

Ölçümler 3 farklı günde akşam antrenmanında yapılmış olup 1. Gün katılımcıların tekrarlı sprint yeteneği testi Wadley ve Le Rossignol (1998)'un geliştirdiği test protokolüne göre uygulanmıştır. Bu protokole göre katılımcılar 12x20 metrelik tekrarlı sprint testine katılmışlardır. Katılımcılara aktif toparlanmayı sağlayabilmeleri amacıyla 20 sn dinlenme süresi verilmiştir. Her test öncesinde denekler 5 dakika ısınma koşusu ve 5 dakika germe egzersizleri içeren 10 dakikalık ısınma sürecine katılmışlardır. Testte fotosel kapıları başlangıç, 10. ve 20. metrelere yerleştirilmiş ve her 20 m sprint koşusu sırasında 0-10 m, 10-20 m ve 0-20 m'lik skor zamanları saniye cinsinden kaydedilmiştir. Test sonunda katılımcıların en iyi sprint zamanı, toplam sprint zamanı ve performans düşüş yüzdeleri hesaplanarak kaydedilmiştir. 12x20m Tekrarlı Sprint Performansının belirlenmesi için 3 kapılı elektronik zamanlayıcı kullanılmıştır. 3 günlük dinlenme süresinin ardından 2.gün katılımcılara 10 dk.'lık serbest ısınma zamanı verilmiş ve ısınmanın tamamlanmasının ardından katılımcılara Anaerobik performansın belirlenmesi için Wingate Anaerobik Güç ve Kapasite testi (WanT) ile skuat ve aktif sıçrama testleri uygulanmıştır.

*12x20 Metre Tekrarlı Sprint Testi:* Çalışmaya katılan katılımcıların Tekrarlı Sprint performansı Şekil 1'de gösterilen 12x20m Tekrarlı Sprint Testi ile belirlenmiştir (Wadley ve Le Rossignol, 1998). Bu teste göre katılımcılar 20 saniye dinlenme aralıklarıyla 12x20 metrelik tekrarlı sprint koşu testine katılmışlardır. Testte fotosel kapıları başlangıç, 10. ve 20. Metrelere yerleştirilmiş ve her 20 m sprint koşusu sırasında 0-10m, 10-20m ve 0-20m mesafeleri için koşu zamanları saniye cinsinden kaydedilmiştir. Her test öncesinde katılımcılar 5 dakika jogging ve 5 dakika germe egzersizlerini içeren 10 dakikalık ısınma sürecine katılmıştır. Ayrıca katılımcıların teste alışmalarını sağlamak için ölçümler yapılmadan önceki bir günde örnek bir test yaptırılmıştır. 12x20m tekrarlı sprint testi sonucunda aşağıdaki parametreler hesaplanmıştır:

- En iyi sprint zamanı: 0-10m, 10-20m ve 0-20m mesafeleri için koşulan en iyi derece dik-kate alınmıştır.
- Toplam sprint zamanı: 0-10m, 10-20m ve 0-20m mesafelerinin koşu zamanlarının önce toplamı alınmış ve daha sonra da toplam mesafenin ortalaması hesaplanmıştır.
- Performans Düşüş Yüzdesi: Wadley ve Le Rossignol (1998)'un geliştirdiği aşağıdaki formülle hesaplanmıştır.

Toplam süre x 100

Performans Düşüş Yüzdesi (PDY) = ----- - 100

İdeal Toplam Zaman

Bu formülle 0-10m, 10-20m ve 0-20m için 12 sprint süresinin toplamı, toplam süre olarak alınırken, ideal toplam zaman her bir mesafedeki en iyi derecenin 12 ile çarpımından elde edilen zaman olarak hesaplanmıştır.

*Wingate Anaerobik Güç ve Kapasiye Testi (WAnT):* WAnT testi için modifiye edilmiş bilgisayara bağlı ve uyumlu bir yazılımla çalışan kefeli bir Monark 894 E (İsveç) bisiklet ergometresi kullanılmıştır. Deneklere test başlamadan önce test hakkında ayrıntılı bilgi verildikten sonra bisiklet ergometresinde 60-70 W iş yükünde, 60-70 devir /dk pedal hızında, 4-8 sn süreli 2 veya 3 sprint içeren, 4-5 dakika ısınma protokolü uygulanmıştır. Isınma sonrasında 3-5 dakika pasif dinlenme verilmiştir (Inbar ve ark., 1996). Isınma ve dinlenmeden sonra her denek için sele ve gidon ayarları yapılmıştır. Her denek için farklı kiloda ağırlıklar test sırasında uygulanacak dış direnç olarak bisiklet ergometresinin kefesine yerleştirildikten sonra test başlatılmıştır. Deneklerin dirençsiz olarak mümkün olan en kısa zamanda en yüksek pedal hızına ulaşmaları istenmektedir. Pedal hızı 150 devir/dk'ye ulaştığında kefe otomatik olarak incek ve test başlamıştır. Denekler dış dirence karşı 30 saniye boyunca en yüksek hızda pedal çevirmişlerdir. Tüm güç parametreleri yazılım programı tarafından hesaplanmıştır.

*Dikey Sıçrama Testi:* Aktif Sıçrama: Denekler elleri belinde dik duruş pozisyonundan aşağı doğru hızla çöküp yukarı doğru maksimal kuvveti ile sıçramışlardır. Elde edilen sıçrama yükseklikleri cm cinsinden değerlendirilmiştir. Skuat Sıçrama: Denekler elleri belinde, dizleri 90 derece bükülü aşağıya doğru bir hareketi olmadan maksimal kuvvet uygulayarak yukarı doğru dik olarak sıçramıştır. Elde edilen sıçrama yükseklikleri cm cinsinden değerlendirilmiştir.

## **Verilerin Analizi**

İstatistiksel analizde tüm veriler için tanımlayıcı istatistik (ortalama ve standart sapma) uygulanmıştır. Elde edilen toplam sprint zamanı, en iyi sprint zamanı, sprint performans düşüş yüzdesi, anaerobik performans ve oksijen tüketim kapasitesi arasındaki ilişki, örneklem sayısının 25 kişi ve değişkenlerin sürekli olmasına bağlı olarak Sperman's Rank Order Korelasyonu analizi kullanılmıştır. Tüm istatistiksel işlemler Windows altında çalışan SPSS 18.0 paket programında yapılmış ve yanılma düzeyi 0,05 olarak alınmıştır.

## **BULGULAR**

20m Tekrarlı Sprint yeteneği testi sonucu elde edilen performans değerleri ile WAnT, Skuat ve Aktif sıçrama testlerinden elde edilen performans değerleri arasındaki ilişkiler Sperman's Rank Order Korelasyon analizi kullanılarak belirlenmiştir. Sperman's Rank Order Korelasyon analizi sonucunda elde edilen bulgular aşağıda sunulmuştur.



**Tablo 1.** Tekrarlı Sprint Yeteneđi Ölçümleri ile Anaerobik performans testi deđerleri analizi sonuçları

<b>Tekrarlı Sprint Testi</b>	<b>Squat Sıçrama</b>	<b>Aktif Sıçrama</b>
<b>En iyi sprint zamanı (sn)</b>		
0 - 10m	r =-0,462* p =0,035	
10 - 20m	r =-0,532* p =0,013	
0 - 20m	r =-0,487* p =0,025	
<b>Toplam sprint zamanı (sn)</b>		
0-10m	r =-0,448* p=0,042	
10m-20m	r =-0,538* p=0,012	r =-0,643* p =0,010
0-20m	r =-0,563* p=0,008	r =-0,511* p =0,016
<b>Performans düşüş yüzdesi (%)</b>		
0-10m		r =-0,544* p =0,010
10-20m		r =-0,586* p=0,005
0-20m		r =-0,550* p=0,001

Yapılan Pearson Moment Korelasyon analizi sonucunda skuat sıçrama deđerleri ile 0-10m EİSZ deđerleri ( $r = -.462$ ;  $p=.035$ ), 10-20m EİSZ ( $r = -.532$ ;  $p=.013$ ) ve 0-20m EİSZ deđerleri ( $r = -.487$ ;  $p=.025$ ) arasında ve Skuat Sıçrama deđerleri ile 0-10m TSZ ( $r = -.448$ ;  $p=.042$ ), 10-20m TSZ ( $r = -.538$ ;  $p=.012$ ) ve 0-20m TSZ ( $r = -.563$ ;  $p=.008$ ) deđerleri arasında negatif yönlü istatistiksel olarak anlamlı bir ilişki bulunmuştur. Bu sonuçlara benzer olarak aktif sıçrama ile 10-20m TSZ arasında ( $r = -.643$ ;  $p=.010$ ), 0-20m TSZ arasında ( $r = -.511$ ;  $p=.016$ ) ve 0-10m PDY ( $r = -.544$ ;  $p=.010$ ), 10-20m PDY ( $r = -.586$ ;  $p=.005$ ) ve 0-20m PDY ( $r = -.550$ ;  $p=.001$ ) arasında istatistiksel olarak anlamlı ilişki bulunmuştur. Yapılan istatistikî analizler sonucunda WANt ile TST deđişkenleri arasında anlamlı bir ilişki olmadığı tespit edilmiştir. ( $p>.05$ ).

## TARTIŞMA

Bu çalışma yıldız basketbolcularda anaerobik performans ve tekrarlı sprint yeteneği arasındaki ilişkiyi incelemek amacıyla yapılmıştır. Yazılı kaynaklara bakıldığında TST ve anaerobik performans arasında çalışmaya rastlamak mümkündür fakat yıldız basketbolcular üzerinde yapılan çalışma bulunmamaktadır. Bu çalışmanın temel bulgusu TST ile Skuat ve aktif sıçrama performansı arasında bir ilişkinin olduğunu göstermektedir.

Yapılan çalışma sonucunda TST ile WAnT arasında ilişkiye rastlanmamıştır. Bu sonucun çıkmasındaki temel nedenlerin uygulanan testler, uygulanış biçimleri ve deneklerin performans düzeyleri ile yakından ilişkili olabileceğini söylemek mümkündür. Bu bulguyu destekleyen ve desteklemeyen çalışmaları gözlemlemek mümkündür. Coetzee ve Adendorff (2002) tekrarlı sprint yeteneğinin aerobik ve anaerobik egzersiz metabolizmasıyla ilişkisini 19 yaş altı 8 rugby oyuncusunda incelemişler ve Performans Düşüş yüzdesi ile Relatif Ortalama Güç arasında yüksek düzeyde ilişki tespit etmişlerdir ( $p<0,05$ ). Yine aynı çalışmada yapılan çoklu regresyon analizi sonucunda  $VO_{2maks}$ , Relatif Ortalama Güç ve Maksimum Güçte ki değişimin en iyi sprint zamanında ki değişimle %97 oranında açıklanabileceğini göstermişlerdir. Ancak, sadece  $VO_{2maks}$  ve relatif ortalama güç değişkenleri arasında istatistiksel olarak yüksek düzeyde anlamlı bir ilişki bulunmuştur ( $p<0,05$ ).

Mendez, Hamer ve Bishop (2008) yaptıkları çalışmada her bireyin anaerobik güç kapasitesini, maksimum anaerobik gücünü ve tekrarlı sprint testi sırasında oluşan yorgunluk arasındaki ilişkiyi belirlemeye çalışmışlardır. Çalışmaya rekreatif olarak sporla ilgilenen 8 sağlıklı erkek katılmıştır. Maksimum ve ortalama güç çıkışları 6 saniyelik devrelerle ölçülmüştür. Anaerobik güç kapasitesini belirlemek için ise 6 saniyelik bisiklet sprintleri dört farklı zamanda ve en az 1 gün arayla yapılmıştır. Tekrarlı sprint performansını ölçmek için ise, denekler standart ısınma ve 4 dakika bisiklet egzersizinden sonra 30s dinlenmelerle 10x6 saniyelik sprintler yapmışlardır. Çalışma sonucunda da deneklerden en çok anaerobik güç kapasitesine sahip olanların 10x6 saniye sprint boyunca daha fazla güç kaybına uğradıkları saptanmıştır. Yüksek anaerobik güç çıktısına sahip sporcuların mevcut enerji depolarını daha çabuk tüketeceklerini ve tekrarlı sprintlerde daha çabuk güç kaybedecekleri söylemek mümkündür. Bu çalışmanın bulgularından elde edilen 0-10m ve 0-20m PDY ile MG ve RMG arasında negatif yönlü ilişkinin saptanması bu durumun açıklayıcısı olabilir.

## SONUÇ

Sonuç olarak, analiz sonuçları anaerobik performans özellikleri ile tekrarlı sprint yeteneği arasında istatistiksel olarak anlamlı ilişkili olduğunu göstermektedir.

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## Relationship Between Anaerobic Performance and Repeated Sprint Ability in Youth Basketball Players

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### **ABSTRACT**

In many sports short bursts of high intensity power production play a major role in performance especially in team sports like football and basketball. Therefore, anaerobic and repeated sprint performances are very crucial and fundamental activities for these types of sports. Hence, the purpose of the present study was to examine the relationship between anaerobic performance and repeated sprint ability in junior basketball players. Twenty-five male junior basketball players participated in this study voluntarily (Mage: 15.33 ±0.48yrs, Mheight: 187.82±1.80 cm, MBW: 73.85±14.47kg, Mfat: 10.03±4.82 %). Vertical jump of basketball players was determined by squat and counter-movement jump tests and Anaerobic fitness was determined by a Wingate anaerobic power test (WAnT). Repeated sprint ability (RSA) was determined by a 12×20m running repeated sprint ability test with 20s intervals. Pearson Product Moment Correlation analysis indicated significant negative correlations between anaerobic power of squat jump and best sprinting time at 0-10m (r= -.462; p=.035), 10-20m (r= -.532; p=.013), 0-20m (r= -.487; p=.025), total time 0-10m (r=-.448; p=.042), 10-20m (r= -.538; p=.012) and 0-20m (r=-.563; p=.008). In addition anaerobic power of counter-movement jump was significantly correlated with total time at 10-20m (r=-.643; p=.010), 0-20m (r=-.511; p=.016), performance decrement at 0-10m (r=-.544; p=.010), 10-20m (r=-.586; p=.005) and 0-20m (r=-.550; p=.001). No significant correlation was observed between WAnT and repeated sprint ability tests (p>.05). As a conclusion it can be said that anaerobic power is highly related with best time, total time and performance decrement in repeated sprint ability, however is not related with Wingate anaerobic power test.

*Key Words: anaerobic performance, repeated sprint, youth basketball players*

### **GİRİŞ**

Basketbol maçları ve antrenmanları esnasında sporcular sıçrama, sprint, ani dönüş, bire bir mücadele gibi şiddeti yüksek hareketleri tekrarlı bir biçimde ve çok kısa dinlenme aralıkları ile defalarca uygulamak zorunda kalırlar (Lyons ve ark., 2006; Caprino ve ark., 2012). Basketbolda yapılan zaman- hareket analizleri sonuçlarına göre maç başına farklılaşan hareket

ortalaması erkeklerde  $1050\pm 51$ , kadınlarda  $652\pm 128$  olduğu (Ben Abdelkerim ve El Ati, 2007; Matthew ve Delexstrat, 2009) ve bu hareketlerin 21-39sn'de bir tekrarlanan en az 4 sn süresince yapılan sprintlerden oluştuğu, maç süresince bu sprintlerin ortalama  $105\pm 52$  defa erkeklerde,  $55\pm 11$  kadınlarda yapıldığı rapor edilmiştir. Ayrıca, kalp atım hızı, laktat konsantrasyonu ve çalışma dinlenme döngülerindeki artış ve yetersizliklere bağlı olarak özellikle 2.Periyodun sonlarında ve maç sonunda yüksek şiddetli egersiz performansında düşüş olduğu gözlemlenmektedir (Ben Abdelkerim ve ark., 2010; Matthew ve Delexstrat, 2009; Caprino ve ark.2012). Özellikle Basketbol gibi takım sporlarında ve tekrarlı sprintlerin fazlaca kullanıldığı tüm branşlarda yorgunluk branşa özgü tekniği ve şiddetli tekrar eden aktiviteleri olumsuz olarak etkilemektedir. Cortis ve Arkadaşlarının (2011) yıldız basketbolcular üzerinde yaptığı çalışmada maç öncesi ve maç sonrası 10m sprint performansında anlamlı düşüşler olduğu gözlemlenmiştir. Basketbolcuların performanslarının ve yorgunluk durumlarının belirlenmesi amacı ile çeşitli saha ve laboratuvar testleri kullanılmaktadır. Uygulanan bu testler sporcuların yeteneklerini belirlemek, kuvvet ve güç gelişimi sağlamak, bireyselleştirilen antrenman programı için bilgi sağlamak, toparlanma hızlarını ve sürelerini ortaya koyabilmek ve antrenman döneminin bir sonucu olan fiziksel özelliklerdeki değişimleri belirlemek için antrenör ve spor bilimcilere yardım etmektedir (Lemmick ve ark.,2004; Boraczysnki, ve Urniaz, 2008). Sporcuların aerobik ve anaerobik performans düzeylerinin belirlenmesi gelişimleri ve daha üst düzeyde verim ortaya çıkarabilmek adına önemlidir. Kısa dinlenme periyotlarıyla desteklenen ve maksimum sprint eforunun üretilmesini sağlayan bir yetenek olarak tanımlanan tekrarlı sprint yeteneği günümüzde futbol, basketbol veya rugby gibi takım sporlarında maç sırasındaki aktivitelerin küçük bir kısmını temsil ediyor olsa da, bir maçın sonucunu etkileyebilecek düzeyde olabilmektedir (Oliver ve ark., 2007). Basketbol gibi çok hızlı ve uzun süre aralıksız oynanan sporlar sırasında sporcular birçok kez tekrarlı sprint yapmak zorunda kalmaktadır, bu yüzden sporcular tekrarlı sprint yeteneğini geliştirmelidir. Tekrarlı sprint yeteneği; kısa dinlenme periyotları ile desteklenen ve maksimum sprint eforunun tekrar üretimini sağlayan bir yetenektir ve birçok takım sporu için önemli bir kondisyon bileşeni olarak kabul edilmektedir (Hill-hass ve ark., 2007). Literatürdeki birçok çalışmada görülebileceği gibi tekrarlı sprint yeteneği; maksimal oksijen tüketimi (Aziz ve Chuan, 2004; Bishop ve ark., 2004; Bishop ve Edge, 2006; Krstrup ve ark., 2006; Yılmaz ve ark., 2009) oksijen tüketim ( $VO_2$ ) kinetikleri (De Souza ve ark., 2006), hidrojen iyon tampon kapasitesi (Bishop ve Edge, 2006; Bishop ve ark., 2004) ve kas glikojen konsantrasyonu gibi değişik birçok faktöre bağlıdır (Ratel ve ark., 2004). Bu doğrultuda bu çalışmanın amacı yıldız basketbolcularda anaerobik performans ve tekrarlı sprint yeteneği arasındaki ilişkiyi incelemektir.

## **YÖNTEM**

### **Araştırma Grubu**

Bu çalışmaya Ankara'daki bir basketbol kulübünün Yıldız Erkek Takımında oynayan 25 sporcu (Yaş:  $15.33 \pm 0.48$ yıl, Boy:  $187.82 \pm 1.80$  cm, VA:  $73.85 \pm 14.47$ kg, Yağ:  $10.03 \pm 4.82$  %) gönüllü olarak katılmıştır. Çalışma Öncesinde sporculara çalışma ile ilgili bilgi verilmiştir.

## Veri Toplama Araçları

Çalışmaya katılan katılımcıların boy uzunlukları hassaslık derecesi  $\pm 0.01$  mm olan stadiometre (Seca 707, Almanya) ile vücut ağırlığı ölçümleri ise hassaslık derecesi  $\pm 0.1$  kg olan elektronik baskülle (Seca 707, Almanya) ölçülmüştür. Tekrarlı Sprint testi (Newtest powertimer 3000 Finlandiya) 3 kapılı telemetrik zamanlayıcı ile alınırken Wingate Anaerobik Güç testi Monark marka bisiklet ergometresi kullanılarak, Skuat ve Aktif Sıçrama performansları sıçrama matı (Newtest powertimer 3000 Finlandiya) kullanılarak tespit edilmiştir.

## İşlem Yolu

Ölçümler 3 farklı günde akşam antrenmanında yapılmış olup 1. Gün katılımcıların tekrarlı sprint yeteneği testi Wadley ve Le Rossignol (1998)'un geliştirdiği test protokolüne göre uygulanmıştır. Bu protokole göre katılımcılar 12x20 metrelik tekrarlı sprint testine katılmışlardır. Katılımcılara aktif toparlanmayı sağlayabilmeleri amacıyla 20 sn dinlenme süresi verilmiştir. Her test öncesinde denekler 5 dakika ısınma koşusu ve 5 dakika germe egzersizleri içeren 10 dakikalık ısınma sürecine katılmışlardır. Testte fotosel kapıları başlangıç, 10. ve 20. metrelere yerleştirilmiş ve her 20 m sprint koşusu sırasında 0-10 m, 10-20 m ve 0-20 m'lik skor zamanları saniye cinsinden kaydedilmiştir. Test sonunda katılımcıların en iyi sprint zamanı, toplam sprint zamanı ve performans düşüş yüzdeleri hesaplanarak kaydedilmiştir. 12x20m Tekrarlı Sprint Performansının belirlenmesi için 3 kapılı elektronik zamanlayıcı kullanılmıştır. 3 günlük dinlenme süresinin ardından 2.gün katılımcılara 10 dk.'lık serbest ısınma zamanı verilmiş ve ısınmanın tamamlanmasının ardından katılımcılara Anaerobik performansın belirlenmesi için Wingate Anaerobik Güç ve Kapasite testi (WanT) ile skuat ve aktif sıçrama testleri uygulanmıştır.

*12x20 Metre Tekrarlı Sprint Testi:* Çalışmaya katılan katılımcıların Tekrarlı Sprint performansı Şekil 1'de gösterilen 12x20m Tekrarlı Sprint Testi ile belirlenmiştir (Wadley ve Le Rossignol, 1998). Bu teste göre katılımcılar 20 saniye dinlenme aralıklarıyla 12x20 metrelik tekrarlı sprint koşu testine katılmışlardır. Testte fotosel kapıları başlangıç, 10. ve 20. Metrelere yerleştirilmiş ve her 20 m sprint koşusu sırasında 0-10m, 10-20m ve 0-20m mesafeleri için koşu zamanları saniye cinsinden kaydedilmiştir. Her test öncesinde katılımcılar 5 dakika jogging ve 5 dakika germe egzersizlerini içeren 10 dakikalık ısınma sürecine katılmıştır. Ayrıca katılımcıların teste alışmalarını sağlamak için ölçümler yapılmadan önceki bir günde örnek bir test yaptırılmıştır. 12x20m tekrarlı sprint testi sonucunda aşağıdaki parametreler hesaplanmıştır:

- En iyi sprint zamanı: 0-10m, 10-20m ve 0-20m mesafeleri için koşulan en iyi derece dikkate alınmıştır.
- Toplam sprint zamanı: 0-10m, 10-20m ve 0-20m mesafelerinin koşu zamanlarının önce toplamı alınmış ve daha sonra da toplam mesafenin ortalaması hesaplanmıştır.
- Performans Düşüş Yüzdesi: Wadley ve Le Rossignol (1998)'un geliştirdiği aşağıdaki formülle hesaplanmıştır.

Toplam süre x 100

Performans Düşüş Yüzdesi (PDY) = ----- - 100

İdeal Toplam Zaman

Bu formülle 0-10m, 10-20m ve 0-20m için 12 sprint süresinin toplamı, toplam süre olarak alınırken, ideal toplam zaman her bir mesafedeki en iyi derecenin 12 ile çarpımından elde edilen zaman olarak hesaplanmıştır.

*Wingate Anaerobik Güç ve Kapasiye Testi (WAnT):* WAnT testi için modifiye edilmiş bilgisayara bağlı ve uyumlu bir yazılımla çalışan kefeli bir Monark 894 E (İsveç) bisiklet ergometresi kullanılmıştır. Deneklere test başlamadan önce test hakkında ayrıntılı bilgi verildikten sonra bisiklet ergometresinde 60-70 W iş yükünde, 60-70 devir /dk pedal hızında, 4-8 sn süreli 2 veya 3 sprint içeren, 4-5 dakika ısınma protokolü uygulanmıştır. Isınma sonrasında 3-5 dakika pasif dinlenme verilmiştir (Inbar ve ark., 1996). Isınma ve dinlenmeden sonra her denek için sele ve gidon ayarları yapılmıştır. Her denek için farklı kiloda ağırlıklar test sırasında uygulanacak dış direnç olarak bisiklet ergometresinin kefesine yerleştirildikten sonra test başlatılmıştır. Deneklerin dirençsiz olarak mümkün olan en kısa zamanda en yüksek pedal hızına ulaşmaları istenmektedir. Pedal hızı 150 devir/dk'ye ulaştığında kefe otomatik olarak inecek ve test başlamıştır. Denekler dış dirence karşı 30 saniye boyunca en yüksek hızda pedal çevirmişlerdir. Tüm güç parametreleri yazılım programı tarafından hesaplanmıştır.

*Dikey Sıçrama Testi:* Aktif Sıçrama: Denekler elleri belinde dik duruş pozisyonundan aşağı doğru hızla çöküp yukarı doğru maksimal kuvveti ile sıçramışlardır. Elde edilen sıçrama yükseklikleri cm cinsinden değerlendirilmiştir. Skuat Sıçrama: Denekler elleri belinde, dizleri 90 derece bükülü aşağıya doğru bir hareketi olmadan maksimal kuvvet uygulayarak yukarı doğru dik olarak sıçramıştır. Elde edilen sıçrama yükseklikleri cm cinsinden değerlendirilmiştir.

### **Verilerin Analizi**

İstatistiksel analizde tüm veriler için tanımlayıcı istatistik (ortalama ve standart sapma) uygulanmıştır. Elde edilen toplam sprint zamanı, en iyi sprint zamanı, sprint performans düşüş yüzdesi, anaerobik performans ve oksijen tüketim kapasitesi arasındaki ilişki, örneklem sayısının 25 kişi ve değişkenlerin sürekli olmasına bağlı olarak Sperman's Rank Order Korelasyon analizi kullanılmıştır. Tüm istatistiksel işlemler Windows altında çalışan SPSS 18.0 paket programında yapılmış ve yanılma düzeyi 0,05 olarak alınmıştır.

### **BULGULAR**

20m Tekrarlı Sprint yeteneği testi sonucu elde edilen performans değerleri ile WAnT, Skuat ve Aktif sıçrama testlerinden elde edilen performans değerleri arasındaki ilişkiler Sperman's Rank Order Korelasyon analizi kullanılarak belirlenmiştir. Sperman's Rank Order Korelasyon analizi sonucunda elde edilen bulgular aşağıda sunulmuştur.

**Tablo 1.** Tekrarlı Sprint Yeteneđi Ölçümleri ile Anaerobik performans testi deđerleri analizi sonuçları

<b>Tekrarlı Sprint Testi</b>	<b>Squat Sıçrama</b>	<b>Aktif Sıçrama</b>
<b>En iyi sprint zamanı (sn)</b>		
0 - 10m	r =-0,462* p =0,035	
10 - 20m	r =-0,532* p =0,013	
0 - 20m	r =-0,487* p =0,025	
<b>Toplam sprint zamanı (sn)</b>		
0-10m	r =-0,448* p=0,042	
10m-20m	r =-0,538* p=0,012	r =-0,643* p =0,010
0-20m	r =-0,563* p=0,008	r =-0,511* p =0,016
<b>Performans düşüş yüzdesi (%)</b>		
0-10m		r =-0,544* p =0,010
10-20m		r =-0,586* p=0,005
0-20m		r =-0,550* p=0,001

Yapılan Pearson Moment Korelasyon analizi sonucunda skuat sıçrama deđerleri ile 0-10m EİSZ deđerleri ( $r = -.462$ ;  $p = .035$ ), 10-20m EİSZ ( $r = -.532$ ;  $p = .013$ ) ve 0-20m EİSZ deđerleri ( $r = -.487$ ;  $p = .025$ ) arasında ve Skuat Sıçrama deđerleri ile 0-10m TSZ ( $r = -.448$ ;  $p = .042$ ), 10-20m TSZ ( $r = -.538$ ;  $p = .012$ ) ve 0-20m TSZ ( $r = -.563$ ;  $p = .008$ ) deđerleri arasında negatif yönlü istatistiksel olarak anlamlı bir ilişki bulunmuştur. Bu sonuçlara benzer olarak aktif sıçrama ile 10-20m TSZ arasında ( $r = -.643$ ;  $p = .010$ ), 0-20m TSZ arasında ( $r = -.511$ ;  $p = .016$ ) ve 0-10m PDY ( $r = -.544$ ;  $p = .010$ ), 10-20m PDY ( $r = -.586$ ;  $p = .005$ ) ve 0-20m PDY ( $r = -.550$ ;  $p = .001$ ) arasında istatistiksel olarak anlamlı ilişki bulunmuştur. Yapılan istatistikî analizler sonucunda WAnT ile TST deđişkenleri arasında anlamlı bir ilişki olmadığı tespit edilmiştir. ( $p > .05$ ).



## TARTIŞMA

Bu çalışma yıldız basketbolcularda anaerobik performans ve tekrarlı sprint yeteneği arasındaki ilişkiyi incelemek amacıyla yapılmıştır. Yazılı kaynaklara bakıldığında TST ve anaerobik performans arasında çalışmaya rastlamak mümkündür fakat yıldız basketbolcular üzerinde yapılan çalışma bulunmamaktadır. Bu çalışmanın temel bulgusu TST ile Skuat ve aktif sıçrama performansı arasında bir ilişkinin olduğunu göstermektedir.

Yapılan çalışma sonucunda TST ile WAnT arasında ilişkiye rastlanmamıştır. Bu sonucun çıkmasındaki temel nedenlerin uygulanan testler, uygulanış biçimleri ve deneklerin performans düzeyleri ile yakından ilişkili olabileceğini söylemek mümkündür. Bu bulguyu destekleyen ve desteklemeyen çalışmaları gözlemlemek mümkündür. Coetsee ve Adendorff (2002) tekrarlı sprint yeteneğinin aerobik ve anaerobik egzersiz metabolizmasıyla ilişkisini 19 yaş altı 8 rugby oyuncusunda incelemişler ve Performans Düşüş yüzdesi ile Relatif Ortalama Güç arasında yüksek düzeyde ilişki tespit etmişlerdir ( $p<0,05$ ). Yine aynı çalışmada yapılan çoklu regresyon analizi sonucunda  $VO_{2maks}$ , Relatif Ortalama Güç ve Maksimum Güçte ki değişimin en iyi sprint zamanında ki değişimle %97 oranında açıklanabileceğini göstermişlerdir. Ancak, sadece  $VO_{2maks}$  ve relatif ortalama güç değişkenleri arasında istatistiksel olarak yüksek düzeyde anlamlı bir ilişki bulunmuştur ( $p<0,05$ ).

Mendez, Hamer ve Bishop (2008) yaptıkları çalışmada her bireyin anaerobik güç kapasitesini, maksimum anaerobik gücünü ve tekrarlı sprint testi sırasında oluşan yorgunluk arasındaki ilişkiyi belirlemeye çalışmışlardır. Çalışmaya rekreatif olarak sporla ilgilenen 8 sağlıklı erkek katılmıştır. Maksimum ve ortalama güç çıkışları 6 saniyelik devrelerle ölçülmüştür. Anaerobik güç kapasitesini belirlemek için ise 6 saniyelik bisiklet sprintleri dört farklı zamanda ve en az 1 gün arayla yapılmıştır. Tekrarlı sprint performansını ölçmek için ise, denekler standart ısınma ve 4 dakika bisiklet egzersizinden sonra 30s dinlenmelerle 10x6 saniyelik sprintler yapmışlardır. Çalışma sonucun da deneklerden en çok anaerobik güç kapasitesine sahip olanların 10x6 saniye sprint boyunca daha fazla güç kaybına uğradıkları saptanmıştır. Yüksek anaerobik güç çıktısına sahip sporcuların mevcut enerji depolarını daha çabuk tüketeceklerini ve tekrarlı sprintlerde daha çabuk güç kaybedecekleri söylemek mümkündür. Bu çalışmanın bulgularından elde edilen 0-10m ve 0-20m PDY ile MG ve RMG arasında negatif yönlü ilişkinin saptanması bu durumun açıklayıcısı olabilir.

## SONUÇ

Sonuç olarak, analiz sonuçları anaerobik performans özellikleri ile tekrarlı sprint yeteneği arasında istatistiksel olarak anlamlı ilişkili olduğunu göstermektedir.

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## KNOWLEDGE OF ANTI-AGING AND EXERCISE PARTICIPATION AMONG THE MEMBERS STAFF OF UNIVERSITY OF IBADAN

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### Abstract

*This study is a survey to find out the knowledge of anti-aging and the level of exercise participation among the members of staff of the University of Ibadan. The descriptive survey research design was employed for the study while self-structured modified questionnaire was used to elicit information from the respondents. The purposive and simple random sampling techniques were used to select the sample from the target population. The total of two hundred and nineteen (219) respondents participated in the study forming the sample size for the study. The statistical tools used for the study includes the mean, standard deviation, percent counts, frequency and chi-square cross tabulation. The hypothesis for the study was tested at 0.05 level of significance. The result of the findings ( $p=.018$ ) showed that there is a significant level of association between the knowledge of anti-aging and level of exercise participation among the members of staff of University of Ibadan.*

### Introduction

Aging is an inevitable phenomenon, which comes with wrinkles declined physical capacity, memory loss, mental and logical sharpness, weakening of the function of sense organs and incoming of diseases like cardiac problems, diabetes, blood pressure, arthritis, etc (Jaiyesimi, 2009). Aging has been viewed as the steady decline of organic function and body systems. It was also described by Gavrilov (2002), as a summary term for a set of processes which contribute to health deterioration and ultimately to death with the passage of time. Shephard (1991) referred to aging as the biological process of growing older in a deleterious sense also known as 'senescence'. Many diseases associated with growing older can be avoided, controlled or even eliminated with regular exercise. the concept of anti-aging addresses how to prevent, slow or reverse the effects of aging and help people live longer, healthier, happier lives (Jaiyesimi, 2009). Amongst the list of therapies available for anti-aging lifestyle; physical exercise and caloric restriction prove to be less expensive and highly effective (Paola, 2003). The use of surgery, lotions, acupuncture, hair coloring and cosmetics only treat the symptoms of aging and not the underlying cause of the problem.

When studying knowledge of aging, it has been found that most people know little about aging and their knowledge is based on misconceptions (Palmore, 1998). Older adults have lived through extraordinary events and learning about aging can be exceptionally informative (Rees, King, & Schmitz, 2009). Viewing older adults in a positive manner is seeing them not only for their capabilities but also understanding them in a sociological, cultural and psychological way (Rees, King, & Schmitz, 2009). Due to longer life expectancy, there has been inevitable increase in the older adult population. Therefore, there is a crucial need for

individuals to be educated on the aging process and a need to possess a positive attitude towards aging (Cottle & Glover, 2007).

Many studies suggest that chronic adaptation to physical activity can attenuate markedly the decrements in exercise capacity and physiologic morphology and function that would otherwise occur with aging, with the notable exception of maximal heart rate stimulation in the aging heart (Scarpace, Lowenthal & Tumer, 1992). Although the peak exercise workload achievable in adult is always lower in aged individuals, the cardiovascular and musculoskeletal adaptations to chronic aerobic exercise enable the trained individual to sustain higher sub-maximal workloads with less of a cardiorespiratory response (heart rate, blood pressure, and dyspnea) and less overall and musculoskeletal fatigue (Poulin, Paterson, & Govindasamy, 1992). Apart from peak athletic performance, the adaptations to cardiovascular training can overcome much of the day-to-day functional limitations that might otherwise be imposed by the physiologic changes of aging and disuse (Bouchard, 2001).

## **Materials and Methods**

### **Participants**

A total of 219 members of academic staff of the University of Ibadan, Nigeria participated in the survey in proportion of 133 male (60.7%) and 86 female (39.3%) whose age ranges from 30 and above are consecutively recruited for this study. The setting for this study was the ancient city of Ibadan, Nigeria. Ibadan is a semi-urban community in South-western Nigeria.

### **Procedures**

A self-structure modified questionnaire was used to collect information on the knowledge of anti-aging and level of exercise participation by the members of staff of University of Ibadan, Nigeria.

### **Methodology**

The study was to find out the level of knowledge of anti-aging and exercise participation among the University staff members. Descriptive survey research method was used for the study. The population comprised the staff members of University of Ibadan, Nigeria. Proportionate and simple random sampling techniques were used to select the respondents for the study. A total of two hundred and nineteen (219) respondents made up of adult male and female staff members were used for the study. The instrument was validated through construct and content validity. Reliability of the instrument ( $r_s=0.82$  correlation coefficient) was done through a pilot study of test re-test method on the sample of neutral population outside the study area. The instrument was administered personally by the researcher. The result was tabulated and coded appropriately using both descriptive and inferential statistics analysis using chi-square cross tabulation ( $X^2$ ) statistics to test the hypotheses at 0.05 alpha level.

### **Procedure for Data Analysis**

Descriptive statistics of frequency, percent counts, mean and standard deviation were used to summarize the data collected. Chi-square cross tabulation was used to test the level of significance of exercise participation by the respondents. The significance level was set at 0.05 alpha level.

## Results

TABLE 1  
FREQUENCY DISTRIBUTION OF RESPONDENTS BY SEX

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	133	60.7	60.7	60.7
female	86	39.3	39.3	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY AGE

TABLE 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 30-34	44	20.1	20.1	20.1
35-39	46	21.0	21.0	41.1
40-44	37	16.9	16.9	58.0
45-49	31	14.2	14.2	72.1
50-54	35	16.0	16.0	88.1
55 and above	26	11.9	11.9	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY MARITAL STATUS

TABLE 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid single	32	14.6	14.6	14.6
married	178	81.3	81.3	95.9
widow ed	8	3.7	3.7	99.5
divorced	1	.5	.5	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY NATURE OF WORK

TABLE 4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid teaching	94	42.9	42.9	42.9
non-teaching	125	57.1	57.1	100.0
Total	219	100.0	100.0	

Table 1 showed that more male participated in the study than female ( $1.4 \pm 0.5$ ). Table 2 showed that 44 respondents (20.1%) fell between the age of 30-34 years, 46 respondents (21%) between the age of 35-39, 37 respondents (16.9%) between the ages of 40-44, 31 respondents (31%) between the age of 45-49, 35 respondents (16%) between the age of 50-54 and 26 respondents between the age of 55 and above in the study ( $3.2 \pm 1.7$ ). Table 3 showed that there are more married respondents in the study than other categories specified ( $1.9 \pm 0.4$ ). Table 4 showed that there are more non-teaching staff in the study than teaching staff ( $1.6 \pm 0.5$ ).

TABLE 5

### QUESTIONS ON KNOWLEDGE OF ANTI-AGING

	<b>KNOWLEDGE ABOUT ANTI-AGING</b>	Yes	No	I don't know	Total
1	Anti-aging strategy means slowing down aging process	151 (68.9%)	27 (12.3%)	41 (18.7%)	219 (100%)
2	Aging process can be slowed down or reversed	105 (47.9%)	71 (32.4%)	43 (19.6%)	219 (100%)
3	Aging affects physical activities status	181 (82.6%)	13 (5.9%)	25 (11.5%)	219 (100%)
4	Anti-aging strategy improves mental and physical performance	131 (59.8%)	40 (18.3%)	48 (21.9%)	219 (100%)

**TABLE 6**  
**QUESTIONS ON EXERCISE PARTICIPATION AND AGING PROCESS**

VO=Very Often O=Often S=Sometimes NAA= Not At All

	<b>EXERCISE PARTICIPATION AND AGING PROCESS</b>	VO	O	S	NAA	Total
14.	I engage in sporting activities for recreation	30 (13.7%)	42 (19.1%)	110 (50.2%)	37 (16.9%)	219 (100%)
15.	I walk a moderate distance for general body fitness	79 (36.7%)	67 (31.2%)	55 (25.6%)	17 (7.9%)	215 (100%)
16.	I do stretching and flexibility exercise	36 (16.6%)	49 (22.6%)	94 (43.3%)	38 (17.5%)	217 (100%)
17.	I participate in domestic chores to exercise my body	80 (36.7%)	65 (29.8%)	50 (22.9%)	23 (10.6%)	218 (100%)
18.	I participate in exercise with fitness instructor	12 (5.9%)	21 (9.8%)	55 (25.6%)	127 (59.1%)	215 (100%)
19.	I engage in light weight lifting to build muscle strength	11 (5.1%)	13 (6.0%)	31 (14.3%)	162 (74.6%)	217 (100%)
20.	I avoid road transportation to stroll to work for general body fitness	22 (10.1%)	22 (10.1%)	98 (45.2%)	75 (34.6%)	217 (100%)
21.	I go to fitness centre for exercise participation	11 (5.1%)	10 (4.6%)	37 (17.1%)	158 (73.1%)	216 (100%)

The cross tabulation  $\chi^2$  observed value was 15.242 ( $p=.018$ ) and the  $\chi^2$  critical value was 12.59, degree of freedom was 6. All questions asked has a level of significance less than 0.05 ( $P<0.05$ ). Therefore, the chi-square cross tabulation analysis showed that there is a significant level of association between the knowledge of anti-aging and level of exercise participation to reverse aging process among the members of staff of university of Ibadan.

### **Discussion**

The findings of the study showed that knowledge of anti-aging is prevalent among the staff members of the university and the chi-square cross tabulation also shows a significant level of association between the knowledge of anti-aging and exercise participation. The study showed that most of the respondents have the knowledge of the anti-aging. From the study, 68.9% of the respondents said yes that anti-aging means slowing down aging process and 47.9% agreed that aging process can be slowed down or reversed. the study also recorded

that 82.6% of the respondents supported that aging affects physical activities status while 59.8% of the respondents agreed that anti-aging strategy improves mental and physical performance. Despite the significant level of relationship reported by the chi-square cross tabulation, 50.2% sometimes engage in sporting activities for recreation, 59.1% do not participate in exercise with fitness instructor, 43.3% sometimes do stretching and flexibility exercise, 45.2% sometimes avoid road transportation to stroll to work for general body fitness while 73.1% do go to fitness centre for exercise participation.

Researchers insist that positive attitudes about the aging population must be introduced early in college education in order to be studied effectively (Funderburk, Damron-Rodrigues, Storms & Solomon, 2006). Knapp and Stubblefield (1998) found that students who enrolled in a gerontology course did, however, gain advanced knowledge of aging. Exercise has been considered as anecdote to health. According to Haastrup and Adeogun (2005), regular physical activity has been found to promote prevention of weight gain and maintenance of weight loss, when combined with diet, better cardio respiratory and muscular fitness, fall prevention, and better cognitive function in older adults. While some studies have shown how aging undermines physical strength and psychomotor performance, others show that exercise can counteract some of the harmful consequences of aging (Udoh, 2000).

### **Conclusion and Recommendation**

Although the health benefits of physical activity for elderly persons are well established, exercise is an underused form of health promotion, especially in the elderly population. Elders face particular challenges in motivating to activity, including illnesses, misinformed belief systems, lack of a peer group influence, accessibility, financial concerns, a sense of disempowerment, and fear of injury. Therefore the institutions that play host to the elderly population need to integrate life support program into the aging health maintenance system that involve physical activity adequate enough to slow down the aging process.

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**PSYCHOSOCIAL FIELDS IN SPORT**  
**ORAL PRESENTATION**

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## Harnessing an Innovation: A Decade on the Field

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### **Abstract**

This presentation tells the story of a curriculum innovation in Singapore - the Games Concept Approach (GCA). Back in 1997 a 'Thinking Schools Learning Nation' educational policy shift was introduced. This policy was intended to address a changing economic landscape where traditional rote learning practices were insufficient in preparing a 21<sup>st</sup> Century workforce. To align itself with this mission, Physical Education refocused its priority towards critical/tactical thinking and created 'The GCA' - a derivative of Teaching Games for Understanding. Premised on Griffin, Mitchell and Oslin's 'Teaching Sport Concepts and Skills' (1997), the authors were invited to conduct a series of workshops in Singapore. Since then, the GCA has been extensively researched from a broad range of pedagogical, psychological and institutional perspectives. Early investigations focused on Student Teachers' needs and university preparation, while interim data was collected on how the GCA was being delivered by qualified teachers at elementary and secondary levels. More recent research measured the motivational climate and its impact on children, but none of the data collected had attempted to validate the extent of implementation across the school spectrum. The GCA was assumed to be healthy through the anecdotal discourse of freshmen who knew of its existence, or had personally experienced it as students, or had been familiarized with it through contract teaching prior to enlistment. The latest survey data indicates a broad interpretation of its shape and a ubiquitous status within the games curriculum.

## The Importance of Sports and Physical Activity on Health and Social Adaptation within the Context of Migration, Elderly and Recreation

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Almanya’da yaşayan Türk kökenli orta yaş ve üzeri erkek göçmenlerde „Göç, Yaşlılık ve Rekreasyon“ üçgeni içinde, spor ve bedensel aktivitenin sağlık ve sosyal uyum için önemini niteliksel olarak sentezlemek, ardından göçmenlere yönelik geliştirilen Alman Spor Sistemine Entegrasyon Programları’nı analiz etmektir. Çalışmanın niteliksel bölümü 2010 yılında Almanya da yaşayan, yaşları 45 ile 75 arasında değişen, 64 Türk kökenli göçmen erkekle yapılmıştır. Araştırma metodu olarak „Yazılı Anket“ uygulanmıştır. Anket altı konu başlığında, toplam 30 soruyla dizayn edilmiştir. Konu başlıkları sırasıyla bireyin „Biyografik Yapısı“, „Göç Geçmişi“, „Serbest Zaman Alışkanlıkları“, „Genel Sağlık Durumu“, „Bedensel Aktivite ve Spor Alışkanlığı“ ve „Kültürlerarası Sosyal Yeterliliği“ olarak sınıflandırılmış ve SPSS 11 İstatistik Programıyla ortalama değerleri analiz edilmiştir. Elde edilen sonuçlar Alman Spor Sistemin de 1990 ile 2011 yılları arasında geliştirilen Sosyal Uyum ve Spor programları ekseninde tartışılarak analiz edilmiştir. 1980’li yıllardan bu yana Alman Olimpiyat Komitesi’nin önderliği ile özellikle Türk ve müslüman göçmenlerin spor sistemine entegrasyonuna yönelik gerçekleştirilen programlar, „Kültürlerarası açılım süreci“nin farklı yorumlanması ve Almanca’nın toplumun her aşamında desteklenmesi politikası, göçmen bireylerden toplumun her alanında Almanca iletişim beklentisi özellikle birinci jenerasyon olarak adlandırılan 50 yaş üstü göçmen grubu içine almayı henüz başaramamıştır. Araştırma grubunun yaklaşık yarısından çoğu sportif anlamda aktif değildir. Ancak çalışma sonucunda „Aktif“ olanların da %56 lık bölümünün herhangi bir Alman Spor Derneği’nde değil de kendi imkanlarıyla spor yaptıkları sonucu ortaya çıkmıştır. Sportif anlamda aktif olan bu grubun % 76’lık bölümü kendilerini „yabancı“ hissettikleri, % 44’lük bölümü ise Almanca bilmedikleri için bu derneklere üye olmadıklarını belirtmiştir.

*Anahtar Kelimeler: Herkes İçin Spor, Rekreasyon, Spor Sosyolojisi*

## Flow in the Kayak - A Canoe Sport

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### **Abstract**

We started our analysis because of the above-mentioned flow in the Kayak participants and in it we analyzed the effect of the Kayak competition on personality from a pedagogical perspective. The training courses used were geared towards stages of the educational process where the personal development, the attitude – and the activity framing could be measured. The sample in the assessment survey consisted of 50 kayak-canoe professional competitors and a control group of 50 non-professionals. To gain data in relation to psychological immune competence the Questionnaire of Psychological Immune-System, PIK (Oláh, 1996) was used. The 16-factor scale attempted to identify the participants' stress-resistance. Each scale had 5 items. The first examination was with the PIK questionnaire, the second examination was with the Flow questionnaire and the third examination was an interview. In the case of educators, there is a significant difference between the feeling of coherence and the strict rules of sports. We found that sports do not support sportsmen/women in the third dimension of education, namely to acquire skills enabling them to act autonomously. Actually, rules were the most important aspect. Keeping this fact in mind indicated that we should develop the educational and pedagogic strategies of training. It was also crucial to make a plan that focuses on enhancing the awareness of the importance of experiencing FLOW as well positive thinking.

## **A Collection of Studies on Personality, Investigating Connections of Decision-Making and Sport**

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### **Introduction**

Personality is described as a condition, the complex of characteristics that distinguishes an individual, the totality of an individual's behavioral and emotional characteristics (Mish, 2004). When describing personality, it may be summarized to state that personality is what is thought as an individual based on behavioral traits. In describing an individual, it can be said, personality is who you think you are. Personality and attitudes are observed behavior as a trait (Ajzen, 2005). Personality traits can be in part a predictor of academic success (Ridgell & Lounsbury, 2004). Personality may also influence decision-making processes. When including the sport environment, identification of personality (trait), success, and how these intermingle, for decision-making models, using personality inventories and other sources makes this a complex issue.

Identifying such dominant themes have appeared in *Research Quarterly for Exercise and Sport (RQES)* over the past 75 years, and can help to explain, and define psychological ideals that include, sportsmanship/moral development, social development/significant others, self-perceptions, attitudes/motivation, modeling/observational learning, emotion/arousal/anxiety, competition/achievement orientations, and gender roles (Weiss, & Gill, 2005). How personality plays a part of a student-athlete, or a professional athlete, decision-making processes make for additional, interesting and informative discussions, especially when an athlete makes a choice to play for a particular coach (Riella, 2002). Time and time again in sport, characteristics of re-emerging yet enduring topics, along with a collection of literature, are reviewed to assist in explanations to assist in validation of the nature and broad purpose of this paper.

### **How Personality is Influenced (Sources)**

Personality behavior using conditional statements, assist in a definition for measuring personality inventory results. Drapkin (2005) describes that motivation may be achieved by using non-verbal model behavior, inspirational posters in a classroom setting and instructional modeling, which is practiced and perceived to set the mood to engage a learner. This can be trans-

ferred to a sport environment, using motivational and inspirational terms, on a playing area and also having instructional modeling practiced by the coach as the teacher to engage the learner-participant. All of this is again dependent on personality defined by Mish (2004), stating how these factors may influence an individual's distinctive trait behavior toward a symbol of an idea. This behavior, may also influence other participant's behavior; therefore, influencing personality. The personality influences a decision-making process.

Personality is a part of the picture that is vulnerable to interpretation. It can be broken down into parts. Drozdov (2005) describes individual aggressive behavior as an urgent social problem. The study is based in Russia; however, it can be transferred to teams, or groups of people in influential organizations who are persuaded to join or feel the need to join groups. This study also describes influences on people who reach a point who are more likely to use indirect forms of aggression. Drozdov (2005) comments that women are likely to use verbal forms of aggression, men are likely to be more physical with their aggression. Such types of aggressive behavior describe what is basically understood as socially unacceptable behavior that usually results in consequences. Nonetheless, it is a behavior familiar with certain geographical and social settings. Also, this behavior can be observed by members of sport organizations who may display this type of behavior based on their decision, and/or on fear of rejection from the group or peer pressure. For example, a team member in particular is defensive when corrected, defensive and ready to fight when approached by other team members or from the opposition team. From a school student-athlete point of this situation, adult teacher/coaches specifically can supply that safe area for learning; provide the temporary safe shelter from these influences, and shape and guide for better more socially acceptable decisions. Drozdov (2005) concludes the study that there exists a number of stereotypes choosing particular models of behaviors, and that the effects of the situation "is conditioned by individual personality characteristics," by gender and age (p. 61). It is possible to conclude from this study, that situations and circumstances influence young people's aggressive behavior. Personality is a perception of what a person may think they are, or have decided, who they are based on the environment. Generally, the formation of behavioral dispositions is caused by influence, perception, fear, or other circumstances.

Storch, Werner, and Storch (2003) mention aggression between intercollegiate athletes receives a good share of media attention regarding these acts in both off and on the field. The authors point to personality societal situations, along gender notions, male physical, and female verbal. Along with noting psychosocial adjustment when examining the association between relational aggression in a population as of the study date, relationships between others, especially between genders, the study uses The Personality Inventory, as a self-report measurement tool having the following subscales: Depression, Alcohol, Borderline Personality Features, Antisocial Personality Features, and Nonsupport. Poor peer relations were indicated from a partial result considering this study on relational aggression. This also ties into another influential mechanism of personality, which could play an integral part of today's sport society. These self-report response statements are in regard to a specific measurement about age and gender.



The Physical Self-Perception Profile was used to assess self-perceptions in the physical domain, to study a self-concept, enlist information on the differences between genders (Asci, 2002). This study examines age and gender differences in the physical self-concept of Turkish late adolescents, using specific multidimensional physical self-concept scales from the profile inventory. This study was also a validation of the process instrument used in a previous study from 1999 by the same author, concludes that gender differences in physical self-concept do not vary with age. This study shows a timeline in personality, and may indicate the establishment toward making decisions early in life, depending on gender. Additionally, Asci (2002) further states, there may be differences between findings of this study to others in the literature, which attributes to different method processes involving the use of multi-aspect of self-concept measures, in its place of exact physical self-concept measures, and to cultural differences.

The decision-making processes affecting personality in a sport environment, are more or less a concern of the self-concept. Asci (2002) found that males score higher than females. This literature investigated age and gender differences at a collegiate level, which also therefore, would affect not only a personality profile inventory, but because of the young adult age, the multidimensional aspects of the study make for a broader set of findings. These findings were inclusive to a specific nationality, Turkish. The study concludes, the physical self-concept fluctuates by gender but not age, and also that these gender variances do not change with age for Turkish youths (Asci, 2002). From this study of Turkish university students, cultural influence, appear to be considered when formulating survey questions.

Personality is flexible, interchangeable, and complex and most vulnerable considering the environment as previously described. It is also used as a deception, such as a personality of an actor. This is not confused with playing a character role, but changing the perception of the personality to fit the role publicly or some other manner. There are interchangeable factors involving if . . . then scenarios, described in literature from Kammrath, Mendoza-Denton, and Mischel (2005). These are complex scenarios, yet may be commonly understood using examples of cause and effect on behavior such as indicated social behavior and personality dispositions. Personality signatures are described to assist in defining personality in trait terms, which signal a person's perception that go beyond the person-to-circumstance differences. If a perception of an individual is already forecasted, then a personality perception is a profile. Competitive daily life perceptions may mislead a person's perception of another. This may be a determined act to motivate a belief. The authors provide data for three motivations such as feelings of caring, desires to impress, and feeling of security. Sport leaders may coordinate needs targeting a specific player using opposites of these defined motivations to bring out specific points of a game situation, a play, or for a rule explanation. Sport coaches or other leaders observe obvious insecurities. Tears indicate a result from the aftermath that involved certain unacceptable behavior observed and corrected. The acceptable was defined for the student-learner, and the impact of the correction was felt emotionally. A smile is contrast to tears, and is an indication of gratitude in receiving a reward of something well done. The display of these feelings may be intended or unintended indications of the individual's sense of security or insecurity.

Kammrath, Mendoza-Denton, and Mischel (2005) further describe personality in a form of target traits, suggesting if . . . then profiles, where motives are interwoven in common personality concepts. Assertions may be included together to, if . . . then profiles that target an agreeableness and extraversion, using research subscales of personality traits. In other words, agreeableness and extraversion are a close link with sociability. Agreeableness is defined as agreeable, ready or willing to agree or consent (Mish, 2004). Extraversion is an act of directing predominantly concerned with and obtaining gratification from what is outside the self; one whose personality is characterized by extroversion (Mish, 2004). The data provides for a decision-making process to attempt and guide goals, using a model maintaining that a person will act warmly because she or he desires to make a good impression. This does not necessarily mean that the person desires to make a good impression because another person recently acted warmly. There is a need to move beyond personality and gain a sense of, 'who' a person is, and to explore additional research.

### **A Possible Personality Trait Study Use**

Ridgell and Lounsbury (2004) describe general intelligence using what they call Big Five personality traits and work drive, to predict academic performance. The Big Five are the following: extraversion, emotional stability, agreeableness, conscientiousness, and openness to experience. These may be summarized as perception coordination with social displays of possible intended behavior for gratification or tendencies toward gratification. Work drive is described by Ridgell and Lounsbury (2004), as a significant predictor for a lasting motivation to prolong time and effort to complete and meet deadlines productively, and achieve success. General intelligence is guided using what this research calls personality measure validating studies, using surveys of student-learners especially represented using a five-point scale range from a response of 'strongly disagree' to 'strongly agree.' The research correlates Work Drive using the following Work Drive scale statements: 'I always try to do more than I have to in my classes,' 'Being a good student means a lot to me,' and 'I would keep going to school even if I didn't have to.' Defining and describing personality using this research assists to form a decision-making dichotomy, and summarize confirmation of previous findings, using specific personality traits for academic performance. Personality enters in responding to such range-type questionnaires, depending on the understanding of the original environment.

Petska (2006) points out in her dissertation that personality has been studied extensively in a traditional sense, or while present in a formal class, discussion, or through ability assessment, without past ties to the latest approaches of academic instruction. This study explores how personality variables contribute to academic success in a nontraditional environment. The author refers to the courses offered by distance correspondence, or other typically unavailable locale courses, such as what is offered at the most convenient location. The type of courses the author mentions are also the very nontraditional classroom type, such as those courses that do not employ specific due dates. Success and failure with these courses are rated very differently as well. As to personality measurements concerning nontraditional academic instruction, the author utilizes the Five Factor Model (FFM), stating this is the 'most-agreed,' upon the

personality model of personality to date. Its five factors neuroticism, extraversion, openness, agreeableness, and conscientiousness- are used to globally describe personality.

To conclude this section, a suggestion is for a proposal to development or additional subscales reflecting the BIG FIVE, along with an additional model, such as the FFM. Some wording alterations to the statements are then necessary to reflect sport leaders utilizing the study data of a nontraditional environment, to attain personality response tendencies, to target for specific reasons why athletes and sport participants, make decisions, considering individual to group/team to environment contexts.

### **Decision-Making in Existing Personality Inventories**

Decisions have been and are commonly and continuously constructed. Student decision-making processes are learned foundations for eventual adult-decision-making. Decision-making is a process, guided with practice shown or obtained by either others or through self-owned learned experiences and techniques. Definitions and explanations may lead toward a better understanding of this process. An understanding of the definitions of personality from a variety of inventories and sources, provide dimensions that underscore the meaning of who makes the decision, and especially how they may have reached that result. The emphasis here is on personality inspired decision-making, from practice to the playing field in theoretical and real terms.

On playing fields of many games and series of games, an athlete or a student in physical education class, makes decisions based upon how they learned and practiced. These are challenges from school age, implementing sport education in a meaningful manner (Gubacs-collins, & Olsen, 2010). From Kammrath, Mendoza-Denton, and Mischel (2005) research use a dichotomy utilizing if . . . then, as a type of personality signature, as interactive, or equally related effects on behavior. People are affected differently depending on their personalities. These behaviors may allow questions that pertain to research on signatures of personality on how they affect and support processing relationships to describe personality and how it affects productivity, such as in a decision-making process. Within decision-making structure and process, school teacher/leaders instruct using constitutional values, managerial responsibility, democratic accountability, along with using and describing moral and ethical practice (Weimer, 2005). Playing field practices account for the purpose of a better playing athlete, to make better decisions, when called upon a demanding situation for an eventual successful outcome either for an individual or team sport. Also, as Loughhead, Hardy, and Eys (2006) state from their article that there is another important source of leadership within teams called, the athletes. The authors conclude the study stating; with particular interests, to study personal characteristics like the endurance of the team and its collective experience, related to the leaders of the team at a higher level or competence level.

Lochbaum, Bixby, and Wang (2007) examine differences in personality in achievement goal profiles for self-reporting physical activity participation. This study offers the opportunity to use the constructs of a self-determination and sport ability beliefs, using 'goal profiling.' A

person's orientation of ego is stated as one who strives to win and that these individuals judge using other-reference standards of success and failure. These concepts have been verified in physical education realms and contexts as well. Personality is one such construct, and is determined from the Motivation Framework section of the study (Lochbaum, Bixby, & Wang, 2007). The participants are university students, divided by gender from ages 18+, with a fifth of the participants being 24 years of age or older. In the results, the differences between male and female, were accomplished for both genders and sets of variables of personality and physical activity, and showed significant differences, on the dependent measures. For males, significant differences were found on four out of the five dependent variables, and these were, neuroticism, extraversion, agreeableness, and conscientiousness. For the female sample, significant differences were found on three out of the five dependent variables, and these were, extraversion, agreeableness and conscientiousness. Subtracting the male sample differences of neuroticism, and examining the respective tables, the other three gender differences mathematically, is not clearly different from each other's results on the personality trait. For any limitations for personality assessment, it may be stated; this research is unique in that it provides direction for future physical assessments considering first, an attendance goal of the actual activity type. To conclude about using this study for further investigation purpose could be that goal profiling is useful when using specific tools enlisted to emphasize a framework for possible major public health concerns.

### **Difficulties for Interpretations**

To ensure reliability taking personality inventories, Arendasy, Sommer, Herle, Schutzhofer, and Inwanschitz (2011) offer an inventory process, which is less threatening to the one taking the inventory while taking it, to diminish faking on the personality test. Using a computer push-button model form of testing, the authors found, a less difficult implementation, which allows respondents to successfully increase test scores. What was particularly interesting, was near the end of this article concerning traffic psychological assessing, the writers predict, where in theoretical risk-taking real-life assessment situations, further discussion is warranted, because successful faking responses still may be prevalent (Arendasy, Sommer, Herle, Schutzhofer, & Inwanschitz, 2011).

Further research about this is by Kubinger (2002) who examines how to clarify literature, about faking in personality inventories. This study considers the clarity of questionnaires, and found that any recommendations for no longer allowing personality inventories would meet serious objections. The alternative is for fresh approaches or procedures hindering any faking (Kubinger, 2002). Revised versions of objective personality tests offering different approaches of measuring personality profiles may be deemed clearer, as long as no self-rated trait is of interest. Objective personality tests are proven difficult to fake, and seem worthy; although Kubinger (2002) suggests additional research is necessary. A combination of how a participant in an athletic venture responds to a statement construction personality inventory for a future survey may assist in indicating how differences acquire decision-making for sport. The results from Kubinger (2002) also demonstrate that a more positive reinforcement to simply

taking the objective type inventory, may improve results. But, again the author mentions that every experiment yielded at least one result, appearing to be faked, even when there were no or minor negative consequences. The theory to findings, make for more possible questions than answers.

### **Decision-Making in a Specific Direction**

The media and the 24/7 sport information technologies have placed emphasis on winning over any other purpose of playing a game (Moore, 2007). But, as Moore (2007) reiterates, that although not all outcome goals are unimportant; a variety of performances, processing outcomes, with a balance of more performance and process goals, should be the athletes' purpose at practice as well as for major competitions. If this takes hold, then other goals fall into their appropriate places. Fun in a very competitive sport arena can still be a part of the performance, the process and eventual outcome-based goal setting for the team/group/individual (Moore, 2007).

According to Moore (2007) goal setting toward skills or tasks to improve individuals, even in team sport concepts, are promoted to improve overall performance promoting a more positive effect on future athletic participation by team members (Moore, 2007). Considering the better overall feeling, each person's personality improves in outlook, no matter the result, which transforms the main idea of the information to conclude that even though you may play the best game of your life and still lose because the other team was just better, in return, you have instilled an outcome-oriented goal setting instrument on talent and effort level of the team/group. The premise using the research by Moore (2007), attempts to address the issues, deciding basically to play by the rules of the game, with the idea of keeping fun in athletic competition, along where players and coaches are allowed to reach their goals. The decision-making process is about placing the rules along with the purpose of the game in context, as a part of the plan. The personalities must decide to play the game by the rules; however, this does not deter a mixture of performance, process and outcome-oriented goals (Moore, 2007). The author further lists from research, criteria for effective goal setting to consider individual personality differences when looking at goal setting.

For a sport leadership role from sport and psychology, Deardorff (2002) mentions, there are individuals in sports who direct specific objectives in sorting tendencies of their opponents, and at the same time, develop strategies to handle their own weaknesses (p. 213). The individual who makes decisions in sport or on a sport team becomes the leader. Deardorff (2002) continues in the same topic of sport and psychology, that coaches and trainers always motivate athletes, help them how to steer past aggressive fans, climate and environmental changes, and guide them through both internal organization situations, including with teammates (p. 213). A coach must be stable to make decisions as a just mediator of team quarrels, and also need to be a rational authoritarian, with compassion and inspiration, all within a one-hour practice at times (Deardorff, 2002, p. 214). The mark of a good coach is that he can maintain this balance while doing what is good for the team, as well as keep a realistic outlook of him-

self and to ensure his players see him as a not only just, but as a capable and proficient leader (p. 214). Finally, Deardorff (2002) includes additional research into measuring this personality objectively, in particularly coaching at a university level, is a challenge. There are other psychological charges for the coach for the overall success of the team program, and these are not only aimed just toward a winning team and making money, increasing the public perception holding onto privately held objectives within the institution such as with the athletic director and school president, at the collegiate level (p. 215). The author includes other research mentioning further leadership obligations at the collegiate level of stress and pressure as a sport leader, who has to mix the alumni power, along with having a pleasant personality, balancing these delicate multi-responsibilities to an even greater role to fill (Deardorff, 2002, p. 215). There are balance pressures dealing with multi-management-leadership roles of the institutional business and educator, director, and mentoring of additional personnel, must be accomplished in an efficient time-managed manner.

An objective of performance is decided, independently of other competitors, and becomes a consideration from one's own previous and varied experiences. Personality toward decision-making goals either from a personal point-of-view, or team point-of-view, could be entered into a questionnaire concerning how well individuals behave with others in a competitive sport environment, in more specific details. Goal setting is performance/task-orientation, processing goals is more important for younger athletes and new participants in a sport to learn the skills of the game first, as Moore (2007) points out.

### **Theoretical Example**

On an educational theory for learning for this particular subject of personality to a student-learner, the dynamics of a democratic process are emphasized and can assist a decision-making process. Personality is influenced by a defined behavior and is explained to a student-learner as the characteristics of specific behavior. Research from Weimer (2005) points out, more accountability can be placed into practice. This theory strives for more proactive outlooks and perspectives in an educational, democratic community of decision-makers. Balance is constructed using a democratic model in this essay, setting out the logic foundations of organizational resources and placing them in the context in what is called neutral competence. As Weimer (2005) suggests, neutral competence indicates, decision-makers are people who qualify themselves without personal agendas. In decision-making, personality must meet the traits of what is asked. A teacher using a basic form of the authors' model institutionalizing neutrally competent policy analysis can model this. Decision-making can be made by and for everyone in a constructive and productive manner. Neutral competence is as Weimer (2005) mentions, not 'value free,' it means identifying certain ideas affecting values held by any members of society. The student-learner needs to accept the necessary procedures by choice and come to school to learn. A teacher or coach models how this can be accomplished in a proper setting. The environment where learning exists is where the most vulnerable personalities are forged toward a positive outlook for not just societal purposes, but may also be the same for a sport participant in any future environment.

This particular personality inventory may assist specific teaching practice, engaging student-learners to become leaders for example, using theories of democracies.

### **Concluding Remarks**

Personality is a complex topic and combining decision-making modes toward productive sport participants needs further investigation. The suggestion is for the survey constructionist to formulate inventory questions, which offer choices (i.e., more than yes or no responses) while exploring social behavior, in a specialized environment. In schools, students who can decide for themselves become constructive and with practice, will be better prepared to survive as progressive citizens. What more can be offered from showing a positive display as an adult, teaching or coaching as a leader for learners in a safe environment? This is what schools are supposed to provide. Decisions are made perhaps without much thought for behavior or personality trait considerations, other than in time or context.

From the sport world, trends in sport and exercise psychology methods vary from scope in scholarship, as well as in research methods (Weiss, & Gill, 2005). *Research Quarterly*, which has been published since 1930, provides a base from earlier days; reflect physical education to broader professional interdisciplinary perspectives in a scholarly approach in the sport and physical activity field. In the article, the authors express and recognize that there is no one study or method that answers complex questions toward sport and exercise behavior. The methods need more current multidimensional, means to follow the trends.

Concerning attitudes and motivation, the authors prescribe a more distant comment toward involvement of individuals who choose to engage or not to engage in particular achievement activities (Weiss, & Gill, 2005). After other broad approaches within the scope of disciplinary boundaries that numerous literature topics and studies agree with each other, the article concludes that the authors' goal, was to document sport and exercise psychology research as represented in the RQES in the period from 1930-2004, reviewing trends in research, designs, and methodologies. This research assists in offering insights within the larger fields of kinesiology and physical education. Attitudes and motivation can be included within behavioral disposition, considering those involved in sport environments.

People have within them, an accumulated number of experiences handed to them from one generation to the next, called genetic endowment, along with their own added and unique life timeline (Ajzen, 2005). These are the things that endure as these are revealed, with an attitude, a personality trait, which makes an impact. Ajzen (2005) concludes about attitudes, personality, and behavior, that we do not hear calls for stopping personality trait approaches, or for constructs concerning attitude, because it is understood there is no simple manner to measure trait or attitude. We cannot generally construct personality inventories or an attitude scale hoping to use it for predicting and explaining any form of behavioral specifics. "In fact, the very distinction between, on the one hand, attitudes and personality traits assessed by means of a questionnaire, and, on the other hand, 'overt' or objective behavior must be discarded" (p. 142). Ajzen (2005) writes that responses used are verbal or nonverbal; resulted from

means of a survey or inventory; behavior reports either self-reports or peer reports are “largely immaterial” (p. 142).

Investigating the variety of resources, the realization from a global perspective about attitudes and personality, along with responses from various literature personality inventories and their focused population samples, there are answers for an objective, computer aided inventory personality trait survey. For the purpose of both theory and findings measuring consistency of behaviors, verbal and nonverbal prediction levels, results toward specific means to an end, and connecting personality trait inventories vary from study to study. Rather, the studies may have intended to find other meaningful outcomes.

From Ajzen (2005), it is no longer necessary to question whether attitudes and personality traits predict behavior, because they do. The author continues that the crucial issue has to do with conditions related with attitudes and personality relationships.

Ajzen (2005) concludes with how convenient it would be, “if we could measure general attitudes or personality traits and use the resulting scores to predict any behavior that appears relevant to the disposition in question. Unfortunately, both theory and empirical findings negate this possibility” (p. 144).

The collection of literature in this paper reflects the complexity of objective inventories, screening for personality traits for decision-making, and this includes sport environments. Specific gender, age, culture, time, and circumstances are without question, able to be measured, using a variety of tools as the research indicates. However, generally wide and various response interpretations are what Ajzen (2005) states, as “poor predictors of specific actions.” The lesson the author indicates refers to here is “the prolonged consistency controversy,” which is difficult to accept (Ajzen, 2005, p. 144). Definite constructs either have not been included in the literature here in this paper, or perhaps are definite in nature for the same consistency level, which Ajzen (2005) mentions.

Investigating personality is a very diverse study. Also, interesting in this collection of literature, were many of the authors’ commenting, how further investigation is necessary, mainly because of the defining aspects of the personality inventories, and their individual findings. Objective personality inventories have advantages to continue personality review, and yet further investigations are warranted.

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## **Knowledge and Utilization of Sports Psychology Principles among Collegiate Coaches of Nigerian Tertiary Institutions**

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### **Abstract**

The study investigated the knowledge and utilization of sports psychology principles among collegiate coaches of Nigerian universities. The sample used for the study 105 coaches from South West Tertiary Institutions of Nigeria. The descriptive survey design was used. The respondents were selected through purposive sampling. Three hypotheses were postulated and tested in the study. A self-structured questionnaire was used to collect data for this study. The test-retest reliability value obtained for the instrument using Pearson Product Moment Correlation Co-efficient was 0.86. Data from the study was analyzed with the use of frequency counts and percentages for demographic data and Chi-square for the variables of the study. Findings of the study revealed that there was a significant level of knowledge of sports psychology principles among collegiate coaches of Nigerian Tertiary Institutions. There was a significant level of effective utilization of personality as a psychological construct among collegiate coaches of Nigerian Tertiary Institutions. There was a significant level of effective utilization of leadership styles as a psychological construct among collegiate coaches of Nigerian Tertiary Institutions. Based on the findings, it is recommended that coaches should take time to study the personality traits of their athletes, as this will enhance smooth working relationships.

## **Sports as a Medium of Improving Quality of Life and Well-Being**

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### **Abstract**

The well-being of individuals and society at large has always been a serious global health concern over decades. Individual and societal health and well-being can be achieved through participation in sports. Hence, sports activities are valuable to individuals and the society in the enhancement of quality of life and well-being. Sports is said to be an organized, competitive, and skillful physical activity requiring commitment and fair play governed by a set of rules or customs. Therefore, this paper discusses sports as a medium of improving quality of life and well-being. It highlights the definition and meaning of sports, the challenge to sports industry, precaution before any sports and physical activities, factors influencing participation in sports, sports for health and well-being, sports and exercise benefits, with a conclusion that sports and physical activity participation can enhance quality of life and consequently improve well-being

## The Effect of Imagery Ability on Hand Muscle Electrical Activity During Grip Task

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### **Abstract**

The aim of this study was to compare the effects of imagery ability (clear mental, vague mental practice) on muscle electrical activity on hand grip task acquisition, retention and transfer. Forty-five girls (18-28 years old) of Islamic Azad University, were selected randomly. Force production in two, clear mental and vague mental modes, were registered using the Encoder Electromyography System. According to the instructions, experimental groups practiced 18 hand grip exercises for each session, three sessions per week, 4 weeks long, in 2 blocks. At the end of the 4th week, an acquisition test, and immediately transfer test at different values (12 kg) were administered and electromyograms were obtained. Three days after the last practice, a retention test, was administered and electromyograms of contractions in the respective ranges were registered. Kolmogorov–Smirnov Test, Independent Groups T-Test, One-Way Analysis of Variance Test and Tukey’s Test were used for data analysis and hypothesis testing. Results showed significant difference between clear mental group and control group, between clear mental group and vague mental group, in hand grip acquisition at 12 kg force. None of clear mental practice, vague mental practice groups caused significant changes in electromyography at retention stage, at 12 kg force. Thus, clear mental practice had significant effects on electromyographic changes in transfer stage at 12 kg. Some studies have shown people with low imagery ability show less progress in learning motor performance by mental practice. This difference indicated the rate of imagery ability affects performance of subjects. The mental imagery ability is an efficacy factor in the learning of task by mental practice.

## **Media Reports of the Super Falconet's (The Nigerian Female Team) Poor Performance in International Competitions from 1990-2012**

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### **Abstract**

The growth of female football teams in Nigeria is a great indication that the country is blessed with potential female football players. The spectacular performance of the national female football team (the Super Falconet) of Nigeria at the continental level earned the team the title (African Queens) crown champions three times consecutively. As a mark of distinction the team represented Africa on the Federation International Football Association (FIFA) in China 1991, Sweden 1995 and the United State of America (USA) 1999. The performance and fortune in recent times has dwindled to a level beyond expectation. This paper, therefore, will explore the factors responsible for the poor performance and offer solutions in the way of recommendations.

## Examination Of Physical Education And Sports Teachers' Attitudes

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### Abstract

The aim of this study is to investigate and determinate teacher attitudes of physical education teachers according to their demographics. During in 2011 – 2012 study period, 19 physical education teachers who work at the high schools and 704 students in the ninth grade have participated to study that applied by permission of local government, at the high schools in city centre of Muğla. First of all, teacher information form and teacher attitude inventory (Bilgin, 1996) was conducted to teachers. After that volleyball skills of students have been recorded with camera and evaluated by three specialists. Demographics of teachers have compared according to their teacher attitudes with independent samples t-test and one way analysis of variance and evaluated according to  $p < .05$  significant level. The teachers who young according to others and have graduate degree, have been more successful in terms of exhibiting democratic attitude that is regarded as the best attitude. In result, if physical qualification and academic knowledge levels of teachers increases, their teacher attitude is going to be also democrat. So, students interested in physical education and sport course will be increased.

**Keywords:** Physical Education, Teacher, Attitude

### Giriş

Milli Eğitimin amaçlarını gerçekleştirmek için kişiyi en üst düzeyde yetiştirmek, milletimize ve insanlığa yararlı, iyi ve verimli yurttaşlar haline getirmenin öğretmenlerin milli görevi olduğu bilinen bir gerçektir (Yalçın, 1995).

Eğitimde asıl üretici öğretmendir. Öğretmen kendi iradesiyle öğrencilerin zihinlerini etkilemedeki becerisi öğrencilerin görev, emir ve standartları kendi istekleriyle koydukları zaman hissedilmeye başlar (Suhomlinski, 1995). Öğretim yöntem ve stratejileri boyutunda çağdaş bir öğretmen, öğreteceği konunun özelliklerine göre öğretim yöntem ve tekniklerini kullanabilmesi, eğitim ortamını daha verimli hale getirebilmek için kendine özgü taktikler geliştirebilmesi ve bilgi iletişim teknolojilerinden yararlanabilmelidir (MEB, 2001).

Beden Eğitiminin amacı, uygun beden çalışmaları ile beden, duygu, akıl yönünden ve sosyal bakımdan sağlıklı vatandaşlar yetiştirmeye yöneliktir (Keske, 2007). Öte yandan okul sporlarının amaçlarından birisi de performans sporları için alt yapı oluşturmaktır (Açıkada ve Ergen, 1990).

Beden eğitimi ve spor öğretmeni, öğretmenlik mesleğinin kutsallığını bilen, Atatürk ilke ve devrimlerine bağlı, Türk Milli Eğitim sistemine uygun ders veren, siyasi propaganda yapmayan, insan haklarına saygılı, fanatik düşünceleri olmayan, bunun yanında özgür düşünen ve konuşan, doğru ve dürüst davranan kişidir (Tamer ve Pulur, 2001).

Demirhan (2002), beden eğitimi öğretmenlerinde bulunması gereken özellikler ve bu özelliklerin önemine değinerek, öğretmenliğe baslarken doğru ya da seçimle atama yapıldığını, son yıllarda seçim eğiliminin arttığını, seçim eğiliminin artmasının öğretmen niteliklerini yüksek düzeyde kazanmış bireylerin sisteme dâhil edilmek istenmesinden kaynaklandığını belirtmiştir.

Beden eğitimi ve spor öğretmenin nitelikleri arasında; konu alanı bilgisine sahip olma, sporun bilimsel ve felsefi temellerini bilme, hareket analiz yapabilme, organizasyon becerisi, iletişim becerisine sahip olma, istekli, karşılıklı ilişki ve saygıyı benimseyen, mesleki dürüstlük ve etik davranışa sahip, isteklendirme yeteneği ve sağlıklı yaşam biçimine sahip olma, bireyin gelişim özelliklerini analiz edebilme, öğretme öğrenme sürecini örgütleyebilme de sayılmalıdır (Demirhan, 2006).

Toplumsal bir kurum olan okulda, sürekli birbiriyle etkileşim ve iletişim halinde olan birçok birey vardır; öğretmenler, öğrenciler, yöneticiler, hizmetliler, veliler gibi. Bu bireylerin iletişimindeki kalite, doğrudan ve dolaylı olarak, okulun genel kalitesi üzerinde önemli bir rol oynamaktadır. Okuldaki bireyler arasında nitelikli bir iletişim örüntüsü varsa, herkes birbirini doğru bir şekilde anlayacağından, bireylerin birbirinden beklentileri netleştirilip açıklığa kavuşturulacak ve böylece eğitim amaçlarının gerçekleştirilebilmesi için gereken en birincil koşullardan biri sağlanmış olacaktır (Sarı, 2007).

Yapılan araştırmalar, genel anlamda okul yaşamında memnuniyet düzeyinin daha sıcak öğretmen öğrenci ilişkileri sonucunda daha da geliştirilebileceğini göstermektedir (Malın ve Lynnakya, 2001). Okulda en yoğun iletişim kurdukları bireylerden biri olan öğretmenleriyle olumlu iletişim kurabilen, beklediği iletileri ve dönütleri alabilen öğrenciler olumlu davranışlarını artırırlar (Hoşgörür, 2002). Sartori'ye göre de (2001) öğretmenler daha iyi bir ortam sağlayabilmek için; öğrencileri ile iyi iletişim kurmalı ve onları katı disiplin yöntemleri ile kontrol etmeye çalışmak yerine insancıl yöntemlerle kontrol etmeye çalışmalıdır.

Çocuğun ya da gencin toplumsallaşması sürecinde önemli bir işlevi olan akran etkileşimi, birey için önemli bir bilgi kaynağıdır. Çocuk akran grubunda, yetişkin yaşamında öğretilmesinden kaçınılan yasak (tabu) konuların burada rahatça tartışılması ve konuşulması olanağını bulur. Evde çeşitli söz ve hareketleri eleştirilen ve direnişle karşılanan birey, bu ortamda kendini rahat hisseder, hoşça zaman geçirir. Akran grubunun bir başka işlevi de, çocuğun toplumsal ufuklarını, görüş açısını genişletmesi, farklı deneyimler edinmesini sağlamasıdır. Normla-

ra bağlanmak ve bu normlara uymak yine bu akran gruplarında kazanılan davranışlardır. Bunun yanı sıra akran gruplarında birey, aileden bağımsız hareket etme, liderlik, otoriteyi tanıma, farklı sosyal sınıflara ait davranış kalıplarını öğrenme, cinsiyet rollerini öğrenme, işbirliği yapma gibi yaşantılar kazanır (Tezcan, 1988).

## Yöntem

Öğretmenlik Tutumları Ölçeği, Leeds tarafından 1951’de geliştirilen ve Calls tarafından yeniden adapte edilen ilk öğretmen tutum envanteri “ The Minnesota Teacher Attitude Inventory” (Minnesota Öğretmen Tutum Envanteri)’nden faydalanarak hazırlanmıştır. 150 maddeden oluşan bu envanter, 1960 yılında Baymur tarafından dilimize çevrilmiş ve 1974 yılında Küçükahmet, envanteri öğretmen yetiştiren kurumlarda çalışan öğretmenlerin tutumlarını araştırmada kullanmıştır. Daha sonra Bakırcı envanteri 100 maddeye indirerek, öğrenciyi merkez alan ve almayan öğretmen tutumları ile ilgili araştırmasında kullanmıştır. Tutum envanterinde cevaplar doğru ve yanlış kategorilerine göre sınıflandırılmamıştır. Herhangi bir ifadeye katılıp katılmamanın belirtilmesi önem taşımaktadır. Bu nedenle, cevaplar doğru ve yanlış olarak değil, belli ifadelere katılıp katılmamaya göre değerlendirilmektedir. Bilgin tarafından geliştirilen Okul Öncesi Öğretmenlerinin Öğretmenlik Tutumları Ölçeği, Minnesota Öğretmen Tutum Envanterinden yararlanılarak hazırlanmıştır. Minnesota Öğretmen Tutum Envanteri genel olarak öğretmenlik tutumlarını ölçmektedir (Akt. Bilgin, 1996).

Bilgin (1996)’nin “ Okul Öncesi Eğitim Kurumlarında Çalışan Öğretmenlerin Öğretmenlik Tutumlarının İncelenmesi” ne yönelik yaptığı araştırmada öğretmenlerin sahip oldukları çocuk sayısı ve demokratik tutumları arasında ters orantı olduğu çocuk sayısı arttıkça demokratik tutumlarının da azaldığı görülmüştür. Aynı araştırmada mesleklerinde belli bir tecrübe bilincine ulaşmış, 26–30 yaş arası öğretmenlerin bu meslek için en ideal dönemde olduğu sonucuna ulaşılmıştır. Ayrıca öğretmenlerin; demokratik tutum ve boş vermiş tutum boyutları içerisinde, mezun oldukları kuruma göre manidar bir fark göstermemelerine karşın, kız meslek lisesi mezunu öğretmenlerin, diğer kurumlardan mezun olan öğretmenlere nazaran yüksek otokrat tutum sergilemelerinde, meslek hayatına erken yaşlarda başlamalarının ve diğer kurumlardaki kadar nitelikli bir eğitim sürecinden geçmemelerinin etkisi olabileceği ifade edilmiştir.

Bu çalışmanın amacı, beden eğitimi ve spor öğretmenlerinin demografik özelliklerine göre öğretmenlik tutumlarını incelemek ve değerlendirmektir. 2011 - 2012 eğitim-öğretim yılında, Muğla Milli Eğitim İl Müdürlüğü’nden alınan izin ile merkez ilçedeki ortaöğretim kurumlarında gerçekleştirilen bu çalışmaya, ilgili kurumlarda görev yapan 19 beden eğitimi ve spor öğretmeni ve 704 9.sınıf öğrencisi katılmıştır. Öncelikle öğretmenlere öğretmen bilgi formu ve öğretmenlik tutumları ölçeği (Bilgin, 1996) uygulanmış, voleybol becerileri video kaydı yapılarak 3 uzman tarafından değerlendirilmiştir. Öğretmenlerin demografik özellikleri, bağımsız örneklem t-testi ve tek yönlü varyans analizi ile öğretmenlik tutumlarına göre karşılaştırılmış,  $p < .05$  anlamlılık düzeyine göre değerlendirme yapılmıştır.

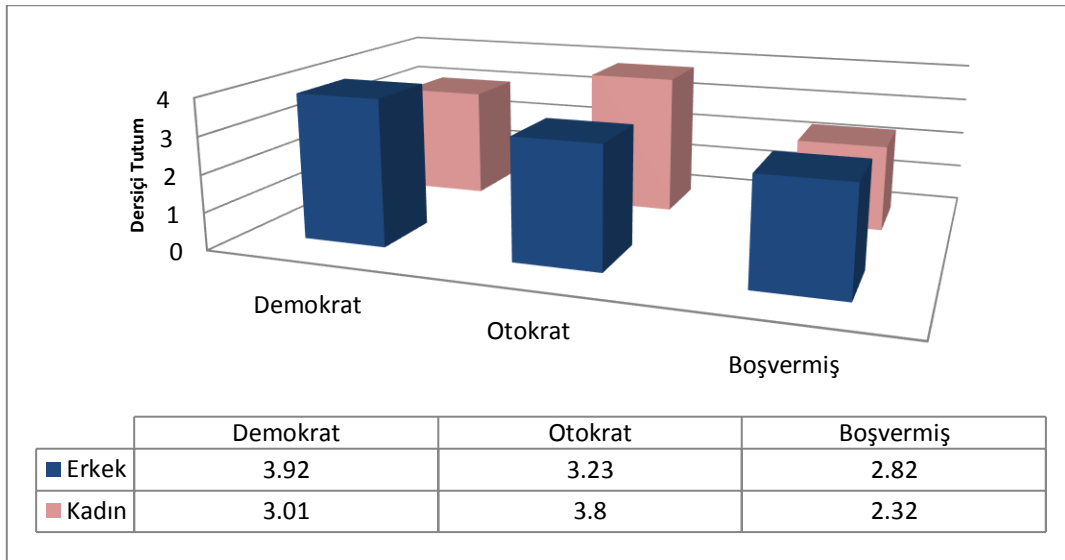


## Bulgular

**Tablo 1.** Öğretmenlerin Cinsiyetlerine Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi İle Karşılaştırılması

		N	Ort ± S.S.	t	p
Demokrat tutum	Kadın	8	3,9297 ±,820	2,110	,050
	Erkek	11	3,0184 ±,999		
Otokrat tutum	Kadın	8	3,2368 ±,247	-2,004	,061
	Erkek	11	3,8089 ±,774		
Boşvermiş tutum	Kadın	8	2,8235 ±1,480	,713	,485
	Erkek	11	2,3262 ±1,514		

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

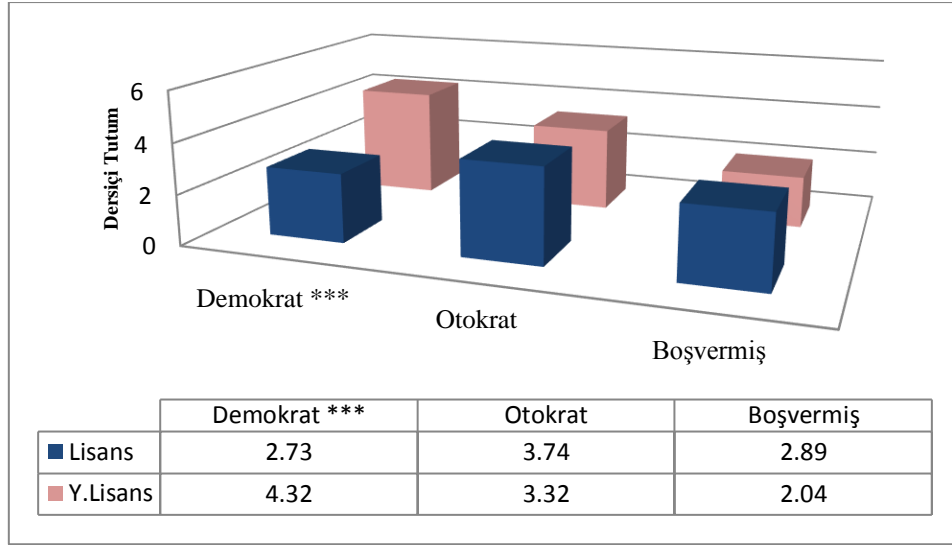


**Şekil 1.** Öğretmenlerin Cinsiyetlerine Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi ile Karşılaştırılmasına İlişkin Grafik

**Tablo 2.** Öğretmenlerin Akademik Derecelerine Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi İle Karşılaştırılması

		N	Ort ± S.S.	t	p
Demokrat Tutum	Lisans	11	2,7316 ±,628	-5,423	,000***
	Yüksek Lisans	8	4,3241 ±,636		
Otokrat Tutum	Lisans	11	3,7470 ±,831	1,415	,175
	Yüksek Lisans	8	3,3220 ±,160		
Boşvermiş Tutum	Lisans	11	2,8909 ±1,667	1,246	,230
	Yüksek Lisans	8	2,0471 ±1,089		

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

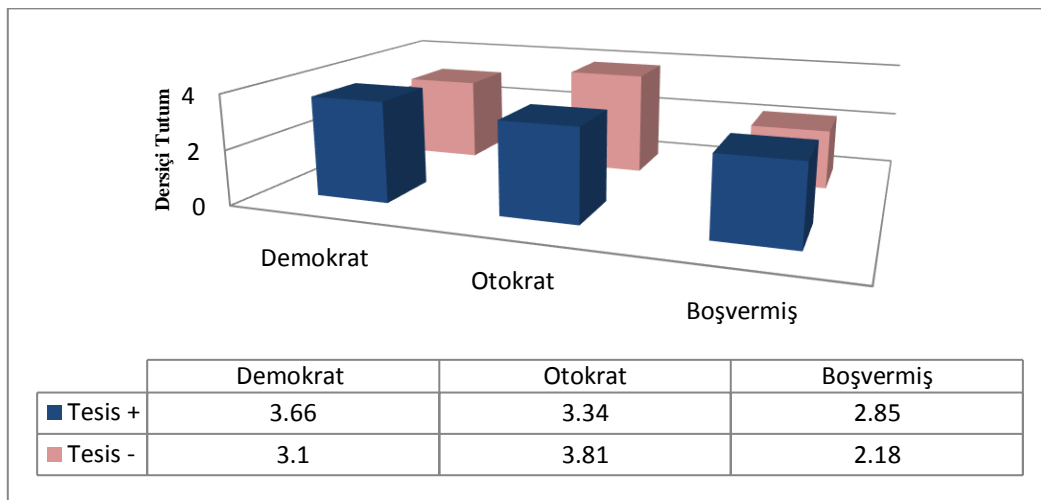


Şekil 2. Öğretmenlerin Akademik Derecelerine Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi ile Karşılaştırılmasına İlişkin Grafik

Tablo 3. Öğretmenlerin Spor Tesisi İmkânlarına Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi ile Karşılaştırılması

		N	Ort ± S.S.	t	p
<b>Demokrat Tutum</b>	<b>Spor tesisi +</b>	10	3,6655 ±,963	1,208	,244
	<b>Spor tesisi -</b>	9	3,1094 ±1,043		
<b>Otokrat Tutum</b>	<b>Spor tesisi +</b>	10	3,3471 ±,537	-1,593	,130
	<b>Spor tesisi -</b>	9	3,8136 ±,733		
<b>Boşvermiş Tutum</b>	<b>Spor tesisi +</b>	10	2,8554 ±1,568	,992	,335
	<b>Spor tesisi -</b>	9	2,1803 ±1,375		

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

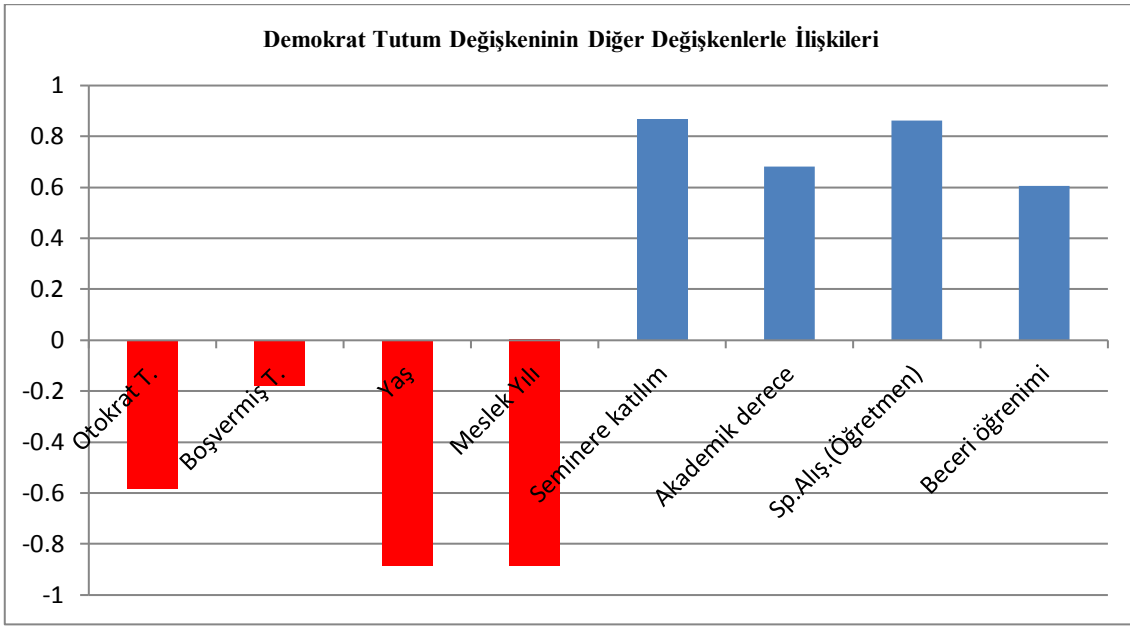


Şekil 3. Öğretmenlerin Spor Tesisi İmkânlarına Göre Ders İçi Tutumları Ortalamalarının Bağımsız Örneklem Testi ile Karşılaştırılmasına İlişkin Grafik

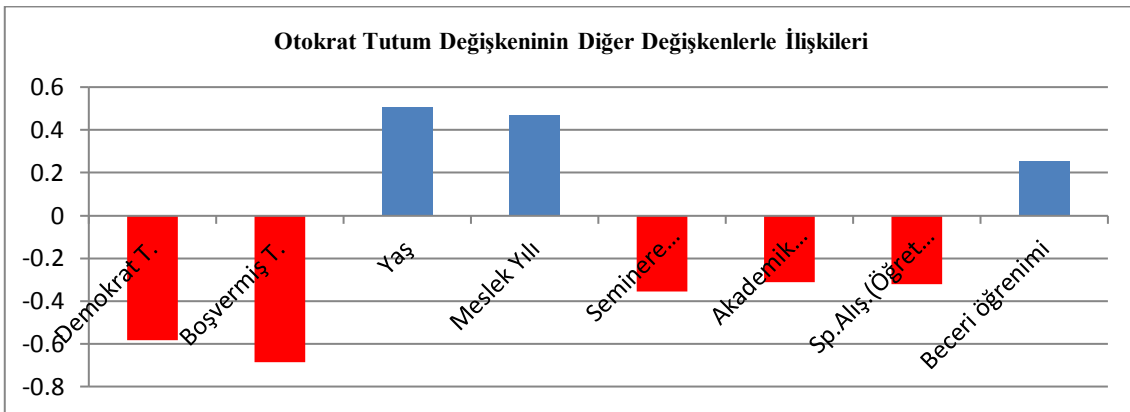
**Tablo 4.** Beden Eğitimi ve Spor Öğretmenlerinin Demografik Özellikleri ve Ders İçi Tutumlarının, Öğrencilerinin Beceri Öğrenimlerine Etkilerinin İncelendiği Korelasyon Analizi

Öğretmenin;	Otokrat Tutum	Boşvermiş Tutum	Yaşı	Meslek Yılı	Seminer	Akademik Derece	Spor Alışkanlığı (Öğrt.)	Öğrenci Beceri Öğrenimi
Demokrat Tutum	-,583*	-,177*	-,884*	-,886*	,867*	,682*	,863*	,606**
Otokrat Tutum		-,685*	,507*	,470*	-,354*	-,311*	-,321*	,255*
Boşvermiş Tutum			,164**	,214**	-,337*	-,239*	-,411*	-,848*

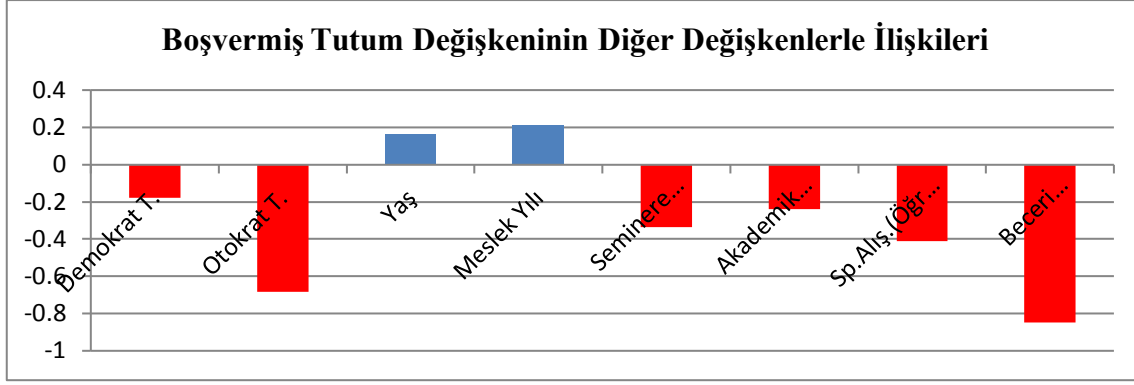
\* $p < ,05$  \*\* $p < ,01$



**Şekil 4.** Beden Eğitimi ve Spor Öğretmenlerinin Demokrat Tutum Değişkeni İle Diğer Değişkenlerinin İlişkilerine İlişkin Grafik



**Şekil 5.** Beden Eğitimi ve Spor Öğretmenlerinin Otokrat Tutum Değişkeni İle Diğer Değişkenlerinin İlişkilerine İlişkin Grafik



**Şekil 6.** Beden Eğitimi ve Spor Öğretmenlerinin Boşvermiş Tutum Değişkeni İle Diğer Değişkenlerinin İlişkilerine İlişkin Grafik

## SONUÇ

Beden eğitimi ve spor öğretmenlerinin ders içi tutum ve davranışlarının ortaöğretim öğrencilerinin beceri öğrenimleri üzerindeki etkilerinin incelendiği bu çalışma, model beden eğitimi ve spor öğretmeni yaratabilme adına kilit noktalara temas etmeye çalışarak aynı zamanda öğrencilerin nasıl daha sağlıklı sürdürülebilir bir hayata kavuşabilecekleri konusunda bilgi vermektedir.

Beden eğitimi ve spor öğretmenlerinin farklı değişkenlerine göre beceri öğretimlerine ilişkin sonuçları bize, lisansüstü eğitim mezunu kadın öğretmenlerin diğer öğretmenlere oranla daha başarılı olduklarını göstermektedir. Demokrat tutum değişkeninin kadın beden eğitimi öğretmenlerinde erkek öğretmenlere göre daha anlamlı olması bu sonucu etkileyen en önemli faktör olarak karşımıza çıkmaktadır.

Spor tesisi imkânına sahip öğretmenlerin daha demokrat tutum sergiledikleri, boşvermiş tuma da tesis imkânı olmayan öğretmenlerden daha eğilimli oldukları görülmüştür. Bu durum spor tesisine sahip olan okullarda öğretmenin kendini derse daha çok güdülediği ile açıklanabilir ve farklı bir çalışma konusu olarak diğer araştırmacılara yol gösterebilir.

35 yaşın altında olan öğretmenlerin beceri öğretimleri ve demokrat tutumları olumlu olarak anlamlı farklılık ifade ederken otokrat ve boş vermiş tutumların 46 yaş ve üzerinde daha sıklıkla görülmüştür. Diğer meslektaşlarına oranla daha az meslek yılına sahip öğretmenlerin demokrat tutumlarında ve beceri öğretimlerinde anlamlı bir farklılık bulunmuştur. Bu durum genç öğretmenlerin mesleki tükenmişliklerinin daha az olabileceği, öğretim tekniklerini uygulamada fiziksel özelliklerini daha iyi kullanabildikleri, bu durum ile de öğrenciye rol model olmaları ve öğrencilerle olan yaş farkının nispeten daha az olması ile açıklanabilir.

Özgül'ün 2009'da yaptığı çalışmada ise çalışma grubunu oluşturan öğretmenlerin öğretmenlik tutumları mesleki kıdem yılına göre anlamlı bir farklılık göstermemiştir. Aritmetik

ortalamalara bakıldığında ise, 5 yıl ve daha az kıdeme sahip öğretmenler demokratik tutum boyutundan en yüksek puanı alırken, otokratik tutum boyutundan en düşük puanı almışlardır. 6-10 yıl arası mesleki kıdeme sahip öğretmenler otokratik tutum boyutundan en yüksek puanı alırlarken, boşvermiş tutum boyutundan en düşük puanı almışlardır. 11 yıl ve üzeri kıdeme sahip öğretmenler boşvermiş tutum boyutundan en yüksek puanı alırlarken, demokratik tutum boyutundan en düşük puanı almışlardır. 5 yıl ve daha az kıdeme sahip öğretmenlerin meslekte yeni olmaları ve daha az yıpranmış olmalarının öğretmenlik tutumlarında etkili olduğunun düşünülebileceğine vurgu yapmıştır.

Beden eğitimi ve spor öğretmenin, Milli Eğitim politikaları gereği görevi olan sağlıklı nesiller yetiştirmeye yardımcı olabilmeye amacı öğretmenlerin ders içi tutumları ile güçlenmektedir. Bu bağlamda, çalışmanın sonucu olarak derslerinde demokratik tutum sergileyen öğretmenlerin beceri öğretiminde daha başarılı oldukları görülmüştür. Bu sonuçla da görülmüştür ki; demokratik bir beden eğitimi ve spor öğretmeni, sporu sevdirmeye, spor alışkanlığı edindirebilmeye, dolayısıyla Atatürk'ün "Ben her daim yavuz ve gürbüz evlatlar isterim" sözüyle örtüşen sağlıklı nesiller yetiştirmeye de yardımcı olmaktadır.

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## Assessment of PA (Physical Activity) Readiness and Participation among Staff in Nigerian Universities

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### **Abstract**

Inactivity and sedentary living are on the increase globally. Readiness to begin, continue and sustain PA (physical activity) behavior plays a key role in attaining desirable health outcomes. Evidence-based data regarding readiness to begin and /or maintain physical activity among staff in workplaces including the University environment have become indispensable for initiating PA behavior promotion policies and programs. This study adopted the descriptive survey research design to assess the prevalence of PA readiness and participation behaviors among university staff in southeastern Nigeria. Six hundred staff, (age ranged from 25-65 years old, male and female, teaching and non-teaching) from two Federal Universities participated in the study. Self-reported data were obtained with PA stages of change assessment instrument. Results indicate 60% of all respondents representing (pre-contemplation, contemplation and preparation) were not participating in PA or doing so infrequently, while 40% were actively participating. T-test yielded no significant differences for both gender, [Males (M=3.09; SD=1.39), Females (M=2.95, SD=1.37)  $t=1.20$ ,  $p=.23$ ] and staff categories, [Teaching staff (M=3.13; SD=1.33), Non-teaching staff (M = 3.03; SD = 1.43)  $t=1.78$ ,  $p=.07$ ]. In conclusion, a majority of university staff were at the pre-adoption or pre-action stages irrespective of gender and staff categories. A PA program to facilitate transition to action and maintenance stages was recommended.

## Efficacy of Exercise on Depression, Anxiety and Mood States of Individuals

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### **Abstract**

Exercise contributes immensely to the well being of humans. Thus, health scientist agree that exercise has a positive effect upon physical well being and upon specific physiological variables associated with health and wellness (such as heart rate and blood pressure). In addition, the large majority of both health professionals and exercisers believe that exercise has benefits for the improvement of psychological problems encountered, especially depression, anxiety and mood. Given that exercise effects both physical and mental health, it would therefore seem important to evaluate research on the efficacy. By extension, given the pandemic nature of such mental health problems as depression and anxiety, in concert with the cost and potential side-effects or after-effects of various drugs in the treatment, it would seem important to review the efficacy of exercise as a treatment. The aim of the present paper is to review recent studies that have focused on the effect of exercise on mood adjustment. Specifically, the evidence regarding the benefits of exercise for depression, anxiety and other states of disturbed mood. Hence, this paper addresses the current literature related to investigations of the link between exercise treatments and depression, anxiety and other mood states. Results from these investigations are supportive of the anti-depressant, anti-anxiety and mood enhancing effects of exercise programs. However, a number of potential methodological problems in many of the research studies; the nature of these were considered. Finally, some possible directions for future research will be outlined.



## **Leadership and Rewards System as Correlates of Team Performance in Nigeria Premier League (NPL)**

Moronfolu Raimi Abiodun <sup>a</sup>

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### **Abstract**

Leadership and rewards are two key determinants of effective management for maximum output in organizations. Thus, this study investigated the impact of these two management variables on team performance in the Nigerian Premier League (NPL). A total of 75 respondents comprising 60 players and 15 coaches from 3 NPL teams were selected through a stratified random sampling technique and used in the study. The Club Structure-Performance Questionnaire (CSPQ) was the instrument used for data collection ( $r=0.88$ ). A total of 75 copies of the questionnaire were administered on selected respondents and the data collected were analyzed using inferential statistics of T test and one way analysis of variance (ANOVA) at  $\alpha < 0.05$ . The findings revealed that transformation leadership (mean=3.22) and direct financial reward (mean=3.44) recorded higher influences on team performance as compared with other variables in each group. In addition, a stronger correlation was recorded between rewards and performance as compared to leadership.

## **Psychological Fitness Indices of Male and Female University Athletes and Performance Implications in Sports**

Emeribe, Victoria C. <sup>a</sup>, Akah, Levi U. <sup>a</sup>

<sup>a</sup> *University of Calabar, Nigeria*

### **Abstract**

The focus of this study was to investigate the performance implications of psychological fitness characteristics of male and female athletes in Nigerian Universities. Five psychological fitness characteristics/indices isolated and investigated were: Physical self efficacy, self esteem, stress reaction, cognitive anxiety, and somatic anxiety. A standardized questionnaire instrument was utilized for data generation. The population of the study comprised university athletes who took part in the 2004 Nigerian University Games (NUGA). Three hundred and twenty athletes studied, comprised 160 male and 160 female athletes selected from six public universities spread across the six geo-political zones in Nigeria. Simple random sampling, stratified and convenience sampling techniques were employed in the study. Data generated were analyzed using the independent t-test statistics. The result of the analyses showed that male athletes had higher efficacy and higher cognitive anxiety than their female athletes, while no significant difference was found on self esteem, stress reaction, and somatic anxiety among male and female university athletes. Based on this findings, it was recommended that sport psychologists should be employed in the training of athletes; Athletes should be subjected to psychological fitness profiling for better placement and enhanced performance.

## Rational Analysis of Sport Participation and Peace-Building Among the University of Ibadan Athletes

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<sup>b</sup> Department of Physical and Health Education, Emmanuel Alayande College of Education

### **Abstract**

Part of the roles of sport participation is to offer opportunities for reconstruction of peace, reconciliation of peace and resolution of peace among the youths. This study therefore was embarked to find out the relationship of sport participation and peace-building among University athletes in Nigeria. Data were collected using a self-developed questionnaire and the instrument was modified into 4-likert scale with reliability of  $r = 0.65$ . Frequency, percentage, charts and Chi-square ( $\chi^2$ ) were used for data analysis and statistical inference was made at 0.05 level of significant. Findings revealed that participating in sport was significantly related to reconstruction, reconciliation and resolution of peace building. Based on these findings, evidence pointed out that participating in sport can facilitate post-conflict reconciliation and resolution of peace but it has not being well utilised among Nigerian youths.

*Key words: Sport Participation, Peace-building, Reconciliation, Reconstruction, Resolution*

### **Introduction**

Sport has been common denominator for the people across the globe. It can be seen to provide a useful way of creating an environment in which people can come together, work towards the same goal and show respect for others. Coakley (2001) stated that there is enough animosity and separation in the world that if there was not any sport to lighten things up, to bring people together through healthy competition, this world would be a very sad, boring, hopeless, and dark place.

Right to play (2009) defines sports as all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport and indigenous sports and games. Sport has the power to unite people, create hope, breaks down racial barriers, laughs in the face of discrimination and speaks to people in a language they can understand.

Keim (2003) reported that sport participation appropriately directed, could be involved in the development of character, work discipline, teamwork, fair play and other socially approved characteristics. The right to participate in sport, physical activity and play is identified implic-

itly in the Universal Declaration, providing support for the increasingly well-recognized right to participate in Sport and physical activity (Universal Declaration of Human rights, 1948 and confirmed by UNESCO Chapter of Physical Education and Sport, 1978). Participating in sport helps to develop character. It helps to teach discipline, which is something every person needs to include in their lives. Team sport also encourages people to work with others as they try to reach for the same goal (Thompson; 2010).

It is worth noting however that participating in sport competition has a lot of benefits. The physical activities that are associated with intramural sport events proves that students interest in participating in sport events are revealed by being involved in fitness programme. The social interaction gained among peers in sport programme shows that university life involves more than just academic achievement. Ruge (2002) asserted that there are enough testimonies to the fact that participation in sport activities at school level is as rewarding as academic itself, in fact it aids academics. He explain further that through sport programme one has the all round training for self adjustment, self discipline, self reliance, loyalty, patriotism, integrity, honesty, service and respect for culture which all together complements academics.

Sport programmes, when properly supported, may be crucial in creating opportunities for social contact that have long being suppressed. Lederach (2005) stated that the importance of creating safe and accessible social spaces and encourages the peace-builder to draw attention to markets, hospitals, schools, and street corners. He also concluded that peace-building is a comprehensive concept that encompasses, generates and sustains the full array of processes, approaches, and stages needed to transform conflict towards none sustainable peaceful relationships activities that both preceded and follow peace accords.

Fisher, Abdi, Ludin, Smith, Williams and Williams (2000) on the role of sport in fostering social interaction among different ethics groups in Southern African schools contend that several factors contributed to the use of sport being successful in bringing about exchange and building relationships between different groups, including sports non-verbal means of communication; sport as a means to engage in collective experience and establish direct physical contact; and sports ability to transcend class divisions.

University of Ibadan has continued to blaze the trail in many facet of human endeavors, maintains a well-rounded sport programmes and athletics activities on campus under the over-all supervision of the director of sports. The university is a member of the Nigeria University Games Association (NUGA), West Africa University Game (WAUG), The Federation of African Universities Sport (FASU) and the International University Sport Federation (FISU). There is spirited physical and sport competitions among the halls of residence and faculties in which there are categories for both male and female participants.

Galturg (1998) opines that peace building requires the 3Rs which are reconstruction of people and places, reconciliation relationships and resolution of issues and animosities. Lea-Howarth (2006) reported that reconstruction is aimed at solving problems, and immediate issues in the short-term, reconciliation is a long term process that aims to build positive relationships between antagonistic groups. Reconciliation is aimed at rebuilding the political, economic, eco-

logical, physical, cultural, and social infra-structures and includes rehabilitation of affected by war. Therefore, the purpose of the study was to find out and explain the relationships of sports participation on the peace building among Nigerian youths in the universities.

## **Hypotheses**

1. There will be no significant relationship of sport participation on reconstruction of people for peace-building
2. There will be no significant relationship of sport participation on reconciliation of relationship for peace-building
3. There will be no significant relationship of sport participation on resolution of peace

## **Methodology**

### **Research Design**

The descriptive (survey) research design was used in this study to investigate the relationship of sport participation on the peace-building among the NUGA athletes. This design is considered appropriate because of its suitability to describe, investigate, explain and interpret the issues under the study.

### **Population**

The population of the study comprised all Nigerian University Games Association Athletes.

### **Sample and Sampling Technique**

A total number of seventy-five (75) participants were sampled from the University of Ibadan Pre-NUGA athletes using simple random sampling technique of fish bowl with replacement method.

### **Research Instrument**

A self structured instrument (questionnaire) was developed by the researchers and validated by other three colleagues for content validity. The instrument comprised of two sections A and B. Section A sought for bio-data while section B sought for information where respondents were asked to indicate the extent of their agreement with each item on the questionnaire by choice of strongly agreed, agreed, disagreed and strongly disagreed on a 4 – point modified Likert-scale.

To ensure the validity of the instrument, a draft of the self-developed structured questionnaire was presented to the sport experts for construct and content validity. The instrument exhibited the reliability test result of  $r = 0.65$  (Cronbach Alpha).

# Data Analysis and Discussion of Findings

*Chart showing the age of respondents*

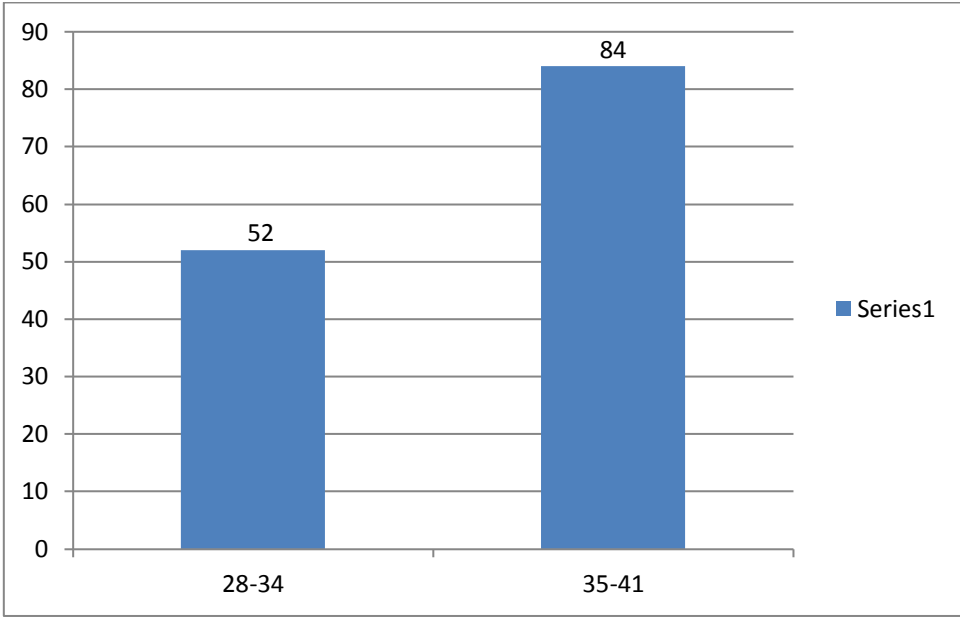


Fig 1: Age range participants

The above chart revealed that 52(38.24%) of the respondents were between 28 and 34 years, while 84(61.76%) were between 35-41 years age range.

*Chart showing the relationship of sport participation and reconstruction of peace*

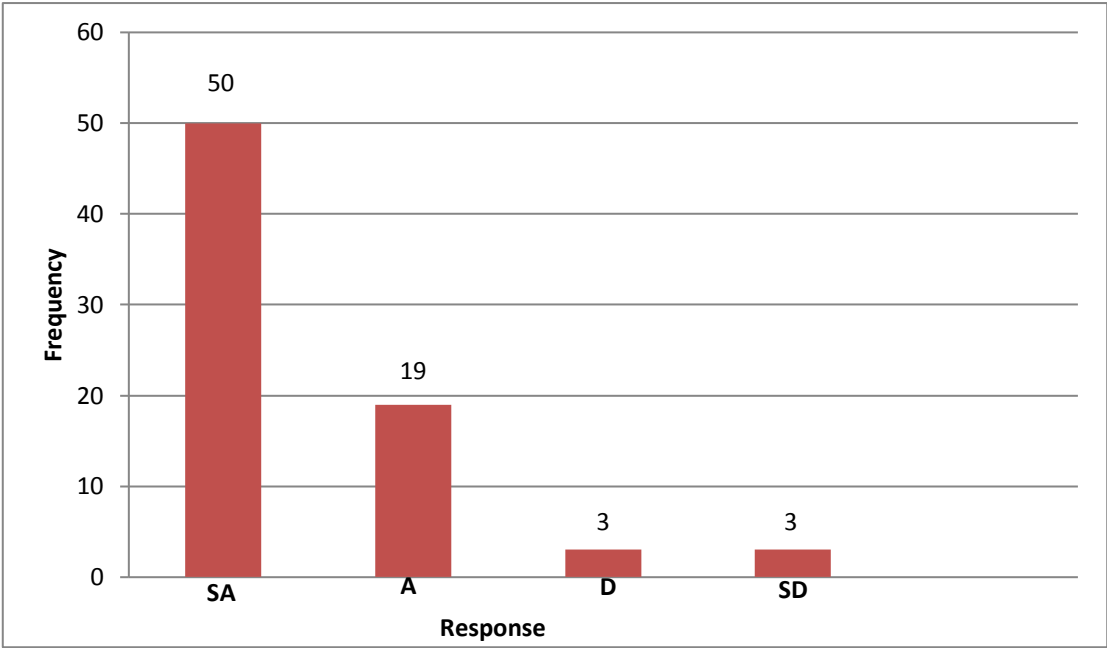
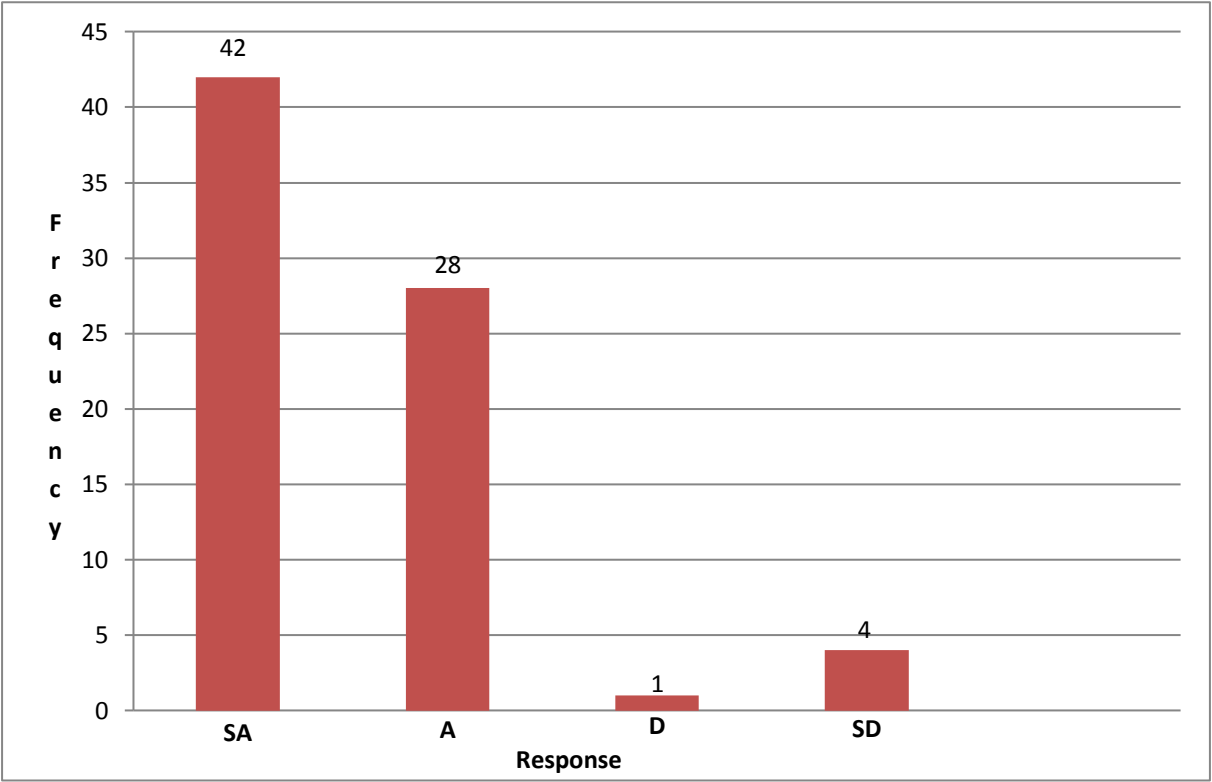


Figure 2: Relationship of sport participation on reconstruction of peace

Figure 2 shows that a greater percentage (92%) of the respondents opined that participation in sport serves as a social construct that aims at solving problems and immediate issue. Considering the obtained critical value of 138.02 which is higher than the table value of 7.82 at 0.05 alpha levels the hypothesis which stated that, there will be no significant relationship of sport participation on reconstruction of peace in Nigeria is hereby rejected. This indicated that participating in sport is related to reconstruction of peace-building. This result agreed with the view of Ruge (2002), that participating in sport significantly increases the number of friendships among participants from different background. She also found that intercultural friendships at school developed more easily when children were involved in integrated team sport. This approach is consistent with the view of Lederach (1997) that contemporary peace-building should focus on relationship.

*Chart showing the relationship of sport participation and reconciliation of peace*

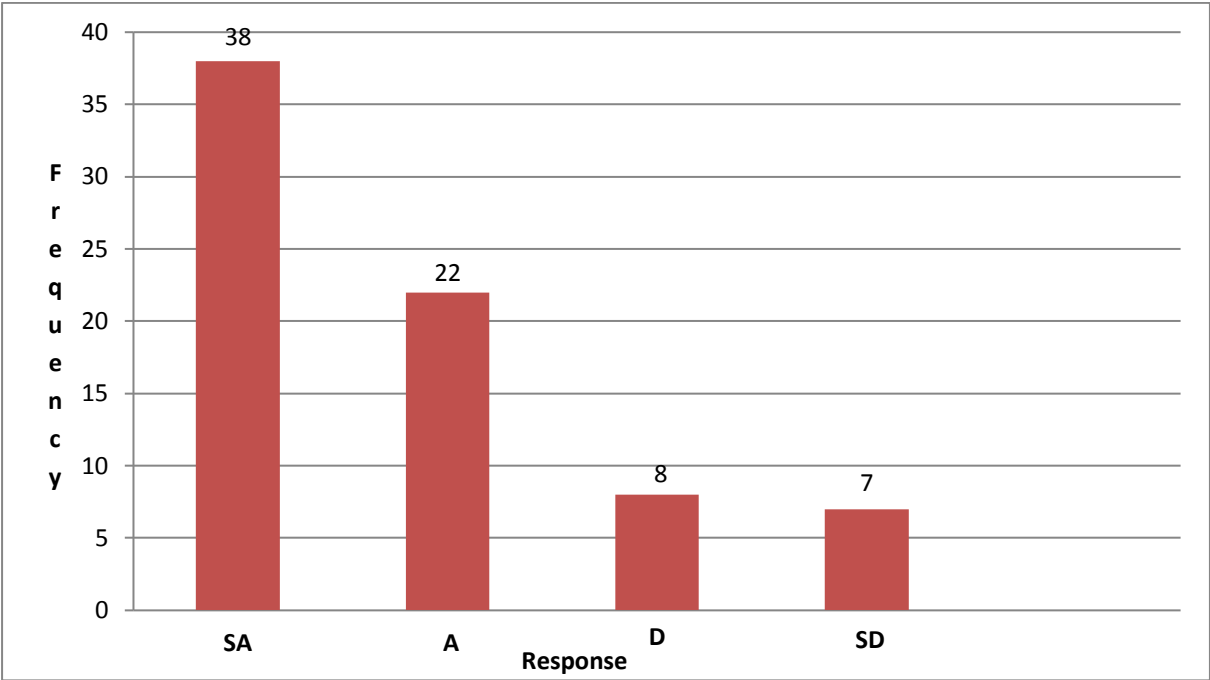


**Figure 3:** Relationship of sport participation on reconciliation of peace in Nigeria.

The above chart shows the summary of the findings that participating in sport was significantly related to reconciliation of peace in Nigeria. The figure indicated that out of 75 respondents only 5(66%) disagree and strongly disagree with the relationship of participating in sport on reconciliation of peace, while the remaining 70(93.4%) of the total respondents agreed and strongly agree with this issues. From the statistical analysis, the calculated chi-square ( $X^2$ ) value of 139.53 is greater than the table value of 7.82 at 0.05 alpha level with  $df=3$ . Therefore, the hypothesis which stated that there will be no significant relationship of sport participation

on reconciliation of peace in Nigeria is hereby rejected. It is therefore accepted that participating in sport can be used for reconciliation of peace in Nigeria. Hence Youth sport should aim to rebuild positive relationship between antagonistic groups in Nigeria. This result agreed with Lea-Howarth (2006) that sport is capable of playing positive role in reconciliation of peace. That is, sport may have a role to play in reconciliation by linking with advocacy groups or recruiting popular stars as advocates for peace.

*Chart showing relationship of sport participation and resolution of peace*



**Figure 4:** Relationship of sport participation on resolution of peace in Nigeria.

The findings on figure 4 revealed that sport participation has significant relationship on resolution of peace. The chart indicated that out of 75 respondents, 60(80%) agreed and strongly agree while 15(20%) of the total respondents disagree. Responses revealed that participation in sport can be used to address open conflicts and aimed at finding an agreement to end violence. From the statistical analysis, the calculated chi-square ( $\chi^2$ ) value of 125.2 is greater than the table value of 7.82 at 0.05 alpha level with  $df=3$ . Therefore, the hypothesis which stated that there will be no significant relationship of sport participation on resolution of peace in Nigeria is hereby rejected. Sport has the ability to bring unity and peace to a world that has been divided and separated by religious system, political beliefs and cultural differences. This finding confirmed the views of Foer (2005) that sport has been evoked in deeply moving ways to reduce conflict and restore communication between antagonists, such as during the 1971 US-Chinese ‘ping pong diplomacy’ and the visits of Mohamed Ali and Pele to war-torn West Africa nations. However, most of the respondents submitted that youths were recruited



many a times to cause violence but were neglected during peace bargaining. Likewise, the findings revealed that sport has not been well utilized as means of peace reconciliation.

## **Conclusion and Recommendation**

Based on the findings of this research work, it was found out that participating in sport has significant relationship to reconstruction of people for peace-building, reconciliation of relationship for peace-building and resolution of peace in Nigeria. Evidence suggested that sport can be used to pacify militant youths in the southern part and the Boko-haram youths in the northern Nigeria. However, such sport participation should be accessible, community-based, cultural sensitive, enjoyable and comprehensive peace-building. Based on the conclusion of this study, it was therefore recommended that sport should be employed as a tool to bring back peace among youth in Nigeria. However such sport should focus on the relationship aspects of teamwork and producing truth and justice necessary for reconciliation of peace in Nigeria. To achieve this, sport should be accessible to anyone that wants to participate, play or watch. It should not discriminate nor set any prejudicial requirement around status, wealth or race other than one having the heart for peace and passion to play.

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## **Rational Analysis of Sport Participation and Peace-Building among the University of Ibadan Athletes**

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### **Abstract**

The purpose of this study was to find out the relationship of sport participation to peace building and since sport participation offers important opportunities for reconstruction of peace, reconciliation of peace and resolution of peace among the youth in Nigeria. Data were collected using a self-administered developed questionnaire and the main instrument was modified, using a 4-point likert scale with reliability of  $r = 0.65$ . Frequency, percentage, charts and Chi-square ( $\chi^2$ ) were used for data analysis and statistical inference was made at 0.05 level of significant. Findings revealed that participating in sport was significantly related to reconstruction, reconciliation and resolution of peace building. Based on these findings, evidence pointed out that participating in sport can facilitate post-conflict reconciliation and resolution of peace in Nigeria; and sport should be accessible to anybody that wants to participate, play or watch.

## **Muscular Fitness Status and Sports Participation of Visually Impaired Students in Cross River State, Nigeria**

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### **Abstract**

This study examined the muscular fitness status regarding three levels of visual impairments: low vision, functionally blind, and totally blind. The study area was the Cross River State of Nigeria. Population of the study comprised all visually impaired students in selected secondary schools. A sample of 60 subjects was studied. Observation Rating Scales and the Practical Activities Package were instruments for data generation. Two hypotheses were generated and tested at .05 degree of significance. ANOVA was utilized as a tool for data analysis. The result of the study showed that : There was no significant difference in the muscular strength of low vision, functionally blind, and totally blind students; and there was a statistically significant difference in the muscular endurance of low vision, functionally blind, and totally blind students. Based on the findings of this study it was recommended that muscular strength activities should be periodically organized for students with visual impairments by heads of schools.

## Synthesis of Research Germane to Motivational Foundation of Exercise and Physical Activity Participations

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### **Abstract**

Human motivation study has spanned the greater part of the recent century. Standing on the shoulders of Skinner, Murray, Maslow, and Bandura (among others), psychologists have been able to determine and understand many of the diverse forces that shape who and what guides our actions. Yet, attempts to examine motivation in exercise and physical activity contexts have become widespread only in recent decades. Progress has been made in our understanding of human action and inaction in exercise and physical activity contexts, yet there is still much to be learned. Research in exercise psychology often borrows its theoretical approaches from the parent discipline of psychology and related area of health psychology. In many instances, these theories have proven to be useful frameworks guiding our inquiry and explaining exercise and physical activity behaviors. Because of the fertile interchange of ideas across these areas, the understanding of motivation for exercise and physical activity pursuits has increased rapidly in a short period of time. Yet, the understanding of human physical activity motivation is inadequate, and how to apply this knowledge is not sufficient. Moreover, sport scientists have not successfully exchanged their knowledge with physical educators, fitness and/or health professionals or the general public. Considering the state of knowledge of human motivation in physical activity settings, this paper, therefore tackles the inactivity problem and study of motivation from a different perspective, and gives an overview of the types of interventions that have been studied for their effects to increase physical activity participation.

**No:108**

## **The Role of Male And Female Athletes' Physical Self-Perceptions and Life Satisfaction in Predicting Their Achievement Goals**

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The purpose of the present study was to examine the role of global self-esteem, global physical self-concept, sport competence and life satisfaction in the prediction of achievement goal orientations in female and male athletes. Participants were 820 athletes (323 female, 497 male) who participated in different sport branches and had a mean age of 21.37 yr. (SD = 3.89). Physical Self-Description Questionnaire, The Satisfaction with Life Scale and 2x2 Achievement Goals Questionnaire for Sport were used as the measure of global self-esteem, global physical self-concept, sport competence, life satisfaction and goal orientation levels, respectively. Data are reported as means and standard deviations. Then, multiple regression analyses with stepwise were applied separately to data of male and female athletes. Global physical self-concept was related to mastery-approach goal orientation in female athletes. Among the male, scores on global self-esteem, sport competence and life satisfaction were associated with mastery-approach goal orientation. Mastery-avoidance goal orientation was related to life satisfaction and global self-esteem in female athletes. In contrast, Mastery-avoidance goal orientation was associated with global self-esteem and global physical self-concept in male athletes. Scores on sport competence was associated with performance-approach goal orientation for both gender. The performance-avoidance goal was predicted by global self-esteem and sport competence in both female and male athletes. In addition, in male athletes, global physical self-concept was related to performance-avoidance goals.

**Key words:** physical self-perception, life satisfaction, achievement goal, gender.

### **GİRİŞ**

Güdülenme kuramları arasında yer alan başarı hedefi kuramı (Adie, Duda ve Ntoumanis, 2008), kişinin kendisi ile ilgili değerlendirmelerinden kendine güven, genel fiziksel yeterlik, sportif yeterlilik kavramları (Marsh ve Craven, 2006) ve yaşamdan alınan doyum (Toros ve ark., 2010) spor ortamlarında geniş uygulamalara sahiptir. Duda ve Nicholls (1992) tarafın-

dan Sporda Başarı Hedefleri Kuramı önceleri “performans (ego)” ve “ustalık (görev)” olmak üzere iki hedef yönelimi şeklinde ele alınmıştır. Performans yönelimi kavramı, diğerlerinden daha iyi yapma şeklinde diğer bireyleri hedef alan bir yaklaşım ile spora yönelmemizi ifade ederken; ustalık yönelimi daha önceki performansından daha iyisini yapma, yeni şeyler öğrenme ve bir görevde ustalaşma gibi kendisini hedef alan hedef yönelimini anlatmaktadır (Duda, JL., Nicholls, 1992). Ancak daha sonraları performans ve ustalık ile sınırlı kalan hedef yönelimleri yaklaşma-kaçınma temelinde ele alınmıştır (Elliot, 2006). 2x2 Başarı Hedefleri Modeli bireylerin hedef yönelimlerini “ustalık yaklaşma”, “performans yaklaşma”, “performans kaçınma” ve “ustalık kaçınma” olmak üzere dört boyutta açıklamaktadır. *Ustalık-yaklaşma hedefleri* verilen görevi en iyi şekilde yapmayı veya bu görevle ilgili daha önceki performansından daha iyisinin yapılmasını ifade ederken; *performans-yaklaşma hedefleri* diğerlerinin önüne geçmeyi, diğerlerinden üstün olmayı anlatmaktadır. *Performans-kaçınma hedefleri* diğerleri tarafından geçilmemeye, diğerlerinin gerisinde kalmamaya odaklanmaktayken; *ustalık-kaçınma hedefleri* ise hata yapmamayı, daha önceki performansından daha düşük performans göstermemeyi anlatan ve modele en son dahil edilen boyuttur (Çepikkurt ve İnanç, 2012).

Kişinin kendisi ile ilgili değerlendirmeleri, davranış ve güdülerimizin belirleyicisi, bireyin tutumunu açıklamadaki rolü gibi nedenlerle benlik ile ilgili yapılar araştırılmaktadır (Aşçı, 2004). Benlik saygısı, bireyin kendisine yönelik değerlendirmeleridir ve sahip olduğu iyi şeylerin derecesini ifade eder (Eisenberg ve Delaney, 1998), “Ben iyi bir sporcuyum” gibi. Motivasyon ile ilgili bazı teoriler, kendini değerlendirme konusunun fiziksel aktivite davranışı gibi çalışmalar üzerindeki rolünün etkisinin önemini vurgulamaktadır (Deci & Ryan, 1985; Harter, 1978; Nicholls, 1989). Örneğin spor alanında yapılan çalışmalar, kendine güven ile fiziksel aktivite ortamındaki güdusel yönelimler (Biddle et al., 1993; Fox, 1997; Marsh, Richards, Johnson, Roche, & Tremayne, 1994) ve fiziksel aktivite davranışı (Crocker, Eklund, & Kowalski, 2000; Hagger, Ashford, & Stambulova, 1998; Thøgersen, Fox, & Ntoumanis, 2002; Welk & Eklund, 2003) arasında ilişki bulmuşlardır. Fox (2000) ise yüksek düzeyde kendine güvenin kişinin seçimleri, sabrı ve başarısının başarı ve sağlık ile ilişkili davranışlar konusunda büyük oranda ilişkili olduğunu ortaya koymuştur. Bununla beraber, bazı araştırmacılar algılanan yeterliliği yüksek olan bireylerin ego-yönelimli güdusel yönelimlerin de yüksek olduğunu ortaya koymuşlardır (Cury, Biddle, Sarrazin ve Famose, 1997). Başarı hedefi yönelimi ve algılanan fiziksel yeterliliğin kendine güven üzerinde etkisini araştırılan çok az çalışma bulunmaktadır. Treasure ve Biddle (1997) görev yöneliminin kendine güveni, algılanan yeterliliği ve fiziksel özsaygıyı doğrudan ve dolaylı olarak onordugunu bulmuşlardır. Kavussanu ve Harnisch (2000) yaptıkları bir çalışmada görev yönelimi yüksek olan sporcuların görev yönelimi düşük olanlara göre daha fazla kendine güvenli olduğunu tespit etmiştir. Bu alanda yapılan sınırlı çalışmalar görev yöneliminin kendine güveni etkileyeceği yönündedir. Genel olarak görev yönelimi kendine güven üzerinde etkilidir çünkü kendine güven yeterlilik ile ilişkilidir. Eğer bir birey kendini faaliyet gösterdiği spor dalında yeterli görüyorsa, o bireyin kendine güven duygusu da yüksek düzeyde olacaktır.

Başari hedefi yaklaşımı ve yaşam doyumu arasındaki ilişkiyi araştıran çalışmalar, görev ile ilişkili hedef yöneliminin yaşam doyumu ile pozitif (Duda ve ark.,1995), ego ile ilişkili hedef yöneliminin ise yaşam doyumu ile negatif ilişkisi (Duda, 1992) olduğunu ortaya koymuştur. Akademik ortamda yapılan bir çalışmada ise kişisel amaçlardan kaçınma yönelimi olan bireylerin yaşam doyumlarının düşük düzeyde olduğunu belirtmiştir (Elliot, Sheldon ve Church, 1997).

Başarı hedefi yaklaşımı, kendini fiziksel tanımlamaya yönelik sportif yeterlilik, genel fiziksel yeterlilik ve kendine güven kavramları ile birlikte yaşam doyumu değişkeni bilişsel değerlendirme değişkenleridir. Bu bakımdan çalışmada ele alınan değişkenler arasındaki ilişkiyi belirlemek yerinde olacaktır. Bu bağlamda çalışmanın amacı kadın ve erkek sporcularda başarı hedefi yönelimini öngörmede kendine güven, genel fiziksel yeterlik, sportif yeterlilik ve yaşam doyumunun rolünü incelemektir.

## **Yöntem**

### **Araştırma Grubu**

Çalışmanın örneklemini milli düzeyde spor yapan 17-37 yaş aralığında amaçlı örneklem yöntemi ile belirlenen 323 kadın, 497erkek olmak üzere toplam 820 sporcu oluşturmaktadır. Çalışmaya katılan sporcuların yaş ortalamaları 21.37 (SS= 3.90) olarak hesaplanmıştır. Kadın katılımcıların yaş ortalaması 20.74 (SS= 3.78), erkek katılımcıların yaş ortalamaları ise 21.77 (SS= 3.92)' dir. Katılımcılara ait haftalık antrenman sıklığı 4.26 (SS=1.76) olarak hesaplanırken, bu bulgu kadın katılımcılar için 4.34 (SS=1.78), erkek katılımcılar için ise 4.22 (SS= 1.74)'dür. Katılımcıların spor yaşı 9.41 (SS=3.93) yıldır. Spor yaşı ortalaması kadınlar için 8.98 yıl (SS= 3.66), erkekler için ise 9.70 yıl (SS= 4.08) yıldır.

### **Veri Toplama Araçları**

Katılımcıların demografik özelliklerini ortaya koymak için kişisel bilgi formu; kendine güven, genel fiziksel yeterlik, sportif yeterlilik düzeyini, yaşam doyumunu ve başarı hedeflerini belirlemek için Kendini Fiziksel Tanımlama Envanteri, Yaşam Doyumu Ölçeği ve Sporda 2x2 Başarı Hedefleri Envanteri kullanılmıştır.

### **Kendini Fiziksel Tanımlama Envanteri (Physical Self-Description Questionnaire)**

Araştırmada Marsh ve ark. (1994) tarafından geliştirilen ve Aşçı (2000) tarafından Türkçeye uyarlanan “Kendini Fiziksel Tanımlama Envanteri (PSDQ)”nin kendine güven (Self-esteem), genel fiziksel yeterlik (Physical self-concept) ve sportif yeterlilik (Sports competence)alt boyutları kullanılmıştır. Marsh Kendini Fiziksel Tanımlama Anketi (PSDQ) ölçeği 9 alt boyutunda (kuvvet, vücut yağ, fiziksel aktivite, koordinasyon, esneklik, dayanıklılık, görünüm, sağlık ve spor yeteneği) bireyin kendini tanımlamasını ve değerlendirmesini içeren ve ayrıca bireyin genel fiziksel benlik ve genel benlik kavramını da değerlendiren, toplam 70 maddeden oluşmaktadır. PSDQ’de yer alan bu maddeler “Tamamen Doğru” ile “Tamamen Yanlış” ara-



sında deęişen 6'lı ölçek üzerinde deęerlendirilmektedir. Bu çalıřma kapsamında yapılan güvenilirlik çalıřmalarında, Kendini Fiziksel Tanımlama Anketi'nin iç tutarlıkkatsayılarının kendine güven için .78, genel fiziksel yeterlik için .84 ve sportif yeterlilik için .79 olduęu görülmüřtür.

### **Yaşam Doyumu Ölçeęi (The Satisfaction with Life Scale)**

Diener ve ark. (1985)'nin geliřtirdięi yaşam doyumu ölçeęi 5 aynı yönde ifadeden oluşmaktadır ve her maddeye katılım düzeyi 7'li deęerlendirme basamaęına göre yapılmaktadır. Yetim (1991) tarafından uyarlaması yapılan ölçeęin test-tekrar test güvenilirlięini .71; iç tutarlık deęeri ise .78 olarak belirlenmiřtir. Yaşam doyumu ölçeęinden alınabilecek en yüksek puan 35, en düşük puan ise 5'tir.Bu çalıřma kapsamında yapılan güvenilirlik çalıřmalarında, Yaşam Doyumu Ölçeęi'nin iç tutarlık katsayısı .80 olduęu görülmüřtür.

### **Sporda 2x2 Başarı Hedefleri Envanteri (The 2x2 Achievement Goals Questionnaire for Sport)**

Conroy ve ark. (2003) tarafından geliřtirilen ve Türkçe'ye uyarlaması Kazak Çetinkalp (2009) tarafından yapılan Sporda 2x2 Başarı Hedefleri Envanteri (The 2x2 Achievement Goals Questionnaire for Sport) dört alt ölçek ve toplam 12 maddeden oluşmaktadır. Ölçek "Kesinlikle Katılıyorum (1)" dan "KesinlikleKatılmıyorum (7)"a doęru deęişen yedili likert tipindedir. Ölçeklerin uyarlanması ile iliřkin yapılan doęrulamalı faktör analizi sonuçları incelendięinde, Sporda 2x2 Başarı Hedefleri Envanteri'ne iliřkin uyum indeksleri  $X^2/df=128.14/43=2.98$ , RMSEA= 0.066, CFI= 0.98, GFI= 0.95 ve NNFI= 0.96 olarak hesaplanmıştır. Uсталık-yaklaşma, uсталık-kaçınma, performans-yaklaşma ve performans-kaçınma alt ölçeklerine iliřkin iç tutarlık deęerleri sırasıyla .94, .75, .88 ve .73'dür. Analiz sonuçları, ölçeęin Türk sporcu popülasyonu için kullanılabilir olduęunu göstermiřtir. Bu çalıřma kapsamında yapılan güvenilirlik çalıřmalarında, Sporda 2x2 Başarı Hedefleri Envanteri'nin iç tutarlık katsayılarının uсталık-yaklaşma için .80, uсталık-kaçınma için .65, performans-yaklaşma için .74 ve performans-kaçınma için ise .63 olduęu görülmüřtür.

### **Verilerin Toplanması**

Arařtırmada kullanılan ölçekler 820 sporcuya arařtırmacı tarafından yüzyüze ve bireysel olarak uygulanmıştır.

### **Verilerin Analizi**

Verilerin ortalama ve standart sapmaları tanımlayıcı istatistik yöntemleri ile hesaplanmıştır. Adımsal çoklu regresyon analizi kadın ve erkeklere puanları için ayrı ayrı uygulanmıştır. Veriler analiz edilmeden önce parametrik testlerin ön şartlarının sağlayıp sağlamadıkları kontrol edilmiştir.

## BULGULAR

### Tüm Degiskenlere İlişkin Betimsel İstatistikler

**Tablo 1.** Tüm Degiskenlere İlişkin Betimsel İstatistikler

Değişkenler	Kadın	Erkek	Toplam
	$\bar{X}\pm SS$	$\bar{X}\pm SS$	$\bar{X}\pm SS$
Uсталık-Yaklaşma Hedefi	17.82±4.11	17.75±3.70	17.78±3.87
Uсталık-Kaçınma Hedefi	14.82±4.27	14.42±4.27	14.58±4.27
Performans-Yaklaşma Hedefi	17.08±3.97	17.00±3.82	17.03±3.88
Performans-Kaçınma Hedefi	14.68±4.36	14.91±4.21	14.82±4.27
Yaşam Doyumunu	26.07±6.02	24.90±6.28	25.36±6.20
Sportif Yeterlilik	27.23±4.94	27.55±4.84	27.42±4.88
Genel Fiziksel Yeterlik	29.02±5.38	28.69±5.17	28.82±5.25
Kendine Güven	35.89±7.09	34.62±7.10	35.12±7.12

Tablo 1’de çalışmada yer alan tüm değişkenlere ait aritmetik ortalama ve standart sapma değerleri verilmiştir. Bu değerlere göre sporcuların başarı hedefi yönelimlerinde Uсталık-yaklaşma ve performans-yaklaşma hedefi yönelimleri alt ölçeklerinde yüksek; uсталık-kaçınma ve performans-kaçınma hedefi yönelimleri alt ölçeklerinde ise puan ortalamalarının düşük olduğu belirlenmiştir. Bunlara ek olarak sporcuların yaşam doyumu, sportif yeterlilik, genel fiziksel yeterlilik ve kendine güven ortalamaları incelendiğinde yüksek puana sahip oldukları gözlemlenmektedir.

### Adımsal Çoklu Regresyon Analizi Sonuçları

**Tablo 2.** Kadın sporcuların çoklu regresyon analizi sonuçları

Uсталık-Yaklaşma Hedef Yönelimi					
	B	SH	$\beta$	t	p
Yaşam Doyumu	0.04	0.04	0.05	0.861	0.390
Sportif Yeterlilik	0.07	0.05	0.07	1.242	0.215
Genel Fiziksel Yeterlik	0.12	0.05	0.16	2.500	0.013**
Kendine Güven	0.05	0.04	0.08	1.373	0.171

<b>Uсталık-Kaçınma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	0.12	0.04	0.17	2.744	0.006**
Sportif Yeterlilik	0.03	0.06	0.04	0.588	0.557
Genel Fiziksel Yeterlik	0.08	0.05	0.10	1.498	0.135
Kendine Güven	-0.08	0.04	-0.14	-2.240	0.026*
<b>Performans-Yaklaşma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	0.01	0.04	0.02	0.256	0.798
Sportif Yeterlilik	0.25	0.05	0.31	4.917	0.000**
Genel Fiziksel Yeterlik	0.01	0.05	0.02	0.252	0.801
Kendine Güven	-0.01	0.03	-0.02	-0.345	0.731
<b>Performans-Kaçınma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	-0.01	0.04	-0.01	-0.171	0.863
Sportif Yeterlilik	0.23	0.06	0.26	4.005	0.000**
Genel Fiziksel Yeterlik	0.02	0.05	0.03	0.415	0.679
Kendine Güven	-0.10	0.04	-0.17	-2.704	0.007**

\*p<0.05 \*\* p<0.01

Tablo 2’de görüldüğü gibi, kadın sporcuların ustalık-yaklaşma hedef yönelimi genel fiziksel algısı ile ( $F_{(4, 318)} = 7.015$ ;  $p < 0.01$ ); ustalık-kaçınma alt boyutunda ise yaşam doyumu ve kendine güven alt boyutları ile ilişkili bulunmuştur ( $F_{(4, 318)} = 3.772$ ;  $p < 0.01$ ). Performans-yaklaşma hedef yönelimi boyutu, sportif yeterlilik ile ilişkili bulunurken ( $F_{(4, 318)} = 9.053$ ;  $p < 0.01$ ); performans-kaçınma alt boyutu ise sportif yeterlilik ve kendine güven tarafından öngörülmüştür ( $F_{(4, 318)} = 5.790$ ;  $p < 0.01$ ).

**Tablo 3.** Erkek sporcuların çoklu regresyon analizi sonuçları

<b>Uсталık-Yaklaşma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	-0.06	0.03	-0.09	-2.151	0.031*
Sportif Yeterlilik	0.09	0.04	0.12	2.105	0.036*
Genel Fiziksel Yeterlik	0.08	0.04	0.11	1.911	0.057
Kendine Güven	0.11	0.02	0.22	4.655	0.000**

<b>Uсталık-Kaçınma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	0.06	0.03	0.08	1.802	0.072
Sportif Yeterlilik	0.04	0.05	0.04	0.703	0.482
Genel Fiziksel Yeterlilik	0.13	0.05	0.16	2.674	0.008**
Kendine Güven	-0.11	0.03	-0.18	-3.739	0.000**
<b>Performans-Yaklaşma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	-0.01	0.03	-0.02	-0.562	0.574
Sportif Yeterlilik	0.20	0.04	0.25	4.599	0.000**
Genel Fiziksel Yeterlilik	0.07	0.04	0.09	1.575	0.116
Kendine Güven	0.03	0.02	0.06	1.191	0.234
<b>Performans-Kaçınma Hedef Yönelimi</b>					
	B	SH	$\beta$	t	p
Yaşam Doyumu	0.00	0.03	0.00	-0.028	0.978
Sportif Yeterlilik	0.13	0.05	0.15	2.706	0.007**
Genel Fiziksel Yeterlilik	0.10	0.05	0.13	2.158	0.031*
Kendine Güven	-0.08	0.03	-0.14	-2.921	0.004**

\*p<0.05 \*\* p<0.01

Tablo 3’de görüldüğü gibi, erkek sporcuların ustalık-yaklaşma hedef yönelimi yaşam doyu mu, sportif yeterlilik ve kendine güven ile ( $F_{(4, 492)} = 15.953$ ;  $p < 0.01$ ); ustalık-kaçınma alt boyutunda ise genel fiziksel yeterlilik ve kendine güven alt boyutları ile ilişkili bulunmuştur ( $F_{(4, 492)} = 6.228$ ;  $p < 0.01$ ). Performans-yaklaşma hedef yönelimi boyutu, sportif yeterlilik ile ilişkili bulunurken ( $F_{(4, 492)} = 15.576$ ;  $p < 0.01$ ); performans-kaçınma alt boyutu ise sportif yeterlilik, genel fiziksel yeterlilik ve kendine güven tarafından öngörülmüştür ( $F_{(4, 492)} = 7.282$ ;  $p < 0.01$ ).

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**Sport Specific Self -Efficacy as a Predictor of Accuracy in Performance of a Penalty Shot among Football Players of Babcock University, Ilisan Remo, Ogun State, Nigeria**

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**Abstract**

The penalty shot is often used to break a tie at the end of regulation time in football. It is often perceived as a challenging task, because of the associated feelings of uncertainty and unpredictable outcome. To achieve success in it, accuracy in a penalty shot performance becomes a vital factor. This study examined self-efficacy as a predictor of accuracy in performance of penalty shot taking among soccer players. Ex-post facto research design was adopted for the study. The study randomly selected 60 male soccer players of Babcock University, Ilisan-Remo, and Ogun State, Nigeria who play for their halls of residence. Sports specific self-efficacy scale, adapted from general self-efficacy scale (GSES) and penalty shot skill test were instruments used for data collection. Data generated were analyzed using regression analysis to test formulated hypothesis at 0.05 alpha level. The study revealed that self- efficacy was not a significant predictor of accuracy in performance of a penalty shot. It was recommended that footballers should be exposed to mental skill training to boost their level of confidence and enhance their penalty kick ability.

## Evaluation of Satisfaction Level of Women Taekwondo Players Different Parts of Body

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### **ABSTRACT**

The aim of this study is to determine how much the women who taekwondo in Turkey are satisfied with their bodies according to their ages, weight classes, sports ages and education. The study includes female taekwondo doers [Xage= 22,17 ± 4,19 (106 athletes)] who are qualified for selection of national team held in Ankara immediately after competed in Turkey Adults Championship in Alanya, 2013. The level of the satisfaction of taekwondo doers with their bodies is measured by "BBHÖ" which is a scale used to measure the satisfaction level of the body parts and its features". As a result of the study, there are significant different satisfaction levels in terms of the age of athletes, sports ages, weight classes and educational levels. According to the findings, with regard to age of the female athletes, significant differences are found only in their body parts [F4.890;p=0,009] Body multiple comparison test (Scheffe) shows that there is a statistically difference between the age group of 16-20 and 21-25. In terms of weight classes, the difference is found in only overall appearance of the body [F=2.536; p=0,012] Overall appearance of the body multiple comparison test (Scheffe) shows that each weight class group of 46 Kg, 49 Kg, 53 Kg, 57 kg, 62 Kg ve 67 Kg differs from that of 73 kg. According to sports age and educational level, not many significant differences are observed (p<0,05).

**Keywords:** Taekwondo, body parts, weight class, satisfaction

### **GİRİŞ**

İnsanların, beden şeklini korumak ya da ideal vücut ölçülerine sahip olmak için başvurdukları yollardan birisi olan fiziksel aktivite son yıllarda pek çok insanın tercih ettiği bir yöntemdir. Fiziksel etkinlikler yolu ile bireyler yeni bir fiziki görünüme ulaşma şansı bulurken, bu yeni görünümle birlikte vücutlarının fiziksel zindelik hakkında olumlu düşüncelere de sahip olurlar (Aşçı ve ark., 2005).



Richman ve Shaffer, spor aktivitelerine katılımın beden algısını ve hoşnutluğu arttırdığını ve pozitif olarak etkilediğini belirtmişlerdir (Güçlü ve Yentür, 2008 ).

Moss ve Berlinger'in yaptığı araştırmaya göre, sporcu olanlar sporcu olmayanlara göre bedenen formda olmayı daha çok önemsemekte ve kendilerini fiziksel olarak daha formda hissetmektedirler; ayrıca vücutlarından daha hoşnutlardır (Güçlü ve Yentür, 2008 ).

Spor, günümüzde önemli bir sektör olarak gelişimini sürdürmektedir. Son Olimpiyatlar'da ki başarılarıyla dikkat çeken spor dalı Taekwondo bu gelişimin içerisinde yer almaktadır. Taekwondo Uzakdoğu kökenli, mücadele sporları içerisinde yer alan, ülkemizde de yapılan bir spor dalıdır (Tel, 1996; Ghorbanzadehkoshki, 2009 ).

Taekwondo sporcularının fiziksel, fizyolojik, ruhsal, zihinsel ve sosyal sağlıklarının devamlılığını sağlayabilecek düzeyde olması gerekmektedir (Tutal, 2005).

Taekwondo sporcuları bu sporu fiziksel ve fizyolojik yapıda yarattığı ihtiyaçları karşılayabilmek için çeşitli çalışma yöntemleri ile bu özelliklerini arttırmak zorundadırlar. Bu çalışma yöntemleri ile birlikte diğer spor branşlarına ve spor yapmayan bireylere göre fiziksel ölçülerinde, görünümünde farklılıklar görülür.

Böylelikle bu araştırmada, Türkiye ve Avrupa'da önemli dereceleri alan ulusal seviyedeki taekwondocu kadınların beden bölgelerinden ve özelliklerinden hoşnut olup olmadıklarının belirlenmesi hedeflenmiştir.

## **Araştırmanın Önemi**

Bu araştırma ile taekwondo yapan kadın sporcuların fiziksel benlik algıları saptanacaktır. Fiziksel benlik algısı yüksek olan bireylerin kendine güven ve kendine saygısı da artmaktadır. Kendine saygının gelişmesinde, beden yeterliliğini algılamadaki artış "etkililik" duygusunu da beraberinde getirmekte ve ayrıca özgür irade, ötekini ve kendini kabul etme hislerini oluşturmaktadır. Aynı zamanda "fiziksel görünüm" genel kendine saygının en kuvvetli temelini oluşturmaktadır. Buna bağlı olarak, bireylerin yetkinlik beklentisi arttıkça, yaptıkları işlerde daha başarılı olmakta, daha fazla fiziksel aktivite içerisinde yer almakta ve mesleki performansları da artmaktadır.

## **GEREÇ VE YÖNTEM**

Bu araştırmanın ön aşamasında hedeflenen amaçlara ulaşılabilmesi için gerekli tarama yapılmış, Türkiye Taekwondo Federasyonu'ndan 2013 Türkiye şampiyonalarının zaman çizelgesi alınmıştır. Büyükler Türkiye Taekwondo şampiyonasına katılan, büyükler kategorisindeki kadın taekwondocular, Avrupa Taekwondo Şampiyonası öncesinde yapılan milli takım seçmelerine katılan kadın sporculardan oluşan araştırma grupları üzerinde "Beden Bölgelerinden Hoşnut Olma Ölçeği (BBHÖ) uygulanmıştır.

## Evren ve Örneklem

Bu çalışmanın evrenini kadın taekwondocular oluşturmaktadır. Örneklemi ise 2013 Türkiye B y kler Taekwondo Őampiyonası'na katılan bazı kadın taekwondocular [Xyaş=22,17 (106 sporcu)] oluşturmaktadır.

## Veri Toplama Araçları

Berscheid, Walster ve Bohrnstedt (1973)'ın “ beden b lgelerinden ve  zelliklerinden hoŐnut olma  lçeđi”inde (BBH ) kızlar i in 25, erkekler i in 26 madde bulunmaktadır. Literat rde “beden imajı anketi” olarak da ge en envanterin orijinal formunda cinsel organların  l s  ve g r n m  ile alt ve  st kal a b lgesi ayrı ikiŐer madde olmasına karŐın T rk eye uyarlanan formda cinsel organlar, kal a Őeklinde tek madde olarak yer almıŐtır.

T rk e Formun Psikometrik  zellikleri:  l eđin T rk e versiyonunun g venirliđi ve ge erliđi G kdođan (1988) tarafından belirlenmiŐtir. Envanterin T rk e uyarlaması ve y zey-sel ge erlik tekniđiyle ge erlik  alıŐması yapılmıŐtır. Yapılan analizler sonucunda  l eđin iki haftalık test g venirliđi .88 ve madde toplam korelasyon katsayısının 26 madde i in .12- .68 arasında deđiŐmekte olduđu tespit edilmiŐtir (Bayar, 2010).

## İŐlem Yolu

AraŐtırmada kullanılan beden b lgelerinden ve  zelliklerinden hoŐnut olma  l eđi (BBH ), sporculara ma   ncesinde ve ya sonrasında antren rlerinden izin alınarak uygulanmıŐtır. Anketin uygulanmasında g n ll l k ilkesi esas alınarak testi cevaplandırma iŐlemi ger ekleŐtirilmiŐtir.

## Verilerin Analizi

Betimsel istatistiksel teknikler kullanılmıŐtır. Fark belirlemek i in tek y nl  ANOVA uygulanmıŐtır.

## BULGULAR

**Tablo 1:** Katılımcıların yaŐ deđiŐkenlerine g re frekans tablosu

YAŐ	f	%
16-20	33	31,1
21-25	62	58,5
26+	11	10,4
<b>TOPLAM</b>	<b>106</b>	<b>100</b>

Katılımcıların  ođunluđunun (%62) 21-25 yaŐ aralıđında olduđu g zlenmektedir.

**Tablo 2:** Katılımcıların sıklık değişkenlerine göre frekans tablosu

<b>SIKLET</b>	<b>f</b>	<b>%</b>
46	8	7,5
49	14	13,2
53	25	23,6
57	20	18,9
62	19	17,9
67	9	8,5
73	6	5,7
73+	5	4,7
<b>TOPLAM</b>	<b>106</b>	<b>100</b>

**Tablo3:** Katılımcıların spor yaşı değişkenlerine göre frekans tablosu

<b>SPOR YAŞI</b>	<b>f</b>	<b>%</b>
1-5	18	17,0
6-10	47	44,3
11-15	28	26,4
16+	13	12,3
<b>TOPLAM</b>	<b>106</b>	<b>100</b>

Katılımcıların çoğunun 6-10 yıl arasında spor deneyimine sahip olduğu gözlenmektedir.

**Tablo4:** Katılımcıların eğitim düzeyleri değişkenine göre frekans tablosu

<b>EĞİTİM DÜZEYİ</b>	<b>f</b>	<b>%</b>
İlköğretim	4	3,8
Lise	25	23,6
Üniversite	74	69,8
Yüksek Lisans	3	2,8
<b>TOPLAM</b>	<b>106</b>	<b>100</b>

**Tablo 5:** Katılımcıların alt gruplara verdikleri cevapların toplam ortalamaları ve standart sapma değerleri

	<b>N</b>	<b>Ort</b>	<b>Std</b>
<b>Bedenin Genel Görünümü</b>	106	4.27	.551
<b>Yüz</b>	106	4.40	.800
<b>Beden Üyeleri</b>	106	4.31	.707
<b>Gövde</b>	106	4.22	.630

**Tablo 6:** Alt Gruplar İçin Yaş Değişkenine Göre Varyans analizi sonuçları (ANOVA)

<b>Alt Gruplar</b>	<b>F</b>	<b>p-değeri</b>
<b>Bedenin genel görünümü</b>	1,633	0,200
<b>Yüz</b>	1,445	0,241
<b>Beden üyeleri</b>	4,890	0,009*
<b>Gövde</b>	0,632	0,534

\* $p < 0.05$

Yaş değişkeni açısından beden bölgelerinden hoşnut olma ölçeğinin Beden üyelerinden hoşnutluk alt ölçeğinde gruplar arasında anlamlı fark olduğu gözlenmektedir [ $F=4.890$ ;  $p=0.009$ ]. Farkın hangi gruptan geldiğini bulmak amacıyla yapılan Scheffe analizinde 16-20 ile 21-25 yaş aralığından kaynaklandığı görülmektedir.

**Tablo 7:** Alt Gruplar İçin Sıklet Değişkenine Göre Varyans analizi sonuçları (ANOVA)

<b>Alt Gruplar</b>	<b>F</b>	<b>p-değeri</b>
<b>Bedenin genel görünümü</b>	2,536	0,012*
<b>Yüz</b>	0,604	0,791
<b>Beden üyeleri</b>	0,785	0,631
<b>Gövde</b>	0,659	0,744

Sıklet değişkeni açısından beden bölgelerinden hoşnut olma ölçeğinin Bedenin Genel Görünümü alt boyutu arasında anlamlı fark olduğu gözlenmiştir [ $F=2.536$ ;  $p=0,012$ ]. Yapılan Scheffe analizinde 46, 49, 53, 57, 62 ve 67 kilolarla 73 kilo arasındaki farktan kaynaklandığı gözlenmiştir.

**Tablo 8:** Alt Gruplar İçin Spor Yaşı Değişkenine Göre Varyans analizi sonuçları (ANOVA)

Alt Gruplar	F	p-değeri
<b>Bedenin genel görünümü</b>	1,446	0,234
<b>Yüz</b>	2,155	0,098
<b>Beden üyeleri</b>	1,538	0,209
<b>Gövde</b>	0,692	0,559

Gruplar arasında anlamlı fark olmadığı gözlenmiştir ( $p>.05$ ).

**Tablo 9:** Alt Gruplar İçin Eğitim Durumu Değişkenine Göre Varyans analizi sonuçları (ANOVA)

	F	p-değeri
<b>Bedenin genel görünümü</b>	1,707	0,170
<b>Yüz</b>	1,728	0,166
<b>Beden üyeleri</b>	0,721	0,542
<b>Gövde</b>	1,025	0,385

Gruplar arasında anlamlı fark olmadığı gözlenmiştir ( $p>.05$ ).

## TARTIŞMA VE SONUÇ

Taekwondo sporu yapan bayan sporcuların sıklet, spor yaşı, yaş ve eğitim durumlarına göre beden bölgelerinden hoşnutluk düzeylerinin belirlenmesi amacı ile yapılan çalışmada, sporcuların sıkletlerine, yaşlarına, spor yaşlarına ve eğitim durumlarına göre beden bölgelerinden hoşnut olma düzeylerinde anlamlı fark bulunmuştur.

Alt gruplar için yaş değişkeninin varyans analizlerine göre sadece beden üyeleri [ $F=4,890;p=0,009$ ] alt boyutunda anlamlı farklılıklara rastlanmıştır.

Alt gruplar için spor yaşı değişkeninin varyans analizlerine göre bedenin genel görünümü [ $F=1,446; P=0,234$ ], yüz [ $F=2,155; p=0,098$ ], beden üyeleri [ $F=1,538; p=0,209$ ] ve gövde [ $F=0,692; p=0,559$ ] alt boyutlarında anlamlı farklılıklara rastlanmamıştır.

Alt gruplar için sıklet değişkeninin varyans analizlerine göre sadece bedenin genel görünümü [ $F=2,536;p=0,012$ ] alt grubunda “beden oranları”, “bedenin duruşu”, “spor yeteneği”, “ki-lo” maddelerinde anlamlı farklılıklar bulunmuştur ( $p<0,05$ ).

Alt gruplar için eğitim durumu değişkenine göre varyans analizi yaptığımızda bedenin genel görünümü [ $F=1,707; p=0,170$ ], yüz [ $F=1,728; p=0,166$ ], beden üyeleri [ $F=0,721; p=0,542$ ] ve gövde [ $F=1,025; p=0,385$ ] alt boyutlarında anlamlı farklılıklara rastlanmamıştır.

Çok (1990), orta öğretime devam eden ve sportif aktivitelere katılan kız ve erkeklerin, spora katılmayan kız ve erkek öğrencilerden daha yüksek ortalama beden imgesinden hoşnut olma puanlarına sahip olduklarını bulmuştur.

Aşçı ve ark.(1993) lise düzeyinde sporcu olan ve olmayan erkek deneklerin beden imgelerinden hoşnut olma düzeyleri arasında bir farkın olup olmadığını test etmek ve spor deneyimi ile spor branşlarının beden imgesinden hoşnut olma düzeyi üzerine etkisini araştırma amacı ile çalışma yapmışlardır. Sporcuların spor deneyimlerine göre beden imgelerinden hoşnut olma puanları test edildiğinde “spor yeteneğinden” hoşnut olma puanları arasında istatistiksel olarak anlamlı fark olduğu bulunmuştur. Bizim araştırmamızda da spor yaşı (spor yapma süresi) değişkenine göre taekwondocularda anlamlı bir fark bulunmamıştır.

Yine Aşçı ve ark (1993) yaptığı çalışmada yapılan spor çeşidine göre (futbol, basketbol, voleybol, hentbol ve atletizm) sporcularını “boy” özelliklerinden hoşnut olma puanları arasında anlamlı farklılık bulunmuştur. Bizim araştırmamızda da taekwondocu kadınların beden oranları, beden duruşu, spor yeteneği, kilo, saçlar, çene ve cinsel organ özelliklerinden hoşnut olma puanları arasında anlamlı farklılık bulunmuştur. Taekwondo sporunda uzun boylu ve uzun bacaklı olmak avantaj olarak kabul edilmektedir. Sporcularda genel olarak bu özellikler uygundur. Aynı zamanda taekwondo bir sıklet sporu olduğu için “kilo” özelliklerinde (sıkletler arasında) anlamlı farklılıklar olduğu gözlenmektedir. Genel olarak 73 kilo diğer sporculardan fizik olarak daha iri ve uzun boyludur. Çalışmamızda da bu sıkletle diğerleri arasında anlamlı fark olduğu gözlenmektedir. Kilo ve boy arasında ki ilişki bu anlamda taekwondo sporunda önemli bir değişkendir ve beden bölgelerinden hoşnut olma bu anlamda üst sıkletlerde daha fazladır.

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## **Relationship between Identity Styles with Motivation Factors and Successful Feelings among Karate Athletes**

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### **Abstract**

The purpose of this study was to determine the leadership styles, the factors affecting the leadership styles of karate coaches and the relationship between leadership styles and success. For this aim 34 Karate male and female coaches with the third grade of national coaching certificate were randomly selected. Baronz and Metzcus leadership style and Raudseep success questionnaires were used, after measuring its validity and reliability (in order:  $\alpha= 0.821$ ,  $\alpha= 0.813$ ). Data were analyzed by T-student. The results showed that there was not any significant relation among leadership styles of karate coaches and their specialty and sex, but there was significant difference between leadership style and their age, education level, coaching experience and coaching grade, also between leadership style and their success.



## **Impacts of Dance on Health and Wellness: Case of Bata Dance in Yoruba Speaking States of Nigeria**

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### **Abstract**

This study examined the impacts of a Nigerian traditional dance (Bata) on the health and wellness of dancers. The objectives were to examine the physical, social, psychological and economic impacts of Bata art on professionals. The study adopted a descriptive survey design. Fifty Bata dancers comprising 27 males and 23 females, purposively drawn from Bata-dancing families in four towns in Yoruba-speaking States of Nigeria participated in the study. A validated questionnaire was the tool for data collection. Data collected were analyzed descriptively using percentage and graphical representations. Results showed that out of 50 respondents, 48 (96%) agreed that Bata art has positive physical/health and psychological impacts on them, while only 2 (4%) disagreed. The two respondents who disagreed had once sustained physical injury (during performance). Though, 29 (58%) respondents agreed that their art has helped them attain upward social mobility in terms of knowing places and people, 44 (88%) respondents said that they did not derive economic benefit from the art. It was concluded that Bata dancers derive physical, social and psychological benefits, but not economic benefit from the art. It was recommended that Dance found to be a crucial factor in human health and wellness should be included as a core subject in the general school curriculum at all levels as well as vocational and adult recreational programs. There should be training and retraining of traditional dance experts in Nigeria.

## The Role of Passion in Determining Psychological Needs And Participation Motives in Exercise Participants

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The purpose of this study was to investigate the role of passion in predicting the psychological needs and exercise motivation in regular exercise participants. Seventy one female (Mage=23.1±3.1) and 143 male (Mage=23.72±2.9), totally 214 (Mage =23.51±3) exercise participants participated in this study. “Passion Scale (Vallerand, Mageau, Leonard, Blanchard, Koestner, Gagne and Marsolis, 2003)”, “Basic Psychological Needs Scale (Deci and Ryan, 2000)” and “Behavioral Regulations in Exercise Scale (Mullan, Markland and Ingledew, 1997)” were administered to participants. Stepwise Multiple Regression Analysis revealed that harmonious passion is significant predictor of autonomy (R<sup>2</sup>=0.65;β=0.81;p<0.01) and competence (R<sup>2</sup>=0.64;β=0.80;p<0.01) subscales of basic psychological needs and the relationship between them are positive. Beside, both harmonious and obsessive passion are predictors of relation subscale (R<sup>2</sup>=0.55;p<0.01). The harmonious passion was positively correlated with relation subscale (β=0.86; p<0.01) but the obsessive passion was negatively correlated with it (β=-0.21; p<0.01). Results also showed that both harmonious and obsessive passion are significant predictors of intrinsic (R<sup>2</sup>=0.64;p<0.05), identified (R<sup>2</sup>=0.45;p<0.01), introjected (R<sup>2</sup>=0.22;p<0.01) and amotivation (R<sup>2</sup>=0.31;p<0.01) subscales of exercise motivation. The harmonious passion was positively correlated with intrinsic (β=0.89;p<0.01) and identified (β=0.30;p<0.01) subscales but it was negatively correlated with introjected (β=-0.61; p<0.01) and amotivation subscales (β=-0.73;p<0.01). On the other hand, the obsessive passion was positively correlated with introjected (β=0.43,p<0.01), identified (β=0.28,p<0.01) and amotivation (β=0.38,p<0.01) subscales, but it was negatively correlated with intrinsic (β=-0.14;p<0.05) motivation. It can be concluded that, passion levels of female and male exercise participants plays a significant role in satisfying individuals’ psychological needs by choosing an activity freely, feeling that they are competent within their capacities, communicating with other participants and explaining exercise motives.

**Keywords:** *Passion, Exercise Participants, Psychological Needs, Behavioral Regulations in Exercise*

## Öğretmen Öz Yeterlik İnançlarının Cinsiyet ve Meslek Süreleri Açısından Karşılaştırılması

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### **ÖZET**

Bu çalışmanın amacı, beden eğitimi öğretmenlerinin öz yeterlik inançlarını cinsiyet ve görev yaptıkları meslek süreleri açısından karşılaştırmaktır. Çalışmaya Eskişehir ilinden 54 erkek (Yaş,  $\bar{X}$  : 32,31±6, 08) 30 kadın (Yaş,  $\bar{X}$  : 32,30 ± 5,10) olmak üzere toplam 84 beden eğitimi öğretmeni katılmıştır. Çalışmada Çapa ve ark (2005) tarafından geliştirilen öz yeterlik ölçeği kullanılmıştır. Verilerin analizinde tanımlayıcı istatistik ve MANOVA analizi kullanılmıştır. Yapılan analiz sonucu; öğretmen öz yeterliliğinin 3 boyutu olan Öğrenci Katılımına Yönelik Öz yeterlik, Öğretim Stratejilerine Yönelik Öz yeterlik ve Sınıf Yönetimine Yönelik Öz yeterlik boyutlarında, cinsiyet ve meslek sürelerinde istatistiksel olarak anlamlı olarak bir fark yoktur ( $p>0,05$ ) . Sonuç olarak beden eğitimi öğretmenlerinin öz yeterlilik inançları cinsiyet ve meslek süreleri açısından anlamlı bir fark göstermemektedir.

*Anahtar Kelime: Öz yeterlik, Öğretmen, Cinsiyet*

### **Abstract**

The objective of this study is to compare self-efficacy beliefs of physical education teachers in terms of gender and duration of jobs that they serve. A total of 84 physical education teachers from Eskişehir Province participated in the study. Fifty-four of the participants were male (Age,  $\bar{X}$  : 32,31±6, 08) and 30 of the participants were female (Age,  $\bar{X}$  : 32,30 ± 5,10). The self-efficacy scale developed by Çapa et al. (2005) was employed in the study. Descriptive statistics and MANOVA analyses were conducted to analyse the data. The conducted analysis shows that there is not a statistically significant difference in 3 dimensions of teacher self-efficacy dimensions including Self-Efficacy Dimension Oriented to Student Participation, Self-Efficacy Dimension Oriented to Teaching Strategies and Self-Efficacy Dimension Oriented to Class Management in terms of gender and duration of job ( $p>0,05$ ). As a result, self-efficacy beliefs of physical education teachers do not differ in terms of gender and duration of job.

*Key words: Self-efficacy, Teacher, Gender.*

### **GİRİŞ**

Eğitim, doğumdan ölüme kadar devam eden bir süreçtir. Bu süreçte de birçok bileşen bir araya gelerek birikimli olarak ilerler. Diğer bir deyişle eğitim; öğrenci, öğretmen, öğrenme ortamı ve müfredat bileşenlerinden oluşan insan hayatının en uzun ve önemli sürecidir. Bu sürecin gerçekleştirilebilmesi için, öğretmenin sınıf içi öğrenme aktivitelerini tasarlama ve etkin

bir sınıf yönetimi gerçekleştirme gibi fonksiyonları yerine getirmesi beklenir (Öksüz ve Çoşkun, 2012). Eğitim, insanların ve toplumların gelişmesine katkı sağlayan aynı zamanda uzmanlık gerektiren bir iştir. Uzmanlık gerektiren bu mesleğin iyi bir şekilde gerçekleşebilmesi için, yetiştirilen öğretmenlerin kendi alanları ile ilgili yeterlik duygusuna sahip olmaları beklenir. Çünkü eğitim öğretimin en önemli unsurlarından birisi de, nitelikli öğretmenlerin alan bilgisi, öğretmenlik formasyonu ve genel kültür alanlarında iyi eğitim almalarının yanı sıra, mesleki yeterliklerini yerine getirebileceklerine olan inançlarıdır (Akkuş, 2013). Bu anlamda değerlendirilen öz yeterlik inancı ilk kez Albert Bandura tarafından dile getirilen önemli bir kavramdır (Lenz ve Shortridge, 2002). Bu kavram, insan davranışının önemli bir belirleyicisi olarak Sosyal-Bilişsel Kuram kapsamında Bandura tarafından tanımlanmış ve daha sonra da bu kavramı ele alan pek çok kuramsal ve deneysel çalışmalar yapılmıştır (Yıldırım ve İlhan, 2010). Bandura ve Schunk, yaptıkları çalışmalarda, öz yeterlik inancının seçim yapma, çaba gösterme, kararlılık, girişkenlik, değişen koşullara uyum sağlama gibi sayısız insan davranışında belirleyici rolü olduğunu göstermiştir (Akt. Özerkan, 2007).

Bandura (1997) öz yeterliği; bireyin belli bir performansı göstermesi için gerekli etkinlikleri düzenleyip başarılı bir biçimde gerçekleştirme kapasitesi hakkındaki yargısı olarak tanımlamıştır. Başka bir ifadeyle öz yeterlik, bireylerin olası durumlar ile başa çıkabilmek için gerekli olan eylemleri ne kadar iyi yapabildiklerine ilişkin yargılarıyla ilgilidir. Bu yargılar, doğru ya da yanlış etkinliklerin ve çevresel düzenlemelerin seçimini etkilemektedir. Öz yeterlik inancı aynı zamanda bireylerin bir sorunla ya da hoş olmayan bir deneyimle karşılaştıklarında, ne kadar çaba harcayacaklarını ve ne kadar süre bu sorunla yüz yüze kalabileceklerini de belirlemektedir. Herhangi bir güçlük karşısında kalan bireyin kendi yetenekleri konusunda ciddi endişeleri varsa bu birey güçlük durumunu ortadan kaldırmak için çabalarını yavaşlatabilir ya da tamamen bu işten vazgeçebilir. Diğer taraftan, yeteneklerine güveni tam olan birey güçlük durumunda daha çok çaba harcayacak ve bunu çözmek için azimli davranacaktır (Bıkmaz, 2002). Buradan yola çıkarak öz yeterlik, bireyin kendine alanında duyduğu güveni oluşturabilmesi açısından önemli olarak yorumlanabilir.

Tüm öğretmenlik alanlarında olduğu gibi beden eğitimi öğretmenlerinin de, öz yeterlik inancına sahip olması her açıdan önemlidir. Çünkü beden eğitimi derslerindeki fiziksel aktiviteler, fiziksel güç ve motor yeteneğin geliştirilmesi için önemli bir araçtır. Beden eğitimi öğretmenleri de öğrencilerin fiziksel aktivitelerle geliştirilmesinde önemli bir rol oynar (Martin ve Kulinna, 2003). Bu nedenle, beden eğitimi öğretmenlerinin öz yeterliğinin yüksek olmasının, öğrencilerin öz yeterlik kazanmalarına ve sportif performanslarına olumlu katkılar sağlayacağı söylenebilir.

Öz yeterlik ile ilgili farklı branşlarda birçok çalışma yapılmıştır (Kaya, 2009; Gür ve ark. 2012). Yapılan çalışmaların ışığında, bu çalışmada beden eğitimi öğretmenlerinin öz yeterlik inançlarının cinsiyet ve meslek süreleri açısından karşılaştırılması amaçlanmıştır.

## YÖNTEM

Araştırmaya Eskişehir ilinde görev yapan 54 erkek (yaş  $\bar{X}$  :32.31±6.08) ve 30 kadın (yaş  $\bar{X}$  :32.30±5.10) olmak üzere toplam 84 beden eğitimi öğretmeni katılmıştır. Araştırmada veri toplama aracı olarak Çapa ve ark. (2005) tarafından geliştirilen “*Öğretmen Öz Yeterlik Ölçeği*” kullanılmıştır. Ölçek 9’ lu likert tipinde olup 24 maddeden oluşmaktadır. Ölçek üç alt

faktörden oluşmaktadır. Her bir faktör 8 maddeden oluşmaktadır. Birinci faktör; öğrenci katılımına yönelik öz yeterlik, ikinci faktör; öğretim stratejilerine yönelik öz yeterlik ve üçüncü faktör ise sınıf yönetimine yönelik öz yeterlikten oluşmaktadır.

## BULGULAR

**Tablo 1.** Öğretmen Öz Yeterlik Ölçeği Cinsiyetlere Göre Alt Boyutlarına Ait Tanımlayıcı İstatistikler

Cinsiyet		N	$\bar{X}$	Sd
Katılım	Kadın	30	58,06	5,95
	Erkek	54	56,64	7,17
Strateji	Kadın	30	59,83	5,80
	Erkek	54	59,57	6,64
Yönetim	Kadın	30	62,73	6,24
	Erkek	54	61,98	6,05

Tablo 1' göre öz yeterlilik düzeylerinin cinsiyete göre değerlendirilmesi sonucunda; Katılım ( $58,06 \pm 5,95$ ) alt boyutunda, Strateji ( $59,83 \pm 5,80$ ) alt boyutunda ve Yönetim ( $62,73 \pm 6,24$ ) alt boyutunda bayan öğretmenlerin erkek öğretmenlere oranla daha yüksek ortalama puanlarına sahip oldukları görülmüştür.

**Tablo 2.** Öğretmen Öz Yeterlik Ölçeği Hizmet Sürelerine Göre Alt Boyutlarına Ait Tanımlayıcı İstatistikler

Süre		$\bar{X}$	Sd	N
Katılım	1-5	56,72	6,66	47
	6-10	58,93	8,87	15
	11-15	56,33	4,22	12
	16-20	57,44	7,09	9
	21 ve +	58,00	.	1
	Toplam	57,15	6,76	84
Strateji	1-5	59,36	5,95	47
	6-10	60,73	8,33	15
	11-15	58,83	6,16	12
	16-20	59,77	5,21	9
	21 ve +	67,00	.	1
	Toplam	59,66	6,32	84
Yönetim	1-5	61,06	6,06	47
	6-10	65,26	5,56	15
	11-15	61,16	6,89	12
	16-20	64,33	4,38	9
	21 ve +	67,00	.	1
	Toplam	62,25	6,09	84

Tablo 2' ye göre öz yeterlilik düzeylerinin hizmet sürelerine göre değerlendirilmesi sonucunda; katılım alt boyutunda 6-10 yıl çalışan ( $58,93 \pm 8,87$ ), Strateji alt boyutunda ( $67,00 \pm \dots$ ) 21 yıl ve üzeri çalışan, Yönetim alt boyutunda ( $67,00 \pm \dots$ ) 21 yıl ve üzeri çalışan grupta en yüksek ortalamalar görülmüştür.

**Tablo 3.** Cinsiyetlere Göre Öz Yeterlik Puanları MANOVA Tablosu

Kaynak	Bağımlı Değişken	Type III Sum of Squares	df	Ort	F	Sig. (p)
Corrected Model	KATILIM	38,807	1	38,807	,848	,360
	STRATEJİ	1,296	1	1,296	,032	,858
	YÖNETİM	10,902	1	10,902	,291	,591
Intercept	KATILIM	253790,140	1	253790,140	5,54	,000
	STRATEJİ	274978,201	1	274978,201	6,78	,000
	YÖNETİM	299965,854	1	299965,854	8,01	,000
CİNSİYET	KATILIM	38,807	1	38,807	,848	,360
	STRATEJİ	1,296	1	1,296	,032	,858
	YÖNETİM	10,902	1	10,902	,291	,591

Tablo 3 incelendiğinde Öz yeterlik inancının cinsiyetler açısından karşılaştırıldığında katılım ( $f = .848$ ;  $p > .05$ ), strateji ( $f = .032$ ;  $p > .05$ ) ve yönetim ( $f = .291$ ;  $p > .05$ ) alt boyutlarında herhangi bir fark bulunmamıştır ( $p > 0,05$ ).

**Tablo 4.** Hizmet sürelerine göre öz yeterlik puanları MANOVA tablosu

Kaynaklar	Değişkenler	Type III Sum of Squares	df	Ort	F	Sig (p)
Corrected Model	KATILIM	65,762	4	16,440	,348	,844
	STRATEJİ	83,660	4	20,915	,510	,728
	YÖNETİM	278,341	4	69,585	1,961	,109
Intercept	KATILIM	64425,60	1	64425,602	1,366	,000
	STRATEJİ	72876,75	1	72876,750	1,777	,000
	YÖNETİM	79268,45	1	79268,450	2,234	,000
SÜRE	KATILIM	65,76	4	16,440	,348	,844
	STRATEJİ	83,66	4	20,915	,510	,728
	YÖNETİM	278,34	4	69,585	1,961	,109

Tablo 4 incelendiğinde Hizmet sürelerinin cinsiyetler açısından karşılaştırıldığında katılım ( $f=.348$ ;  $p>.05$ ), strateji ( $f=.510$ ;  $p>.05$ ) ve yönetim ( $f= 1.961$ ;  $p>.05$ ) alt boyutlarında anlamlı bir fark bulunmamıştır ( $p>0,05$ ).

## TARTIŞMA VE SONUÇ

Beden eğitimi öğretmenleri ile yapılan bu çalışmada, beden eğitimi öğretmenlerinin öz yeterlik inançlarının cinsiyet ve hizmet süreleri açısından farklı olmadığı bulunmuştur. Çoşkun ve Öksüz (2012) yaptıkları çalışmada, öğretmenlik uygulaması derslerinin öğrenci katılımı öz yeterliği ve öğretim stratejileri öz yeterliği üzerindeki etkisini, cinsiyete göre anlamlı ölçüde değişmediği şeklinde yorumlamışlardır. Benzer şekilde Azar (2010) “Ortaöğretim Fen Bilimleri ve Matematik Öğretmeni Adaylarının Öz yeterlik İnançları” isimli çalışmasında, kadın öğretmen adaylarının öğretmen öz yeterlik puanları ile erkek öğretmenlerin öz yeterlik puanlarının cinsiyet açısından fark göstermediğini ifade etmiştir. Gür ve ark. (2012) tarafından yapılan “Sınıf, Fen ve Matematik Öğretmenlerinin Öz-Yeterliklerini Yordayan Değişkenlerin İncelenmesi” isimli diğer bir çalışmada ise cinsiyetin, branşın ve öğretmenlik tecrübesinin öz yeterlik inancını etkilemediği bulunmuştur. Bu çalışmalar bizim çalışmamızda çıkan öz yeterlik inancının cinsiyetler açısından farklı olmadığına dair çıkan sonucu desteklemektedir. Bu bulguların ve bizim çalışmamızda çıkan sonuçların aksine Akbaş ve Çelikkaleli (2006) tarafından yapılan çalışmada ise sınıf öğretmeni adaylarının fen eğitimi öz yeterlik inançlarının cinsiyet açısından kadın öğretmenlerin lehine anlamlı olarak farklı olduğu bulgusu elde edilmiştir. Yine Akkuş (2012) tarafından “Sosyal Bilgiler Öğretmen Adaylarının Öz-Yeterlik İnanç Düzeylerinin Belirlenmesi” üzerine yapılan çalışmada, öz yeterlik inancı düzeylerinde kadın öğretmen adaylarının lehine anlamlı bir fark olduğu bulgusu elde edilmiştir. Shahid ve Thompson, tarafından öğretmen yeterliğinin cinsiyete göre karşılaştırıldığı çalışmada, öğretmen öz yeterliği ile cinsiyet arasında pozitif bir ilişki olduğu vurgulanmakta ve kadınların erkeklere göre daha yüksek öz yeterliğe sahip oldukları belirtilmektedir (Akt. Azar, 2010). Bu çalışmalara paralel olarak Ülper ve Bağcı (2012) Türkçe öğretmeni adaylarının öğretmenlik mesleğine dönük öz yeterlik algıları üzerine yaptıkları çalışmada, özel alan bilgisi bölümünde öz yeterlik algılarının kadınların lehine anlamlı olduğu bulgusuna erişmişlerdir. Anlatılan bu çalışmalar ise bizim çalışmamızda cinsiyet açısından öz yeterlik inançları arasında çıkmayan fark için desteklemeyen sonuçlar ortaya koymaktadır.

Meslek süreleri açısından yapılan karşılaştırma sonucunda ise bu çalışmada öğretmenlerinin öz yeterlik inançları meslek süreleri açısından anlamlı bir fark göstermemiştir. Bizim çalışmamızda çıkmayan bu sonucu destekler bulgularla paralellik göstermeyen çalışmalar da vardır. Örneğin, Çapri ve Kan (2007) yaptıkları çalışmada, öğretmenlerin kişilerarası öz yeterlik inançlarını hizmet süresi, okul türü, öğretim kademesi ve unvan değişkenleri açısından incelemişler ve öz yeterlik inancının hizmet süreleri açısından anlamlı farklılık gösterdiği sonucuna ulaşmışlardır. Benzer şekilde Akkuzu ve Akçay (2012) yaptıkları çalışmada, kimya öğretmen adaylarının öz yeterlik inançları farklı değişkenler açısından incelemişler ve ders verme süresi fazla olan öğretmen adayında kimyanın öğretimine yönelik öz yeterlik inançlarının da-

ha yüksek olduğunu sonucuna varmışlardır. Bizim çalışmamızdaki bulgularla paralellik gösteren çalışmalarda vardır. Saracaloğlu ve Yenice (2009) çalışmalarında mesleki kıdem ile öz yeterlik inançları arasında istatistiksel olarak anlamlı bir fark olmadığını bulmuşlardır. ortaöğretim öğretmenlerinin öz-yeterlik algıları üzerine yapılan diğer bir çalışmada ise ortaöğretim öğretmenlerinin öz yeterlik algılarının cinsiyet, branş, kıdem, görev yapılan okul türü ve en son mezun olunan yükseköğretim programına göre farklılık gösterip göstermediği araştırılmış ve öz yeterlik algılarının kıdem değişkenine göre farklılaşmadığı sonucuna ulaşılmıştır (Üstüner ve ark. 2009).

Araştırma sonuçlarına göre bizim çalışmamızı destekleyen ve desteklemeyen çalışmalar olduğu açıktır. Bizim çalışmamızdaki öğretmen öz yeterlik inancının hizmet süresi açısından fark göstermemesi beden eğitimi derslerinin uygulamalı olarak işlenmesi, genç öğretmenlerin daha dinamik olması ve bundan dolayı da özgüvenlerinin yüksek olmasına bağlanabilir.

Sonuç olarak öğretmenlerin öz yeterlik inançlarının birçok açıdan değişkenlik gösterdiği söylenebilir. Yapılan çalışmada öğretmen öz yeterliğinin cinsiyet ve meslek süreleri açısından farklılık göstermediği bulgusu elde edilmiştir.

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## An Analysis of Aggression Scores League Soccer Players by Level

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Purpose of this study, according to the province of Eskişehir some variables to examine the levels of aggression in players playing football. Eskişehir A team, U-16 and U-17 team football players, Eskişehir Anadolu University and Kırka Boraks football players who are struggling super amateur league, Osmangazi University who are struggling the league 1. amateur league and Eskişehir Gökova sports football players who are struggling in the 2. league participated in the study voluntarily. In this research, as means of collecting datum; “ Aggressiveness Inventory” used the 30 item inventory developed by Kiper (1984). Descriptive statistics and MANOVA analysis were conducted on the collected data. The results of analysis show that destructive aggression between amateur and professional football players ( $F=3,63;p<0,05$ ), football players with monthly income of destructive aggression ( $F=2,41;p<0,05$ ), monthly income levels of impulsive aggression ( $F=2,16;p<0,05$ ), with the super league, super amateur league, first amateur league ve second amateur leagues are significant differences between destructive aggression ( $F=5,26;p<0,05$ ) and passive aggression ( $F=6,82;p<0,01$ ). With the level of education and marital status, there is no difference in any of the sub-dimensions of aggression inventory. Consequently, some sub-dimensions of football players in situations of aggression, football players’ play league level, income level and sports levels shows the difference. There is no a significant difference in case of education and marital football players.

*Keywords: Football, Aggression, League Level*

## A Investigation Of Exercise Motives According to Gender Role Orientations

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The purpose of this study was to investigate the role of gender role orientation in predicting exercise motives and also it was aimed to compare the participation motives of exercise participants with regard to gender role classifications. One hundred and thirty eight female ( $M_{ge}=29.32\pm 8.88$ ) and 179 male ( $M_{age}=30.10\pm 10.24$ ) exercise participants voluntarily participated in this study. “BEM Gender Role Orientation Inventory” and “Physical Activity and Leisure Motivation Scale (PALMS)” were administered to participants. The results of MANCOVA (sex as a control variable) indicated significant differences in participation motives of exercise participant with regard to their gender role classifications (Wilks Lambda=.61;  $F(24,850)= 6.57$ ;  $p<.05$ ). For each sex, two separate Stepwise Multiple Regression analysis were conducted to test the role of gender role orientation in determining the exercise motives. Regression analysis revealed that the femininity score was significant predictor of physical and psychological condition motives of both male and female exercise participants. On the other hand, masculinity score was the significant predictor of affiliation, appearance, others’ expectations and competitive motives of females and males. In addition, femininity score was only significant predictor of mastery and enjoyment motives of female participants while both femininity and masculinity scores were predictors of these motives for male participants. As a result, gender role orientations play a significant role in understanding why females and males participate to exercise

**Keywords:** *Gender Role Orientations, Exercise Motives*

## Effect of Swimming on Changing Happiness Levels in Boy High School Students with Different Personality Traits

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### **Abstract**

This study of swimming exercise measured the rate of change in participants regarding measures of happiness. The study population began with 300 male high school athletes but a total of 72 were randomly selected as the sample size in this study. The subjects were measured by the use of the Oxford Happiness Questionnaire and the NEO Personality Inventory. SPSS19 analysis was performed using the software package to test the effect of physical activity on happiness among individuals with: personality 1 - introverted extrovert and 2 - neurotic and neurotic 3 - dutiful and undutiful 4 - compatible or incompatible 5 - receptive to new experiences and new experiences denial. There were significant differences between physical activity and levels of happiness, life satisfaction, positive mood, and self-esteem. There also was a significant relationship between mental health and efficiency and no significant relationship between any of the personality factors and happiness.

## Egyptian Folkloric Dance

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### **Abstract**

Dance is the temple of art which can give you a new talent and support you in hard times. It can constitute cardiac, muscular and, more importantly, psychological exercises. Cultures and civilizations survive until now, sometimes because of dance. In Egypt, folkloric dance reflects most of the traditions you want to know about Egypt. There are numerous numbers of Egyptian folkloric dances which depend on the area that the dance comes from. For example, Nubian, Alexandrian, and the upper Egyptian dance. Egyptians like dance but at the same time they do not like their children to learn dance in institutions or to practice dance in a dance group. These are obstacles that face folkloric dancers.

## **Prevalence and Psychosocial Factors of Illicit Drug Use among Nigeria Elite Athletes**

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### **Abstract**

Considerable attention has been focused on the use of drugs as an artificial means of enhancing athletic performance, by both amateur and professional athletes. Although sports administrators are doing a lot to discourage the practice, the incidences appear to be on the increase. It is against this background that the study investigated the prevalence and psychosocial factors of drug use among elite athletes in Nigeria. In addition, it examined the extent to which drug use has influenced the behavioral dispositions of athletes. The population of this study consisted of athletes (male and female) who have represented Nigeria at least once at an international competition. A total of 220 athletes were randomly sampled from 11 popular sports in Nigeria. A set of questionnaires developed and validated by the researcher was used to collect data for the study. The data collected were analyzed using descriptive statistics, t-test and Analysis of Variance (ANOVA). Scheffe post-hoc analysis was used to locate any significant f-ratio. The hypotheses were tested at <0.05 level of significance. The results showed that participants in this study had used ephedrine, caffeine, anabolic steroids as well as dianabol. Also, there was a significant influence of psychological factors on drug use among the participants. Participants in team sports scored the psychological reasons for drug use significantly higher than participants in individual and dual sports. However, sociological factors had no significant influence on drug use among the participants.

## **Knowledge Of Anti-Aging And Exercise Participation Among The Staff Members Of The University Of Ibadan, Nigeria**

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### **Abstract**

This study examined the knowledge of anti-aging and the level of exercise participation among the staff members of the University of Ibadan. The descriptive survey research design was employed for the study, while a self-structured modified questionnaire was used to elicit information from the respondents. The purposive and simple random sampling techniques were used to select the sample from the target population. A total of 219 respondents participated in the study, forming the sample size. The statistical tools used for the study included the mean, standard deviation, percent counts, frequency and chi-square cross tabulation. The result of the findings ( $p=0.018$ ) showed that there was a significant level of association between the knowledge of anti-aging and level of exercise participation among the staff members.

### **Introduction**

Aging is an inevitable phenomenon, which comes with wrinkles declined physical capacity, memory loss, mental and logical sharpness, weakening of the function of sense organs and incoming of diseases like cardiac problems, diabetes, blood pressure, arthritis, etc (Jaiyesimi, 2009). Aging has been viewed as the steady decline of organic function and body systems. It was also described by Gavrilov (2002), as a summary term for a set of processes which contribute to health deterioration and ultimately to death with the passage of time. Shephard (1991) referred to aging as the biological process of growing older in a deleterious sense also known as 'senescence'. Many diseases associated with growing older can be avoided, controlled or even eliminated with regular exercise. the concept of anti-aging addresses how to prevent, slow or reverse the effects of aging and help people live longer, healthier, happier lives (Jaiyesimi, 2009). Amongst the list of therapies available for anti-aging lifestyle; physical exercise and caloric restriction prove to be less expensive and highly effective (Paola, 2003). The use of surgery, lotions, acupuncture, hair coloring and cosmetics only treat the symptoms of aging and not the underlying cause of the problem.

When studying knowledge of aging, it has been found that most people know little about aging and their knowledge is based on misconceptions (Palmore, 1998). Older adults have lived through extraordinary events and learning about aging can be exceptionally informative (Rees, King, & Schmitz, 2009). Viewing older adults in a positive manner is seeing them not only for their capabilities but also understanding them in a sociological, cultural and psychological way (Rees, King, & Schmitz, 2009). Due to longer life expectancy, there has been inevitable increase in the older adult population. Therefore, there is a crucial need for individuals to be educated on the aging process and a need to possess a positive attitude towards aging (Cottle & Glover, 2007).

Many studies suggest that chronic adaptation to physical activity can attenuate markedly the decrements in exercise capacity and physiologic morphology and function that would otherwise occur with aging, with the notable exception of maximal heart rate stimulation in the aging heart (Scarpace, Lowenthal & Tumer, 1992). Although the peak exercise workload achievable in adult is always lower in aged individuals, the cardiovascular and musculoskeletal adaptations to chronic aerobic exercise enable the trained individual to sustain higher sub-maximal workloads with less of a cardiorespiratory response (heart rate, blood pressure, and dyspnea) and less overall and musculoskeletal fatigue (Poulin, Paterson, & Govindasamy, 1992). Apart from peak athletic performance, the adaptations to cardiovascular training can overcome much of the day-to-day functional limitations that might otherwise be imposed by the physiologic changes of aging and disuse (Bouchard, 2001).

## **Materials and Methods**

### **Participants**

A total of 219 members of academic staff of the University of Ibadan, Nigeria participated in the survey in proportion of 133 male (60.7%) and 86 female (39.3%) whose age ranges from 30 and above are consecutively recruited for this study. The setting for this study was the ancient city of Ibadan, Nigeria. Ibadan is a semi-urban community in South-western Nigeria.

### **Procedures**

A self-structure modified questionnaire was used to collect information on the knowledge of anti-aging and level of exercise participation by the members of staff of University of Ibadan, Nigeria.

### **Methodology**

The study was to find out the level of knowledge of anti-aging and exercise participation among the University staff members. Descriptive survey research method was used for the study. The population comprised the staff members of University of Ibadan, Nigeria. Proportionate and simple random sampling techniques were used to select the respondents for the study. A total of two hundred and nineteen (219) respondents made up of adult male and female staff members were used for the study. The instrument was validated through construct and content validity. Reliability of the instrument ( $r_s=0.82$  correlation coefficient) was done through a pilot study of test re-test method on the sample of neutral population outside the study area. The instrument was administered personally by the researcher. The result was tabulated and coded appropriately using both descriptive and inferential statistics analysis using chi-square cross tabulation ( $X^2$ ) statistics to test the hypotheses at 0.05 alpha level.

### **Procedure for Data Analysis**

Descriptive statistics of frequency, percent counts, mean and standard deviation were used to summarize the data collected. Chi-square cross tabulation was used to test the level of



significance of exercise participation by the respondents. The significance level was set at 0.05 alpha level.

## Results

TABLE 1  
FREQUENCY DISTRIBUTION OF RESPONDENTS BY SEX

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	133	60.7	60.7	60.7
female	86	39.3	39.3	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY AGE

TABLE 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 30-34	44	20.1	20.1	20.1
35-39	46	21.0	21.0	41.1
40-44	37	16.9	16.9	58.0
45-49	31	14.2	14.2	72.1
50-54	35	16.0	16.0	88.1
55 and above	26	11.9	11.9	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY MARITAL STATUS

TABLE 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid single	32	14.6	14.6	14.6
married	178	81.3	81.3	95.9
widow ed	8	3.7	3.7	99.5
divorced	1	.5	.5	100.0
Total	219	100.0	100.0	

FREQUENCY DISTRIBUTION OF RESPONDENTS BY NATURE OF WORK

TABLE 4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid teaching	94	42.9	42.9	42.9
non-teaching	125	57.1	57.1	100.0
Total	219	100.0	100.0	

Table 1 showed that more male participated in the study than female ( $1.4 \pm 0.5$ ). Table 2 showed that 44 respondents (20.1%) fell between the age of 30-34 years, 46 respondents (21%) between the age of 35-39, 37 respondents(16.9%) between the ages of 40-44, 31 respondents (31%) between the age of 45-49, 35 respondents (16%) between the age of 50-54 and 26 respondents between the age of 55 and above in the study ( $3.2 \pm 1.7$ ). Table 3 showed that there are more married respondents in the study than other categories specified ( $1.9 \pm 0.4$ ). Table 4 showed that there are more non-teaching staff in the study than teaching staff ( $1.6 \pm 0.5$ ).

TABLE 5

QUESTIONS ON KNOWLEDGE OF ANTI-AGING

	<b>KNOWLEDGE ABOUT ANTI-AGING</b>	Yes	No	I don't know	Total
1	Anti-aging strategy means slowing down aging process	151 (68.9%)	27 (12.3%)	41 (18.7%)	219 (100%)
2	Aging process can be slowed down or reversed	105 (47.9%)	71 (32.4%)	43 (19.6%)	219 (100%)
3	Aging affects physical activities status	181 (82.6%)	13 (5.9%)	25 (11.5%)	219 (100%)
4	Anti-aging strategy improves mental and phy-	131	40	48	219

sical performance	(59.8%)	(18.3%)	(21.9%)	(100%)
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TABLE 6

**QUESTIONS ON EXERCISE PARTICIPATION AND AGING PROCESS**

VO=Very Often O=Often S=Sometimes NAA= Not At All

	<b>EXERCISE PARTICIPATION AND AGING PROCESS</b>	VO	O	S	NAA	Total
14.	I engage in sporting activities for recreation	30 (13.7%)	42 (19.1%)	110 (50.2%)	37 (16.9%)	219 (100%)
15.	I walk a moderate distance for general body fitness	79 (36.7%)	67 (31.2%)	55 (25.6%)	17 (7.9%)	215 (100%)
16.	I do stretching and flexibility exercise	36 (16.6%)	49 (22.6%)	94 (43.3%)	38 (17.5%)	217 (100%)
17.	I participate in domestic chores to exercise my body	80 (36.7%)	65 (29.8%)	50 (22.9%)	23 (10.6%)	218 (100%)
18.	I participate in exercise with fitness instructor	12 (5.9%)	21 (9.8%)	55 (25.6%)	127 (59.1%)	215 (100%)
19.	I engage in light weight lifting to build muscle strength	11 (5.1%)	13 (6.0%)	31 (14.3%)	162 (74.6%)	217 (100%)
20.	I avoid road transportation to stroll to work for general body fitness	22 (10.1%)	22 (10.1%)	98 (45.2%)	75 (34.6%)	217 (100%)
21.	I go to fitness centre for exercise participation	11 (5.1%)	10 (4.6%)	37 (17.1%)	158 (73.1%)	216 (100%)

The cross tabulation  $\chi^2$  observed value was 15.242 ( $p=0.018$ ) and the  $\chi^2$  critical value was 12.59, degree of freedom was 6. All questions asked has a level of significance less than 0.05 ( $P<0.05$ ). Therefore, the chi-square cross tabulation analysis showed that there is a significant level of association between the knowledge of anti-aging and level of exercise participation to reverse aging process among the members of staff of university of Ibadan.

**Discussion**

The findings of the study showed that knowledge of anti-aging is prevalent among the staff members of the university and the chi-square cross tabulation also shows a significant level of association between the knowledge of anti-aging and exercise participation. The study showed that most of the respondents have the knowledge of the anti-aging. From the

study, 68.9% of the respondents said yes that anti-aging means slowing down aging process and 47.9% agreed that aging process can be slowed down or reversed. the study also recorded that 82.6% of the respondents supported that aging affects physical activities status while 59.8% of the respondents agreed that anti-aging strategy improves mental and physical performance. Despite the significant level of relationship reported by the chi-square cross tabulation, 50.2% sometimes engage in sporting activities for recreation, 59.1% do not participate in exercise with fitness instructor, 43.3% sometimes do stretching and flexibility exercise, 45.2% sometimes avoid road transportation to stroll to work for general body fitness while 73.1% do go to fitness centre for exercise participation.

Researchers insist that positive attitudes about the aging population must be introduced early in college education in order to be studied effectively (Funderburk, Damron-Rodrigues, Storms & Solomon, 2006). Knapp and Stubblefield (1998) found that students who enrolled in a gerontology course did, however, gain advanced knowledge of aging. Exercise has been considered as anecdote to health. According to Haastrup and Adeogun (2005), regular physical activity has been found to promote prevention of weight gain and maintenance of weight loss, when combined with diet, better cardio respiratory and muscular fitness, fall prevention, and better cognitive function in older adults. While some studies have shown how aging undermines physical strength and psychomotor performance, others show that exercise can counteract some of the harmful consequences of aging (Udoh, 2000).

### **Conclusion and Recommendation**

Although the health benefits of physical activity for elderly persons are well established, exercise is an underused form of health promotion, especially in the elderly population. Elders face particular challenges in motivating to activity, including illnesses, misinformed belief systems, lack of a peer group influence, accessibility, financial concerns, a sense of disempowerment, and fear of injury. Therefore the institutions that play host to the elderly population need to integrate life support program into the aging health maintenance system that involve physical activity adequate enough to slow down the aging process.

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## Why Do Young Adults Participate in Recreational Exercise and Sports?

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The purpose of this study was to determine motives of young adults for participating in recreational exercise and sport. The study was also aimed to examine motives for participating in recreational exercise and sport with regard to gender and some exercise behaviors (frequency & years of exercise/sport participation). “Physical Activity and Leisure Motivation Scale (PALMS)” was administered to 250 individuals who participated exercise or sports on a regular basis. Male and female exercisers were classified into two groups with respect to frequency (4 or more times per week & 3 or fewer times per week) and they were also classified into three groups with respect to their years of exercise/sport participation (1- 5 years, 6- 10 years & 11 years and more). Physical condition, appearance, and psychological condition were the most important motives of young adults for participating in recreational exercise and sport. T-test results revealed significant differences in affiliation, competition and other’s expectation motives between males and females ( $p < 0.05$ ). In addition, a significant difference was obtained in appearance, other’s expectation and competition motives with regard to frequency of exercise. The only significant difference was obtained in other’s expectation motives in terms of year of exercise participation. It can be concluded that the physiological wellness is the most important reason of young adults for participating in recreational exercise and sport. Furthermore, gender and exercise/sport behaviours may have an influence the motives of young adults.

**Keywords:** *Exercise, Sport, Motivation*

## **College Athletes Perception of the Application of Religious Rite (Prayer) as a Psycho-Social Aid For Anxiety, Fear and Stress Management in Sports**

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### **Abstract**

The application of religious rite (prayer) before, during and after competitive sports and training session is a common phenomenon in virtually all sports. It is however more noticeable during team sports like soccer, hockey, handball, volleyball and basketball. A lot of reasons have been attributed to it, the Main thrust of the study is to ascertain whether college athletes significantly perceive religious rite (prayers) as a psychological aid for anxiety, fear, and stress management in sports. One Null hypothesis was formulated to guide the study. The sample for the study consists of three hundred and fifty athletes who participated in the 2012 Nigerian Colleges of Education Games. The stratified sampling technique was adopted in selecting the sample. The instrument used for the study was a self developed questionnaire which was validated by experts in physical education Department from the Delta State University Abraka, Nigeria. The reliability of the instrument was ascertained using the test re test method and a reliability of 0.89 was obtained. The multiple regression analysis was used in testing the hypothesis at 0.05 level of significance. The result of the study revealed that college athlete significantly perceived religious rite (prayer) as a psychological aid for anxiety, fear and stress management in sports. It was concluded and recommended that sports psychologist and sociologists include religious rite (prayers) as one vital variable that can be utilized in the management of athlete's psycho-social problems of anxiety, fear and stress.

**Key words:** *Prayer, anxiety, fear, stress management and psycho-social*

### **Introduction**

Prayer (a religious rite) is a common phenomenon in both individual and team sports. Its utilization before, during and after major sports tournament and training session attracted the attention of sports sociologist and psychologist to go into research to determine its constant utilization (Coakley, 2003; Hoffman, 1992; Stevenson, 1991). Ruphine (2000) defines prayer 'as a way in which humans relate with the Holy God', gods and spirits. Ruphine further stated

that people often use religious beliefs and rituals to provide them with psychological support in the face of uncertainty. In sports no team can be certain to be the winning side. Hence, after adequate and professional preparation they still need the assistance of the Supreme Being. According to Watson and Czech (2005) recent review of literature has identified the relative neglect of spiritual and religious issues in the sport psychology literature and highlighted the need to further document its importance in athletes' and consultants' lives.

La Torre (2004) pointed out that prayer produces psychological changes or advantages to the religious man who prays, hence sportsmen and women succumb to the fissiparous tendencies from whatever doctrines they find themselves. They believe that God or the supernatural will give them something that they want to have but which they cannot obtain by ordinary means. Miller and Delaney (2005) opined that researchers, coaches and sport psychologists have begun to acknowledge the importance of religion and spirituality (religious practices) which include prayer in sports and exercises as in Yoga

Coakley (2003) as cited by Watson and Czech (2005) suggest six possible reasons why athletes utilize religious prayer: prayer as a coping mechanism for uncertain stressful situations; to help live a morally sound life; to sanctify athletes' commitment to sport; to put sport into perspective; to establish a strong bond of attachment between teammates; and to maintain social control. The use of religious prayer to alleviate anxiety and stress in uncertain situations is prevalent among athletes, and is consequently an important topic for sport psychology research. According to Boye, Chidi and Makasi (2009) athletes of various category use prayer as a psychological arousal for enhancement of better performances during training and active competitive sports tournaments.

Ruphine (2000) affirmed that athletes and coaches may use their religion as a source of psychological support as they cope with the challenges and uncertainty in competition, and as they try to find special meaning for their sports lives. Coaches may also use various forms of religion and religious beliefs (prayer) to produce team unity and establish a basis for social control over their athletes. This habit is very common in schools and college sports (in some parts of the world) where special religious services are conducted prior to any crucial match. Players converging and praying or performing some rituals before a kick-off is not an unusual or uncommon sight in today's sporting competitions (Ruphine, 2000). Religious beliefs and rituals can provide athletes with physical and spiritual reinforcement, relieve anxiety, help them concentrate and face competitions with confidence, and supply reasons for practising and developing physical skills" (Prebish, 1984, Croakley 1994).

Czech et al. (2004) carried out a study on the use of Christian prayer in sports. In their study nine former division 1 Christian athletes were their respondents. The collection and analysis of data were based on an existential-phenomenological method. Instrument used for data collection were interviewed using an interview guide comprising a series of open-ended questions. The result of their findings revealed that ritualistic activity has a powerful influence on athletes" and that they ". . . use prayer as a coping mechanism to alleviate stress. The findings



of Czech et al (2004) are in consonant with the findings of Park (2000) which investigated coping strategies used by national Korean athletes and (Vernacchia et al., 2000) which were on determinants of professional and personal development in Olympic track and field athletes. Both investigations identified prayer as an important factor in coping with stress and anxiety, attaining peak performance and providing meaning to sports participation.

In contrast to the above studies, Eitzen, Sage, and Brown (1993) suggest that most athletes and coaches do not believe that religious rite (prayer) can make up for the failure to acquire necessary skills or employ correct situational strategies in sport. However, according to Watson and Czech (2005) past researches have shown that the use of prayer in coping with uncertainties in sport is more significant for higher level athletes, for example, those playing in collegiate or elite sport (Buhrmann & Jarvis, 1981).

Womack (1992) theorized that one reason that athletes use religious rituals (prayer) is because it helps them focus attention on the task at hand, thus aiding performance. Boye, Chidi and Makasi (2009) from their study suggest that prayer is often used by athletes to alleviate anxiety and help optimize attentional focus. Considering the findings of previous studies on the use of prayer in sports and the claim of Buhrmann and Jarvis (1981) and Watson and Czech (2005) that the use of prayer for coping with uncertainties is mostly common with higher level athletes and those playing collegiate or elite sports, the present studies tends to investigate college athletes perception of the application of religious rite (prayer) as a psychological aid for anxiety, fear and stress management in sports

## **Null Hypothesis**

College athletes will not significantly perceive the application of religious rite (prayer) as a psychological aid for anxiety, fear and stress management in sports

## **Methods**

One Null hypothesis was formulated to guide the study. The sample for the study consists of three hundred and fifty athletes who participated in the 2012 Nigerian Colleges of Education Games. The stratified sampling technique was adopted in selecting the sample. The instrument used for the study was a self developed questionnaire which was divided into three sections. Section A was based on demographic data, section B contain twelve items which require the respondents to tick strongly agree, agree, strongly disagree and disagree while section C of the questionnaire included question items that requested the respondents to make comments on why they pray before, during and after any sports tournament. The instrument was validated by experts in Physical Education Department from the Delta State University Abraka, Nigeria. The reliability of the instrument was ascertained using the test re test method and reliability was obtained using the Pearson Product Moment Correlation and a reliability of 0.89 was obtained. The multiple regression analysis was used in testing the hypothesis at 0.05 level of significance.

## Results

The results of the findings is displayed on the table below

Table 1. Multiple Regression Analysis on the application of Variables of religious rites (Prayer) as psycho-social aid for fear, anxiety and stress management techniques in sports

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.415 <sup>a</sup>	.173	.157	.73541

a. Independent variables: Religious rite (prayer)

b. Dependent Variable: (Psycho-social aids) fear, anxiety, and stress management techniques

### ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41.154	2	5.879	10.871	.000 <sup>a</sup>
	Residual	197.400	365	.541		
	Total	238.554	367			

a. Independent variables: Religious rite (prayer)

b. Dependent Variable: (Psycho-social aids) fear, anxiety, and stress management in sports

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.300	.181		7.188	.000
	Variable of fear (X1)	.366	.151	.160	2.421	<b>.016</b>
	Variable of anxiety (X2)	.294	.097	.184	3.026	.003
	Variable of stress(X3)	.319	.122	.165	2.624	<b>.009</b>

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.300	.181		7.188	.000
Variable of fear (X1)	.366	.151	.160	2.421	<b>.016</b>
Variable of anxiety (X2)	.294	.097	.184	3.026	.003
Variable of stress(X3)	.319	.122	.165	2.624	<b>.009</b>

b. Dependent Variable: (Psycho-social aids) fear, anxiety, and stress management in sports

### Conclusion

All combined variables are significantly perceived as psycho-social aids to fear, anxiety and stress management in sports ( $p < 0.001$ )

### Discussion of Findings

The result of the findings as shown on the regression table revealed that college athletes significantly perceived religious rite (prayer) as psycho-social aids to fear, anxiety and stress management in sports. The critical t value of 7.118 is greater than calculated t value of fear, anxiety and stress variables of 2.421, 3.026 and 2.264 respectively. It implies that college athletes significantly perceive Religious rite (prayer) as a psycho-social aid for fear, anxiety and stress management in sports.

The findings from this study is in consonant with the assertions of Omoregbe (2002) who pointed out that prayer produces psychological changes or advantages to the religious man who prays, hence sportsmen and women succumb to fissiparous tendencies from whatever doctrines they find themselves. Similarly the findings confirmed the earlier suggestions of Coakley (2003) that the possible reasons why athletes utilize religious prayer in sports is to among others: prayer as a coping mechanism for uncertain stressful situations; to help live a morally sound life; to establish a strong bond of attachment between team mates.

Boye, Chidi, and Makasi (2009) findings on prayer as a psychological arousal for enhancement of better performance in sports is also a pointer in this findings, that college athletes adopt religious rite as a means to control and cope with some perceived psychological problems. It has been earlier affirmed that some athletes result to prayers for the Almighty God to assist them achieve their desire for success. However, this study has empirically proven that athletes result to prayer for the Supreme Being to assist them to have confidence and help manage stressful situations that will hamper their performance.

The study also affirmed the findings Prebish (1984) and Coakley (1994) that stated that religious beliefs and rituals can provide athletes with physical and spiritual reinforcement, relieve anxiety, help them concentrate and face competition with confidence, and supply for practising and developing physical skills.

In contrast to this finding is that Eitzen, Sage and Brown (1993) suggest that most athletes and coaches do not believe that prayers can make up for the failure to acquire necessary skills or employ correct situational strategies in sports. However, the present study has shown that college athletes perceived prayers as a means to alleviate fear, anxiety and stress management in sports. The interesting aspect that sports psychologist and sociologist are of utmost concern is the ability to instill confidence, which is paramount in any sports performance. An athlete performing under fear, stress and anxiety is bound to perform poorly, hence prayer has been perceived as a means of arousing and instilling confidence.

As earlier stated in this work the use of religious rituals in sport, especially Christian prayer is one area of research that has begun to receive particular attention according to Park (2000) Vernacchia, McGuire, Reardon, & Templin, (2000), Czech, Wrisberg, Fisher, Thompson, & Hayes, (2004), Watson and Czech (2005), Boye, Chidi and Makasi (2009). All these studies have shown that the use of prayer by athletes before, during and after competition is a common and valuable practice for enhancing performance and overall well-being. This study has further confirmed that the use of religious rite (prayer) was perceived by college athletes as a significant psycho-social aid for fear, anxiety and stress management in sports

A lot of empirical research in non-sports contexts supports this result and further illustrates the need and legitimacy of this area of study in social psychology of sports. Similarly, research studies in health psychology (Koenig, 1988; Duckro & Magaletta, 1994; Koenig, McCullough, & Larson, 2001), medical science (Leibovici, 2001) and the psychology of religion (Finney & Malony, 1985; McCullough, 1995; La Torre, 2004 ;), have demonstrated the significant positive and psychological and physiological effects of prayer, (particularly the use of prayer in coping with stress and anxiety). However, while further empirical studies of the use and effect of prayer in sport and non-sport contexts is important, the current study clearly confirms the ancient teachings of religions be it Christian prayer or Islam. It is clear evidence that in times of adversity and uncertainty, most persons have always used prayer for strength and as a means of coping with anxiety. In addition to prayer being used by athletes to cope with stress and anxiety in sport, there may be other considerations for the sport psychology consultant when working with the religious athlete.

An extract of some athletes comments on the use of prayers before, during and after sport competitions

First comment:

“When we pray in group before the commencement of our game I get inspired, and have more confidence. Before the commencement of the second half when we pray together I develop a stronger feeling that we will win our game. I feel a sign of relief immediately after prayers

Second comment:

“Prayer act as a strong motivational force that keeps us together. We believe that when we pray together our fears are better handled and it has been working for us, so we need to pray to God for support”.

Third comment:

“Prayer is perceived by us as a way of controlling our anxiety and we strongly believe that only God can help us. Though we train before our game but our coach made us to believe that without God helping us we cannot help ourselves as such we call Him through our prayers to assist us”

Fourth comment:

Competitive stress is inevitable, fear of superior team is normal; anxiety cannot be rule out of big tournaments. All the above put together makes us to call on God to help us. We pray so that we don't get injured, because if any member of our team get injured it will affect our performance. The God of sports is always available when you call Him

Fifth comment:

Without God helping us our effort is effortless. We pray because prayer takes care of the unknown. We mostly thank God when we are wining our game after first half during our prayers, while we call on him to help us play without fear and anxiety when we are losing. It real works for us

The comments from the respondents used for the study further affirms that college athletes perceived prayer as a psycho-social aid for anxiety, fear and stress management in sports. The use of religious rite (prayer) by college athlete is strongly tied to the belief that there is a Supreme Being who can help them after the physical skill training hence it has become a common phenomenon.

## **Conclusion**

There is a clear indication that college athletes apply prayer as means of psycho-social aid for fear, anxiety and stress management. The study has affirmed that prayer can help boost athlete's performance. Sports psychologist and social-psychologist should henceforth consider prayer as a psycho-social aid for sports performance when discussion psycho-social variables that influences athletes performance and stress/anxiety management techniques.

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## **Cognitive, Physical and Psychosocial Perspective of Athletes' Fatigue and Coping Experiences**

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### **Abstract**

The term fatigue, which may be generated through two primary modes of exertion, either physical or mental, each resulting in subjective feelings of tiredness, has a very unique influence on performance. In the course of active fatigue, a constant inescapable demand is placed on attention and when fatigue develops during situations of continuous demand, available attentional resources and the frequency by which external sources are sampled is reduced. There is a growing attention in scientific literature for the development of comprehensive approaches to investigate variables involved in the onset of fatigue and the coping resources that can be used during sport and exercise experience. Therefore, the purpose of this study was the investigation of the relationship of the physical, cognitive and psychosocial functions of athletes impaired by fatigue and their coping resources on one hand, and whether the physical, cognitive and psychosocial functions of the athletes are compositely dependent on their ability to cope with fatigue in sport on the other hand. Descriptive research design was used. Participants consisted of (169) male and female university athletes involved in teams and individual sports and their mean age was (19.26, sd 4.07). With ethical approval from the appropriate authority as well as informed consent from the participants, data were collected with the Modified Fatigue Scale with cronbach alpha of  $r=.81$  for the overall items and the Athletics Coping Inventory Scale (ACIS-28) with overall cronbach alpha of  $r=.91$  for the overall items. Both instruments exhibit acceptable internal consistency at the total score level. Statistical analysis was performed on the data with the Pearson's correlation coefficient and regression analysis. Positive relationship of  $r=.67$ ;  $p<.000$  was observed between the fatigue and coping variables. Further results revealed that fatigue experience of athletes was compositely dependent on their coping ability  $F(3,165); 5.62$ ;  $p<.001$ . While 93% of the psycho-social, physical and cognitive functions of the athletes were accounted for in the variance of the coping variables. Cognitive, psychological and physical functions of athletes in an exhaustive sport and exercise events, can be predicted based on their coping abilities. The physically, cognitively and psychologically more efficient athletes can be, the better their chance of success in sport and exercise engagements.

## **Analysis of Children's Attitudes towards Physical Activities in Nigeria**

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### **Abstract**

The promotion of life-long physical activity participation has been recognized as the ultimate goal of physical education in schools, and physical activity ranks tops in the ten leading health indicators. Despite this, participation in all types of physical activity among children continues to decline strikingly as age and grade increases and more children are becoming sedentary. It is in light of this that this study examined children's attitudes towards physical activity in Nigeria. The descriptive research design was adopted for this study. Participants consisted of 120 male and female school children with a mean age of 8.85. Data were collected with the Children's Attitude towards Physical Activity Questionnaire ( $r=0.71$ ) and the Physical Activity Questionnaire for Children ( $r=0.79$ ). Descriptive statistics, t-test and regression analysis were used to analyze data at 0.05 level of significance. There was no significance difference ( $p>0.5$ ) in participation in physical activity between public and private school children. However, public school children ( $= 172.5$ ) participated more in physical activity than their private school ( $= 168.4$ ) counterparts when their mean values were compared. Children's attitudes positively and significantly ( $P<.05$ ) correlated with participation in physical activity. About 58% of the variance of children's attitude was accounted for by physical activity. Health/fitness subscale made the highest relative contribution to physical activity participation.



## The Effects of Aromatherapy Massage on the State Anxiety of Female Handball Players throughout the Match

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### **Abstract**

The aim of the current study is to investigate the impact of aromatherapy, massage, and aromatherapy massage on the state anxiety of female handball players throughout a match. In this study, 44 volunteer female students, aged between 16- 18, were selected from four teams participating in the state championship competitions. These participants were divided into four groups, namely aromatherapy, massage, aromatherapy massage, and control groups. The level of state anxiety was measured by Spielberg state-trait anxiety inventory on pre-test and post-test sessions. Before the beginning of the match, the aromatherapy group directly inhaled the essence of *Lavandula Angustifolia*, the massage group was treated with classical massage, and the aromatherapy massage group was treated with both massage and direct inhaling of *Lavandula Angustifolia*. The control group was treated with nothing. Data were analyzed by T-test, analysis of co-variance, and the Bonferroni method ( $P < 0.05$ ). The results showed that state anxiety was meaningfully reduced following one session aromatherapy, massage, or aromatherapy massage. The aromatherapy massage method had the maximum effect, followed by massage method and aromatherapy method respectively. The findings of the current study suggest that aromatherapy massage, massage, and aromatherapy can be used to reduce state anxiety in handball players during a match.

## Barriers to Sports and Physical Activity Participation: A Case Study of Physical Education Teachers in Iran

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### **Abstract**

Sports activities have been considered a factor of personal health. They improve the body mentally and physically. However, only some Iranian people are interested in sports activity. Especially, the teachers' role in pedagogy requires a physical and mental readiness. To this end, the purpose of this present study was to examine the disinterest causes of teachers' attitudes towards sports activities focused on individual factors, barriers, challenges and physical activity characteristics. It was a survey done through field study. The population composed of male teachers employed all over Iran ( $N > 100,000$ ). The sample was 400 teachers based on Morgan's table selected by cluster sampling. The Instrument was a structured questionnaire distributed all over the country followed by the confirmation of validity and reliability ( $\alpha = 0.93$ ). Data analysis was done by exploratory factor analysis. Results showed that the individual factors were low self-confidence, fatigue and fear of injury ( $kmo = 0.754$ ,  $p < 0.001$ ). Moreover, the barriers composed of difficult access to facilities, low income, facilities with low quality service and busy working and living ( $kmo = 0.67$ ,  $p < 0.001$ ). Challenges included fear of failure, insufficient facilities, lack of awareness to sports benefits and improper national planning ( $kmo = 0.76$ ,  $p < 0.001$ ). Finally, physical activity characteristics maintained high intensity, long time of activity and lack of exciting sports ( $kmo = 0.76$ ,  $p < 0.001$ ). The findings suggest that to increase interest and participation, sport managers should conduct special strategies to develop sport between teachers because a teacher has a great responsibility in the national development through teaching. Such a big responsibility needs a healthy mind and body.

## The Role of Burn-out Factors on Judgement: A Case Study of the Iranian Premier Football League

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### **Abstract**

A professional referee is a challenging, exciting and worthwhile profession. On the other hand referees are exposed to frustration, abuse and disrespect. So there is no surprise that some referees suffer burn out. Assuming that football referees are always under the pressure of excitement and anxiety of the matches, teams, coaches, players and spectators, they tend to get vulnerable against the phenomena of "Burning-out". This study engaged 75 referees who worked in the Iranian football league as the population. Data were collected via the Maslach questionnaire ( $\alpha=0.92$ ). The results showed a major contrast between the two factors Personal Accomplishment and burn-out ( $t=15.371, p<0.05$ ). There were also an outstanding contrast between the factors burn-out and referees depersonalization ( $\chi^2=30/16, p=0.000$ ). There were also a major contrast between different factors effective on referees burn-out ( $\chi^2=30.16, p=0/000$ ) and managerial factors with the average of  $MR=5.35$  and  $MR=3.88$  for economic factors. The factors pertaining to individual and environmental issues had the averages accordingly  $MR=2/42$  and  $MR=2/92$  which are considered as inferior factors. Furthermore there was a prominent relation between involvement and burn-out factors ( $r=0/297, p<0/01$ ). There were also an outstanding relation between economic factors and their inefficiency ( $r=-0/193, p<0/05$ ). Providing appropriate education and opportunities for referees, comprehensive support and required resources for referees and improving public understanding of referee's class in society are some actions that must be taken by relevant officials in order to prevent this phenomenon. Considering a referee's job situation, presenting decent planning in order to hire efficient referees, and creating a less stressful job position are among the main things that superior managers should exert to prevent the infectious phenomena of burn-out.

## Ortaokullarda Görev Yapan Beden Eğitimi Öğretmenlerinin Mesleki Kişilik Yeterliklerinin Kendilerince Değerlendirilmesi

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### **Özet**

Bu araştırmada, ortaokullarda görev yapan beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinin kendilerince değerlendirilmesi amaçlanmıştır. Tarama modeline uygun olarak düzenlenen araştırmanın problem cümlesini; Beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinin kendilerince algılanması nasıldır? sorusu oluşturmaktadır. Araştırma örneklemini, 2011-2012 öğretim yılında İstanbul il sınırları içinde Milli Eğitim Bakanlığı'na bağlı resmi ve özel ortaokullarda görev yapan 224 beden eğitimi öğretmeninden oluşmaktadır. Araştırmada BEÖ Mesleki Kişilik Yeterliliği Ölçeği, beden eğitimi öğretmenlerine uygulanarak veriler elde edilmiştir. Araştırmada elde edilen verilerin; sosyo-demografik özellikleri için frekans dağılımları, mesleki kişilik yeterliliği ölçeği faktör puanları ile cinsiyet, yaş, hizmet yılı ve okul türü değişkenlerine göre farklılaşma durumları parametrik Bağımsız Grup t Testi ve parametrik olmayan Kruskal Wallis testleri yapılarak bulgular elde edilmiştir. Elde edilen bulguların analizi sonucunda; beden eğitimi öğretmenleri, kendi mesleki kişilik yeterliklerini “tamamen yeterli” buldukları görülmüştür. Beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri alt boyutları olan; insan onuruna saygı ve adalet, güdüleyici etkileşim, mesleki heyecan ve adanmışlık ile yansıtıcı etkileşim alt boyutlarında da kendilerini “tamamen yeterli” bulmuşlardır. Ayrıca beden eğitimi öğretmenlerinin cinsiyet, yaş ve hizmet yıllarına göre mesleki kişilik yeterlikleri arasında da anlamlı bir farklılık bulunmamıştır. Fakat okul türüne göre, özel okullar lehine anlamlı farklılık bulunmuştur.

***Anahtar Kelimeler:** Mesleki Kişilik Yeterliği, Beden Eğitimi Öğretmeni, Mesleki Özellikler, Kişisel Özellikler.*

## **GİRİŞ**

### **Problem Durumu**

Mesleki kişilik yeterliği, bireyin ait olduğu meslek grubuna özgü sahip olması beklenen, alan ve mesleki bilgisinin değerlendirildiği özelliklerdir (Büyüknacar, 2008, s.10).

Eken'in (2008) araştırmasında öğrencilerin, sevdikleri derslerde dersten çok öğretmenin etkili olduğu ayrıca beden eğitimi dersinin en çok ilgi duyulan dersler arasında yer aldığı görülmüştür.

Çağdaş bir öğretmenin sınıf ortamında karşılaştığı sorunların üstesinden gelebilmesi için mesleki ve kişisel yeterlikler olarak iki grupta açıklanmıştır (Başaran, 2004, s.207, Demirel, 2004, s.176, Erden, 2004, s.71). Öğretmen mesleğinin gereklerini yerine getirirken bu iki temel özelliği öne taşır (Erden, 2009, s.148). Beden eğitimi derslerinde kalitenin artırılması için beden eğitimi öğretmenlerinin mesleki yeterlikleri çok önemlidir (Atencio, Jess and Dewar, 2012, s.127-129). Saçlı, Bulca, Demirhan ve Kangalgil'in (2009, s.145-151) "Beden eğitimi öğretmenlerinin kişisel nitelikleri" konulu araştırmaları sonucunda, beden eğitimi öğretmenininde bulunması gereken kişisel özelliklerden eleştiriye açık olma ilk sırada yer alırken, öğrenciyi her konuda anlama, geniş bakış açısına sahip olma, sabırlı olma, kendine güveni olma, doğaçlama yeteneğine sahip olma, yaratıcı olma ve şefkatli olma özellikleri sıra ile yer almıştır. Uluslar Arası Sağlık, Beden Eğitimi, Rekreasyon, Spor ve Dans Konseyi (ICHPER:SD, 2005) beden eğitimi öğretmenlerinin mesleki yeterlik standartlarını; alan bilgileri, mesleki bilgi ve beceriler ile pedagojik bilgi ve beceriler olarak üç başlıkta açıklamıştır.

Öğretmenin, öğrenci üzerindeki etkisi öğrencinin akademik başarısıyla ilişkili olmaktadır. Öğretim sürecinde öğretmenlerin etkililikleri ile ilişkili olan genel yeterlikleri 6 boyutta açıklanmıştır (Stronge, 2007, s. 23-28); Öğrenciye değer verme, Öğrenci kişiliğine saygı duyma ve eşitlik, Öğrencilerle kurulan sosyal etkileşim, Mesleki heyecan ve motivasyon, Öğretmenin mesleğine ilişkin tutumu ve Yansıtıcı düşünme.

NASPE (Amerika Ulusal Beden Eğitimi ve Spor Derneği) tarafından yayınlanan beden eğitimi öğretmen adaylarının sahip olması gereken 10 standart; İçerik bilgisi, Büyüme ve gelişme, Farklı öğrenciler, Yönetim ve motivasyon, İletişim, Planlama ve öğretim, Değerlendirme, Yansıma, Teknoloji ve İşbirliği olarak açıklamıştır (2003, s.3-9);

Ülkemizde Milli Eğitim Bakanlığı'na bağlı Öğretmen Yetiştirme ve Eğitimi Genel Müdürlüğü beden eğitimi öğretmenlerinde bulunması gereken özel alan yeterliklerini altı ana ve 30 alt boyutta belirlemiştir (Oyegm.meb, 2012, s.203-217); Bunlar; Öğretim sürecini planlama ve düzenleme, Fiziksel performansı geliştirmeyi sağlama ve koruma, Ulusal bayramları anlam ve önemine yaraşır şekilde kutlama, Gelişim performansını izleme ve değerlendirme, Okul, aile ve toplumla işbirliği yapma ve Mesleki gelişimi sağlama.

Yukarıdaki bilgiler göz önüne alınarak "Beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri; kendilerince algılanmaları nasıldır?" sorusu araştırmanın problem cümlesini oluştururken alt problemler ise;

- 1) Beden eğitimi öğretmenleri, kendi mesleki kişilik yeterliklerini nasıl algılamaktadırlar?
- 2) Beden eğitimi öğretmenleri kendi mesleki kişilik yeterlikleri alt boyutlarını nasıl algılamaktadırlar?
- 3) Beden eğitimi öğretmenlerinin cinsiyetlerine göre, mesleki kişilik yeterlikleri arasında ilişki var mıdır?

- 4) Beden eğitimi öğretmenlerinin okul türüne göre, mesleki kişilik yeterlikleri arasında ilişki var mıdır?
- 5) Beden eğitimi öğretmenlerinin hizmet yıllarına göre, mesleki kişilik yeterlikleri arasında ilişki var mıdır?
- 6) Beden eğitimi öğretmenlerinin yaşlarına göre, mesleki kişilik yeterlikleri arasında ilişki var mıdır?

## **Amaç**

Bu araştırmanın amacı, ortaokullarda görev yapan beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinin, kendilerince nasıl algılandığını belirlemek, cinsiyet, okul türü, hizmet yılı ve yaş değişkenlerine göre algılarını incelemektir.

## **Araştırmanın Önemi**

Beden eğitimi dersinin hedeflerine ulaşılma düzeyi beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri ile doğru orantılı olabilmekte ve böylece kaliteli eğitim-öğretim süreci mesleki kişilik yeterlikleri iyi olan beden eğitimi öğretmenleriyle gerçekleştirilebilmektedir.

Beden eğitimi öğretmenleri mesleki kişilik yeterliklerinin kendilerince değerlendirilmesi, bu sonuçların tartışılarak mesleki kişilik yeterlikleri yüksek, ideal beden eğitimi öğretmeni standartlarının belirlenmesi ve bu doğrultuda beden eğitimi öğretmeni yetiştiren kurumların eğitimlerini belirlenen eksikliklere göre yeniden şekillendirmesi ve mesleki kişilik yeterlikleri ile ilgili eksiklikleri giderici eğitim etkinliklerinin düzenlenmesi açısından önemli olacaktır.

## **Sınırlılıklar**

Bu araştırmadaki sınırlılıklar aşağıda yer almaktadır;

- 1) Araştırma 2011-2012 öğretim yılında İstanbul il sınırları içinde bulunan Milli Eğitim Bakanlığına bağlı resmi ve özel ortaokullarda görev yapan beden eğitimi öğretmenleri ile sınırlıdır.
- 2) Beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerini değerlendirebilmeleri için “BEÖ Mesleki Kişilik Yeterliliği Ölçeği’nin’ uygulanması ile sınırlıdır.

## **Sayıtlar**

Bu araştırmadaki sayıtlar aşağıda açıklanmaktadır;

- 1) Beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerini değerlendirmek için kullanılan “BEÖ Mesleki Kişilik Yeterliliği Ölçeği’nin’ geçerli ve güvenilir bir ölçme aracı olduğu varsayılmaktadır.
- 2) Araştırmaya katılan beden eğitimi öğretmenlerinin ölçekleri içtenlikle cevapladıkları varsayılmaktadır.

## YÖNTEM

### Araştırmanın Modeli

Araştırmada, mevcut bir durumun tanımlaması ve açıklaması yapılmasından dolayı genel tarama modellerinden ilişkisel tarama modeli ile yapılmıştır. Araştırmada beden eğitimi öğretmenlerinin mesleki kişilik özellikleri ile cinsiyet, okul türü, hizmet yılı ve yaş değişkenleri arasındaki ilişkilerin değerlendirilmesinden dolayı bu araştırmada karşılaştırma yolu ile ilişki belirlemesi yapılmıştır.

Tarama modeli, geçmişte ya da halen var olan bir durumun var olduğu şekliyle betimlemeyi amaçlayan araştırma yaklaşımıdır. Tarama modelleri; genel tarama ve örnek olay taramaları olarak ikiye ayrılır. Genel tarama modelleri; tekil ve ilişkisel tarama modelleri olarak ikiye ayrılmaktadır (Karasar, 2003, s.77-81).

### Çalışma Grubu

Çalışma grubu, 2011-2012 öğretim yılında İstanbul il sınırları içinde Milli Eğitim Bakanlığı'na bağlı resmi ve özel ortaokulların 6,7 ve 8. sınıflarında beden eğitimi derslerine giren beden eğitimi öğretmenlerinden oluşmuştur.

**Tablo 2.1.** Beden Eğitimi Öğretmenlerinin Cinsiyetlerine Göre Frekans ve Yüzde Değerleri

Cinsiyet	f	%
Kadın	80	35,7
Erkek	144	64,3
Toplam	224	100

Araştırma örneklemin %64,3'nü erkek, % 35,7'si ise kadın beden eğitimi öğretmenlerinden oluşmuştur.

**Tablo 2.2.** Beden Eğitimi Öğretmenlerinin Okul Türüne Göre Frekans ve Yüzde Değerleri

Okul Türü	f	%
Özel Okul	53	23,7
Devlet Okulu	171	76,3
Toplam	224	100

Beden eğitimi öğretmenlerinin %76,3'ü devlet, %23,7'si özel okulda görev yapmaktadır.

**Tablo 2.3.** Beden Eğitimi Öğretmenlerinin Yaşlarına Göre Frekans ve Yüzde Değerleri

Yaş	f	%
21-25 yaş	20	8,9
26-30 yaş	40	17,9
31-35 yaş	62	27,7
36-40 yaş	57	25,4
41-45 yaş	18	8,0
46 yaş ve üzeri	27	12,1
Toplam	224	100,0

Beden eğitimi öğretmenlerinin; %27,7'si 31-35 yaş aralığında, %25,4'ü 36-40 yaş aralığında, %17,9'u 26-30 yaş aralığında, %8,9'u 21-25 yaş aralığında, %12,1'i 46 ve üzeri yaş aralığında ve geriye kalan %8'i 41-45 yaş aralığında olduğu görülmüştür.

**Tablo 2.4.** Beden Eğitimi Öğretmenlerinin Hizmet Yıllarına Göre Frekans ve Yüzde Değerleri

Hizmet Yılı	f	%
1-5 yıl	57	25,4
6-10 yıl	66	29,5
11-15 yıl	54	24,1
16-20 yıl	21	9,4
21 yıl ve üstü	26	11,6
Toplam	224	100,0

Beden eğitimi öğretmenlerinin hizmet yılları dağılımına bakıldığında; %29,5'inin 6-10 yıl arasında, %25,4'ünün 1-5 yıl arasında, %24,1'inin 11-15 yıl arasında, %11,6'sının 21 yıl ve üstünde ve geriye kalan %9,4'ünün 16-20 yıl arasında hizmet yıllarına sahip oldukları görülmüştür.



## Veri Toplama Aracı

Araştırmada, veri toplama aracı olarak BEÖ Mesleki Kişilik Yeterliliği Ölçeği kullanılmıştır. Ölçek Büyüknacar'ın (2008) geliştirdiği Mesleki Kişilik Yeterliliği Ölçeği temel alınarak beden eğitimi öğretmenlerine uyarlanmış ve beden eğitimi öğretmenlerinin cevaplayacağı şekilde geliştirilmiştir. Ölçeğin sahip olduğu alt boyutlar ise; mesleki heyecan ve adanmışlık, insan onuruna saygı ve adalet, güdüleyici etkileşim ve yansıtıcı etkileşimdir.

Ölçek 4 alt boyut kapsamında 60 maddeden oluşmuştur. Ölçek likert tipidir ve 1-Kesinlikle Katılmıyorum, 2-Katılmıyorum, 3- Kararsızım, 4-Katılıyorum, 5-Kesinlikle Katılıyorum olarak derecelendirilmiştir. Ölçeğin değer aralıkları 1-2 arası Tamamen Yetersiz, 2-3 arası Kısmen Yetersiz, 3-4 arası Kısmen Yeterli ve 4-5 arası Tamamen Yeterli olarak derecelendirilmiştir. Ayrıca ölçekte cinsiyet, yaş, hizmet yılı ve okul türüne ait bilgiler de yer almıştır.

## Ölçeğin Oluşturulması

Araştırmada kullanılacak ölçme aracının Büyüknacar (2008) tarafından Mesleki Kişilik Yeterliliği Ölçeği olmasına karar verildikten sonra ilk iş olarak Büyüknacar ile iletişime geçilerek gerekli izin sözlü ve elektronik ortamda alınmıştır. Daha sonra ölçek, önce beden eğitimi öğretmenlerine göre uyarlanmış var olan 42 madde sayısı 60 maddeye çıkartılmış ve dört alt boyuttan oluşturularak ölçeğe son şekli verilmiştir.

Ölçeğin iç tutarlık katsayısı analizlerinde Cronbach Alpha değerlerinin 0,95 ile 0,98 aralığında yani yüksek güvenilirlik kategorisinde olduğu görülmüştür.

## Verilerin Toplanması

Araştırmada geliştirilen ölçek, İstanbul İl Milli Eğitim Müdürlüğü'nden uygulama izni alındıktan sonra araştırmacı tarafından uygulanmıştır. Uygulamalarda birlikteliğin ve tutarlılığın sağlanması için ölçek ile ilgili dikkat edilmesi gereken bilimsel araştırma kuralları araştırma grubuna açıklanmıştır. Beden eğitimi öğretmenlerine ölçekler doğrudan araştırmacı tarafından boş derslerde veya teneffüslerde ulaştırılmış ve ölçeği doldurmaları sağlanmıştır.

## BULGULAR

Beden eğitimi öğretmenlerinin mesleki kişilik yeterliliği ölçek puanlarının farklılaşma durumlarını belirlemek için Bağımsız Grup t testi ve Kruskal Wallis testi yapılmıştır.

**Tablo 3.1. BEÖ Mesleki Kişilik Yeterliliği Ölçeğinin Tanımlayıcı İstatistikleri**

Ölçek Maddeleri	N	Enk.	Enb.	$\bar{x}$	$S_x$
2. Okulda öğrencilerle kurduğum iletişimin temelinde dürüstlük ve güven olmasına önem veririm.	224	2	5	4,84	0,421
5.Sınıf içerisinde olumsuz bir davranışta bulunan öğrenciyi sınıf önünde eleştirmem.	224	1	5	3,94	0,996

Beden eğitimi öğretmenlerinin her bir maddeye katılım düzeyleri için yapılan analizler sonucunda; “Okulda öğrencilerle kurduğum iletişimin temelinde dürüstlük ve güven olmasına önem veririm” ölçek maddesi en yüksek puanı alırken, “Sınıf içerisinde olumsuz bir davranışta bulunan öğrenciyi sınıf önünde eleştirmem” ölçek maddesi ise en düşük puanı almıştır.

**Tablo 3.2.** BEÖ mesleki kişilik yeterlik ölçeği alt boyutlarına ilişkin bulgular

Mesleki Kişilik Faktörleri	N	Enk.	Enb.	$\bar{x}$	S <sub>x</sub>
Güdüleyici etkileşim	224	1,05	5,00	4,5996	,40422
Mesleki heyecan ve adanmışlık	224	3,21	5,00	4,5966	,32244
İnsan onuruna saygı ve adalet	224	2,89	5,00	4,4802	,39992
Yansıtıcı etkileşim	224	1,38	5,00	4,6264	,40296

Beden eğitimi öğretmenlerinin alt boyutlara katılım düzeyleri değerlendirildiğinde en yüksek ortalamanın Güdüleyici Etkileşim alt boyutunda olur iken en düşük ortalama ise İnsan Onuruna Saygı ve Adalet alt boyutunda olmuştur. Beden eğitimi öğretmenleri dört alt boyutta kendilerini “tamamen yeterli” olarak değerlendirmişlerdir.

**Tablo 3.3.** Cinsiyete göre BEÖ mesleki kişilik yeterliklerinin belirlenmesine ilişkin bulgular

Mesleki Kişilik Faktörleri	Cinsiyet	N	$\bar{x}$	S <sub>x</sub>	t	p
Güdüleyici etkileşim	Kadın	80	4,5493	,52343	-1,391	,166
	Erkek	144	4,6276	,31818		
Mesleki heyecan ve adanmışlık	Kadın	80	4,5947	,32728	-,063	,950
	Erkek	144	4,5976	,32087		
İnsan onuruna saygı ve adalet	Kadın	80	4,4597	,42347	-,569	,570
	Erkek	144	4,4915	,38727		
Yansıtıcı etkileşim	Kadın	80	4,5788	,49791	-1,318	,189
	Erkek	144	4,6528	,33806		

Beden eğitimi öğretmenlerinin cinsiyetlerine göre mesleki kişilik yeterlikleri alt boyutları arasında anlamlı farklılık bulunmamıştır ( $p>0,05$ ).

**Tablo 3.4.** BEÖ Mesleki Kişilik Yeterliliği Ölçeği Faktör Puanlarının Yaş Değişkenine Göre Farklılaşma Durumu ile İlgili Yapılan Kruskal Wallis Testi Sonuçları

Mesleki Kişilik Faktörleri	Yaş	N	Ortalama Sıra	X <sup>2</sup>	p
Güdüleyici etkileşim	21-25 yaş	20	125,68	4,924	,425
	26-30 yaş	40	127,28		
	31-35 yaş	62	111,34		
	36-40 yaş	57	107,57		
	41-45 yaş	18	94,86		
	46 yaş ve üzeri	27	105,69		
	Toplam	224			
Mesleki heyecan ve adanmışlık	21-25 yaş	20	103,68	,965	,965
	26-30 yaş	40	118,51		
	31-35 yaş	62	115,26		
	36-40 yaş	57	109,98		
	41-45 yaş	18	109,83		
	46 yaş ve üzeri	27	110,89		
	Toplam	224			
İnsan onuruna saygı ve adalet	21-25 yaş	20	107,38	,919	,969
	26-30 yaş	40	115		
	31-35 yaş	62	114,79		
	36-40 yaş	57	110,45		
	41-45 yaş	18	102,92		
	46 yaş ve üzeri	27	118,06		
	Toplam	224			
Yansıtıcı etkileşim	21-25 yaş	20	118,68	4,897	,429
	26-30 yaş	40	126,1		
	31-35 yaş	62	114,59		
	36-40 yaş	57	106,89		
	41-45 yaş	18	114,81		
	46 yaş ve üzeri	207	93,30		
	Toplam	224			

Beden eğitimi öğretmenlerinin yaşlarına göre mesleki kişilik yeterliliği faktör puanları arasında anlamlı farklılık bulunmamıştır ( $p>0,05$ ).

**Tablo 3.5.** BEÖ Mesleki Kişilik Yeterliliği Ölçeği Faktör Puanlarının Okul Türü Değişkenine Göre Farklılaşma Durumu için Yapılan Bağımsız Grup t Testi Sonuçları

Mesleki Kişilik Faktörleri	Okul Türü	N	$\bar{x}$	$S_x$	t	p
Güdüleyici etkileşim	Devlet Okulu	171	4,5623	,42469	-2,510	,013*
	Özel Okul	53	4,7200	,30283		
Mesleki heyecan ve adanmışlık	Devlet Okulu	171	4,5626	,32850	-2,875	,004**
	Özel Okul	53	4,7061	,27763		
İnsan onuruna saygı ve Adalet	Devlet Okulu	171	4,4425	,40521	-2,563	,011*
	Özel Okul	53	4,6017	,35967		
Yansıtıcı etkileşim	Devlet Okulu	171	4,5956	,42011	-2,069	,040*
	Özel Okul	53	4,7257	,32584		

\* $p<0,05$       \*\* $p<0,001$

Mesleki kişilik yeterlikleri alt boyut faktör puanları özel okulda görev yapan beden eğitimi öğretmenlerinin lehine anlamlı farklılık bulunmuştur. Bu farklılık, mesleki heyecan ve adanmışlık alt boyutunda  $p>0,001$  düzeyinde iken diğer alt boyutlarda  $p>0,05$  düzeyindedir. Özel okul da görev yapan beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinin devlet okulunda görev yapan beden eğitimi öğretmenlerine göre daha olumlu olduğu görülmektedir.

**Tablo 3.6.** Hizmet Yılına göre BEÖ mesleki kişilik yeterliklerinin belirlenmesine ilişkin bulgular

Mesleki Kişilik Faktörleri	Hizmet yılı	N	Ortalama Sıra	$X^2$	p
Güdüleyici etkileşim	1-5 yıl	57	133,19	9,134	,058
	6-10 yıl	66	111,87		
	11-15 yıl	54	98,57		
	16-20 yıl	21	104,02		
	21 yıl	26	104,5		
	Toplam	224			

	1-5 yıl	57	118,83		
	6-10 yıl	66	106,36		
Mesleki heyecan ve adanmışlık	11-15 yıl	54	114,24	1,278	,865
	16-20 yıl	21	108,4		
	21 yıl	26	113,9		
	Toplam	224			
	1-5 yıl	57	115		
	6-10 yıl	66	112,76		
İnsan onuruna saygı ve adalet	11-15 yıl	54	104,82	1,422	,840
	16-20 yıl	21	112,81		
	21 yıl	26	122,06		
	Toplam	224			
	1-5 yıl	57	130,27		
	6-10 yıl	66	107,58		
Yansıtıcı etkileşim	11-15 yıl	54	106,33	6,069	,194
	16-20 yıl	21	109,52		
	21 yıl	26	101,25		
	Toplam	224			

Beden eğitimi öğretmenlerinin hizmet yıllarına göre normal dağılım göstermediği için Kruskal Wallis testi yapılmıştır. Buna göre; beden eğitimi öğretmenlerinin hizmet yıllarına göre mesleki kişilik yeterlikleri alt boyutları arasında anlamlı farklılık bulunmamıştır.

## SONUÇ

Beden eğitimi öğretmenleri, kendi mesleki kişilik yeterliklerini “kısmen yeterli” veya “tamamen yeterli” olarak değerlendirmişlerdir. Ölçekte en yüksek ortalama puanı “Okulda öğrencilerle kurduğum iletişimin temelinde dürüstlük ve güven olmasına önem veririm” ölçek maddesi alırken en düşük ortalama puanı ise (3,94) “Sınıf içerisinde olumsuz bir davranışta bulunan öğrenciyi sınıf önünde eleştirmem” ölçek maddesi almıştır.

Alt boyutlar için yapılan analizlerde ise beden eğitimi öğretmenleri en yüksek ortalama puan Güdüleyici Etkileşim alt boyutunda olduğu (4,5996), İnsan onuruna Saygı ve Adalet boyu-

tunda en düşük ortalamanın olduğu görülmüştür (4,4802). Beden eğitimi öğretmenleri dört alt boyutta kendilerini “tamamen yeterli” olarak değerlendirmişlerdir. Fakat insan onuruna saygı ve adalet alt boyutu ortalamasının en düşük ortalama puana sahip olması ayrıca bu alt boyut ölçek maddelerinden birinin en düşük ortalama puanı alması dikkat edilmesi gereken bir sonuç olmaktadır.

Beden eğitimi öğretmenlerinin cinsiyetlerine göre mesleki kişilik yeterlikleri arasında farklılık bulunmamıştır. Böylece erkek ve kadın beden eğitimi öğretmenlerinin tamamen yeterli düzeyde mesleki kişilik yeterliklerine sahip oldukları sonucu elde edilmiştir.

Beden eğitimi öğretmenlerinin hizmet yıllarına göre de mesleki kişilik yeterlikleri arasında anlamlı farklılık bulunmamıştır. Yani 1 ile 5 yıl mesleki tecrübeye sahip olan beden eğitimi öğretmenleri ile 26 yıl ve üzeri tecrübeye sahip olan beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri arasında farklılık olmadığı sonucuna ulaşılmaktadır. Aynı şekilde beden eğitimi öğretmenlerinin yaşları arasında da farklılık bulunmamıştır. Bu iki değişkenin aynı sonucu vermesi tecrübe kavramının eğitimde anlamlı farklılık oluşturmadığı sonucunu vermektedir.

Okul türüne göre beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri alt boyutlarında özel okullar lehine anlamlı farklılık bulunmuştur. Buna göre özel okullardaki beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinin devlet okullarındaki beden eğitimi öğretmenlerinin mesleki kişilik yeterliklerinden daha iyi olduğu sonucuna ulaşılmaktadır.

## **TARTIŞMA**

Beden eğitimi öğretmenleri “Okulda öğrencilerle kurduğum iletişimin temelinde dürüstlük ve güven olmasına önem veririm.” ölçek maddesine en yüksek puanı verirlerken “Sınıf içerisinde olumsuz bir davranışta bulunan öğrenciyi sınıf önünde eleştirmem” ölçek maddesine ise en düşük puanı vermişlerdir. Bu veriler ışığında beden eğitimi öğretmenlerinin öğrencileri ile iletişimlerinde dürüstlük ve güven temeline dayandırdıkları anlaşılmaktadır. Ayrıca olumsuz davranışta bulunan öğrenciyi sınıf önünde eleştirel davranışlar sergiledikleri sonucuna varılmıştır.

Mesleki kişilik yeterliliği alt boyutları olan güdüleyici etkileşim, yansıtıcı etkileşim, mesleki heyecan ve adanmışlık ile insan onuruna saygı ve adalet alt boyutlarında da beden eğitimi öğretmenleri, kendilerini “tamamen yeterli” olarak değerlendirmişlerdir. Bu sonucu destekleyen araştırmalar ise; Mirzeoğlu, Özcan ve Çelebi (2008) beden eğitimi öğretmen adayları öğretmen yeterlikleri, Öksüzoğlu (2009) beden eğitimi öğretmen adaylarının mesleki yeterlikleri, Kaya (2010) beden eğitimi öğretmenlerinin tüm yeterlik alanlarında kendilerini yeterli düzeyde algıladıkları görülmüştür. Kougioumtzis, Patriksson ve Strahlman (2011) beden eğitimi öğretmenlerinin mesleki yeterliklerde kendilerini yeterli algıladıkları Stronge, Ward, Tucker ve Hindman (2007) tarafından yapılan araştırmada da beden eğitimi öğretmenlerinin mesleki yeterliklerini oldukça yüksek puan ile değerlendirdikleri sonuçları araştırmamızı destekleyen diğer araştırmalardır.

Beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri cinsiyetlere göre farklılık göstermemektedir. Gökçe (1999), Yazıcı (2004), İlkin (2006), Numanoğlu ve Bayır (2009), Canteğin (2009), Öksüzoğlu (2009), Şahin (2010) ve Eroğlu (2011) tarafından yapılan araştırmaların sonuçları da bizim araştırmamızı desteklemektedir.

Beden eğitimi öğretmenlerinin okul türlerine göre, özel okulda görev yapan beden eğitimi öğretmenlerinin mesleki kişilik yeterlik puan ortalamalarının devlet okulunda görev yapan beden eğitimi öğretmenlerinden daha yüksek olduğu ve özel okullar lehine anlamlı farklılık bulunduğu görülmektedir. Bu durumun nedenleri olarak; özel okullarda spor araç-gereçleri ile alt yapısının yeterliliği, yeterli beden eğitimi öğretmeni kadrosu, sınıf mevcutlarının düşüklüğü ile mesleki gelişim önemsenmesi bu farklılığın nedeni olduğu düşünülmektedir. Fakat Ilıkın'ın (2007) öğretmenlerin mesleki kişilik yeterlikleri ile ilgili araştırmalarında; devlet okullarında görevli okul öncesi öğretmenlerinin yeterliklerinin özel okulda görevli okul öncesi öğretmenlerinden daha yüksek olduğu sonucu elde etmiştir. Bu sonucun bizim araştırmamızı desteklememesinin nedeni farklı branş olmasından kaynaklandığı düşünülmektedir.

Beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri hizmet yıllarına göre farklılık göstermemiştir. Ünlü'nün (2008) beden eğitimi öğretmenlerinin, Behets'in (1996) beden eğitimi öğretmenlerinin yeterliklerini değerlendirdikleri araştırmalarda hizmet yılına göre mesleki yeterliklerinde farklılık bulunmamış ve bu sonuçlar bizim araştırmamızı desteklemiştir. Beden eğitimi öğretmenlerinin mesleki kişilik yeterlikleri yaşlarına göre de farklılık göstermemiştir. Bu sonuç hizmet yılı değişkeni ile aynı olmaktadır. Böylece; ya tecrübe kavramı yok sayılmakta veya mesleğe yeni başlayan beden eğitimi öğretmenleri kendilerini iyi yetiştirdiği düşünülmektedir.

## ÖNERİLER

Bu araştırmada elde edilen veriler sonucunda öneriler aşağıdaki gibidir;

- 1) Beden eğitimi öğretmenleri mesleki kişilik yeterlikleri, kendilerince yeterli düzeyde algılandığı fakat “İnsan onuruna saygı ve adalet” alt boyutu ise en düşük ortalama puanı almıştır. Bu alt boyutu beden eğitimi öğretmenleri yeterli olarak değerlendirmiş olsalar da en düşük ortalama puanı alması ve bu alt boyut sorularından birinin de en düşük ortalama puanı sahip olması soru işaretlerinin oluşmasına neden olmaktadır. Bu boyutun öğrenci kişiliğini ve öğrenme ortamını etkileyen davranışlar içermesinden dolayı bu yeterliklerin; lisans eğitimi veya mesleki süreçte çeşitli eğitim çalışmaları ile geliştirilmesi önerilmektedir.
- 2) Okul türüne göre, özel okul beden eğitimi öğretmenlerinin devlet okulundakilere göre daha yeterli olması özel okulların fiziki olanakları ile spor tesis- araç-gereç ve öğretmen kişisel gelişimlerinin etkili olduğu düşünüldüğünden devlet okullarının da bu standartları elde etmesi önerilmektedir.

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## An Examination of Participation Physical Activity And Social Self-Efficacy of the Preservice Teachers

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The purpose of this study was to analyze levels of the participation in physical activity and social self-efficacy of preservice teachers according to some demographic variables, and to determine the relationship between participation in physical activity and social self-efficacy. This study, in which a quantitative approach has been followed, was conducted on 2324 (1483 female and 840 male) preservice teachers. “Variation Stages of Exercise Behaviour Questionnaire” and “Social Self-efficacy Perception Scale” were administered on the participants. Descriptive statistical methods, Chi-square test, t test, one-way Anova and Pearson Correlation test were used in the data analysis. At the end of the research, it became clear that the preservice teachers’ participation in physical activity varies depending on gender, department and no significant differences were found between grade level variable. Perception of the self-efficacy have a significant variation in all independent variables. In addition, increasing the level of participation in physical activity, concern for the perception of social self-efficacy is increasing. From the results of this, preservice teachers, some of the factors that may have become effective in being a qualified teacher, in terms of participation in physical activity is recommended.

*Keywords: Physical activity, social self-efficacy, preservice teachers*

### GİRİŞ

Toplumların geleceği yetiştirdikleri genç nesillere bağlıdır. Geleceğin yetişkinlerinin daha ilk yıllardan itibaren amaçlı ve nitelikli yetiştirilmeleri çok önemlidir (Taşkaya, 2012). Bu noktada en önemli görev şüphesiz öğretmenlere düşmektedir. Öğretmen, öğrenme ve öğretme süreçlerinin temel öğelerinden biridir. Öğrenciyle devamlı etkileşim halinde bulunan, eğitim programını uygulayan, öğretimi yöneten ve hem öğrencinin hem de öğretimin değerlendirmesini yapan kişidir. Öğretmenin nitelikleri, bu süreçlerin niteliğini de etkilemektedir (MEB, 2010). Bu derece önemli bir sorumluluk alan öğretmenlerin, henüz öğretmen adayırken, kendilerini yetiştirme aşamasında, çeşitli fiziksel ve sosyal aktivitelere katılmaları, nitelikli öğretmen olmalarında etkili olabilecek görev ve sorumluluklarını bilmelerinin, yetiştirecekleri bireylerin nitelikli olmalarına olumlu katkı yapacağı şüphesizdir. Fiziksel aktivite, günlük yaşam içinde kas ve eklemlerin kullanılarak enerji harcaması ile gerçekleşen, kalp ve solunum hızını artıran ve farklı şiddetlerde yorgunlukla sonuçlanan aktiviteler olarak tanımlanmaktadır (Gür, 1992). Fiziksel aktiviteye katılımın, kendini an-

latma ve kendine güveni artırdığı, başarı ve sosyal iletişim becerilerini geliştirdiği, dayanışma ve centilmenlik ruhunu artırdığı, (Gür, 1992) ayrıca, insanlara kişisel kimlik, sosyal kimlik ve grup üyeliği duygusu vererek onları bir araya getirdiği, ırk, cinsiyet, yaş ve kültür ayrımı gözetmeyen bir olgu olması nedeniyle ise insanlar ve toplumlar arasındaki iletişimin kurulmasını sağladığı bilinmektedir (Yıldıran ve Yetim, 1996). Öz-yeterlik (self-efficacy) Bandura'nın Sosyal Öğrenme Kuramı'nda dikkati çeken bir kavramdır ve bireyin kendine duyduğu güven olarak tanımlanmaktadır (Bandura, 1997; Schunk, 2000). Sosyal öz-yeterlik ise çevreyle uygun şekilde etkileşimde bulunabilmek için gerekli olan sosyal becerilere sahip olma, gerekli ortam ve zamanlarda bu becerileri kullanabilme yetisi olarak tanımlanmaktadır (Vuran, 2007). Öz-yeterlikleri konusunda güçlü inançlara sahip olan insanlar, zor görevleri üstlenmekten kaçınmazlar aksine, zor görevlere meydan okuyucu ve bunun üstesinden gelici bir tavır sergilerler. Amaçlarını gerçekleştirmek için mücadeleci davranırlar ve sorumluluk duygularını kaybetmezler. Başarısızlık veya olumsuz durumlarla karşı karşıya kaldıklarında çabalarını en üst seviyeye çıkarabilirler (Ritter ve ark., 2001).

Fiziksel aktiviteye katılım ve öz-yeterlik kavramlarına ilişkin verilen bilgiler doğrultusunda, fiziksel aktiviteye katılım ve öz-yeterlik düzeylerinin yüksek olmasının bireylerin yaşam kalitesinin artması yönünde oldukça önemli parametreler söylenebilir. Konu ile ilgili araştırmalar incelendiğinde, fiziksel aktiviteye katılım (Aşçı ve ark, 2006; Cengiz, 2007; Ebem, 2007; Cengiz ve ark, 2010) ve öz-yeterliği (Smith ve Betz, 2000; Sezer ve ark, 2006; Çubukçu ve Girmen, 2007; İkiz ve Yörük, 2013;) ayrı ayrı konu edinen veya başka değişkenlerle ilişkisini inceleyen çalışmalar olmakla birlikte her iki değişkeni birlikte ele alan ve aralarındaki ilişkiyi inceleyen araştırmaların oldukça sınırlı olduğu görülmektedir (Markus ve ark, 1992; Tigge-mann ve Williamson, 2000; Marquez ve McAuley, 2001; Kololo ve ark, 2012). Yapılan araştırmalar sonucunda literatürde, öğretmen adaylarının fiziksel aktiviteye katılım ve sosyal öz-yeterlikleri arasındaki ilişkiyi konu edinen herhangi bir çalışmaya rastlanmamıştır. Bu nedenle araştırmadan elde edilen sonuçların, literatüre katkı sağlayacağı düşünülmektedir. Buradan hareketle bu araştırmanın amacı; öğretmen adaylarının fiziksel aktiviteye katılım ve sosyal öz-yeterlik algılarını bazı değişkenlere göre incelemek ve aralarındaki ilişkiyi belirlemektir.

## YÖNTEM

Betimsel araştırma modelindeki çalışmanın grubunu 2012-2013 eğitim öğretim yılında, Karadeniz Teknik Üniversitesi, Fatih Eğitim Fakültesi bünyesindeki farklı bölümlerde ve Beden Eğitimi ve Spor Yüksekokulu bünyesindeki Beden Eğitimi ve Spor Öğretmenliği Bölümünde öğrenim gören toplam 2323 öğrenci (1483 kadın, 840 erkek) araştırma grubunu oluşturmaktadır. Araştırmada, araştırmacılar tarafından geliştirilen "Kişisel Bilgi Formu" ve Marcus ve Lewis (2004) tarafından geliştirilen Cengiz, Aşçı ve İnce (2010) tarafından Türkçe geçerlik ve güvenilirlik çalışması yapılan "Egzersiz Davranışı Değişim Basamakları Ölçeği-EDDBÖ" ile Smith-Betz (2000) tarafından geliştirilmiş ve Özbay ve Palancı (2001) tarafından Türkçe uyarlaması yapılmış olan "Sosyal Öz-Yeterlik Algısı Ölçeği-SÖZYEO" veri toplama araçları olarak kullanılmıştır. Egzersiz davranışı değişim basamakları ölçeği 4 maddeden oluşmaktadır. Ölçekte yer alan maddeler "Evet" "Hayır" şeklinde cevaplandırılmaktadır. Araştırmada kullanılan diğer bir ölçek olan sosyal öz-yeterlik algısı ölçeği 25 maddeden oluşmuş olup 5 li

Likert tipi derecelendirmeye sahiptir. Bu ölçekten yüksek puan almak sosyal öz-yeterlik algısının yüksekliğine işaret etmektedir. Araştırma kapsamında yapılan istatistiksel analizler SPSS 20.0 istatistik paket programı aracılığıyla gerçekleştirilmiştir. Verilerin değerlendirilmesinde istatistiksel yöntem olarak; betimsel istatistikler; t-testi, tek yönlü varyans analizi (ANOVA), Ki-Kare ve Pearson Correlation testleri kullanılmıştır.

## BULGULAR

Katılımcıların EDDBÖ puanları, cinsiyet değişkenine göre anlamlı bir farklılık göstermektedir ( $\chi^2=97.13$ ,  $sd=4$ ,  $p=0.000$ ). Tablo 1 incelendiğinde kadın öğretmen adayları açısından en yüksek yüzdenin “Eğilim (%28.9)” basamağı, erkek öğretmen adayları için ise “Devamlılık (%31.5)” basamağında olduğu görülmektedir. Katılımcıların EDDBÖ puanları, bölüm değişkenine göre anlamlı bir farklılık göstermektedir ( $\chi^2=146.45$ ,  $sd=32$ ,  $p=0.000$ ). Tablo 1 incelendiğinde “Eğilim Öncesi” basamağında en yüksek yüzdenin GSE (%28.3), “Eğilim” basamağında EBB (%30.9), “Hazırlık” basamağında OSAE (%25.5), “Hareket” basamağında EBB (%15.5) ve “Devamlılık” basamağında ise BESÖ (%43.5) bölümü öğretmen adaylarında olduğu görülmektedir. Katılımcıların EDDBÖ puanları, sınıf değişkenine göre anlamlı bir farklılık göstermemektedir ( $\chi^2=18.66$ ,  $sd=12$ ,  $p=0.097$ ). Tablo 1 incelendiğinde “Eğilim Öncesi” basamağında en yüksek yüzdenin 3.sınıf (%24.2), “Eğilim” basamağında 1.sınıf (%27.9), “Hazırlık” basamağında 1.sınıf (%21.3), “Hareket” basamağında 2.sınıf (%13.9) ve “Devamlılık” basamağında ise 4.sınıfta (%24.0) öğrenim gören öğretmen adaylarında olduğu görülmektedir.

**Tablo 1.** Cinsiyet, bölüm ve sınıflara göre EDDBÖ yüzdelik değerleri

Cinsiyet	Eğilim Öncesi	Eğilim	Hazırlık	Hareket	Devamlılık	Toplam
Kadın	374 (%25.2)	429 (%28.9)	284 (%19.2)	157 (%10.6)	239 (%16.1)	1483 (%100)
Erkek	138 (%16.4)	165 (%19.6)	171 (%20.4)	101 (%12.0)	265 (%31.5)	840 (%100)
Bölüm						
BESÖ	13 (%7.7)	25 (%14.9)	36 (%21.4)	21 (%12.5)	73 (%43.5)	168 (%100)
OFMAE	30 (%16.8)	51 (%28.5)	35 (%19.6)	17 (%9.5)	46 (%25.7)	179 (%100)
EB	42 (%23.2)	56 (%30.9)	33 (%18.2)	28 (%15.5)	22 (%12.2)	181 (%100)
OSAE	17 (%17.3)	14 (%14.3)	25 (%25.5)	14 (%14.3)	28 (%28.6)	98 (%100)
GSE	83 (%28.3)	71 (%24.2)	47 (%16.0)	26 (%8.9)	66 (%22.5)	293 (%100)
İ	154 (%23.1)	185 (%27.8)	137 (%20.6)	78 (%11.7)	112 (%16.8)	666 (%100)
TE	61 (%31.4)	42 (%21.6)	46 (%23.7)	21 (%10.8)	24 (%12.4)	194 (%100)
BÖTE	26 (%14.4)	46 (%25.6)	34 (%18.9)	14 (%7.8)	60 (%33.3)	180 (%100)
ÖE	86 (%23.6)	104 (%28.6)	62 (%17.0)	39 (%10.7)	73 (%20.1)	364 (%100)
Sınıf						
1	123 (%22.0)	156 (%27.9)	119 (%21.3)	63 (%11.3)	98 (%17.5)	559 (%100)
2	118 (%21.0)	136 (%24.2)	105 (%18.7)	78 (%13.9)	126 (%22.4)	563 (%100)
3	123 (%24.2)	117 (%23.0)	102 (%20.1)	52 (%10.2)	114 (%22.4)	508 (%100)
4	148 (%21.4)	185 (%26.7)	129 (%18.6)	65 (%9.4)	166 (%24.0)	693 (%100)

(BESÖ: Beden Eğitimi ve Spor Öğretmenliği, OFMAE: Ortaöğretim Fen ve Matematik Eğitimi, EB: Eğitim Bilimleri, OSAE: Ortaöğretim Sosyal Alanlar Eğitimi, GSE: Güzel Sanatlar Eğitimi, İ: İlköğretim, TE: Türkçe Eğitimi, BÖTE: Bilgisayar ve Öğretim Teknolojileri Eğitimi, ÖE: Özel Eğitim)

Öğretmen adaylarının SÖZYEÖ puanları, cinsiyet değişkenine göre anlamlı bir farklılık göstermektedir ( $t=3.657$ ,  $p<0.05$ ). Erkek katılımcıların ortalama puanları kadın katılımcıların puanlarından daha yüksektir (Tablo 4). ANOVA sonuçları, öğretmen adaylarının SÖZYEÖ puanlarının, bölüm değişkenine göre anlamlı bir şekilde farklılaştığını göstermektedir ( $F=4.395$ ,  $p<0.05$ ). Tablo 2 incelendiğinde BESÖ Bölümünde öğrenim gören katılımcıların ortalama puanlarının diğer katılımcıların puanlarından daha yüksek olduğu görülmektedir (Tablo 2). Analiz sonuçları, öğretmen adaylarının SÖZYEÖ puanlarının, sınıf değişkenine göre anlamlı bir şekilde farklılaştığını göstermektedir ( $F=6.122$ ,  $p<0.05$ ). Tablo 2 incelendiğinde, 3 ve 4. sınıflarda öğrenim gören katılımcıların ortalama puanlarının 1 ve 2. sınıflarda öğrenim gören katılımcıların puanlarından daha yüksek olduğu görülmektedir.

**Tablo 2.** Cinsiyet, bölüm ve sınıflara göre SÖZYE puanlarının dağılımı

<i>Cinsiyet</i>	<i>N</i>	$\bar{x}$	<i>Ss</i>
Kadın	1417	88.63	16.67
Erkek	802	91.40	17.81
<b><i>Bölüm</i></b>			
BESÖ	162	95.91	15.16
OFMAE	176	91.06	16.06
EB	175	88.67	14.76
OSAE	88	87.56	18.14
GSE	285	89.55	18.39
İ	635	88.16	16.60
TE	194	87.36	16.64
BÖTE	164	90.03	17.80
ÖE	340	90.85	18.57
<b><i>Sınıf</i></b>			
1	532	87.75	17.17
2	538	88.32	16.65
3	484	91.02	16.737
4	665	91.19	17.607

(BESÖ: Beden Eğitimi ve Spor Öğretmenliği, OFMAE: Ortaöğretim Fen ve Matematik Eğitimi, EB: Eğitim Bilimleri, OSAE: Ortaöğretim Sosyal Alanlar Eğitimi, GSE: Güzel Sanatlar Eğitimi, İ: İlköğretim, TE: Türkçe Eğitimi, BÖTE: Bilgisayar ve Öğretim Teknolojileri Eğitimi, ÖE: Özel Eğitim)

Korelasyon analizi sonuçları, öğretmen adaylarının fiziksel aktiviteye katılım durumları ile sosyal öz-yeterlikleri arasında, pozitif yönde ancak düşük düzeyde bir korelasyon olduğu göstermektedir ( $r=0.203$ ;  $p<0.01$ ).

## TARTIŞMA VE SONUÇ

Erkek öğretmen adaylarının fiziksel aktiviteye katılım düzeylerinin kadın öğretmen adaylarından daha yüksek olması, literatürdeki birçok araştırma (Aşçı ve ark., 2006; Cengiz, 2007; Crocker ve ark., 2000; Ebem, 2007; Hagger ve ark., 1998; Hayer ve ark., 1999; Ross ve Pate, 1987; Savcı ve ark., 2006) sonucuyla paralellik göstermektedir ancak, Brown ve ark. (2003)'ün üniversitede hazırlık sınıfı öğrencileri üzerinde yaptıkları araştırmada ise erkek ve kadın öğrenciler arasında fiziksel aktivite düzeyi bakımından anlamlı bir fark bulunamamıştır. Bu sonucun ortaya çıkmasına, farklı kültürlerin spora ve fiziksel aktiviteye cinsiyet açısından

bakış açılarının farklı olmasının neden olduğu düşünülebilir. BESÖ bölümünde öğrenim gören öğretmen adaylarının fiziksel aktiviteye katılım düzeylerinin diğer öğretmen adaylarına göre daha yüksek olması, araştırma dahilinde beklenen bir sonuçtur. Çünkü bu bölümdeki öğretmen adayları, hem ders programları hem de kişisel eğilimleri gereği (boş zaman aktiviteleri, spor yaşantıları) diğer bölümlerde öğrenim gören öğrencilere göre daha fazla fiziksel aktiviteye katılma imkânına sahiptirler. Cengiz (2007)'in yaptığı bir araştırmada da, öğrencilerin egzersiz davranışına katılımları ile bölümleri arasında anlamlı farklılıkların bulunduğu tespit edilmiştir. Araştırmada öğretmen adaylarının fiziksel aktiviteye katılım durumları ile sınıf değişkeni arasında anlamlı bir farklılık bulunamamıştır. Ancak “Hareket” ve “Devamlılık” basamaklarında 1.sınıf öğrencilerinin daha düşük bir yüzdeye sahip olduğu görülmektedir. Yeni bir sosyal çevreye dahil olma sonucunda fiziksel aktiviteye katılım olanaklarının kısıtlı olması bu sonuca sebep olmuş olabilir.

Erkek öğretmen adaylarının sosyal öz-yeterlik puanlarının kadın öğretmen adaylarına göre daha yüksek olması ve bu farkın istatistiksel olarak da anlamlı olması, literatürdeki bazı araştırma (Aydiner, 2011; Çapri ve Kan, 2006) sonuçlarıyla benzerlik gösterirken bazı çalışma (Çubukçu ve Girmen, 2007; İkiz ve Yörük, 2013) sonuçları ile farklılık göstermektedir. Sonuçlardaki bu farklılık, araştırma gruplarının karakteristiklerinden kaynaklanmış olabilir. Araştırma sonuçları, BESÖ Bölümünde öğrenim gören öğretmen adaylarının SÖZYE algısı puanlarının diğer bölümlerdeki öğretmen adaylarının puanlarından daha yüksek olduğunu göstermektedir. Beden Eğitimi ve Spor Öğretmenliği Bölümü öğretmen adaylarının büyük bir kısmının, belirli bir sporcu özgeçmişlerinin olması, katıldıkları müsabakalar ve çeşitli etkinlikler sayesinde, farklı zamanlarda farklı sosyal çevrelerde bulunmaları, bu çevrelerde farklı kültürlerden sporcularla ve kişilerle iletişim halinde olmaları ve sporun kişiye kazandırmış olduğu güven duygusunu günlük yaşantılarında fazlasıyla hissettirmeleri, sosyal öz-yeterlik algılarının diğer bölüm öğrencilerine göre daha yüksek çıkmasının bir sebebi olarak gösterilebilir. Çubukçu ve Girmen (2007)'in yaptıkları bir çalışmada da öğretmen adaylarının programlarıyla sosyal öz-yeterlik algıları arasında anlamlı bir farklılığın olduğu tespit edilmiştir. Araştırmadan elde edilen sonuçlardan bir diğeri de 1 ve 2.sınıfta öğrenim gören öğretmen adaylarının SÖZYE algısı puanlarının, 3. ve 4. sınıfta öğrenim gören öğretmen adaylarının puanlarından daha düşük olduğudur. Öğretmen adaylarının üniversite eğitimlerinin ilk yıllarında sosyal çevre edinimi ve sosyal uyum açısından sahip oldukları bazı dezavantajların sonuçların bu yönde oluşmasına katkı sağlamış olabileceği düşünülebilir. Araştırmadan elde edilen bir diğer sonuç, öğrencilerin fiziksel aktiviteye katılım durumu ve sosyal öz-yeterlik algısı arasında anlamlı bir ilişkinin olduğudur. Kololo ve ark. (2012), ergenlerin fiziksel aktiviteye katılımlarına hangi psikolojik faktörlerin neden olduğunu belirlemek amacıyla yaptıkları çalışmanın sonucunda, öz-yeterlik, beden imajı ve fiziksel öz-saygının ile fiziksel aktiviteye katılım arasında pozitif yönlü bir ilişkinin olduğunu rapor etmişlerdir.

Araştırmadan elde edilen sonuçlarla literatürdeki sonuçların bazı değişkenler açısından farklılık göstermesi, bu konular üzerine güncel çalışmaların yapılması gereğini ortaya koymaktadır. Diğer taraftan çalışma grubunun tek bir üniversitede öğrenim gören öğretmen adaylarından oluşması, araştırmanın sınırlılığı olarak değerlendirilebilir. Bundan sonra yapılacak çalışmalarda, örneklem sayısının artırılması ve öğretmen adaylarının tüm üniversite öğrenimleri boyunca izlendiği farklı araştırma deseninde çalışmalara ihtiyaç olduğu düşünülmektedir.

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# Kırsal Alanda Yaşayan Kadınların Pilatese Katılımında Etkili Olan Sosyoekolojik Faktörler

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## **Özet**

Kırsal alanda yaşayan kadınların düzenli fiziksel aktiviteye katılımlarında etkili olan bireysel, sosyal ve fiziksel faktörler ile ilgili bilgi yok denecek kadar az olduğu kadar kırsal alanlarda kadınlara sunulan fiziksel aktivite hizmetleri de oldukça sınırlıdır. Bu doğrultuda, Kasım 2012-Mayıs 2013 tarihleri arasında Bursa, Nilüfer Belediyesi ile Çağdaş Yaşamı Destekleme Derneği ile birlikte Hasan ağa köyünde yaşayan kadınlara yönelik pilates projesi yürütülmüştür. Araştırmada bu proje kapsamında sunulan pilatese katılan kadınların katılımlarında etkili olan faktörler sosyoekolojik yaklaşımla analiz edilmiştir. Bu yaklaşım, kırsal alanda yaşayan kadınların fiziksel aktiviteye katılımlarını anlayabilmemizi sağlayabilecek ve katılımlarını arttırmayı hedefleyen politikaların geliştirilmesinde dikkate alınacak faktörleri bütünlüklü sunmaktadır. 7 aylık pilates programına (haftada 2 gün) katılan 10 kadın ve katılmayan 10 kadın ile bireysel görüşmeler yapılmıştır. İçerik analizi sonucunda elde edilen bulgular -+kadınların yaşadıkları bireysel, sosyal ve fiziksel çevrenin fiziksel aktiviteye katılımlarında önemli olduğunu göstermektedir. Fiziksel çevrenin güvenilir olmaması, fiziksel aktivite alanlarının ve programlarının yokluğu, ulaşım zorluğu ile birlikte sosyal çevrenin kadınların fiziksel aktiviteye katılımlarını onaylamaması ve spor/fiziksel aktivite kültürünün yokluğu kadınların yaşamında fiziksel aktivitenin olmamasına neden olmaktadır. Bu ortamda yaşayan bazı kadınların pilatese katılımlarında ise program (ücretsiz, kadınlara özel, kadın eğitmen, ulaşım kolaylığı), sosyal (koca onayı) ve bireysel (kilolu olmak, sporu sevmek, sağlık elde etmek ve engellerle baş edebilmek) faktörler etkilidir. Pilatese katılmayan kadınlar için özellikle sosyal destek yokluğu (koca/akraba/arkadaş onayının olmaması) belirgindir. Elde edilen bulgular ışığında, kırsal alanda yaşayan kadınların fiziksel aktiviteye katılımını arttırmak amacıyla programların geliştirilmesinde ve uygulanmasında programa erişimin kolaylığının (ulaşım ve ücret), sosyal çevrenin ve bireysel faktörlerin belirleyiciliğinin önemli olduğunu söyleyebiliriz.

*Anahtar kelimeler:* Kadın, sosyoekolojik faktör, pilates, kırsal alan

# Socioecological Factors Influencing Plates Participation of Women Living in Rural Area

## **Abstract**

The physical activity programmes for the women living in rural areas are very limited. On the other hand, there is limited number of studies which analyzed the factors influencing regular physical activity participation of the women living rural areas. Therefore, with the collaboration between the Nilüfer Municipality and the Çağdaş Yaşam Destekleme Derneği a plates project was organized between November 2012 and May 2013 for the women living in Hasanaga village. In this study, the factors influencing plates participation of those women is analyzed with the socioecological model. This model provides a comprehensive understanding of physical activity participation of the women living in rural area and the factors which are important for promoting related policies. Data were collected via individual interviews with 10 plates participant women and 10 non-participant women and content analysis was conducted. The analysis shows that individual (being overweight, enjoying sport, wanting to be healthy and self-confidence), social (approval of husband), environmental factors (coping with unsecure neighborhood, lack of physical activity opportunities and facilities, transportation difficulties) and plates programme (free of charge, women-only context and women instructor) are important for plates participant women. For non-participant women not having social approval of husband, relatives and friends (social) is the most important factor and secondly transportation difficulty is considered important barrier. In the lights of the findings of the study, we can argue that the accessibility of the program, social, environmental and individual factors are important in developing and delivering the physical activity program for the women living in rural areas.

**Key words:** *Women, Socioecological Factors, plates, rural area*

## **GİRİŞ**

Spor ve fiziksel aktiviteye katılımın kadınların yaşamlarındaki yeri, kadınların güçlenmesine ya da kadınların toplumdaki ikincil konumunun devamına olası katkıları feminist araştırmacılar arasında sıklıkla tartışılan konulardır (Bartky, 1998; Markula, 1995; Shaw ve Lee, 2012). Bu tartışmalarda kadınların yaşadıkları kültürle birlikte bu kültüre etki eden faktörlerin bütünlüklü analizinin önemi vurgulanmaktadır. Bu bağlamda, farklı kültürlerde yaşayan kadınların deneyimleri uluslararası literatüre önemli bir katkı sağlamakla birlikte kadınların toplumsal konumlarının güçlendirilmesi politikalarına da veri sunma potansiyeline sahiptir.

Kırsal alanda yaşayan kadınların düzenli fiziksel aktiviteye katılımında etkili olan bireysel, sosyal ve fiziksel faktörler ile ilgili bilgi yok denecek kadar az olduğu kadar kırsal alanlarda kadınlara sunulan fiziksel aktivite hizmetleri de oldukça sınırlıdır. Sınırlı sayıdaki projelerden

birisi olan Bursa, Nilüfer Belediyesi ile Çağdaş Yaşamı Destekleme Derneği ile birlikte Hasan ağa köyünde yaşayan kadınlara yönelik pilates projesine katılan ve katılmayan kırsal alandaki kadınların fiziksel aktivite deneyimleri araştırmanın odak noktasıdır.

Araştırmada bu proje kapsamında sunulan pilatese katılan kadınların katılımlarında etkili olan faktörler sosyoekolojik yaklaşımla analiz edilmiştir. Bu yaklaşım, kırsal alanda yaşayan kadınların fiziksel aktiviteye katılımlarını anlayabilmemizi sağlayabilecek ve katılımlarını arttırmayı hedefleyen politikaların geliştirilmesinde dikkate alınacak faktörleri bütünlüklü sunmaktadır. Son yıllarda özellikle çocukların ve gençlerin spor ve fiziksel aktiviteye katılımlarında etkili olan faktörlerin araştırıldığı çalışmalarda bireysel, sosyal, çevresel ve politik faktörlerin birlikte ele alındığı sosyo-ekolojik model sıklıkla kullanılmaktadır (Brownson ve diğ., 2001; Sallis ve diğ., 2008). Sosyo-ekolojik model kadınların ve kız çocuklarının spor ve fiziksel aktiviteye katılmaya ve devam etmeye karar vermelerinde ve deneyimlerinde etkili olan çok boyutlu ve karmaşık faktörlerin anlaşılmasında çok yararlıdır (Nahas ve diğ., 2003).

Sosyo-ekolojik modelde *bireysel faktörler* arasında yaş, cinsiyet, algılanan fiziksel yeterlik, zaman, fiziksel aktivite bilgisi, öz saygı, öz güven, motivasyon, özerklik, eğitim durumu ve ekonomik durum yer almaktadır (Ainsworth ve diğ., 2003; Zhang ve diğ., 2012). Örneğin, kadınların beden imgesi ve fiziksel görünümü (aşırı kilolu, kilolu, zayıf; yeme bozukluğu vs.) yönelik hoşnutsuzlukları onların spor ve fiziksel aktiviteye katılımında etkili olan bireysel faktörlerdir. *Bireyler arası/sosyal faktörler* ailenin, arkadaşların ve resmi ve resmi olmayan sosyal ağların, diğer bir ifadeyle sosyal çevrenin etkisini içeren faktörlerdir. Örneğin, kadınların spor ve fiziksel aktiviteye katılımında etkili olan sosyal faktörlerin başında aile ve arkadaş desteği gelmektedir (Coleman, Cox ve Roker, 2008). *Çevresel faktörler* spor kurumları, spor tesisleri ve yaşanılan bölge ile ilişkili faktörlerdir. Örneğin, yetersiz spor olanağı, ulaşım problemleri, program saatleri, ücretleri ve ekipman giderleri, tesislere erişim, tesis kalitesi, ortamın güvenliği, hava, trafik ve yaşanılan çevre spor ve fiziksel aktiviteye katılım ile ilişkilidir (Duncan, Spence ve Mummery, 2005; Fleury ve Lee, 2006; Langille ve Rodgers, 2010). *Politikalarla ilgili faktörler* ulusal, bölgesel ve yerel düzeydeki programlar, politikalar ve yasalar ile ilgili faktörlerdir (Langille ve Rodgers, 2010). Kızlara ve kadınlara uygun olmayan spor ve fiziksel aktivite programları, antrenör eğitimi, beden eğitimi programları, spor federasyonlarının genel olarak spora ve özel olarak kadınların spora katılımına dair politikaları vs.

Yukarıda sunulan kuramsal çerçeve bağlamında, bu araştırmanın amacı kırsal alanda sunulan pilates programına katılan kadınların katılımlarını etkileyen faktörlerin sosyoekolojik model bağlamında incelenmesidir. Katılım faktörlerini ayırt edebilmek için pilates programına katılmayan kadınlar da araştırmaya dahil edilmiştir.

## **YÖNTEM**

### **Katılımcılar**

Araştırmanın yöntemi nitel araştırmadır. Örneklemen belirlenmesinde amaçlı örneklem yöntemi (Patton, 1990) kullanılmıştır. Kasım 2012-Mayıs 2013 tarihleri arasında Bursa, Nilüfer Belediyesi ile Çağdaş Yaşamı Destekleme Derneği ile birlikte Hasan ağa köyünde yaşayan

kadınlara yönelik pilates projesi yürütülmüştür. Proje kapsamında sunulan 7 aylık pilates programına (haftada 2 gün) katılan 10 kadın ve katılmayan 10 kadın araştırmanın katılımcılarını oluşturmuştur. Yaşları 20 ila 60 arasında değişen araştırmaya katılan kadınların yaş ortalaması 41 dir. Kadınların tamamı ev hanımı ve evlidir. Araştırmaya katılan kadınların 16 sı ilkokul mezunu, 2 si ortaokul ve diğer ikisi de lise mezunudur.

### **Bireysel Görüşmeler**

Yarı-yapılandırılmış bireysel görüşmeler yoluyla kadınların spor ve fiziksel aktivite deneyimleri etkileyen faktörler anlaşılmaya çalışılmıştır. Bireysel görüşmeler gönüllülük esasına göre yapılmış, kadınlardan Gönüllü Katılım Formu imzalamaları istenmiştir. Ayrıca görüşmelerde, katılımcılardan izin alınarak ses kayıt cihazı kullanılmıştır. Görüşme sorularının belirlenmesinde sosyo-ekolojik modelden yararlanılmıştır.

### **Veri Analizi**

Bireysel görüşmelerden elde edilen veriler üzerinde içerik analizi gerçekleştirilmiştir (Yıldırım ve Şimşek, 2003). Bu analiz tekniği kapsamında şu aşamalar takip edilmiştir: 1. *Açık kodlama*: Görüşme metinleri satır satır okunarak ve araştırmacılar tarafından araştırma problemi ve araştırmanın kavramsal çerçevesi kapsamında bir kod listesi oluşturulmuştur. 2. *Tematik kodlama*: Elde edilen verilerin kodlanmasından sonraki aşama, birbiriyle ilişkili kodları bir araya getirebilecek temalar bulunmuştur. Analiz sonucunda iki tema elde edilmiştir: Fiziksel aktiviteye katılmamakta etkili olan faktörler ve kadınların pilatese katılımında etkili olan faktörler.

### **Verilerin Toplanması**

Araştırmaya katılan kadınlardan gönüllü katılım formu yoluyla onayları alınmıştır. Araştırma Uludağ Üniversitesi Tıp Fakültesi Klinik Araştırmalar Etik kurulunun 2013-7/21 nolu kararıyla onaylanmıştır. Veriler birinci yazar tarafından toplanmıştır.

## **BULGULAR VE TARTIŞMA**

### **Fiziksel Aktiviteye Katılmamakta Etkili Olan Faktörler**

Kırsal alanda yaşayan kadınların genel olarak fiziksel aktiviteye katılmamalarında etkili olan faktörlerin başında fiziksel çevrenin güvenilir olmaması, fiziksel aktivite alanlarının yokluğu ve ulaşım zorluğu gelmektedir: *Yaşadığımız çevre spor yapmak için güvenilir değil. Yürünecek yollarda köpekler var. Kendimi güvende hissetmiyorum(Ayşe). Egzersiz yapmak için güvenilir değil. Akşamüstü sokakta kalmamız mümkün değil (Fadime).*

Çevresel faktörler (güvenlik, tesislere erişim ve ücret gibi) özellikle yoksul kadınlar için daha belirleyicidir. Araştırmalar çok sayıda kadın ve kız çocuğunun kamusal alanda fiziksel ve cinsel tacize, saldırılara ve şiddete maruz kaldıklarını ve bu nedenle kendileri güvende hissetmediklerini göstermektedir (Bracewell, 2005).

Pilatese katılmayan kadınlar için özellikle sosyal destek yokluğu (koca/akraba/arkadaş onayının olmaması) belirgindir: *Eşim kendisinin düzeninin bozulmasını istemiyor(Ayşe). Engel eşimim izin vermemesi. Pilates programı, sürekli olduğu için izin vermiyor(Fadime)*. Ayrıca, kadınların sosyal çevreleri (komşu, arkadaş) kadınların spor yapmalarının doğru bulunmadığı da anlaşılmaktadır: *Akşam saatlerinde (yürüyüş için) dışarda kalmam mümkün değil. Ayıplama var. Tek başıma çıkıp yürüyemem(Fadime). Parklar ve spor aletleri olsa da gidip kullanamazdım herhalde. Yaşadığımız çevrede dedikodu yapılır(Ayşe)*. Örneğin, Ayfer pilatese katılıyor fakat dışarda yürüyüş ya da spor yapma imkânı bile olsa yapamayacağını belirtiyor: *Olsa da gidip spor yapmam mümkün değil, çünkü toplumsal baskı hissederim (Ayfer)*.

Türkiye’de yapılmış bir araştırmada özellikle alt toplumsal sınıf kadınların fiziksel aktiviteye katılabilmeleri ve katılımlarını devam ettirebilmelerinin özellikle aile ve sosyal çevreyle ilişkili çeşitli faktörlerden etkilendiği ortaya çıkmıştır. Bu faktörler arasında en fazla önce çıkarılanlar, çocuk, eş ve akraba bakımı, koca, akraba ve sosyal çevre onayıdır (Koca ve diğ., 2009). Bu araştırmanın bulguları da göstermektedir ki kadınların fiziksel aktiviteye katılımları, kadınların ev dışı alanda yer almasını onaylamayan sosyal çevre (aile bireyleri, komşular) tarafından baskılanmaktadır.

Ayrıca spor/fiziksel aktivite kültürünün yokluğu kadınların yaşamında fiziksel aktivitenin olmamasına neden olmaktadır: *Spor hakkında bir bilgim yok. Ailem de bilmiyordu beni teşvik etmedi. Spor yapma alışkanlığımız yok. Çocuklarım da yapmıyor(Ayşe). Ailem spora katılmaya önem vermiyor. Hiç kimse hiçbir etkinliğe katılmıyor(İlknur)*.

#### ***Kadınların pilatese katılımında etkili faktörler***

Pilates programı (ücretsiz, kadınlara özel, kadın eğitmen, ulaşım kolaylığı) en belirgin faktör olarak pilatese katılan kadınların tamamı tarafından dile getirilmiştir. Programın sadece kadınlara özgü olması önemli bir faktördür: *Programda sevdiğim şey kadınlarla birlikte spor yapmak (Ayfer). Sadece kadınlar olduğu için eşim izin veriyor (Emine)*. Kadınların, sadece kadınlara özel spor merkezlerinde, erkeklerin olmadığı bir ortamda rahat ve güvenli bir şekilde spor yapabildiklerini bildiren araştırmalar bulunmaktadır (Koca, Henderson, Bulgu ve Aşçı, 2009; Craig ve Liberti, 2007).

Kadınların pilatese katılımında etkili olan bir diğer faktör bireyseldir (kilolu olmak, sporu sevmek, sağlık elde etmek ve engellerle baş edebilmek): *Kendimi sağlıklı ve zayıf hissetmek için katıldım (Ayfer). Spor yapmayı çok seviyorum, katılmaya gayret ediyorum (Emine)*. Pilatese katılan kadınlar karşılaştıkları engellerden bazılarıyla baş ederek katılımlarını devam ettirebiliyorlar. Örneğin Ayfer, kayın valide engeliyle baş ederek pilatese katılabiliyor: *Kayın validem engel olabiliyor. Senin bu yıl düğünün var ne işin var diye karşı çıkıyor. Duymamazlıktan gelip katılıyorum. Emine de benzer şekilde komşularının eleştirilerini önemsemiyor: Komşularım spor yaptığım için çok eleştiriyor. Kendim çok istediğim için eleştirileri önemsemiyorum.*

Sonuç olarak, araştırmadan elde edilen bulgular özellikle sosyal ve çevresel (fiziksel) faktörlerin kadınların fiziksel aktiviteye katılımlarında önemli olduğunu göstermektedir. Bu bulgular ışığında, kırsal alanda yaşayan kadınların fiziksel aktiviteye katılımını arttırmak amacıyla

programların geliştirilmesinde ve uygulanmasında programa erişimin kolaylığının (ulaşım ve ücret) ve sosyal çevrenin belirleyiciliğinin önemli olduğunu söyleyebiliriz.

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## Yaşlı Kadınların Yaşam Boyu Fiziksel Aktivite Deneyimlerini Anlamlandırmalarında Etkili Olan Faktörler

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### **Abstract**

Turkish women of any age are devoid of right to participation to sport and physical activity which are the essential components of healthy life. Studies claim older women are the most disadvantaged age groups feeling this deprivation. This study aims to examine factors effecting the older women's interpretation of lifelong physical activity experiences. Data were collected by individual interviews with 20 women (60-83 years old) from different socio-economic statuses that live in different regions (Adana, Ankara, Erzurum, İstanbul, Ordu). Theoretical framework of this study is socio-ecological model and feminist cultural studies approach is used to understand the culture and gender effects on experiences. After content analysis, findings show that individual, social and physical environment being experienced by women lifelong and government policies are the factors influencing women's participations. It is seen that socio-economic status of family, environment of childhood and youth, education, perception of ageing (individual); behaviors of father/husband and gender norms (social); rural/urban environmental facilities (physical environment), national and local programs (policies) are the factors influencing the older women's participation. It can be said that it is highly important to consider the women's lifelong experiences to understand and to increase the women's participation to physical activity in older age, and to create comprehensive sport/physical activity policies from childhood to oldness.

**Key words:** Socio-ecological model, older women, physical activity.

### **GİRİŞ**

Düzenli yapılan fiziksel aktivitenin insan sağlığına önemli faydalarına rağmen (WHO, 2010) her yaş grubundan bireylerin fiziksel aktiviteye katılım oranlarının yeterli olmadığı birçok araştırmacı tarafından ortaya konmaktadır. Çalışmalar, yaşın ilerlemesiyle birlikte fiziksel aktivite düzeyinin azaldığını göstermektedir (Caspersen, Pereira ve Curran, 2000; Craig, Russell, Cameron ve Bauman, 2004). İlerleyen yaşla birlikte fiziksel aktivitede azalmalar en fazla kadınlarda görülmekle birlikte, kadınların erkeklere kıyasla yaşam boyu daha az aktif oldukları da bilinmektedir (Cengiz, İnce ve Çiçek, 2009; Karaca, Çağlar ve Cinemre, 2009; Sallis, Prochaska ve Taylor, 2000). Örneğin, Türkiye'de 1990-2008 tarihleri arasında yapılan takip



çalışmalarında kadınların fiziksel aktivite düzeylerinin yaşa bağlı olarak azaldığı, bu önemli azalmanın özellikle 40-59 yaş grubu için geçerli olduğu belirtilmektedir (Onat, 2009).

Kadınların fiziksel aktiviteye katılımlarında ve deneyimlerinde etkili olan çok boyutlu ve karmaşık faktörlerin anlaşılmasında sosyo-ekolojik modelin son yıllarda sıklıkla tercih edildiği görülmektedir (Brownson ve diğ., 2001; Casey, Eime, Payne ve Harvey, 2009; Sallis, Owen ve Fisher, 2008). Bu modele göre bireylerin fiziksel aktiviteye katılımı bireysel özelliklerden, sosyal çevreden, fiziksel çevre faktörlerinden ve ülke politikalarından etkilenir. Araştırma sonuçları yoksul (Dye ve Wilcox, 2006), kırsal bölgede yaşayan (Brownson ve diğ., 2000; Scharff ve diğ., 1999) ve elverişli olmayan fiziksel çevreye sahip (Li ve diğ., 2005), düşük eğitilmiş (Wilcox ve diğ., 2000) yaşlı kadınların fiziksel olarak daha az aktif olduğunu göstermektedir.

Sosyo-ekolojik model kadınların fiziksel aktiviteye katılımını belirleyen faktörleri anlamamızda bütünlüklü bir yaklaşım sergilese de, kadınların fiziksel aktivite deneyimlerinde kültürün ve toplumsal cinsiyetin etkisini anlamamıza olanak sağlayan feminist kültürel çalışmalar araştırmanın diğer bir kuramsal arka planını oluşturmaktadır (örn., Hall, 1996; Markula, 1995). Türkiye’de bu perspektifle yapılan araştırmalar kadınların fiziksel aktiviteye katılımlarını etkileyen faktörlerin çocuk, eş ve akraba bakımı; koca, akraba ve sosyal çevre onayı ve ekonomik koşullar gibi aile ve çevreyle ilgili olduğunu ortaya koymaktadır (Aşçı, Koca ve Bulgu, 2008). Örneğin yapılan bir araştırmada bazı kadınların fiziksel aktiviteye katılamamalarının nedeni olarak ailelerinin izin vermemelerini, ekonomik olanaklarının bulunmamasını, kişisel güvenlikleri konusunda endişelerinin olmasını ve ev işlerinin dışında spora ayıracak zamanlarının olmamasını belirtmişlerdir (Koca, Henderson, Aşçı ve Bulgu, 2009).

Ülkemizde her yaş grubundan kadınların sağlıklı bir yaşam tarzının vazgeçilmez bileşenlerinden olan spor ve fiziksel aktiviteye katılım hakkından yoksun oldukları bilgisinden hareketle, yaşlı kadınların fiziksel aktiviteye ilişkin deneyimlerinin derinlemesine anlaşılması ve katılımın önündeki olası engellerin belirlenmesi kritik bir öneme sahiptir. Bu bilgiler ışığında, bu çalışmanın amacı yaşlı kadınların yaşam boyu fiziksel aktivite deneyimlerini anlamlandırmalarında etkili olan faktörlerin açığa çıkarılmasıdır.

## YÖNTEM

**Araştırma Deseni:** Araştırmanın amacı ve kuramsal çerçevesi doğrultusunda yaşlı kadınların yaşam boyu fiziksel aktivite deneyimlerini anlamlandırmalarında etkili olan faktörleri bütünlüklü bir yaklaşımla analiz edebilmek ve zengin veri elde edebilmek için nitel yöntem tercih edilmiştir (Patton, 2002).

**Katılımcılar:** Bu çalışma Koç Üniversitesi Toplumsal Cinsiyet ve Kadın Çalışmaları Araştırma ve Uygulama Merkezi tarafından desteklenen “Üç kuşak kadının (kızlar, anneler ve anneanneler) spor ve fiziksel aktivite deneyimlerinin sosyo-ekolojik model çerçevesinde feminist kültürel çalışmalar yaklaşımıyla incelenmesi” konulu projenin bir parçasıdır. Katılımcıların

belirlenmesinde amaçlı örnekleme yöntemleri kapsamında maksimum çeşitlilik örnekleme ve kartopu tekniği kullanılmıştır (Patton, 2002). Bu doğrultuda çalışmamız herhangi bir spor dalında yarışmacı olan ergen kızlar ile olmayanların anneannelerini kapsamaktadır. Türkiye genelinde gerçekleştirilen büyük ölçekli araştırmalarda beş bölge (Batı, Güney, Orta, Kuzey ve Doğu Anadolu) sınıflandırılmasının sıklıkla tercih edildiği görülmektedir (örn., Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü, 2009). Buna göre her bir bölgedeki farklı illerde (Adana, Ankara, Erzurum, İstanbul, Ordu) yaşayan, yaşları 60-83 arasında değişen ve farklı sosyo-ekonomik düzeylerden 20 kadın çalışmamıza dahil olmuştur. Katılımcıların ikisi üniversite mezunu olup, altısı okuma yazma bilmemektedir. Hiç birinin spor ve düzenli egzersiz geçmişi yoktur, günümüzde ise dördü doktor önerisi ile fizik tedavi hareketleri, ikisi de yakın mesafe yürüyüşleri yapmaktadır. Katılımcıların 10'u düşük, beşi yüksek, diğer beşi de orta sosyoekonomik gelire sahiptir.

**Bireysel Görüşme:** Görüşme soruları sosyo-ekolojik modelden ve feminist kültürel çalışmalardan faydalanılarak hazırlanmıştır (örn., Biddle ve diğ., 2005; Brown, 2011; Enright ve O'Sullivan 2010; Oliver, Hamzeh ve McCaughtry, 2009). Görüşmeler katılımcıların evlerinde gerçekleştirilmiş, ses kayıt cihazı kullanılmış ve 35-90 dakika arasında sürmüştür. Her bir katılımcıya görüşmelerden önce çalışmanın amacı anlatılmış ve Gönüllü Katılım Formu imzalatılmıştır.

**Veri analizi:** Verilerin analizinde içerik analizi yöntemi kullanılmıştır (Yıldırım ve Şimşek, 2003). Bu analiz tekniği kapsamında görüşmeler doğrudan metne aktarılmış, veriler düzenlenmiş, ardından her bir araştırmacı bağımsız olarak açık kodlama yapmıştır. Araştırmacılar %100 görüş birliği sağlanana kadar kodlanmış birimler üzerinde uzunlamasına tartışmıştır (Lincoln ve Guba, 1985). Elde edilen verilerin kodlanmasından sonra birbiriyle ilişkili kodları bir araya getiren temaların bulunması aşamasına geçilmiş ve tematik kodlama yapılmıştır. Verilerin geçerlik ve güvenilirliği için araştırmacı çeşitlemesi, esneklik ilkesi gibi çeşitli stratejiler kullanılmıştır (Berg, 2004; Lincoln ve Guba, 1985).

## BULGULAR VE TARTIŞMA

**1. Bireysel faktörler:** Yaşlı kadınların yaşam boyu fiziksel aktivite deneyimlerini anlamlandırmalarında *sosyo-ekonomik düzeyin, eğitimin, çocukluğun ve gençliğin geçtiği ortamın ve yaşlılığa ilişkin alguların* etkili olduğu açığa çıkmıştır. Buna göre ailesinin sosyo-ekonomik düzeyi kendi çocukluk/gençlik döneminde düşük olan ve eğitimine devam edemeyen kadınların yaşam boyu düzenli fiziksel aktiviteye katılmadıkları; fiziksel aktiviteye dair anlamlandırmalarının ev içi ve ilgili işlerle sınırlı olduğu görülmektedir. Beden eğitimi derslerine hiç katılmamış düşük eğitilmiş kadınlar oyun ya da düzenli bir aktivite yerine ev içi işlere, çobanlık, tarla ve bahçe işlerindeki hareketliliğe anlam yüklemektedirler: “Köyde spor ne bilmezdik, tarlada ekinde geçti çocukluğumuz, her şey spordu” (Şeref, 70 yaş) “Çalışıyordum be kızım. Ufacık çocukların önüne memleketimizde mal-mülk koyuyordu. Bahçede kazma elimizde. Tabii o yana bu yana öyle çalıştım.” (Reyhan, 64 yaş). Öte yandan ailesi yüksek ekonomik seviye sahip olan ve eğitimlerini sürdüren kentli kadınların günümüzde fiziksel aktiviteye

katılmak için planlama yaptıkları, çocukluk döneminden günümüze kendi yaşamlarında bu farkındalığı aktardıkları görülmektedir. Örneğin, Leman (72 yaş) lisede aldıkları beden eğitimi derslerinin önemini vurgulayarak, günümüzde aktif olmanın arayışı içerisinde: *“Her gün köpeğimi gezdiriyorum, yürüyüş oluyor.”* Araştırmalar da ailenin sosyo-ekonomik düzeyinin çocuklarının fiziksel aktiviteye katılımı üzerinde etken olduğunu, yüksek gelirli ailelerin çocuklarının fiziksel aktiviteyi daha fazla sürdürme eğiliminde ve yetişkinlikte daha aktif olduklarını göstermektedir (Barnett, O’Loughlin ve Paradis, 2002; Stalsberg ve Pedersen, 2010).

İlgili literatür yaşlı kadınların fiziksel aktiviteye katılımların önündeki engellerin başında ağrılara bağlı olan sağlık problemleri olduğunu ve bu semptomlarla başa çıkmada düzenli fiziksel aktiviteyi sıklıkla tercih etmediklerini göstermektedir (Booth, Owen, Bauman, Clavish ve Leslie, 2000; Jancey ve diğ., 2009). Benzer şekilde, çalışmamızda bireysel faktörler arasında açığa çıkan diğer bir bulgu kadınların kendi yaşlanma süreçlerini nasıl algıladıkları ile ilgilidir. Suna’nın (79 yaş) *“Ağrılardan kesiliyorum”* ya da Hanım’ın (61 yaş) *“Ameliyat olamıyorum ki zamansızlıktan, dizlerim kötü, hareket edemiyorum”* ifadelerinde olduğu gibi bazı kadınlar sağlık problemleri nedeniyle düzenli fiziksel aktiviteye katılamadıklarını belirtirken, bazıları ise katılamamalarını yaşın ilerlemesi ile birlikte “doğallaşan” süreçle açıklamaktadır: *“Canım istemiyor kızım işte ihtiyarlardan mı eringeçlikten mi gayri neye sayarsan say”* (Kıymet, 64 yaş), *“İnsan yaşını aldıkça düşüyor, şimdi düştüm kaldım”* (Reyhan, 64 yaş), *“Yaş ilerleyince tembelleşiyor insan”* (Yüksel, 76 yaş).

**2. Sosyal faktörler:** Çalışmamızda kadınların fiziksel aktivite deneyimlerinde çocukluk döneminde babanın, evlendikten sonra ise kocasının ve ailesinin tutumlarının kritik bir öneme sahip olduğu görülmüştür. Düşük SES’li, kırsalda yaşayan ve eğitim düzeyi düşük anababaya sahip kadınların çocukluk döneminde sokağa çıkmasına, oyun oynamasına ve eğitim almasına izin verilmemiş, bu durum fiziksel aktiviteye katılım konusunda yoksunluk yaşamalarına neden olmuştur: *“Hiç oyuna koymazdı babam! Hiç yollamazdı. Kıskanç adamcağızdı”* (Duraniye, 64), *“İlkokul dörtte okuldan aldılar beni, kapının önüne çıkamazdım, evlendim kayınvalidem çıkarttırmadı bu kez”* (Tülay, 70 yaş). Türkiye’de yapılmış bir araştırmada da özellikle alt toplumsal sınıf kadınların fiziksel aktiviteye katılabilmeleri ve katılımlarını devam ettirebilmeleri koca, akraba ve sosyal çevre onayı gibi faktörlere bağlı olduğu belirtilmektedir (Koca ve diğ., 2009). Ayrıca aile ilgisinin, aileden kaynaklanan engellerin ya da desteğinin, sosyal normların, anne babanın spor ve fiziksel aktiviteye yönelik görüşlerinin çocuklarının spor ve fiziksel aktiviteye katılımı ile ilişkili faktörler olduğu bilinmektedir (Norman ve diğ., 2005; Sallis ve diğ., 2000). Babaları çocukluk döneminde izin verici tutuma sahip olan, spora ve fiziksel aktiviteye katılım noktasında olanaklar yaratılan ve desteklenen kentli kadınların, hem çocukluk hem yetişkinlik döneminde daha fazla aktif oldukları açığa çıkmıştır: *“Bizim oralar ufak bir yer olmasına rağmen babamın bisikletini alırdım, dolaşırdım, tur atardım”* (Hande, 66 yaş), *“Babam hususi bahçe içinde ev tutardı..ne saklambacı ne körebesi kaldı. Ne de kukalı saklambaç. Çelik çomak oynardık, çember çevirirdim.”* (Leman, 72 yaş).

**3. Fiziksel çevre:** Görüşme yaptığımız kadınların yaşadıkları çevrenin fiziksel özellikleri fiziksel aktivite katılımına ilişkin anlamlandırmalarını etkilemektedir. “*Şimdi şimdi çoğaldı şişman kişi. Çünkü neden? Çamaşırı elle yıkıyorduk, su yoktu evimizde taşıyorduk. Gölbağçe'nin girişi kadar yerden su taşıyorduk.*” ifadelerinin sahibi Zambak (61 yaş) gibi bazı kadınlar çocukluk ve gençlik dönemindeki olanaksızlıklar nedeniyle aktif olduklarını açıklarken, bazıları ise yaşadıkları çevrenin güvenliğine işaret etmektedir: “*İyi ki o dönemde dünyaya gelmemişim. Çok güzeldi çocukluğumuz. Ortaokulda lisede bile sokakta arkadaşlarla oynardık biz.*” (Yüksel, 76 yaş). “*Sizlerden daha özgürdük bir noktada. Çünkü başımıza bir şey gelecek korkusu yaşamadan biz gece 21-22'lere kadar sokakta oynayabiliyorduk*” (Leman, 72 yaş). Kadınların sosyo-ekonomik koşullara bağlı olarak fiziksel çevre faktörlerini anlamlandırmaları, günümüz koşulları için de geçerlidir. Örneğin, Kıymet'in “*Yok öyle yakın yerimizde parklar aletler*” ifadesinde olduğu gibi daha yoksul yaşlı kadınların çevresel olanaklardan yoksundur. Kıymet gibi düşük ekonomik gelire sahip kadınların yaşadıkları mahalle fiziksel aktivite açısından dezavantajlı öğeleri barındırabilir ve olanaklara erişim açısından yeterli fırsatlar sunmayabilir (KASFAD, 2012). Öte yandan, yaşadıkları çevrede açık hava spor alanları ve aletleri olan kadınlar ise kendi yaşları için uygun görmedikleri, bakımsız olduğu, güvende hissetmedikleri için çok fazla tercih etmediklerini belirtmişlerdir: “*Oraya gidip aletlerde hareket edebilmek için yanıma herhalde bir arkadaş istiyorum. Tek başıma gidip yapmak bir tuhafıma geliyor benim.*” (Leman), “*Okulun yanında park var..ama dışarda oturamıyoruz. Evimde otururum çünkü yabancı gelse kapıyı açmam vallaha ben korkarım.*” (Reyhan, 64 yaş), “*Bir defa her zaman çıkamıyorsun burada. Araç sorunu var. Çıksan geri nasıl geleceksin, düşünüyorsun otobüsler saatle.*” (Zambak, 61 yaş). Görüldüğü gibi ulaşım zorluğu ile birlikte akşam saatlerinde sokakta olmayı istememek birleştiğinde, kadınların ev dışında spora ve fiziksel aktiviteye katılımları azalmaktadır (Bracewell, 2005).

**4. Politikalar:** Görüşme yaptığımız kadınların fiziksel aktiviteye ilişkin anlamlandırmalarında etkili olan bireysel, sosyal ve fiziksel çevre faktörleri bütünsel olarak ülkenin ulusal ve yerel düzeydeki programları, politikaları ve yasaları ile ilişkili olduğu düşünülmektedir. Örneğin, Türkiye'de okuma yazma bilmeyen 65 ve daha yukarı yaştaki kadın nüfus oranı %42'dir (TÜİK, 2013). Bu oran 1950'li yıllar ve sonrasında kız çocuklarının okullaştırılması oranının ne derece düşük olduğunun göstergesidir. Kız çocuklarının ve kadınların ev içi işlerle tanımlanması, kamusal alanda varlık göstermelerinin önündeki engeller ve güvenlik sorunları, her yaştaki kadının (özellikle yoksul kadınların) düzenli fiziksel aktiviteye katılımını belirleyen faktörlere dönüşmektedir. Araştırmamıza katılan bazı kadınlarda da olduğu gibi eğitimini sürdüremeyen kız çocukları düzenli fiziksel aktiviteye katılım alışkanlığını edinebilmede anahtar araç olan beden eğitimi dersleri ile tanışamamıştır: “*Yazık diyorum, şimdiki zaman çok güzel. Keşke bu şeyde gelseydim, o genç kızlığım bu senelerde geçseydi. Çok da güzel spor yapardım yani.*” (Hande, 66 yaş). Dolayısıyla yaşlı kadınların fiziksel aktiviteye katılımlarını belirleyen unsurların eğitim ve sağlık hizmetleri, sosyal politikalar ve çevresel düzenlemeler gibi farklı ulusal ve yerel politikalar çerçevesinde değerlendirilmesi gerektiği açığa çıkmaktadır.

## SONUÇ

Elde edilen bulgular, yaşlı kadınların fiziksel aktiviteye ilişkin algılarında sosyo-ekolojik modelin öngördüğü gibi bireysel, sosyal, fiziki çevre ve ülke politikalarının etkili olduğu ve fiziksel aktivite davranışlarının yaşamın her alanındaki toplumsal cinsiyet rolleri ve normları tarafından şekillendiğini göstermektedir. Bu doğrultuda, yaşlı kadınların fiziksel aktiviteye katılımını anlamak ve arttırmak için yaşam boyu deneyimledikleri bütünlükçü faktörlerin ele alınmasının gerektiğine ve Türkiye'nin spor/fiziksel aktivite politikasının çocukluktan ileri yaşlılığa kadar kapsayıcı bir temelde oluşturulmasının faydalı olacağına inanılmaktadır.

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## Prevalence and Psychosocial Factors of Illicit Drug Use among Nigeria Elite Athletes

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### Abstract

*Considerable attention has been focused upon the use of drugs as an artificial means of enhancing athletics performance by both amateur and professional athletes. Although sports administrators are doing a lot to discourage the practice, yet the incidence appears to be on the increase. It is against this background that the study investigated the prevalence and psychosocial factors of drug use among elite athletes in Nigeria. The population of this study consisted of all the athletes (male and female) who have represented Nigeria at least once at an international competition.*

*A total of 220 athletes were randomly sampled from eleven popular sports in Nigeria. A set of questionnaire developed and validated by the researcher was used to collect data for the study. The data collected were analyzed using descriptive statistics, t-test and Analysis of Variance (ANOVA). Scheffe post-hoc analysis was used to locate any significant f-ratio. The hypotheses were tested at 0.05 level of significance. The results showed that participants in this study had used ephedrine, caffeine, anabolic steroids and dianabol. Also, there was a significant influence of psychological factors on drug use among the participants. Participants in team sports scored the psychological reasons for drug use significantly higher than participants in individual and dual sports. However, sociological factors have no significant influence on drug use among the participants. These data may help physical education teachers for effective teaching of drug education in schools.*

**KEYWORDS:** drug, popular sports, anabolic steroids, caffeine, ephedrine.

### Introduction

Man has used and abused drugs since time immemorial. In almost all cultures there has been the desire for man, consciously or unconsciously, to escape from monotony, frustrations and pains, and to seek euphoria or a sense of well-being when taking part in different achievement tasks. Sports is no exception. Any problem or propensity that pervades society will also pervade sports, since sports is part of society.

The issue of illicit drug use in sports is assuming an alarming rate and it is becoming a big problem which is threatening the existence of sports (WADA Code, 2005). The wide spread of illicit drug use in sports may be as a result of the characteristic and physiological effects of some of the drugs that allow wide patronage amongst athletes. The illicit drugs which are referred to as ergoge-



nic substances are taken by athletes to enhance their performance. Generally, athletes are trying to achieve one or more of five types of improvement. These five areas include increased lean muscle mass; increased strength; increased oxygen depth and capacity; increased energy and decreased recovery time after exertion.

The use of drugs in sports is not a common phenomenon only in modern times. Chemical substances were known to have been used in connection with sports in ancient times. In ancient Rome, for example, the Romans used to give their racing horses a mixture of honey and water to enhance their performances by increasing their speed, while the Indians of South America chewed coca leave (Kurda, 1995). Also, Spartans and Athenians in Greek city states massaged their competitors with performance enhancing chemical substances before they competed in various sports competitions (Harley, 1979).

A capsule review of literature revealed an evidence that man made use of substances contained in plants when physical strength and courage were needed for mountain hunting and fighting (Ryan and Aliman, 1974). Similarly, Ancient Greek athletes used stimulants to improve their performances as early as the third century B. C. (Hanley, 1979). However, up to the middle of this century there has been little documentary evidence available to substantiate the hypothesis that drugs have been used in sports. Periodic reports describing the use by athletes of caffeine, strychnine ether and alcohol, appeared between the middle of the nineteenth century and the advent of the Second World War. Around the time of the Second World War, the development of amphetamines-like central nervous stimulant drugs reached its peak. According to Mottram (1988), these drugs were administered on combat troops in order to enhance their mental awareness and to delay the onset of fatigue. The author, further stated that in 1940s and 1950s, amphetamines became the drug of choice for athletes, particularly in sports such as cycling, where the drug effects were perceived to be beneficial in enhancing sports performance.

It is not out of place to reason that as the international sports became excessively competitive and commercialized, manufacturers of drugs started producing highly potent drugs often with dangerous side effects to improve sports performance (Nwankwo, 1988). As a result of this new development, reports of the misused of drugs in sports became widespread, particularly at the time of the 1964 Olympic Games in Tokyo.

Today, it is universally known that some top athletes use illicit drugs to enhance their performance. The prevalence of illicit drug use in sports among sportsmen and women may be better appreciated by the number of athletes caught using prohibited substances by the IOC Medical commission (2007) accredited laboratories around the world between 1985 and 2006. For instance, in 1985, 930 cases were detected; in 1986, it was 627; in 1987, 854 cases were recorded. In 1988, 1153 cases; in 1989, 1341 cases and in 1990, 1064 cases were detected with 30 different kinds of ergogenic drugs being used by athletes. Also, Dore (1995) reported that 89,166 cases out of which 1,222 athletes tested positive by IOC Medical Commission. The International Paralympics Committee sanctioned 9 athletes between 2005 and 2006 for anti-doping rule violations for a period of years in sporting events such as power lifting, shooting, athletics and archery (IOC medical commission, 2007).

Studies revealed that the most common illicit drugs used as performance enhancing agents by athletes include anabolic agents, amphetamines, cocaine, ephedrine, caffeine and diuretics (Dubin, 1990; Kwarajafa, 1991; Oshodin, 2004; Laker, 2005 and Synthetic Report, 2007). The use of illicit drugs did not become a major issue in sports until after the 1988 Olympics in Mexico, when many athletes set new records. Drug testing began at the Olympics in 1968, and since then numerous athletes have been caught taking substances ranging from alcohol, amphetamines to steroids. The most unfortunate aspect of drug use in sports is that sports superstars around the world who are supposed to serve as role models to the youths are being caught using performance enhancing drugs. For instance, superstars like Asafa Powell; Sherone Simpson; Tyson Gay and Allison Randall were among five athletes who allegedly tested positive for banned performance-enhancing drugs during the Jamaican national championships in June, 2013 (The Nation Sporting life, July, 2013).

In Nigeria, there was an assumption that sportsmen and women were not involved in the use of illicit drugs to enhance sports performance. Evidences have proved the assumption wrong because Okujeni (1990) and Oshodina & Egor (1999) noted that Nigeria as a nation in African sports may not be totally free from doping problem because of its exposure to other nations through international competitions. The assertion holds good as there were reported cases of Nigeria athletes tested positive to performance-enhancing drugs – most especially in weight lifting and athletics (Emeka, 1991; Oshodin & Egor 1999; IOC Medical Commission, 2006 and Lissey, 2009).

The illicit use of drugs to enhance performance by elite athletes in Nigeria has been a source of embarrassment not only to government but also to sports administrators, coaches and spectators (Mgbor, 1995). Although, sports administrators are doing a lot to discourage the practice, yet the incidence appears to be on the increase. It stands to reason that this trend is the result of overriding urge by athletes to win competitions at all costs (Levy, 1997), as a result of this urge the athletes resorts to trying special diets, drugs and other feasible means to achieve his or her goal. Thus, the use of drugs to improve sports performance and achieve superiority over the opponents becomes a world wide problem.

It is not out of place to reason that the use of drugs to aid sports performance has been on the increase because of the benefits which await the “high performer” from governments, cultural institutions, philanthropists and other big enterprises after winning. Such gifts in the form of scholarship, huge financial rewards and other career prospects bring about the “winning at the cost syndrome” which promotes the use of illicit drugs in sports.

Another reason for the growing incidence of illicit drug use in sports among sportsmen and women may be traced to the fact that the competition is becoming tougher with increasing standard and the winning at-all-cost syndrome (Oshodin & Egor, 2000). For instance, at every sport of international standard, old records are broken and new ones are set. Furthermore, with an increase in the number of participants, the technique of selection and training programme have all become more rigorous with technological innovations.

It appears that many youths of diverse backgrounds are now willing to experiment with various types of drugs to enhance their performances. The world Health Organisation (1995; 1999) and Knotts (2000) reported that many youths involved in the use of various drugs such as amphetamines,

cocaine, tobacco, lysergic acid diethylamide (LSD), steroids and other doping substances for various psycho-social reasons. Such psycho-social reasons include escape from reality, identity and identification, frustration, expectation of failure in competition, pressure from team mate, social recognition peer approval and motivation from mass media.

The earlier studies of Fawole (1986), Atolagbe (1988), Yusuf and Atere (1988), Emiola (1990) and Boroffice (1991) provide a vital base for establishing prevalence, rates and trends in drug use among the elite athletes in Nigeria. However, none of these studies covers the areas of psycho-social factors which may influence athletes' drug use behaviour. Because of the absence of sufficient and reliable data in Nigeria on which generalization can be based, the present study was carried out to fill the gap.

Thus, the purpose of the study was to determine the extent to which the athletes have actually used performance-enhancing drugs and also, to investigate the psycho-social factors influencing such use.

Three hypotheses were postulated for verification at  $P < .05$ , thus

- 1) Sex and age of athletes will have no significant influence on illicit drug use.
- 2) There is no significant difference in the perception of athletes who used illicit drugs and those who did not on the psychological factors of drug use.
- 3) There is no significant influence of sociological factors on the attitudes of athletes who used illicit drugs and those who did not.

### **Research Design**

The study adopted a descriptive survey research design. The survey research typology enables information to be obtained from a representative sample of the population so as to describe situation as they exist.

### **Population**

The population of this study consisted of all the athletes who had represented Nigeria at least once at an international competition before this study was undertaken. The rationale for sampling this category of athletes is based on their exposure to international competitions which afford them the opportunity to interact freely with athletes from other countries, some of who might have used drugs to enhance their performance.

### **Participants**

A total of 220 athletes (males = 135, females = 85) acted as the participants of this study. All the participants who had represented Nigeria at least once at an international competition were drawn from eleven sports usually competed for by Nigeria at the international level. The subjects were stratified by their sex (either male or female) and by the type of sports (individual, dual and team sports) they were involved in.

### **Procedure:**

A self-developed questionnaire was designed on the bases of literature relating to drug use in sports and also a scheduled oral interview that was carried out on 20 athletes and 10 coaches. The results of this initial interview assisted the researcher to include more relevant questions on the psycho-social factors that may influence drug use among the elite athletes. The instrument consisted of two sections. The first part dealt with socio-demographic variables of participants, while the second part contains items on the use of illicit drugs and psychosocial factors influencing such use. The instrument was given to three experts in the areas of sports psychology, medicine and health education in the Universities of Ilorin and Ile-Ife in Nigeria for scrutiny for face and content validity.

In order to determine the reliability of the questionnaire and its applicability to the Nigerian context, a pilot study was undertaken. In the pilot test, the questionnaire was administered on 60 athletes (male = 30, female = 30) at two weeks interval. The scores from the two sets of responses were correlated using Pearson Product Moment Correlation. A correlation coefficient of 0.85 was obtained. This shows that the questionnaire is stable and appropriate enough to be used for data collection for the study.

Each participant responded to the questionnaire independently. Participants responses were regarded as reflecting current status on the psycho-social scale of drug use. It was assumed that all responses given by the participants were frank and sincere. It is relevant to add that the researcher was a former national and international sportsman and hence had little or no difficulty in interacting with the athletes and coaches.

The responses were scored and the resulting data were, subjected to inferential statistics such as Chi-square, t-test and Two-Way Analysis of Variance (ANOVA). In the ANOVA analysis, the independent variables were sex of participant as factor A( $a_1$  = male,  $a_2$  = female) and type of sports as factor B( $b_1$  = individual sports,  $b_2$  - dual sport and  $b_3$  = team sports). The dependent variable was the scores obtained from the ratings in the attitudinal scales. The level of statistical significance for each analysis was set at 0.05.

## **Results**

### **Reported use of illicit drugs by participants**

The drugs reported in this study were those which previous research and informal interviews by the researcher were familiar to, or used by athletes. The participants were asked to indicate the drugs they have seen and the extent they actually used the identified drugs. The responses are reported in Table 1.

**Table 1: Extent of illicit drugs used by participants**

Types of drugs	Drug seen	Used currently	Used but discontinued	Never used
Anabolic steroids	27 (12.3)	8 (3.6)	4 (1.8)	208 (94.5)
Stanazolol	11 (5.0)	1 (0.5)	0 (0.0)	219 (99.5)
Diamabol	11 (5.0)	6 (2.7)	2 (0.9)	212 (96.4)
Nandrolone	2(0.9)	0 (0.0)	0 (0.0)	220(100.0)
Heroin	22 (10.0)	5 (2.3)	0 (0.0)	215 (97.7)
Morphine	9 (4.1)	2 (0.9)	1 (0.5)	217 (98.6)
Methadone	9 (4.1)	4 (1.8)	2 (0.9)	214 (97.3)
Opium	16 (7.3)	0 (0.0)	4 (1.8)	220 (100.0)
Amphetamines	22 (10.0)	2 (0.9)	0 (0.0)	217 (98.6)
Ephedrine	45 (20.1)	18 (8.1)	1 (0.5)	201 (91.4)
Cocaine	46 (20.9)	5 (2.3)	1 (0.5)	214 (97.3)
Caffeine	44 (20.0)	11 (5.0)	1 (0.5)	208 (94.5)
Phenobarbital	26 (11.8)	2 (0.9)	2 (0.9)	216 (98.2)
barbiturates	22 (10.0)	1 (0.5)	1 (0.5)	218 (99.1)

% in parents

The data in table 1 showed that there was a wide gap between having seen a particular drug and actually trying or using it. While a high number of participants saw the drugs, only a few of them had actually used or tried them. On the whole few of the participants indicated that they were currently using ephedrine (8.1%), caffeine (5.0%), anabolic steroids (3.6%) and dianabol (2.7%). Out of the fourteen identified drugs, only two had not been tried by the participants. These were nandrolone and opium.

A two-way analysis of variance (ANOVA) was further performed on the responses to determine the extent of drug use by sex and age of athletes. The results of ANOVA (table 2) was statistically significant ( $F_{1, 210} = 35.02$ ;  $P < 0.05$ ) for sex of participants. Scheffe post-hoc analysis showed that male participants used drugs more significantly higher than female counterparts. However, the sex by age (A x B) interaction effect were not statistically significant.

**Table 2: Summary of two-way Analysis of Variance on the use of performance enhancing drugs by sex and age of participants**

Source	Ss	df	Ms	F
Sex (A)	43.41	1	43.41	35.02*
Age (B)	3.11	4	.78	.63
Interactions (A x B)	1.48	4	.37	29
Error Terms S/AB	260.33	210	1.24	

\* Significant results

### Psychological reasons of illicit drugs use

Table 3 below showed the results of the test analysis for drug users and non-users on whether certain psychological factors have significant influence on drug use.

**Table 3: Comparison by (t-test) of drug users with non-users on psychological factors.**

Source	Drug Users		Non-Users		t-Value (df, 218)
	$\bar{X}$	SD	$\bar{X}$	SD	
Desire to experiment	2.56	1.00	2.71	.93	1.08
Fear of failure	2.52	1.00	2.42	.95	-0.76
Nervousness	2.66	.98	2.95	.99	2.21*
Frustration	2.05	.95	2.51	.87	3.66*
Desire to excel	3.03	.87	3.02	.84	-0.03
Arousal elevation	3.06	.91	3.02	.86	-0.33
Monetary/material reward	2.65	1.06	2.35	.86	-2.21*

\*  $p > 0/05$  (Significant)

The results on table 3 above indicated that there were differences in the mean scores of drug users as compared with those of non-users on almost all the psychological factors of drug use.

However, drug users and non-users seemed to agree that the desire to excel ( $\bar{X} = 3.03$  for drug users and  $\bar{X} = 3.02$  for non-users) and arousal elevation ( $\bar{X} = 3.02$ ), were factors that may influence an athlete to use illicit drugs.

In order to test for statistical significance of the differences in each of the factors, the t-test analysis was used. The results showed that there was a significant difference on only four of the psychological factors. A 't' value of 2.21 was established for nervousness and  $t=1.08$  for desire to experiment while a 't' - value of 3.66 was established for. Thus, the scores of the participants who were non-drug users on these three reasons were significantly higher than the scores of drug users. However, drug users scored significantly higher on monetary and materials reward ( $t$ -value of -2.21 ) than the non-drug users.

In order to determine if the differences observed in all the factors are statistically significant with respect to sex of participants and type of sports. A Two-way analysis of variance was computed. The results (table 4) showed that there was significant main effect of type of sports ( $F_{2,214} = 5.16$ ;  $P < 0.05$ ). Post-hoc analysis of the significant effect of factor B showed that participants in team sports scored significantly higher on the psychological factors than those in the other two sports group. Therefore, drug users and non-users in team sports viewed psychological factors as more influential in drug use habits among the athletes.

**Table 4: Summary of Two-way Analysis of Variance on Psychologies factors of drug use by sex and type of sports.**

Source	Ss	df	Ms	F
Sex	21.95	1	21.95	1.61
Type of Sports	140.86	2	70.43	5.16*
Tow-way Interaction (A x B)	23.85	2	11.92	.87
S/AB	2916.50	214	13.62	

\*P >.05 (Significant result).

#### **Sociological reason of illicit drugs use**

In order to determine if the perception of drug users on each of the sociological factors of drug use differ significantly from those of non-users, the 't'-test analysis was computed for each factor. Table 5 presents the results on sociological factors of drug use.

**Table 5: Comparison (by t-test) of perception of drug users and non-users on sociological factors of drug use.**

Source	Drug Users (N = 80)		Non-Users (N = 140)		t-Value (df, 218)
	$\bar{X}$	SD	$\bar{X}$	SD	
Athletes interaction	2.46	.90	2.40	.94	-.49
Social recognition	1.95	.84	2.01	.82	.55
Social/Doctor Influence	1.99	.88	2.02	.88	.28
Advertisement	1.67	.77	1.78	.85	.96
Peer group interaction	2.26	.98	2.13	.92	-0.02
Acceptance by other	2.18	.87	2.25	.92	.59

\* Significant results

Table 5 above showed that the drug users did not differ significantly from the non-users in their perception on sociological factors of drug use. However, drug users and non-users scored athletes interaction very high. Thus, athletes' interaction among themselves may influence the use of illicit drugs in sports. Furthermore, the results of the Two-way Analysis of Variance (ANOVA) on all the sociological factors of drug use are presented on table 6.

**Table 6: Summary of Two-way Analysis of Variance on Sociological factors of drug use by sex and type of sports**

Source	Ss	df	Ms	F
Sex A	1.37	1	1.37	.13
Type of Sport B	36.55	2	17.77	1.77
Tow-way Interactions (A x B)	1.42	2	0.71	.07
Error Term S/AB	2146.79	214	10.03	

Table 6 showed that the effects of sex of participants (factor A) and type of sports (Factor B) which were main effects were not statistically significant. Also, there was no significant sex by type of sports (A & B) interaction. Thus, there was no significant difference in the perception of male and



female athletes and athletes in different type of sports, with respect to sociological factors of drug use.

## **Discussion**

The findings in this study provide support in some respects for many of the findings of previous studies cited in the study. Many of the participants were not ignorant of illicit drug used to enhance sports performance. All the drugs identified in this study have been seen by the participants. Some of the athletes in this study identified themselves with one form of illicit drugs or the other. Prominent among drugs used by the athletes were ephedrine caffeine, anabolic steroids and dianabol. This finding was similar to the reports of Ivy (1996), Mandell (1999), Carroll (2001) and Bells (2006) that elite athletes used various types of doping substances for different sporting activities to perform beyond their natural abilities, increase their speed, power, strength, energy and endurance most especially in athletics, cycling, soccer and weight lifting to mention a few. The present study discovered that sex of participants influenced significantly the use of illicit drugs to enhance sports performance (Okujeni, 1990 & Mgbor, 1995).

The findings of this study also revealed that majority of drug users were influenced by psychological factors such as arousal elevation, nervousness, desire to excel and monetary reward. However, frustration which seems not to be an important factor of drug use among the drug users was found to be significant when compared with the mean scores of non-users. In other words, those athletes who did not take drugs recognised frustration as a strong factor that motivated an athlete to experiment with drugs. On the whole, drug users and non-users had high mean scores for desire to excel, nervousness and the desire to experiment. This finding is consistent with the earlier studies of Oyerinde (1990); Woolley (2000) and Oshodin (2001). The sociological factors recognised by the respondents were athletes interaction, peer group pressure, acceptance by other athletes and the influence of the coach. Studies by Melvin (1983) and Mike (1983) had previously found out similar findings.

## **Conclusion and Recommendations**

Based on the findings of this study Nigeria athletes were not ignorant of illicit drugs used to enhance sports performance. However, only few of the athletes were users of the drugs identified in this study. Some psychological factors such as desire to excel, arousal elevation, nervousness and the desire for material/monetary rewards are important factors that may influence athletes to use performance-enhancing drugs. On the other hand, the drug users did not differ significantly from the non-users in their perception on the sociological factors of drug use. However, the interaction of athletes among themselves may play a major role in inducing athletes to use performance – enhancing drugs. It is therefore, recommended that the Nigerian Government should intensify its campaign and public enlightenment programmes to educate the athletes and sports handlers on the health consequences associated with illicit drug use to enhance sports performance.

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**No.109**

**SPORT- SPECIFIC SELF EFFICACY AS PREDICTOR OF ACCURACY IN PERFORMANCE OF PENALTY SHOT AMONG FOOTBALL PLAYERS OF BABCOCK UNIVERSITY, ILISAN REMO, OGUN STATE, NIGERIA**

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**Abstract**

Penalty shot is often used to break a tie at the end of regulation time in football. It is often perceived as a challenging task, because of the associated feelings of uncertainty and unpredictable outcome. To achieve success and experience victory in it, accuracy in penalty shot performance becomes a vital factor. This study examined self efficacy as a predictor of accuracy in performance of penalty shot among soccer players. Ex-post facto research design was adopted for the study. The study randomly selected 60 male soccer players of Babcock University, Ilisan-Remo, and Ogun State, Nigeria who play for their halls of residence. Sports specific self efficacy scale, adapted from general self efficacy scale (GSES) and penalty shot skill test were instruments used for data collection. Data generated were analyzed, using regression analysis to test formulated hypothesis at 0.05 alpha level. The study revealed that that self efficacy was not a significant predictor of accuracy in performance of penalty shot. It was recommended that footballers should be exposed to mental skill training to boost their level of confidence and enhance their penalty kick ability

**Introduction**

The soccer penalty kick rules were invented by the association of football (soccer) and it is a type of free kick taken from twelve yards (11 meters) away from the opponents' goal line with only the goalkeeper and the penalty taker. Penalty shot is a crucial part of the game of soccer because it is often used at the elimination stage of competition to break a tie and to determine the team that remains or emerges the winner in a tournament.

At this stage, expressions of anxiety and uncertainties are seen on faces of players, coaches and spectators because it is perceived that penalty shoot out is associated with feelings of nervousness and tension of unpredictable outcomes.

Many great and elite soccer players like have suffered the misfortune of missing penalty kicks in world cup. This consequently establishes the uncertainties of penalty shot outcomes, which accounts for the reason fans, players and coaches express greater feelings of satisfaction when their teams win after penalty shoot out, than they do when they win without penalty shoot out. In the same vein, members of the losing team in a penalty shoot out exp-

ress greater feelings of disappointment and loss, than they do, when they lose as a result of poor performance within the normal regulation time.

Many factors are usually put into consideration by team handlers or managers before they finally take decision on the players who play penalty kicks on behalf of their teams for the purpose of achieving peak sports performance because it is perceived as a challenging task.

However, sports research has shown that self efficacy is one among variety of mechanisms that is associated with higher performance. Athletes with high self efficacy are more likely to try harder, choose challenging tasks, experience positive emotions and be less anxious (Bandura 1997). Self efficacy is a positive predictor of motor skills acquisition, execution and competitive sports. Self efficacy is the belief in one's capabilities to organize and execute courses of action required to produce given attainments. (Bandura, 1997).

According to Bandura's theory, people with high self efficacy – that is those who believe they can perform well, are more likely to view tasks as something to be mastered rather than something to be avoided. In other words, self efficacy is a person's belief in his or her ability to succeed in a particular situation. Bandura describes these beliefs as determinants of how people think, behave and feel, which makes self efficacy to have impact on everything from psychological states to behaviour and to motivation. And motivating people to do regular exercise depends on several factors, among which is optimistic self belief of being able to perform appropriately. High self efficacy will only lead to productive behaviour in an activity if the outcome expectancy for that engagement is high. If the individual cannot place a high value on the benefit of the activity, a high level of self efficacy will not motivate the individual to act positively towards the activity. Conversely, high outcome expectancy will not motivate an individual with low self efficacy to act (Bandura, 1997).

Self efficacy is a social psychological variable that is conceptualized from an agentic perspective. It refers to people's beliefs about their capabilities to perform designated tasks which make differences on how people feel, think and act. A strong self efficacy enhances human accomplishment and personal well being in many ways: people with high assurance in their capabilities approach difficult tasks as challenges to be measured rather threats to be avoided. They approach threatening situations with assurance that they can exercise control over them. Such efficacious outlook produces personal accomplishment, reduces stress and lowers vulnerability to depression (Bandura, 2000).

Bandura and others have found out that an individual's self efficacy plays a major role in how goals, tasks and challenges are approached. Bandura opined that self efficacy is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations. One's self judgment of personal capabilities to initiate and successfully perform specific tasks at designated levels, expand greater effort, and perseverance in the face of adversity (Bandura, 1997). It is a form of self-evaluation in which several sources of information (performance accomplishment, interpretations of physiological arousal) are appraised to form perceptions of capabilities (Katula and McAnley, 2001).

Self efficacy is viewed as a cognitive mechanism that affects behavior which consequently affects results or outcome of that behavior because someone's belief in his competence might positively influence his strength and commitment towards the accomplishment of his intended result. Bandura's self efficacy theory has shown potential for wide application in learning and development situations. It takes full account of external physical and social structures as well as internal cognitive processes. It is a theory which is simultaneously realistic and humanistic at the same time. Bandura has argued that our efficacy beliefs mediate subsequent thought patterns, affective responses and action (Bandura, 2000).

Therefore, efficacy conceptualizes a person's perceived ability to perform a task. A change in the level of self efficacy can predict a lasting change in behavior if there are adequate incentives and skills. Subsequently each group, according to Webb, Williams, Nasco, Suzanne, Riley and Headrick (1998), was likely to pay more attention to information about the particular facet of themselves they regard as salient.

From the foregoing, self efficacy is an important psychological construct that can determine and influence behavioural patterns of an individual. Numerous studies have shown a strong positive relationship between an individual's self efficacy and his performance. That is, perceived athlete's competence may influence behavior and action. It is as a result of this the researcher investigated self efficacy as predictor of accuracy in performance of penalty shot among soccer players in Babcock University, Ilisan-Remo, Ogun State.

### **Statement of the problem**

In sports competition, victory is what every athlete aspires to achieve. However, physical and psychological preparations are pertinent to achieving success in sports. Therefore, effort must be made by players and coach to ensure that they take cognizance of important parameters that can serve as performance boosters and predispose them to their dream achievement outcome.

In some team sports, penalty shot is often used to break a tie at the end of regulation time in order to determine the team that emerges winner whether through luck or skill or both.

It is quite obvious that penalty shot is usually full of uncertainties. And to achieve success and experience victory in it, accuracy of goal target becomes a non-negotiable important factor. Therefore, team handlers must explore available technical and psychological resources in order to cope and get result from penalty shot which may be used as the last resort to determining the winner.

Considering the uncertainties and tension associated with penalty shoot out, it is on that premise that the researcher sought to determine self efficacy as predictor of accuracy in performance of penalty shot among Babcock University soccer players.

### **Research Hypothesis**

The following hypothesis was tested.

Self efficacy will not be a significant predictor of accuracy in performance of penalty shot among Babcock University football players.

### **Methodology**

Ex-post facto research design was used for the study.

The population for the study was Babcock University male football players.

The sample for the study was 60 Babcock University male football players. Simple random sampling technique was used to select four out of eight male undergraduate halls of residence while purposive sampling technique was used to select 15 participants who play football for their halls from each of the halls of residence.

The General Self Efficacy Scale (GSES), a standardized instrument, was adapted to Sports Specific Self Efficacy Scale (SSSES) for the purpose of the study and penalty shot skill test in soccer was used for the study. The SSSES was used to measure the independent variable, thus obtaining the strength of self efficacy scores. The SSSES is a Likert format 17 item scale. The response format is a 5-point scale, ranging from strongly disagree, disagree, undecided, agree and strongly agree. The self efficacy scale has been subjected to Cronbach Alpha reliability analysis technique, and the model shows high reliability coefficient value of 0.88. The penalty shot skill test, the dependent variable measure, was used to assess the participants' target performance of penalty shot by dividing the goal post into six segments ranging from 0-5 points. Five (5) point was awarded to a player who placed the ball at the two upper extreme spots that were difficult for the goalkeeper to intercept while other points were awarded based on this difficulty parameter. The instrument was designed based on Professor Brian's assertion when

he opined that ‘players should be trained on how to kick the ball higher into the corners as these areas are usually the hardest to block’.(Brian, 2012).

Descriptive statistics of frequency counts, percentages and standard deviation were used to analyze demographic data while inferential statistics of regression analysis was used to test the hypothesis at 0.05 level of significance.

## Results

### Analysis of responses on self efficacy believes and accuracy in performance of penalty kick

Dependent Variable:

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance.
		B	Std. Error	Beta		
1	(Constant)	1.148	1.257		.913	.366
	When I make plans...	-.091	.233	-.058	-.393	.696
	One of my problems..	-.532	.250	-.385	-2.130	.039
	If I can do a job the first time...	.299	.157	.305	1.901	.064
	When I set important goals for myself...	.093	.217	.086	.430	.670
	I give up on things before completing them	.007	.247	.006	.030	.976
	I avoid facing difficulties	.294	.203	.252	1.451	.154
	If something looks too complicated...	.147	.265	.102	.556	.581
	When I have something unpleasant to do...	-.389	.232	-.342	-1.674	.101
	When I decided to do something new...	-.148	.157	-.150	-.946	.349
	When trying to learn something new....	.226	.247	.186	.913	.366
	When unexpected problems occur	.156	.221	.119	.706	.484



I avoid trying to learn new things...	.342	.238	.261	1.433	.159
Failure just makes me try harder	.285	.178	.259	1.600	.117
I feel insecure about my ability to do things	-.392	.275	-.311	-1.425	.162
I am a self reliance person	.086	.156	.071	.552	.584
I give up easily	-.440	.249	-.367	-1.765	.085
I do not seem capable of dealing...	.494	.240	.352	2.063	.045

### Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.619 <sup>a</sup>	.383	.133	1.343

### ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	47.043	17	2.767	1.533	.130 <sup>a</sup>
	Residual	75.807	42	1.805		
	Total	122.850	59			

In testing the above stated hypothesis, regression analysis was adopted in order to establish the relationship that exists between self efficacy and accuracy in performance of penalty shot. The basic thing here is that a P value of  $P \leq 0.05$  suggests that the result is significant at significant level less or equal to 0.05. On the other hand, a P value of  $P \geq 0.05$  suggests that the result is not significant at significant level greater or equal to 0.05. The decision rule is that,

when the calculated value is less than the constant value of 0.05, the null hypothesis (Ho) will be rejected.

As shown in the above tables,  $r = 0.619$ ,  $r^2 = 0.383$ ,  $p = 0.130$  at 0.05 level of significance. Therefore, we accept the null hypothesis that "Self -efficacy will not be a significant predictor of accuracy in performance of penalty shot" and reject the alternative hypothesis that says "Self -efficacy will be a significant predictor of accuracy in performance of penalty shot"

## **Discussion**

This result shows that the respondents self efficacy had no significance influence on accuracy in performance of their penalty shot. Hence, the null hypothesis which states that self efficacy will not be a significant predictor of accuracy in performance of penalty shot among Babcock University soccer players was accepted. This was at variance with Bandura's assertion that self efficacy is viewed as a cognitive mechanism that affects behaviour which consequently affects results or outcome of that behaviour because someone's belief in his competence might positively influence his strength and commitment towards the accomplishment of his intended result. And that a strong self efficacy enhances human accomplishment (Bandura, 2010)

## **Conclusion**

The study was carried out to determine self efficacy as predictor of accuracy in performance of penalty shot among soccer players of Babcock University, Ilisan-Remo, Ogun State.

In view of the findings of this research, it is concluded that self efficacy is not a predictor of accuracy in performance of penalty shot among football players of Babcock University, Ilisan-Remo, Ogun State.

## **Recommendations**

Sequel to the findings on self efficacy as predictor of accuracy in performance of penalty shot, the following recommendations were made:

1. Football players should be equipped and exposed to some relevant psychological coping therapies that will boost their confidence level and enhance their performance in penalty kick.

2. Tips on how to take penalty kick should be regularly included in training sessions.
3. Skills and techniques necessary for improved penalty kick should be part of training packages.
4. Drills on penalty kick practice should be included in training programmes.
5. Procedures and rules governing a successful penalty kick should be given.
6. Players should be exposed to penalty test skills at least once in a training week.
7. Coaches should painstakingly identify players that are psychologically and skillfully exceptional in penalty shot taking.

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No.29

## SPORTS AS A MEDIUM OF IMPROVING QUALITY OF LIFE AND WELL-BEING

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### ***Abstract***

*The well-being of individuals and the society at large has always been a serious global health concern over decades. The individual and societal health as well as well-being can be achieved through participation in sports. Hence, sports activities are valuable to individuals and the society in the enhancement of quality of life and well-being. Sports is said to be an organized, competitive, and skilful physical activity requiring commitment and fair play governed by a set of rules or customs. Therefore, this paper discusses sports as a medium of improving quality of life and well-being. It highlights the definition and meaning of sports, the challenge to sports industry, precaution before any sports and physical activities, factors influencing participation in sports, sports for health and well-being, sports and exercise benefits, with the conclusion that, sports and physical activities participation can enhance quality of life, and consequently improve human well-being.*

***Keywords:*** *Quality, Sports industry, Well-being, Challenge, Exercise benefits*

### **Introduction**

People of all ages, body types, and sports preferences are today demonstrating interest in an active healthy lifestyle. An awareness of the benefits of regular exercises and sports activities influence or guarantee the need for individuals to actively participate in sports. People need encouragement and facility convenience to make time available for regular involvement in exercises and sports. Sports specialists, managers, administrators, officers and programmers need to counter the sedentary patterns perpetuated by the rise of modern technology, and there is therefore the urgent need to programme sports into the current lifestyles, leisure, free time and also encourage participation as a lifetime pursuit.

The increasing growth and development of sports in the recent years could not be unconnected with individuals wishing to participate in one sport or the other. Participation in sports programme could either be for competition or recreational purposes. Furthermore, sports the world over has become a good weapon for international diplomacy and an instrument for assessing the strength and cohesion of each nation. sports today in all its ramifications

ons have cut across all barriers, ethnic, religious, racial and has served as a symbolic dialogue in developing the citizens of the world (Awosika, 1996).

### **Definition and Meaning of Sports**

Sports is said to be an activity or experience that gives enjoyment of recreation, past time diversion, which requires rigorous bodily exertion and is carried on according to some traditional forms or set of rules whether indoor or outdoor. Sports in its well-developed form is an integral part of the total make up of the society. Omoruan (1996) defined sports as a highly organised game. Bonnet, Howell and Simri (1998) opined that, sports is an institutionalised physical activity in which the rules are fixed externally or before hand, while Loy (1999) maintained that, sports is play, and competitive, requiring physical skill, strategy and chance as well as physical prowess.

According to Morakinyo (2000) stating that, sports is a social phenomenon that has grown from its humble beginning of being an entertainment and recreational pastime to becoming a viable and prominent business phenomenon that could no more be ignored in the social, political and economic environment of any nation.

Watt (2004) also asserted that, sports as all forms of physical activity which through causal or organized participation, aims at expressing or improving physical activity, fitness and mental well being, forming social relationships or obtaining results in competition at all levels. In a nutshell, sports can be described as those physical activities engaged in during recreation or competitions which have direct effects on the mental, emotional, organic and social development of an individual.

### **The Challenge to Sports Industry**

We as sports administrators, managers, officers, directors and organizers are challenged to provide some solutions as far as the physical health, fitness and well-being of the child as well as the adult are concerned. The challenge often comes from reputable medical organisations when they outline the importance of physical activities, exercises and sports for health.

In this respect, the American Academy for Paediatrics in International Council for Health, Physical Education, Recreation, Sports and Dance (2002) stated that, good physical activities at school should promote a life long habit of exercise and sports. In the opinion of The American College of Sports Medicine, Pate & Hohn (1994) asserted that, physical fitness programme for youth and adults should be developed with the primary goal of encouraging the adoption of appropriate lifelong exercise and sports behaviour in order to develop and maintain sufficient physical fitness for adequate functional capacity and quality health enhan-

cement. American Heart Association suggested that, the society should teach the benefits of sports and the development and maintenance of exercise conditioning throughout life.

From the above mentioned position statements, it is clear that, the professional health organisations central focus of expectation of sports is to persuade the youth to it adopt as a lifelong physically active lifestyle and thus promote health and wellness of the population. With this noble expectations in mind, which only sports can fulfil, the current situation of sports being phased out from most schools is indeed a catastrophic situation. We must inevitably ask ourselves the question, what is the reason for this unfortunate situation we find ourselves as specialists?

### **Precaution before any Sports and Physical Activities**

It is true that, certain optimum level of sports and physical activities are needed by everybody for health promotion, irrespective of age, sex or occupation. Emiola (2009) observed the rate of sudden death during vigorous physical activities and sports and dictated that, some form of medical test is necessary, especially to identify individuals who may have cardiovascular problems before they start a regular physical activity programme. He further suggested that, for health related benefits, individuals should select activities they enjoy and are willing to continue throughout life, such as walking, jogging, running, cycling, swimming, aerobic dancing and game like tennis, squash and badminton. Omonode (2002) suggested that, communities should make adequate provision for all and sundry to play, run, climb, catch, swim and compete in team games or pursue sport, for fitness, dance and recreational activities.

### **Factors Influencing Participation in Sports**

Changes in lifestyles and the nature of work have affected the amount of sports and physical activities that take place, including the following:

- A reduction in physically active employment, improvement in technology reducing the amount of time and physical efforts required to do chores and gardening;
- Less travel on foot or by bicycle due to increased car ownership, expectations of convenient travel, time pressures and safety fears;
- Lack of access to appropriate facilities for physical activity and affordability;
- Lack of access to appropriate activities, coaching or instruction; limited time availability;
- Community and personal attitude, beliefs and knowledge about sport and physical activity;
- Fear of injury or of making their current medical conditions worse;
- Embarrassment and fear of failure, and

- Concern over the impact on current lifestyle and relationship (British Heart Foundation, 2003).

## **Sports for Health and Well-Being**

Most people feel better after engaging in sports and physical activity (Ajala, 2002). In support of this idea, Howley and Franks (1992) stated that, sports and physical activity can affect one as follows:

- Reduce the risk of cardiovascular diseases;
- Incidence of low back pain;
- Provide more energy and work without fatigue and sustain stronger bones;
- Enhance efficient performance of motor tasks;
- Afford better means of relaxation and good sleep;
- Increase the amount of high density lipoproteins (HDLs);
- Increase lung capacity;
- Strengthen the body, relax the mind and toughen the spirit;
- Decelerate the aging process;
- Increase physical performance capacity and wellness.

Norgan (1992), also observed that, many people enjoy being active and the apparent benefits of activity can be enumerated as follows:

- An increased feeling of well-being improved cardio-vascular and muscular function;
- Protection against cardio-vascular diseases;
- Maintenance of a certain degree of agility and joint flexibility;
- Avoiding obesity and developing a trim, muscular and attractive physique;
- Increased appetite and food intake in elderly people to avoid nutritional deficiencies.

## **Sports and Exercise Benefits**

### ***Health Enhancement***

It is becoming increasingly clear however that, physical activity involvement through participation in sports, recreation and specific exercise activities has a prominent role to play in the broader context of health enhancement, because it is a role that has received much attention. This largely involves the potential impact of physical activity on the promotion of mental well-being, wellness, and factors concerning the quality of life.

### ***Acute Benefits***

Consistently reported by specialists are sports and exercise responses which have been described as the feeling good phenomenon. It may occur during activities and may emanate through a variety of physiological mechanisms. Commonly they are associated with a release of muscular tension and anxiety and enhanced mood which are often accompanied by post sports and exercise reduction in blood pressure and improved blood sugar level. Regardless, the effect



seem to be sufficiently powerful to motivate many to return to sports and exercise on a regular level.

### ***Social Benefits***

Social and recreational contact are important correlates of well-being (Diener, 2004). Some forms of sports and exercise through their team and club structure provide a recreational medium for increased social interaction and the development of friendships. With decreasing work hours, it has often been predicted that, sport and leisure pursuits will become increasingly significant in maintaining a balanced and fulfilled lifestyle.

### ***Self-Esteem Benefits***

Self-esteem has been widely accepted as an indicator of mental and social adjustment. Physical self-perceptions concerning attractiveness, fitness, physical abilities and achievements, as well as confidence contribute to self-esteem throughout the lifespan. Fitness activities sports and dance provide a particularly powerful arena for these perceptions to develop. In the case of sports and activities which are highly valued among peers, success may also lead to elevated social status which has the potential to enhance confidence and self-esteem.

### ***Sensory Enhancement***

Although less well-established through research, sports and physical activities also provide a medium for enriching quality of life through variety of sensory experiences which they either offer or to which they allow access. Sports and activities which involve high risk, physical contact, thrill and excitement may have a prolonged emotional effect. The sensory rewards of being in a pleasingly aesthetic performance, provide another potential for enhancing the well-being of people of all types and ages.

### **Conclusion**

In conclusion, the brief summary above shows a wide range of routes through which involvement in sports and physical activities can enhance quality of life and consequently improve well being. Furthermore, the maintenance of a reasonable amount of fitness and activity throughout the lifespan helps not only delay ageing process but also adding life to years as well as years to life.

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**SPORT MANAGEMENT  
ORAL PRESENTATION**

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## Emerging Fitness Trends in India

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### **Abstract**

Good health generated by physical fitness is the logical and necessary starting point for the pursuit of excellence in any field. Numerous surveys have been conducted to identify the worldwide fitness trends and there's no shortage of new exercise trends aimed at helping us meet our health goals. Watchers of fitness trends say the road to better health is paved with new possibilities along with some old ones that are poised to make a comeback. The World-wide Survey of Fitness Trends for 2012 (Walter R. Thompson) based on ACSM worldwide surveys revealed that some trends were being embraced again. However, trends related to fitness in India could be the same or different. Hence, the present paper makes an attempt to identify the emerging fitness trends in India. Keeping in view the nature of the study, the literature was collected from secondary sources including books, magazines and the internet. The data was critically examined, discussed and presented for identifying the emerging trends of fitness in India. Various surveys available on different websites were also referred to, to compile the trends of fitness in India. The literature reveals that the emerging fitness trends in India include: battling child obesity in Metro; women going toe to toe with men; boot camp training; senior citizen specific activities; stay-at-home workouts; power yoga; circuit training; aerial yoga; strength training; Zumba; pilates; tabata training; exercise-diet combo; group fitness programs and corporate fitness.

## Sports Development: The Nigerian Way

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### **Abstract**

Sports Performance and achievements have been an avenue through which great nations of the world exhibit their supremacy over others. Effective sports development therefore requires variables like sport policy, sport personnel, sport funding, sport programs, sport facilities and sponsorship. The extent to what these variables are met shall no doubt affect the effectiveness of any sports development. Two distinguishing features of the Nigeria sports system are its central organization and its employment for specific socio-political objectives. It is against this backdrop that this paper will examine the politicization of sports which parallels sports development in the enhanced role of sports. We will also compare and contrast this model with developed nations sport systems and management.

## **Sport Sponsorship Management: A Case Study Analysis of an International Appliance and Consumer Electronics Brand**

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### **Abstract**

Recently sport sponsorship has gained increased significance as a marketing communications strategy. A significant number of international enterprises have chosen to focus on sport sponsorships to reach various marketing objectives, including increasing brand awareness; brand image, and increasing brand loyalty. Although significant research exists within the sponsorship sector that focuses on the effectiveness of sponsorships or the image fit between sport entities and sponsors, this research identifies, analyzes, and conceptualizes the strategic management of sponsorship strategy of Beko, a Turkish-based international appliance and electronics firm. The objectives of this study include: 1) understanding the firm's motives for its sponsorship initiatives; 2) gaining an understanding of the firm's decision making process related to selection of sports properties; and articulating key insights of successful sponsorship management. For this research, the "case study" methodology was used. Case study analysis employs multiple methods, including literature review, in-depth interviews, and document analyses. The case study methodology was employed in order to gain a holistic understanding of the complexity and extent of the key issues faced by the firm. The results revealed that the selection of sponsorship as a marketing communication strategy requires extensive strategic analyses and resource deployment. In addition, Beko clearly identified their communication objectives. The image fit between the Beko brand and its selected sport properties was a key factor of success of the sport sponsorship.

## **Assessment of Gender Distribution in Sports Administrative Positions and its Challenges in Nigeria**

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### **Abstract**

This study examined gender distribution in sports administrative positions and its challenges in Nigeria. It involved the administration of a structured questionnaire to 200 top sportsmen and women, Directors, Coaches, Referees, and Club Managers randomly selected from different sporting associations and/or organizations in the country. The data collected were analyzed using only descriptive statistics of the frequency distributions (f) and percentages (%). The results revealed that the Federal Government of Nigeria has not appointed any women as cabinet Minister and Director General of sports since 1960. It also revealed 95 percent and 88 percent acceptance of research variables that the government does not consider appointments of women as zonal sports coordinators and leaders in sports federations respectively. These findings revealed and established the premise that there is gender discrimination in the distribution of sports administrative positions thereby posing a serious challenge for women to contribute in sports development in the country. It is therefore recommended that more leadership administrative positions be reserved for women to reverse this trend.



## **Sport Sponsorship Effectiveness at Second-Tier Events: The Case of the 2011 Rixos Cup**

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### **Abstract**

Sponsors spend billions of euros on sport events annually with the intentions of positively influencing consumer behaviors, hospitality, branding, and/or demonstrating corporate social responsibility. While scores of sport sponsorship studies has been previously conducted, many surround large mega-events in highly developed economies i.e., Germany, US, and England. Relatively few studies have examined the effectiveness of sponsorship at smaller or second-tier events, and in emerging economies. The Rixos Cup International Basketball Tournament is considered one of Europe's most prestigious basketball competitions. Sponsored by Rixos Hotel, the annual tournament features six teams from four countries who compete in the Euroleague. The 2011 tournament was held in Antalya, Turkey from 16-19 September, with games played at Atatürk Sports Hall. An on-site survey was conducted to profile spectators who attended the 2011 Rixos Cup. A total of 390 spectators were interviewed throughout the event. Spectators were asked if they knew who was the sponsor of the tournament. Over 90% knew that Rixos Hotels was the official sponsor; 8.7% did not know the sponsor. Twenty-four percent of subjects had previously stayed in a Rixos Hotel before the basketball tournament, 76% had not. Spectators were asked how likely they were to stay at a Rixos Hotel because of the sponsorship of the 2011 Basketball Championships. Most (67.7%) reported that they were likely or very likely to stay in a Rixos Hotel because of the company's sponsorship of the tournament. Most spectators were avid basketball fans (48.5%), or those so interested in the sport that they would watch it when then could (33.6%). Twenty-four percent of the spectators were female and 76% were male. The average age of the spectator was 28.7 years. Spectators attended an average of 3.6 games during the tournament. Further results will extend the profile of the event's spectator market, analyze the leveraging and activation effectiveness of the title sponsor, and discuss the implications of the study's findings to event organizers, sponsors, and researchers.

## **Sport Occupations in Germany between Professionalization and De-professionalization**

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### **Abstract**

The story of sport was often told as a success story. A pastime activity became a billion euro industry (Hoye et al. 2009). There was always the hope that sport occupations will develop in a huge number and quality. The process of modernization as defined by Dries and Degele (2005) will shape new occupations by specialization and new professions by rationalization. The promise of a rapidly growing new career field in a post-industrial society was offered, but has this promise come true? Fifteen years ago Schubert (1997) gave a very pessimistic answer. But time moved on and the growth of the sport sector in Germany carries on. So the question has to be answered again. This will be done by a secondary analysis of qualitative interviews (N=52, 1997-2011) and general observations. The answer is not easy to give because we can observe contradictory trends. The first trend is indeed a growing one of jobs in the field of professional sports. New specialized jobs as forecast by the modernization theory can be found. For example, the trainer position is now accompanied by special condition trainers. On the other hand there are trends that lead to de-professionalization. The financial crisis of the state has resulted in less pay to sport teachers or to hire amateurs for sport school activities in the afternoon. The change of the labor market and labor laws lead to a growing of time limited jobs as well.

## **An Assessment of the Fitness Centers in the Lagos Metropolis of South West Nigeria: Implication for Sports Development in Nigeria**

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### **Abstract**

Physical inactivity is a leading public health issue, not only in the advanced nations of the world, but also in developing countries, including Nigeria in recent times. This calls for all forms of motivation and awareness for individuals to lead active lifestyles. Fitness centers and sports clubs play major roles in this respect. This study was carried out to assess the fitness centers in Lagos metropolis of South-West Nigeria. Eighty one [81] respondents (Male-56, Female-25) who were staff of 28 fitness clubs and centers participated in this study. They responded to a self-developed and validated instrument [r-value =0.79] that sought information on departments, facilities and equipment available at the centers. It also sought related demographic information of the participants, and fitness/wellness assessment procedures for clients. The data collected were analyzed using frequency counts, simple percentages and a pictorial analytical tool of component bar charts. Findings showed that many of the centers were not adequately equipped to meet an expected standard of a fitness center. Most of the staff lacked the professional qualifications and adequate knowledge to operate in such centers. The commonest program in most fitness centers in the Lagos metropolis of Nigeria is that of weight control and general physical fitness, which are considered inadequate. This reflected in poor fitness and wellness assessment practices revealed in this study. Finally, the paper recommended that there should be constant monitoring of all fitness and sport outfits to ensure that there is compliance with set rules and regulations.

## Management of Summer Sport Camps in the United States

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### **Abstract**

In the United States, the organization and delivery of summer sport camps can best be described as a multi-million dollar phenomenon. Each summer, almost every university in the U.S. hosts several weeks of sport camps, which deliver a wide array of sports, and serve virtually all ages. Camps are designed to meet the needs of myriad student-athletes, and range from showcasing the talent of elite athletes to instructional camps for students to learn and improve their skills. Sport camps are run as a business, and participants pay a fee to attend. In some situations, a university allows coaches free usage of facilities, while in other situations, the university rents the facilities, thereby gaining revenue for university programs. In addition to university locations, many entrepreneurial coaches arrange camps at local schools. Usually camp length is from three to five days, and typically includes instruction, practice, and camp competitions. While most camps are for individuals, some are designed for teams. Most university camps are residential in nature, but day camps are usually offered at off-campus locations. This presentation examines the various types of camps as well as the processes of planning, organizing, budgeting, staffing, and risk management related to summer sports camps.

## Sports Manager Self-Efficacy Scale (Smses) Scale Development Study

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### **Abstract**

According to social cognitive learning theory; concept of self-efficacy belief is related with the individual judgments of individuals regarding how well they can do in actions, which are required for dealing with possible situations. With this research, a “Sports Manager Self-Efficacy Scale” (SMSES) has also been developed by the researcher in order for the questioning of the sports managers self-efficacy situation in a comprehensive manner. SMSES was performed that working as managers in different positions in state and private sector which can be considered in the evaluation, 292 surveys of women and men (women=72, men=220, total= 292). In the research, the sample group was formed by using the simple random sampling method. By taking the Mintzberg’s Managerial Roles Approach as the basis, sub-dimensions of the (SMSES) were named; it is composed of four sub-divisions such as decision-making ( $\alpha = 94$ ), knowledge ( $\alpha = 89$ ), interpersonal roles ( $\alpha = 89$ ) and personal characteristics ( $\alpha = 81$ ) and of 48 questions. Internal consistency values of Cronbach’s Alpha for the entire scale was found as ( $\alpha = 0.96$ ). It can be stated that the measurement tool can consist of four factors and the lower cut-off point for factor loads can be taken as 0,40. It is observed that of the analyzed items, 48 items’ are grouped under four factors whose equity values are higher than 1. These obtained four factors explain the 55.54 % of the total variance.

**Key words:** Efficiency, self efficacy, sports manager

## **GİRİŞ**

Spor yönetimi kavramı günümüzde yaygın ve farklı alanlarda uygulama alanı olan bir disiplindir. Değişen uygulama alanlarında farklılık gösteren tanımlamalar yapılsa da spor yönetiminin en önemli unsurlarından biri spor yöneticiliğidir. Yönetim kavramını bir süreç, bir sanat veya bir bilim olarak gören pek çok yaklaşım vardır. Her bir yaklaşımın temelinde insan ve insana hizmet eden çeşitli madde ve parasal kaynaklar bulunmaktadır. Özellikle ulusal ve uluslararası alanda birçok organizasyon ve yapının içinde bulunan spor yöneticilerinin, farklı alanlarda ki yöneticilik algılarının içerisinde farklı yeterliklere sahip olması gerekmektedir.

Sporun doğası, spor yarışmalarının başlayan ve biten yapısı, anlık tüketilmesi, çok disiplinli olması, gerektirdiği mükemmellik seviyesi açısından diğer bilim alanları ile birlikte çalışması söz konusudur.

Mintzberg (2004), yönetimi; üretim, deneyim, bakış açısı ve anlayış ile sanatın ve bilimin içinde iyi bir şekilde ele alınan, özellikle teknik ve analizlerden oluşan bir uygulama olarak açıklamaktadır.

Spor yönetimi; spor ile ilgili kurulmuş örgüt veya organizasyonun (federasyonlar, kulüpler, turnuva, yarışma ve müsabaka organizasyonları, spor malzemesi üretim firmaları vb.) en verimli ve iyi bir şekilde yürüebilmesi için insan ve madde kaynaklarını etkin ve uyumlu kullanma sürecidir şeklinde tanımlanabilir (Basım ve Argan, 2009: 6).

Chelladurai (2008)'e göre, spor yönetimi; ulusal ve uluslararası organizasyonların spor ve fiziksel aktiviteler için sunumu; tesislerin ve malzemelerin kullanımı, aktivitelerin programı, özel hazırlanmış aktivitelerde eğitici; yarışma organizasyonları ve mükemmellik çalışmaları, ulusal, özel veya devlet seviyesinde aktivite veya spor organizasyonlarının düzenlenmesi hizmetlerini içermektedir.

Yönetici, verimlilik ve yeterlik uzmanlıklarını yerine getirme yeteneğine sahip olan kişiyi temsil eder (Hila, 2010). Profesyoneleşmiş bütün meslek alanlarında olduğu gibi, spor yöneticilerinin de taşınması gereken bir takım özellikler ve yeterliklerin bulunması gerekmektedir. Krotte (2007), spor yöneticisinin yapmakta olduğu iş, görev ve sorumlulukları Mintzberg'in yönetsel roller teorisindeki yapıyı kullanarak sınıflandırmıştır.

Mintzberg, etkili yöneticinin sergilemesi gereken on farklı rolden bahsetmektedir. Bu roller üç kategoriye ayrılır; kişiler arası roller, bilgi ile ilgili roller ve karar verme ile ilgili rollerdir. Yöneticilerin faaliyetlerinin “kişiler arası”, “bilgi” ve “karar verme” olarak adlandırdığı üç temel davranışın biri veya birden fazlası içinde yer alabilen on rolden oluştuğunu göstermiştir (Mintzberg, 1980).

Yeterlik, bir kişinin neye inandığı ve nasıl davrandığının güçlü bir göstergesidir. Bandura'ya göre öz yeterlik, bireyin belli bir performansı göstermesi için gerekli etkinlikleri düzenleyip başarılı bir biçimde gerçekleştirme kapasitesi hakkında kendine ilişkin yargısıdır. Öz yeterlik inancı kavramı, bireylerin olası durumlarla başa çıkabilmek için gerekli olan eylemleri ne kadar iyi yapabileceklerine ilişkin bireysel yargılarıyla ilgilidir (Bandura, 1982).

Öz yeterlik ise, özel bir alan için kullanılır ve kişinin diğer alanlarla ilgili yapabildiklerine olan inançlarından farklılaşır. Aynı alandaki farklı işler için kişinin birim işi yapmakla ilgili inançları değişmektedir (Bandura, 1997).

Stajkovic ve Luthans (1998), öz yeterlik teorisini iki boyutta incelemektedir. Birinci boyut; öz yeterlik beklentilerinin büyüklüğü, ikinci boyut ise; öz yeterlik beklentilerinin gücüdür. Birin-

cisi; bir kişinin yürütebileceğine inandığı görev zorluk seviyesini ifade etmektedir. İkincisi ise; güç veya zayıflığın büyüklüğü hakkında kararını ifade etmektedir (Stajkovic, 1998, <http://des.emory.edu/mfp/self-efficacy>, 20 Ekim 2011'de erişildi).

Öz yeterlik algısı bireyin yapmış olduğu seçimleri etkiler; bireyler kendilerini rahat ve yeterli gördükleri durumları, görevleri seçerler. Ayrıca, bireyin yapmayı seçtiği şeyde başarılı olmak için ne kadar çaba göstermesi gerektiğini ve ne kadar kararlılık göstereceğini belirler (Kaya, 2007). Öz yeterlik algısı bireyin bir işi gerçekleştirmedeki gerçek yeterlik düzeyini yansıtmaktan daha çok, bireyin kendi yeterliklerine ilişkin yargılarını yansıtır (Woolfolk-Hoy ve Burke-Spero, 2005).

Bandura'nın yapıyı ilk tanıttığından bu yana geçen sürede öz yeterlik kapsamlı bir şekilde kabul edilmiştir. Öz yeterliğin, tahmin edilen ve uzlaştırıcı rolüne farklı çalışma alanlarındaki bulgular işaret etmektedir (Bandura, 1997; Stajkovic ve Luthans, 1998). Performans ve öz yeterlik inançları arasındaki ilişki araştırmaları ve çok sayıda, daha küçük boyutlarda yapılan araştırmalar öz yeterliğin önemini destekler niteliktedir. Öz yeterliğin, diğer bireysel inançlardan daha fazla, davranış çıktılarının tahmin edilen oluşumunda rol alan inançlardan biri olduğu görülmektedir (Pajares, 2003).

Yönetim ve spor yönetimi alanlarında yeterlik ve öz yeterlik kavramları üzerinde durulması gerekmektedir. Yöneticinin organizasyonda görevlerini etkin bir şekilde yerine getirebilmesi için belirli yeterliklere sahip olması gerekmektedir. Aynı şekilde literatürde öz yeterlik kavramı hemen hemen yaşamın her alanında başarılı performanslara olan katkısı bakımından en önemli faktörlerden biri olarak bulunmuştur. Liderlik (Anderson, 2000), müzikal performans (Craske ve Craig, 1984), ilişkiler (Thomas, 1999) ve spor (Wurtele, 1986). Çalışmaların sonuçları lider öz yeterliğinin; gerekli öngörü, anlayış ve etkili liderliği geliştirdiğini desteklemektedir (Anderson, Krajewski, Goffin ve Jockson, 2008). Araştırmalara göre öz yeterlik; tahmin edilen performans için önemli bir değişken olduğunu kanıtlamıştır (aktaran: Moen ve Allgood, 2009).

## YÖNTEM

### Örnekleme

Araştırmanın amacı doğrultusunda geliştirilen "Spor Yöneticisi Öz Yeterlik Ölçeği" devlet ve özel sektörde farklı pozisyonlarda yöneticilik yapan 600 kişiye ulaştırılmış ancak geri dönen ve değerlendirmeye alınabilecek anket olarak 292 kadın ve erkek (kadın=72, erkek=220; n=292) olmuştur. Katılımcılara; bire bir görüşülerek, e-mail ve posta yolu ile ulaşılmıştır. Araştırmada örneklem grubu; basit tesadüfi örnekleme yöntemi kullanılarak oluşturulmuştur. Araştırmaya pilot uygulama için 13 ilden katılım sağlanmıştır.

## Veri Toplama Aracı

Alanla ilgili geliştirilen diğer ölçekler incelendiğinde öz yeterlik çalışmalarında farklı ölçek tiplerinin kullanıldığı görülmektedir. Ancak ölçeğin güvenilirliğinin ve hassaslığının daha yüksek olması için ve Bandura' nın rehberinden yola çıkarak bu çalışmada ölçeklendirme 0 ile 100 arasında katılımcıların işaretleyebilecekleri 11 aralıktan oluşacak şekilde hazırlanmıştır. Katılımcıların daha kolay bir şekilde kendilerine uygun ifadeleri işaretleyebilmelerini sağlamak için ölçekte 0 “*benim için hiç uygun değil*”, 50 “*benim için orta derecede uygun*”, 100 “*benim için kesinlikle uygun*” ifadeleri belirtilmiştir. Diğer aralıklarda herhangi bir ifade verilmemiştir.

Öz yeterlik ölçekleri ile ilgili olarak; maddelerinin bir bağlam oluşturmaya yetecek kadar spesifik ancak genellemeyi engelleyecek kadar çok spesifik olmayacak şekilde oluşturulmasının gerekliliği de belirtilmektedir (Pajares, 2001; Humphries, Hebert, Daigle ve Martin, 2012).

Yapılan görüşmeler, literatür taraması, nitel çalışma sonrasında teorik yapının tüm boyutları ele alınarak hazırlanan ilk ölçek formunda 114 madde yer almıştır. Genel bilgiler bölümünde ise spor yöneticisinin demografik bilgileri, şu anki ve geçmiş yöneticilik durumunu belirlemeye yönelik 15 soru yer almıştır.

Ölçeğin kapsam ve görünüş geçerliliği bakımından 3 uzman kişi ile (alanda görev yapan, ölçek gelişimi alanında uzman ve alan dışında yöneticilik yapan) ölçek maddeleri tek tek okunmuştur. Maddelerin ölçekte uygun şekilde sorulması, dili, sıralaması, anlaşılabilirliği, diğer maddelerde birbirini tekrarlayan kavramların birleştirilmesi, tekrarlar ve ölçme tipinin maddeler ile uyumu açısından kapsamlı bir çalışma yapılmıştır.

Yapılan çalışma sonrasında “Spor Yöneticisi Öz Yeterlik Ölçeği” formunu oluşturan madde sayısı 74, genel bilgiler bölümünü oluşturan madde sayısı ise; 11 olarak belirlenmiştir.

Maddeler ve boyutlar belirlendikten sonra ölçek ile ilgili olarak spor yönetimi alanında devlet ve özel sektörde farklı organizasyon yapılarında yöneticilik yapan ve akademisyenlerden oluşan toplamda 7 kişiden (2 Kulüp Yöneticisi, 1 Gençlik Hizmetleri ve Spor İl Müdürü, 1 Şube Müdürü, 1 Özel Spor İşletme Yöneticisi, 1 Bölüm Başkanı, 1 Federasyon Yöneticisi) uzman görüşü alınmıştır. Ölçme, değerlendirme ve ölçeğin görünüş geçerliği ile ilgili olarak da alanda uzman 2 kişinin de görüşleri alınmıştır.

## BULGULAR VE YORUM

### *Spor Yöneticisi Öz Yeterlik Ölçeği açıklayıcı faktör analizi*

“Spor Yöneticisi Öz Yeterlik Ölçeği” için Açıklayıcı Faktör Analizi kullanılmıştır. Açıklayıcı Faktör Analizinde varimax eksen döndürme işlemi ile birlikte temel bileşenler analizi yöntemi kullanılmıştır. Açıklayıcı faktör analizi'nin uygulanabilirliğinin ölçümü için Kaiser-Meyer-Olkin (KMO) yeterlilik ölçümüne ve Bartlett Küresellik testine bakılmıştır.



Faktör analizinin uygulanacağı örneklemin yeterliliği Kaiser-Meyer-Olkin (KMO) ölçümü ile yapılmıştır. Bu değer 1'e ne kadar yakın ise eldeki veri grubuna faktör analizinin yapılmasının uygun olduğu kabul edilir. KMO 0.50'den küçük ise ilgili veri grubuna faktör analizi yapılamaz (Bayram, 2004).

KMO ölçütü 0,90-100 arasında olduğunda **çok iyi**; 0,80–0,89 arasında iyi; 0,70 – 0,79 arasında **orta**; 0,60-0,69 arasında olduğunda **kötü**; 0,50–0,59 arasında olduğunda **çok kötü** ve 0,50'nin altında olduğunda **kabul edilemez** olduğu belirtilmektedir (Alpar, 2010).

Tablo 1'de “Spor Yöneticisi Öz Yeterlik Ölçeği” ne ait KMO ve Bartlett testi sonuçları verilmektedir.

**Tablo 1:** Spor Yöneticisi Öz Yeterlik Ölçeği KMO ve Bartlett Küresellik Testi Tablosu

<b>Kaiser-Meyer-Olkin Örneklem Yeterlilik Ölçümü</b>		0.948
Bartlett Küresellik Testi	Yaklaşık Ki-kare	7506.902
	Serbestlik derecesi	1128
	Anlamlılık	0.00

Tablo 1 incelendiğinde, ölçeğin **KMO** örneklem yeterlilik ölçümü değeri **0,94** olarak görülmektedir. Bu değer KMO için çok iyi bir değer olduğunu ve ilgili veri grubuna analiz yapılmasının uygun olduğunu söyleyebiliriz. Bartlett Küresellik Testi sonucunda, anlamlılık derecesi  $p= 0.00$  değerinin test istatistiğine ilişkin olarak maddeler arasında ilişkinin varlığını ortaya koyarak faktör analizi için verilerin uygunluğunu göstermektedir.

Verilerin faktör analizine uygunluğunu ölçen analizlerden bir diğeri de, test maddelerinin “Başlangıç Ortak Değerlerinin” incelenmesidir. maddelerin başlangıç ortak değerleri en düşük 0,35 en yüksek 0,73 olduğu saptanmıştır. Bu değerler verilerin faktör analizine uygunluğunu göstermektedir.

Örneklem yeterlilik ölçümlerinden sonra varimax dikey ekseninde döndürme işlemi uygulanmıştır. Döndürme işleminde yeterli faktör yükü almayan 4,5, 8, 14, 21, 23, 26, 37, 45, 46, 49, 52, 53, 54, 56, 57, 58, 59, 62, 65, 69, 70, 71, 72, 73, 74. maddeler çıkarılmış ve ölçek 48 maddelik halini almıştır.

**Tablo 2:** Spor Yöneticisi Öz Yeterlik Ölçeği Eigen değerleri ve açıklanan toplam varyans

<b>Açıklanan Toplam Varyans</b>			
Başlangıç Özdeğerleri			
<b>Bileşen</b>	<b>Toplam</b>	<b>Varyans %</b>	<b>Toplam Varyans %</b>
1	8.45	17.61	17.61
2	6.99	14.56	32.17
3	5.91	12.32	44.50
4	5.29	11.38	55.54

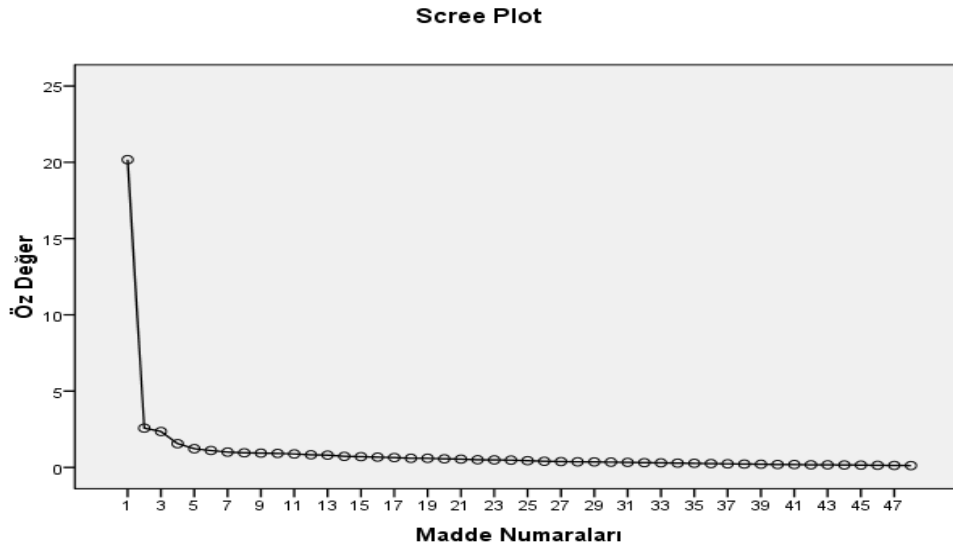
Tablo 2 incelendiğinde analize alınan maddelerin 48' inin öz değeri 1' den büyük dört faktör altında toplandığı görülmektedir. Elde edilen bu dört faktör toplam varyansın % 55,54' ünü açıklamaktadır. Analiz sonuçlarında elde edilen varyans oranları ne kadar yüksekse, ölçeğin faktör yapısı da o kadar güçlü olmaktadır. Sosyal bilimlerde yapılan analizlerde % 40 ile % 60 arasında değişen varyans yeterli oranda kabul edilmektedir(Tavşancıl, 2006).

**Tablo 3:** Spor Yöneticisi Öz Yeterlik Ölçeği döndürülmüş faktör yükleri

Maddeler	Faktörler			
	1	2	3	4
S44	0.730			
S1	0.705			
S41	0.680			
S22	0.661			
S50	0.647			
S47	0.635			
S29	0.623			
S31	0.599			
S24	0.584			
S33	0.558			
S27	0.555			
S30	0.548			
S40	0.546			
S17	0.526			
S16	0.491			
S32	0.473			
S28	0.462			
S7	0.442			
S12	0.418			
S15	0.403			
S63		0.772		
S66		0.740		
S67		0.709		
S64		0.703		
S68		0.698		
S61		0.662		
S60			0.701	
S38			0.687	
S11			0.636	
S18			0.629	
S36			0.612	
S35			0.591	
S19			0.586	
S48			0.558	
S13			0.555	
S34			0.536	
S51			0.532	
S43			0.477	
S20			0.465	
S10			0.433	
S2				0.640
S9				0.623
S42				0.612
S25				0.601
S3				0.599
S39				0.597
S6				0.568
S55				0.403

Tablo 3’de Spor Yöneticisi Öz Yeterlik Ölçeğinin döndürülmüş faktör yükleri bulunmaktadır. Ölçeğin faktör yükleri alt kesme noktasının 0,40 olarak alındığı görülmektedir. Ölçek döndürme işleminden sonra 0, 40 kesme noktası alındığında ölçek; karar verme alt boyutunda 20 madde, kişisel özellikler alt boyutunda 6 madde s, bilgi alt boyutunda 14 madde, kişiler arası ilişkiler alt boyutunda 8 madde, toplam ölçekte 48 madde şeklinde boyutlar oluşmuştur.

**Grafik 1:** Spor Yöneticisi Öz Yeterlik Ölçeği scree plot grafiği



Dikey ekseninde öz değerlerin, yatay ekseninde faktörlerin yer aldığı öz değerler grafiği olan (Grafik 1) Spor Yöneticisi Öz Yeterlik Ölçeği Scree Plot Grafiği incelendiğinde, düşüşlerin görüldüğü dikey eksenindeki faktör sayısının dört olduğu söylenebilmektedir. Dörtten sonraki faktörlerin getirdikleri ek varyansların katkılarının birbirine yakın olduğu görülmektedir. Bu sonuca dayanarak ölçme aracının dört faktörden oluşabileceği söylenebilir.

### Spor Yöneticisi Öz Yeterlik Ölçeği doğrulayıcı faktör analizi

**Tablo 4:** Spor Yöneticisi Öz Yeterlik Ölçeği doğrulayıcı faktör analizine ait uyum ölçüleri

Uyum Ölçüleri	İyi Uyum	Kabul Edilebilir Uyum	Modelin Sonuçları	Uyum
<b>RMSEA</b>	$0 < RMSEA < 0,05$	$0,05 \leq RMSEA \leq 0,10$	0,071	Kabul edilebilir
<b>NFI</b>	$0,95 \leq NFI \leq 1$	$0,90 \leq NFI \leq 0,95$	0,94	Kabul edilebilir
<b>NNFI</b>	$0,97 \leq NNF \leq 1$	$0,95 \leq NNFI \leq 0,97$	0,97	Kabul edilebilir
<b>CFI</b>	$0,97 \leq CFI \leq 1$	$0,95 \leq CFI \leq 0,97$	0,97	Kabul edilebilir
<b>IFI</b>	$0,97 \leq IFI \leq 1$	$0,95 \leq IFI \leq 0,97$	0,97	Kabul edilebilir
<b>SRMR</b>	$0 \leq SRMR \leq 0,05$	$0,05 \leq SRMR \leq 0,10$	0,065	Kabul edilebilir
$\chi^2 / df$		$0 < \chi^2 / df < 3$	2,05	

Tablo 4’ de modelin sonuçları incelendiğinde; RMSEA uyum ölçümü 0,071 olup, kabul edilebilir uyum gösterdiği görülmektedir. Diğer uyum ölçülerinden NFI, NNFI, CFI, IFI ve

SRMR ölçümleri de kabul edilebilir uyum göstermektedir. Ki-kare testi, “gözlenen kovaryans matrisi ile faktör kovaryans matrisi arasında fark yoktur” hipotezini test etmektedir. Bu değer 5 değerinden küçük ise modelin uyum iyiliğine sahip olduğu, 3 değerinden daha küçük ise modelin çok iyi bir uyuma sahip olduğu kabul edilir (Özdamar, 2002).

Uyum iyiliği indeksleri için 0,90-0,95 kabul edilebilir ve 0,95 üzerinde olması ise yüksek bir uyumu gösterir. Diğer yandan modelin hata (uyumsuzluk) indekslerinin 0,08-0,05 değerleri arasında modelin kabul edilebilir; 0,05 değerinden küçük olduklarında da modelin iyi olduğu söylenebilir. Özellikle Ortalama Karekök Hata Tahmini (RMSEA) indeks değerinin 0,00 a yakın olması iyi uyumu göstermektedir (Du Toit and Du Toit, 2001; Tatar, 2005; Güzeller, 2005;aktaran: Doğan ve Başokçu, 2010).

Buna göre uyum ölçülerinin kabul edilebilir uyum göstermeleri ayrıca düzeltmeli ki-kare değerinin de kabul edilebilir uyum göstermesi, verilerimizin kabul edilebilir uyuma sahip olduğu ve modelimizin istatistiksel olarak anlamlı ve geçerli olduğunu göstermektedir.

### Spor Yöneticisi Öz Yeterlik Ölçeği Güvenirlik Çalışması

**Tablo 5:** Spor Yöneticisi Öz Yeterlik Ölçeği alt boyutlarının ve toplam ölçeğin alfa değerleri

		Alt Boyutların Cronbach Alpha Değerleri		Toplam Ölçeğin Cronbach Alpha Değeri
Karar Verme	Madde1.Planlama yaparken paydaşların (sporcu, antrenör, federasyon, STK, yerel yönetim, özel kurum, kuruluşlar vb.) görüşleriyle birlikte kurumsal hedefleri oluştururum.	20	$\alpha= 0.94$	
	Madde7.Kurumda işlerin stratejik hedeflere uygun olarak yapılmasını sağlarım.			
	Madde12.Kararlarımı paydaşlarla paylaşıyorum.			
	Madde15.Toplantıların gündemli, düzenli olmasına dikkat ederim.			
	Madde16.Çoğu zaman doğru kararlar veririm.			
	Madde17.Kurumdaki çatışma ortamlarını objektif bir şekilde yönetirim.			
	Madde22.Çalışanların düşüncelerini önemserim.			
	Madde24.Her zaman şeffaf bir yönetim anlayışı sergilerim.			
	Madde27.Topluma karşı sosyal sorumluluklarım olduğunu düşünürüm.			
	Madde28.Kurumsal olarak (paydaşlarla) işbirliklerinin artırılması için gereken çabayı gösteririm.			
	Madde29.Kurumda performans ölçme, değerlendirme sistemini kullanırım.			
	Madde30.Kurumda görev dağılımlarında liyakatı esas alarak karar veririm.			
	Madde31.İş ortamının fiziksel şartlarını çalışanların memnuniyetini arttıracak şekilde planlarım.			
	Madde32.Kurumun varoluş hedeflerine (misyon, vizyon, değerler ve politikaları vb.) uygun olarak kararlar veririm.			
	Madde33.Çalışanlar için her konuda fırsat eşitliği sağlarım.			
Madde40.Kurumun yararına olacak yeni fırsatlar oluşturmak için çalışırım.				
Madde41.Gerekli konularda uzman görüşüne başvurma ihtiyacı duyarım.				
Madde44.Çalışanlara sürekli olarak müdahale etmek yerine onlara destek olmaya çalışırım.				
Madde47.Kurumsal başarı için takım çalışmasını önemserim.				
Madde50.Yönetici olarak etik davranmaya özen gösteririm.				

<b>Kişisel Özellikler</b>	Madde61.İş çevremde kişisel olarak saygınlığım yüksektir. Madde63.Düzgün bir diksiyona sahibim. Madde64.İşimi yaparken duygularımı kontrol altında tutabilirim. Madde66.Hitap yeteneğine sahibim. Madde67.Pratik bir zekaya sahibim. Madde68.Özgüvenim yüksektir.	6	$\alpha=0.89$	$\alpha=0.96$
<b>Bilgi</b>	Madde10.Spor etkinliklerini etkin yönetirim. Madde11.Spor hukuku alanında yeterli bilgiye sahibim. Madde13.Spor tesislerini etkin yönetirim. Madde18.Düzenli bir şekilde kişisel gelişim eğitimlerine katılmaya özen gösteririm. Madde19.Kurumda hizmet içi eğitim olanağı sağlıyorum. Madde20.Görevimi etkin şekilde yerine getirebilmek için gerekli uzmanlık alan bilgisine (spor yönetimi) sahibim. Madde34.Spor yöneticiliği yapabilmek için aldığım eğitim yeterlidir. Madde35.Spor yapmış kişilerin spor organizasyonlarını daha iyi yönetebileceklerini düşünürüm. Madde36.İyi bir yönetici olabilmek için kurumun tarihini bilirim. Madde38.Alanım dışındaki konularda gelişmeleri takip ederim. Madde43.Kurumsal hedefleri oluştururken öncelikleri belirlerim. Madde48.Yaptığım işte teknolojiyi etkin kullanırım. Madde51.Yasal sorumluluklarımı (sosyal güvenlik, iş sağlığı ve güvenliği, özlük hakları vb.)yerine getiririm. Madde60.Bulduğum görevi etkin bir şekilde yerine getirebilmek için yöneticilik bilgisine sahibim.	14	$\alpha=0.89$	
<b>Kişiler Arası İlişkiler</b>	Madde2.Diğer kurum, kuruluşlar (Gençlik Hizmetleri ve Spor İl Müdürlükleri, spor kulüpleri, federasyonlar, STK'lar vb.) ile işbirliği içerisinde çalışırım. Madde3.Spor ortamını oluşturan tüm kişilerin düşüncelerini dikkate alırım. Madde6. Spor organizasyonlarında sorumluluk almak için girişimlerde bulunurum. Madde9.Organizasyonlar için sponsor bulmakta güçlük çekmem. Madde25.Birlikte çalıştığım kişilerle iletişimim güçlüdür. Madde55.Kurumun tanıtımında temsil gücümün olduğunu düşünürüm. Madde39.İş ilişkilerimde saygı önemli bir unsurdur. Madde42.Çalışma ortamında iyi ilişkilerle disiplini sağlayabilirim.	8	$\alpha=0.81$	
<b>Ölçeğin Toplam Madde Sayısı</b>		48		

Spor Yöneticisi Öz Yeterlik Ölçeğinin güvenilirlik çalışması için Cronbach Alpha değerlerine bakılmış ve Tablo 5’de verilmiştir.48 maddeden oluşan ölçeğin toplam Cronbach Alpha değeri  $\alpha=0.96$  olarak bulunduğu gösterilmiştir. Ölçeğin alt boyutlarında ise 20 sorudan oluşan birinci faktörün Cronbach Alpha değeri  $\alpha=0.94$ ; 6 sorudan oluşan ikinci faktörün Cronbach Alpha değeri  $\alpha=0.89$ ; 14 sorudan oluşan üçüncü faktörün Cronbach Alpha değeri  $\alpha=0.89$ ; 8 sorudan oluşan dördüncü faktörün Cronbach Alpha değeri ise  $\alpha=0.81$  olarak bulunmuştur.

## SONUÇ

Ölçek geliştirme çalışması kapsamında yapılan analizler sonucunda ölçeğin “Karar Verme, Kişisel Özellikler, Bilgi ve Kişiler Arası İlişkiler” olmak üzere toplam dört faktörden ve 48 maddeden oluştuğu görülmüştür. Spor Yöneticisi Öz Yeterlik Ölçeği için modelin uygun, geçerli, güvenilir ve kullanışlı bir ölçek olduğu kabul edilmiştir.

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## Metaphoric Analysis of Organizational Culture Tendency in Sportive Institutions

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### **Abstract**

In this study; it has been aimed to analyze the organizational culture tendency in various sportive institutions through metaphors. Sample of the study has been constituted by selecting 360 people working in such institutions as General Directorate of Sports, İstanbul Provincial Directorate of Youth Welfare and Sports, Adana Provincial Directorate of Youth Welfare and Sports, Çukurova University's School of Physical Education and Sports, Turkish Football Federation, Turkish National Olympic Committee, and Turkish Amateur Sports Clubs Confederation by random-sampling method. Organizational culture survey prepared by the researchers has been utilized as a data collection instrument. The metaphors used in the study have been determined by the unstructured interviews conducted in the said sports institutions. In the data analysis; such descriptive statistical techniques as frequency, percentage, and arithmetic mean have been used. In conclusion, it has been observed that the institutions of General Directorate of Sports, İstanbul Provincial Directorate of Youth Welfare and Sports, Adana Provincial Directorate of Youth Welfare and Sports, Çukurova University's School of Physical Education and Sports do not have a tendency to strong organizational culture; whereas such institutions as Turkish Football Federation, Turkish National Olympic Committee, and Turkish Amateur Sports Clubs Confederation have such a tendency to strong organizational culture.

*Key Words: Sports Institutions, Organizational Culture, Metaphor*

### **GİRİŞ**

Yöneticilerin yıllardır ellerinin altında bulunan ama sınırsız özelliklerini anlayamadıkları insana eğilmeleri ve çözümü onda aramaları ancak 1970'li yıllardan sonra söz konusu olmuştur. Bu ise beraberinde örgütte ciddi bir şekilde göz önüne alınması gereken yeni bir faktörün fark edilmesine yol açmıştır. Nitekim yönetim düşüncesinin gelişiminde ilk kez neo-klasik dönemde fark edilip, etkileri görülmüş olan ve bugün için durumsallıktan öte



“mükemmeliyetçi yaklaşım”ın bir uzantısı olarak aslında örgütlerin faaliyete başladıkları ilk günden beri var olan “örgüt kültürü”dür(Terzi, 2000). Örgüt kültürü kavramı antropolojiden iş dünyasına uyarlanmış bir kavramdır. Bununla birlikte antropolojideki farklı ekoller örgüt kültürü kavramına da yansımış, organizasyonlar hakkında birbirinden farklı varsayımlara sahip farklı teoriler oluşmasına neden olmuştur(Meek, 1988). Örgüt kültürüne yönelik farklı teorik yaklaşımlar ve tanımlar, kültür kavramının tanımlanmasındaki çeşitlilikten etkilenmektedir(Allaire ve Firsirotu, 1984). Örgüt kültürü Schein’a göre; bir grubun kendi içinde bütünleşme ve dış çevreye uyum sorunlarını çözerken yarattığı ve geliştirdiği; yeni üyelerine algılama, düşünme ve hissetme yolu olarak aktardığı varsayımlar ve inançlar bütünüdür(Schein, 1984). Kültürel unsurları değerler ve uygulamalar olarak ayıran Hofstede ise, temel varsayımları değerlerle iç içe kabul etmiş ve örgüt üyelerinin örgütsel yaşamla ilgili temel algılamalarının kültürü açıklamaya dayanak oluşturduğunu ileri sürmüştür(Hofstede, 1990). Örgüt kültürü, örgüt üyeleri arasındaki dayanışmayı artırır. Örgütü bir arada tutmada birleştirici bir unsur olarak görev yapar ve örgüt üyeleri için bir kontrol mekanizması olarak fonksiyon görür. Yani, çalışanların tutum ve davranışlarını hem biçimlendirir hem de onlara rehberlik eder (Yeniçeri ve Demirel, 2004). Örgüt kültürü örgütü diğerlerinden ayıran, örgütsel verimliliğe etki eden, çalışanların örgüt içindeki davranışlarını yönlendiren dinamik bir özellik gösterir. Bu açıdan son yıllarda örgüt ve yönetim ile ilgili araştırmalarda güncel konulardandır. Örgüt kültürü konusunda gerçekleştirilen birçok çalışmanın arkasında yatan bir diğer neden de dünyada gittikçe artan globalleşmedir. Bu doğrultuda yürütülen çalışmalar "sınırlar ötesinde iş yapmak" gibi başlıkların altında toplanmaktadır. Bu çalışmalar hem ülkesel, hem de şirketlerin özgün farklılıklarının anlaşılması ve bu farklılıklardan doğabilecek güçlüklerin önlenmesi ve hatta bunlardan sinerji oluşturulması gibi bir amaca hizmet etmektedir. Örgütsel kültürler, konuyla ilgili kuramsal yayınlarda ve alanlarda çalışan araştırmacılar tarafından değişik biçimlerde sınıflandırılmaktadır. Bu sınıflandırmalardan güçlü (strong) ve zayıf (weak) kültürler olarak yapılan sınıflandırma biçimi (Ouchi 1981; Peters and Waterman, 1982; Deal and Kennedy 1982; Pascale 1985; Cooke and Rousseau 1988; Hofstede and Others 1990) yaygın olarak benimsenmektedir. Bu çalışmada, örgütsel kültürlerin sınıflandırılmasıyla ilgili olarak güçlü (strong) ve zayıf (weak) kültürler biçiminde yapılan sınıflandırma biçimi benimsenmiştir. Güçlü kültür, bir örgüt üyelerinin temel saygınlığı, inanç ve değerleri ne ölçüde paylaştıklarıyla yakından ilgilidir. Eğer sosyal bir grubun üyeleri, birtakım saygınlığı, inanç ve değerler üzerinde bir uzlaşma sağlayamamışsa, bu grupta güçlü bir kültürün varlığından da söz etmek mümkün değildir (O’Reilly and Others 1991:493). Metaforların araştırma yöntemi olarak kullanılması son yıllarda önemli ölçüde artmıştır. Yıldırım ve Şimşek’e (2005) göre mecazlar, bir durumun, olayın ve olgunun var olduğu haliyle betimlenmesi ve resmedilmesidir. Morgan’a (1986) göre metaforlar iki amaçla kullanılır: bir durumu betimleme (descriptive) ve bir süreci hızlandırma veya iyileştirme (prescriptive). Örgütler bir değişim aracı olarak görülür. Metaforlar yoluyla nitel veri toplama Sosyoloji, Psikoloji, Antropoloji, İşletme, Felsefe, Uluslararası İlişkiler gibi sosyal bilim disiplinlerinin yanı sıra mühendislik ve fen bilimlerinde de etkili bir şekilde kullanılmaktadır(Yıldırım ve Şimşek, 2005). Metaforlar üzerine, aynı ölçüde de metaforları kulla-

narak sosyal bilimlerin deęişik disiplinlerinde 1980'lerden beri çok sayıda araştırma yapılmış ve çok şey yazılmıştır(Barley, 1983;Bates, 1984; Bech&Moore, 1984;Morgan, 1986;Smircich, 1983,Palmer&Lundberg, 1995;Balcı, 1999; Morgan, 1986; Özar, 1999; Sackmann, Sterman, 1985; Şimşek, 1997). Grekçe metaphora'dan gelen "metafor" kelimesi, meta: öte ve pherein: taşımak, yüklenmek kelimelerinden gelmektedir, ve "bir yerden başka bir yere götürmek" anlamındadır. Burada söz konusu olan, geçici bir anlamdan çok, kalıcı, köklü, yeni bir anlamdır. Metafor bir gerçeęi dile getirmek amacıyla kullanılır, ve pek çok metaforik ifade (biz onların metaforik ifade olduğunu fark etmesek de) dilde kalıcıdır(Lakoff ve Johnson, 2003). Sözcüğün dilde kullanımı süreklilik kazanarak belli bir zaman dilimi içinde sabitlenmiş anlamlarına, başka bir deyişle, kavrayışlarında uyandırdığı sözcüklere girmiş anlamlarına gerçek anlam; kullanım içinde bir başka sözcüğün anlamını bir yönüyle üstlenmesiyle edindięi anlamlara metafor denilmektedir (Guiaraud, 1994).Gündelik kavram sistemimiz – kendileriyle düşündüğümüz ve eylemde bulunduğumuz terimler – temelde doğası gereęi metaforiktir. Algıladığımız şeyi, dünyada yolumuzu bulma tarzımızı ve dięer insanlarla ilişki kurma biçimimizi, kavramlarımız yapıya kavuşturur. Bu yüzden kavram sistemimiz gündelik gerçekliklerimizi tanımlamakta merkezi bir rol oynar(Lakoff ve Johnson, 2003).

Bu çalışmada, Spor Genel Müdürlüğü(SGM), İstanbul Gençlik Hizmetleri ve Spor İl Müdürlüğü (İGHSİM), Adana Gençlik Hizmetleri ve Spor İl Müdürlüğü(AGHSİM), Çukurova Üniversitesi Beden Eğitimi ve Spor Yüksekokulu (Ç.Ü.BESYO) kuruluşlarında Türkiye Futbol Federasyonu(TFF), Türkiye Milli Olimpiyat Komitesi (TMOK) ve Türkiye Amatör Spor Kulüpleri Konfederasyonu (TASKK) çalışanlarının örgütsel kültür eğilimlerinin metaforlarla analiz edilmesi amaçlanmıştır.

## **MATERYAL VE YÖNTEM**

Betimsel bir çalışma olan bu çalışmanın örneklemini; SGM, İGHSİM, AGHSİM, TFF, ÇÜBESYO, TMOK ve TASKK'da çalışan 360 kişi tesadüfi örnekleme yöntemine göre seçilerek oluşturmuştur. Veri toplama aracı olarak araştırmacılar tarafından hazırlanan örgüt kültürü anketi kullanılmıştır. Bu ankette kullanılan metaforlar spor kuruluşlarında yapılan yapılandırılmamış görüşmelerle belirlenmiştir. Verilerin analizinde, betimsel istatistik olan; frekans, yüzdeler, aritmetik ortalama kullanılmıştır. Bu çalışmada aşağıdaki sorulara yanıt aranmıştır;

1. Çalışanlar kurumlarını hangi metaforlarla tanımlamaktadırlar?
2. Çalışanlar kurumlarının personel alım kriterlerini hangi metaforlarla tanımlamaktadırlar?
3. Çalışanlar kurumlarında yapılan tören veya toplantılarda yönetici-personel ilişkisi-nihangi metaforlarla tanımlamaktadırlar?
4. Çalışanlar kurumlarının yönetim anlayışınıhangi metaforlarla tanımlamaktadırlar?
5. Çalışanlar kurumlarının dięer kuruluşlarla olan ilişkilerini hangi metaforlarla tanımlamaktadırlar?

6. Çalışanlar kurumlarının adalet anlayışını hangi metaforlarla tanımlamaktadırlar?
7. Çalışanlar kurumlarının işgörene verdiği değeri hangi metaforlarla tanımlamaktadırlar?

## BULGULAR

Araştırma sonucunda katılımcıların, %31.10'unu kadın, %68.90'ını ise erkek, yaş verilerinin dağılımında en yüksek değerli uç noktaları %26.40 oranla 45 yaş ve üstü aralığında, en düşük değerli uç noktaları %3.90 oranla 17-24 yaş aralığında bulunmakta, %19.20'sinin 21-24 yıllık kıdem yılına sahip olduğu görülmekte, eğitim durumlarına bakıldığında ise %52.5'i lisans, %6.10'u yüksek lisans ve %1.7'sinin ise doktora mezunu çalışanlardan olduğu görülmüştür.

**Tablo 1.** Spor Kuruluşlarını İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
	SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM	
ARI KOVANI	Mean	1.71	2.78	3.13	4.00	2.56	3.96	3.86	2.99
	N	87	60	60	65	25	49	14	360
	%	13.80	15.50	17.50	<b>24.20</b>	5.90	18.00	5.00	100
KURLAR SOFRASI	Mean	3.73	2.22	2.27	2.38	2.24	1.27	1.00	2.44
	N	87	60	60	65	25	49	14	360
	%	<b>36.80</b>	15.10	15.50	17.60	6.40	7.00	1.60	100
DEDİKODU YUVASI	Mean	3.96	2.33	2.22	2.31	3.24	1.35	1.00	2.58
	N	87	60	60	65	25	49	14	360
	%	<b>37.10</b>	15.10	14.30	16.10	8.70	7.10	1.50	100
ORKESTRA	Mean	1.79	3.38	3.10	3.28	2.12	4.04	4.69	2.98
	N	87	60	60	65	25	49	14	360
	%	14.50	18.90	17.30	<b>19.80</b>	4.90	18.40	6.10	100

“*Arı Kovanı*” metaforunun %24.20 oranla TFF’de, “*Kurlar Sofrası*” metaforunun %36.80 oranla SGM’de, “*Dedikodu Yuvası*” metaforunun %37.10 oranla SGM’de, “*Orkestra*” metaforunun %19.80 oranla TFF’de, en yüksek oranla kullanıldığı belirlenmiştir.

**Tablo 2.** Spor Kuruluşlarına Yeni Personel Alınırken Hangi Kriterlerin Öne Çıktığını İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
	SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM	
ARKASI SAĞLAM	Mean	4.49	3.32	3.98	3.26	3.92	1.86	2.79	3.53
	N	87	60	60	65	25	49	14	360
	%	<b>30.80</b>	15.70	18.80	16.70	7.70	7.20	3.10	100
VELİAHT SİSTEMİ	Mean	4.11	1.60	2.00	2.28	3.60	1.22	1.07	2.46
	N	87	60	60	65	25	49	14	360
	%	<b>40.40</b>	10.80	13.50	16.70	10.10	6.80	1.70	100
AHBAP-ÇAVUŞ	Mean	4.33	2.57	2.58	2.72	3.84	1.39	2.71	2.95
	N	87	60	60	65	25	49	14	360
	%	<b>35.40</b>	14.50	14.60	16.60	9.00	6.40	3.60	100
İŞİN EHLİ	Mean	1.66	3.32	3.22	4.17	2.40	5.00	4.75	3.25
	N	87	60	60	65	25	49	14	360
	%	12.30	17.00	16.50	19.90	5.10	<b>23.20</b>	6.00	100

“*Arkası Sağlam*” metaforunun %30.80 oranla SGM’de, “*Veliaht Sistemi*” metaforunun %40.40 oranla SGM’de, “*Ahbap-Çavuş*” metaforunun %35.40 oranla SGM’de, “*İşin Ehl-i*” metaforunun %23.20 oranla TMOK’da en yüksek oranla kullanıldığı belirlenmiştir.

**Tablo 3.** Spor Kuruluşlarında Yapılan Tören Veya Toplantılarda Yönetici-Personel İlişisini İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
	SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM	
SABUN KÖPÜĞÜ	Mean	3.29	1.77	2.08	1.82	2.92	1.06	1.00	2.15
	N	87	60	60	65	25	49	14	360
	%	<b>37</b>	13.70	16.10	15.20	9.40	6.70	1.80	100
BUZ GİBİ	Mean	3.13	1.73	2.07	1.77	2.44	1.06	1.00	2.06
	N	87	60	60	65	25	49	14	360
	%	<b>36.70</b>	14.00	16.70	15.50	8.20	7.00	1.90	100
EMİR-KOMUTA	Mean	3.41	2.93	4.37	2.89	2.80	3.20	3.93	3.34
	N	87	60	60	65	25	49	14	360
	%	21.80	14.60	<b>24.60</b>	15.60	5.80	13.00	4.60	100
ABİ-KARDEŞ	Mean	2.35	3.90	3.33	3.82	2.52	3.82	4.21	3.32
	N	87	60	60	65	25	49	14	360
	%	17.10	19.60	16.70	<b>20.80</b>	5.30	15.60	4.90	100

“*Sabun Köpüğü*” metaforunun %37 oranla SGM’de, “*Buz Gibi*” metaforunun %36.70 oranla SGM’de, “*Emir-Komuta*” metaforunu %24.60 oranla AGHSİM’de, “*Abi-Kardeş*” metaforunun %20.80 oranla TFF’de en yüksek oranla kullanıldığı belirlenmiştir.

**Tablo 4.** Kurumdaki Yönetim Anlayışını İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
		SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM
AST-ÜST	Mean	3.39	3.60	4.12	4.62	3.24	3.92	5.00	3.89
	N	87	60	60	65	25	49	14	360
	%	21.10	15.40	17.60	<b>21.40</b>	5.80	13.70	5.00	100
KRALLIK	Mean	3.10	1.25	1.83	2.05	2.44	1.20	1.00	2.01
	N	87	60	60	65	25	49	14	360
	%	<b>37.40</b>	10.40	15.20	18.40	8.40	8.20	1.90	100
ORKESTRA	Mean	1.57	3.42	3.45	3.34	2.28	4.18	4.93	3.05
	N	87	60	60	65	25	49	14	360
	%	12.50	18.70	18.90	<b>19.80</b>	5.20	18.70	6.30	100
SALLA BAŞI AL MAAŞI	Mean	4.24	2.83	2.25	1.74	2.44	1.27	1.00	2.57
	N	87	60	60	65	25	49	14	360
	%	<b>39.90</b>	18.40	14.60	12.20	6.60	6.70	1.50	100

“*Ast-Üst*” metaforunun %21.40 oranla TFF’de, “*Krallık*” metaforunun %37.40 oranla SGM’de, “*Orkestra*” metaforunun %19.80 oranla TFF’de, “*Salla Başlı Al Maaşı*” metaforunun %39.90 oranla SGM’de en yüksek oranla kullanıldığı belirlenmiştir.

**Tablo 5.** Diğer Kuruluşlarla Olan İlişkileri İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
		SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM
İMECE	Mean	2.39	3.70	4.40	4.15	2.56	4.47	4.14	3.63
	N	87	60	60	65	25	49	14	360
	%	15.90	17.00	20.20	<b>20.70</b>	4.90	16.80	4.40	100
KAPALIKUT	Mean	2.38	1.42	1.22	1.97	2.80	2.22	1.00	1.91
	N	87	60	60	65	25	49	14	360
	%	<b>30.20</b>	12.40	10.60	18.70	10.20	15.90	4.00	100
ARAPSAÇI	Mean	3.03	2.17	1.80	2.25	2.56	1.76	1.00	2.26
	N	87	60	60	65	25	49	14	360
	%	<b>32.50</b>	16.00	13.30	18.00	7.90	10.60	1.70	100
GÜLLÜK GÜLİSTANL	Mean	1.60	3.00	2.72	2.74	1.72	3.10	3.36	2.51
	N	87	60	60	65	25	49	14	360
	%	15.40	5.20	18.10	19.70	4.80	16.90	<b>20.00</b>	100

“İmece” metaforunun %20.70 oranla TFF’de, “Kapalı Kutu” metaforunun %30.20 oranla SGM’de, “Arapsaçı” metaforunun %32.50 oranla SGM’de, “Güllük Gülistanlık” metaforunun %20 oranla TASKK’da en yüksek oranla kullanıldığı belirlenmiştir..

**Tablo 6.**Kurumdaki Adalet Anlayışını İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
		SGM	İGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM
TERAZİ	Mean	1.52	2.83	3.07	3.34	2.28	3.82	4.86	2.82
	N	87	60	60	65	25	49	14	360
	%	13.00	16.70	18.10	18.40	5.60	<b>21.40</b>	6.70	100
AHBAP-ÇAVUŞ	Mean	3.91	2.42	2.10	2.49	3.76	1.33	1.10	2.63
	N	87	60	60	65	25	49	14	360
	%	9.90	15.30	13.30	17.10	<b>35.90</b>	6.90	1.50	100
KEVGİR	Mean	2.79	1.15	1.20	1.58	3.04	1.10	1.00	1.75
	N	87	60	60	65	25	49	14	360
	%	12.00	10.90	11.40	16.30	<b>38.50</b>	8.60	2.20	100
AL GÜLÜM VER GÜLÜM	Mean	3.29	1.40	1.20	1.65	3.20	1.04	1.00	1.93
	N	87	60	60	65	25	49	14	360
	%	<b>41.20</b>	12.10	20.40	15.40	11.50	7.30	2.00	100

“Terazi” metaforunun %21.40 oranla TMOK’da, “Ahbap-Çavuş” metaforunun %35.90 oranla ÇÜBESYO’da, “Kevgir” metaforunun %38.5 oranla ÇÜBESYO’da, “Al Gülüm Ver Gülüm” metaforunun %41.2 SGM’de en yüksek oranla kullanıldığı belirlenmiştir.

**Tablo 7.**Kurumlarınışgörene Verdiği Değeri İfade Eden Metaforların Yüzde ve Ortalamaları

	Kurumlar								
		SGM	IGHSİM	AGHSİM	TFF	ÇÜBESYO	TMOK	TASKK	TOPLAM
BÖCEK	Mean	2.88	1.47	1.75	1.35	2.60	1.10	1.40	1.85
	N	87	60	60	65	25	49	14	360
	%	<b>37.70</b>	13.20	15.80	13.20	9.80	8.10	2.10	100
KAHRAMAN	Mean	1.22	1.23	2.30	2.31	1.84	2.84	2.36	1.91
	N	87	60	60	65	25	49	14	360
	%	15.5	10.80	20.10	<b>21.90</b>	6.70	20.30	4.80	100
ETKİSİZ ELEMAN	Mean	3.95	2.83	3.50	1.88	2.72	1.18	1.21	2.75
	N	87	60	60	65	25	49	14	360
	%	<b>34.80</b>	17.20	21.20	12.30	6.90	5.90	1.70	100
GÖZBEBEĞİ	Mean	1.32	1.82	1.97	2.54	1.96	3.10	3.14	2.09
	N	87	60	60	65	25	49	1	360
	%	15.30	14.50	15.70	<b>21.90</b>	6.50	20.20	5.90	100

“*Böcek*” metaforunun % 37.7 oranla SGM’de, “*Kahraman*” metaforunun %21.9 oranla TFF’de, “*Etkisiz Eleman*” metaforunu %34.8 oranla SGM’de, “*Gözbebeği*” metaforunu %21.9 oranla TFF’de en yüksek oranla kullanıldığı belirlenmiştir.

## TARTIŞMA VE SONUÇ

Araştırmaya katılan spor kuruluşlarındaki örgüt kültürü eğiliminin metaforlarla analizinde ortaya çıkan bulgular, aşağıda her kurum için ayrı ayrı ele alınarak tartışılmıştır.

**Spor Genel Müdürlüğü (SGM);** çalışanları kurumlarını; “Kimsenin kimseye güvenememesi” anlayışını temsil eden “*Kurtlar Sofrası*” ve “Çalışanların birbirleri arkasından konuşmaları” anlayışını temsil eden “*Dedikodu Yuvası*” olumsuz metaforlarıyla tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “*Çorba*” ve “*Dingo’nun Ahır*” metaforları da olumsuz metaforlardır. Çalışanlar kurumlarına yeni personel alınırken hangi kriterlerin öne çıktığını; “Kuruluşa alınacak personelin referansının siyasi açıdan güçlü olması, Ankara’da dayısının olması” anlayışını temsil eden “*Arkası Sağlam*”, “Kuruluşa alınacak personelin veraset, soya çekim ve babadan-oğla devrolma” anlayışını temsil eden “*Veliaht Sistemi*” ve “Kuruluşa alınacak personelin referansının tanıdık birisi ya da birileri olması ve hatır gönül işleri” anlayışını temsil eden “*Ahbap-Çavuş*” olumsuz metaforları ile tanımlamışlardır. Çalışanlar kurumlarında yapılan tören veya toplantılarda yönetici-personel ilişkisini; “İlişkilerin gelip geçici olduğu” anlayışını temsil eden “*Sabun Köpüğü*” ve “İlişkilerin soğuk olduğu” anlayışını temsil eden “*Buz Gibi*” olumsuz metaforları ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Kalabalığın gözünü boyamak için ilişkilerini iyi göstermeye çalıştığı” anlayışını temsil eden “*El İyisi*” metaforu da olumsuz metafordur. Oysaki örgüt bir aile, köy, kulüp havası taşınmalı, karşılıklı güven ve dostluk bulunmalıdır. Çalışanlar kurumlarının yönetim anlayışını; “Söz sahibi kişi ne derse o olur”, anlayışını temsil eden “*Krallık*” ve “Etliye sütlüye karışma ki kimsede sana karışmasın” anlayışını temsil eden “*Salla Baş Al Maası*” olumsuz metaforları ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Bazı yöneticilerin yetkilerini kötüye kullanıp, egolarını tatmin etme” anlayışını temsil eden “*Ahkâm Kesme*”, “Bazı yöneticilerin yönetimi sadece verilen görevi yaptıktan sonra işinin bitmesi” anlayışını temsil eden “*Bitsede Gitsen*” metaforları da olumsuz metaforlardır. Çalışanlar kurumlarının diğer kurumlarla olan ilişkilerini; “İşlerin birbirine girmesi ve karmakarışık olması” anlayışını temsil eden “*Arapsaç*” ve “Kendi işimizi kendimiz hallederiz, kimseleri iç işlerimize karıştırmayız, başkalarına da karışmayız” anlayışını temsil eden “*Kapalı Kutu*” olumsuz metaforları ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Bu kurumun diğer kurumlarla olan ilişkilerinde karşılıksız hiçbir şey olmayacağı” anlayışını temsil eden “*Al gülüm Ver Gülüm*” ve “Bu kurumun diğer kurumlarla ilişkilerinde yüz göz olduğu, seviyesizleştiği” anlayışını temsil eden “*Laçka*” metaforları da olumsuz metaforlardır. Çalışanlar kurumdaki adalet anlayışını; “Kuruluşların çalışanlarına karşı davranışlarda karşılıklı çıkar ilişkilerinin olduğu” ifade eden “*Al Gülüm Ver Gülüm*” olumsuz metaforu ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Kuruluşun adalet anlayışının doğru düzgün çalışmadığı” anlayışını temsil eden “*Bozuk Tartı*” metaforu da olumsuz metafordur. Çalışanlar kurumun işgörene verdiği değeri; “Kuruluşların çalışanlarını ezmesi, kendilerinden küçük görmesi” anlayışını temsil

eden **“Böcek”**, “Kuruluşlarda çalışanların varlıklarıyla yokluklarının bir olduğu” anlayışını temsil eden **“Etkisiz Eleman”** olumsuz metaforları ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Kuruluşun çalışanlarına her istediğini yaptırabileceği” anlayışını temsil eden **“Köle”** ve “Kuruluşun işgörenleri sürekli azarlayıp tersledikleri” anlayışını temsil eden **“Stres Topu”** metaforları da olumsuz metaforlardır. Bu metaforlar SGM’nin işgörene değer vermediği ve bu durumun örgüt üyeleri tarafından da algılanabildiğini göstermektedir. Yöneticiler astlarını yönlendirirken, sahip oldukları statü yerine, onlara değerli olduklarını hissettirme aracını kullanmayı tercih etmeli ve astlarına güvenmelidirler. SGM’de ön plana çıkan olumsuz metaforlar, SGM’nin örgüt kültürünün güçlü kültürel eğiliminde olmadıkları şeklinde yorumlanabilir. SGM’nin bu sonuçları, Palmer ve Lundberg’in (1995) çalışmalarında da ön plana çıkan olumsuz metafor kullanım oranları, olumlu metaforların kullanım oranlarından daha fazladır, sonucuyla örtüşmektedir.

**İstanbul Gençlik Hizmetleri Spor İl Müdürlüğü (İGHSİM);** çalışanları kurumlarını, SGM çalışanlarının tanımlarına ek olarak “diğer” kısmına yazdıkları “Çalışanların örgütte yapılan her işi, örgütün amaçlarının gerçekleşmesi ve örgütün başarıya ulaşması için değil sadece geçimlerini sağlamak için zorunlu olarak yapmaları” anlayışını temsil eden **“Ekmek Parası”** ve “Örgütte adil bir sisteminin bulunmadığının, işgörene sağlanacak hertürlü yardım, destek ve ödüllerde işgörenin performansı ve işindeki becerisi temel ölçütler olarak kabul edilmediği; imtiyazlı davranışların uygulandığı” anlayışını temsil eden **“Cemaat”** olumsuz metaforlarıyla tanımlamaktadırlar. İGHSİM’de olumsuz metaforların ön plana çıkması, güçlü kültürlere sahip örgütlerin özelliklerini taşımadığının bir göstergesi olarak yorumlanabilir. İGHSİM’nin bu sonuçları, bağlı oldukları SGM’nin sonuçlarıyla örtüşmektedir.

**Adana Gençlik Hizmetleri Spor İl Müdürlüğü (AGHSİM);** çalışanları “ilişkilerin resmi, hiyerarşik yapıya sahip olduğu” anlayışını temsil eden **“Emir-Komuta”** olumsuz metaforu ile tanımlamışlardır. Çalışanların “diğer” kısmına yazdıkları “Kuruluşun çalışanlarını her statüde çalıştırabileceği ve bu yüzden kendi alanlarında uzmanlaşamadıkları” anlayışını temsil eden **“Yedek Oyuncu”**, “Yöneticilerin çalışanlarının hatalarında ikili ilişkilerin seviyesine göre kendi adamlarını görmezden gelme ve ayrıcalıklı davranması” anlayışını temsil eden **“Cemaat”** ve “Sözleşmeli ve kadrolu çalışan ayrımını, kadrolu çalışanlar hancı sözleşmeli çalışanlar ise yolcu” anlayışını ifade eden **“Zenci-Beyaz Ayrımı”** metaforları da olumsuz metaforlardır. AGHSİM’de ön plana çıkan metaforların, örgüt kültürü eğiliminin, güçlü kültürle sahip örgütlerin özelliklerini taşımadığının bir göstergesi olarak yorumlanabilir. AGHSİM’nin bu sonuçları bağlı oldukları SGM’nin sonuçlarıyla örtüşmektedir.

**Türkiye Futbol Federasyonu (TFF);** çalışanlarının kurumlarını “Kuruluşun hiç durmadan çalıştığı” anlayışını temsil eden **“Arı Kovanı”**, “Çalışanların katılması gerektiği özel tören veya toplantılardaki yönetici-personel ilişkisinin aile ilişkisi gibi samimi yapıya sahip olduğu” anlayışını temsil eden **“Abi-Kardeş”**, “Herkesin farklı görev ve yetkileri olsa da genel olarak uyumlu çalışma” anlayışını temsil eden **“Orkestra** olumlu metaforu ile tanımlamaktadırlar. Çalışanların “diğer” kısmına yazdıkları “Kuruluşun çalışanlarını bir aile gibi gördüğü” anlayışını temsil eden **“Babacan”**, “Kuruluşun çalışanlarını sorun çözücü olarak gördüğü” anlayışını temsil eden **“İş Bitirici”**, “Çalışanların yaratıcı olduğu” anlayışını temsil eden



**“Mucize”**, “İşlerin yolunda gittiği” anlayışını temsil eden **“Tıkır Tıkır İşleyen Saat”** ve “Kuruluşların, çalışanlarını her şeyden üstün tuttıkları” anlayışını temsil eden **“Gözbebeği”** metaforları da olumlu metaforlardır. Bulgular tablosuna bakıldığında TFF çalışanlarının olumsuz metaforları az, olumlu metaforları daha fazla kullandıkları görülmektedir. Çalışanların “diğer” kısmına yazdıkları “Bir gecede her şeyin değişebileceği tüm değerlerin alt-üst olabileceği” anlayışını ifade eden **“Bizans”** kök metaforunu çalışmaya katılan TFF 65 çalışanından 33’ü kullanmıştır. Sonuç olarak, sıkı yaptırımları olan, sürekli olarak çalışanları kontrol altına almaya çalışıp, çeşitli yaptırımlar uygulatan, klasik yönetim anlayışına sahip spor kuruluşlarından çok, insana daha çok önem veren esnetilmiş kurallara sahip spor kuruluşları çalışanlarının olumlu metaforları kullandığını ve bu durumun demokratik bir ortamda, çağdaş yönetim anlayışının etkili olmasından, çalışanlara katı yaptırımlar uygulamayıp onlara iş verimini artırıcı imkânların sunulmasından ve çalışanlara gereken değerin verilmesinden kaynaklanıyor olmasının bir göstergesi olarak yorumlanabilir. Varol’un (1993) güçlü bir örgüt kültürünün oluşabilmesi ile ilgili olarak; yapıya ilişkin ilkeleri, hiyerarşiye fazla önem vermeme, kuralların oluşumuna herkesin katılımı, esnek yapı, yöneticilerin kuralları biçimlemelerinin yanı sıra iş görenlerle birlikte çalışmalarını biçimde ifade etmektedir sözü bu durumu destekler niteliktedir (Güvenç, 1984). TFF’de ön plana çıkan metaforların, güçlü örgüt kültürü eğiliminde olduğu şeklinde ifade edilebilir.

**Çukurova Üniversitesi Beden Eğitimi ve Spor Yüksek Okulu (ÇÜBESYO):** Yüksek eğitim kurumları özellikle sadece öğrenci ve çalışanlara değil toplumun geneline, sorunları nasıl çözeceğinin çerçevesini (kültürünü) belirleme yöntemini öğretme işini üstlenmiştir. Bir eğitim kurumundan söz edildiğinde genellikle yapısından ve programından söz edilir. Fakat okulun en önemli özelliği, onun yazılı olmayan norm çevresi ve beklentilerinden oluşan kültürüdür. Bazı örgütler ciddi, bazıları eğlenceli, bazılarında verimlilik, bazılarında ise, insan ilişkileri en öne gelir. Okullara baktığımızda bu özelliklerin tümünü içeren örgütler olduğunu görürüz. Çalışanlar kurumlarının adalet anlayışını “Kuruluş çalışanlarına davranışta samimiyet ve yakınlık derecesine göre muamele” anlayışını temsil eden **“Ahbap-Çavuş”** ve “Kuruluşların çalışanlarına karşı davranışlarının delik deşik olduğu, eşit olmadığı” anlayışını temsil eden **“Kevgir”** olumsuz metaforları ile tanımlamışlardır. Örgütte adil bir sistem bulunmalı; işgörene sağlanacak her türlü yardım, destek ve ödüllerde işgörenin performansı ve işindeki becerisi temel ölçütler olarak kabul edilmeli; imtiyazlı davranışlardan kaçınılmalıdır. Bulgular tablosuna bakıldığında ÇÜBESYO çalışanlarının olumsuz metaforları çok fazla, olumlu metaforları ise az kullandıkları görülmektedir. Çalışanların “diğer” kısmına yazdıkları “Kuruluşun işgörenleri sürekli azarlayıp tersledikleri” anlayışını ifade eden **“Stres Topu”**, “yapacak başka bir işi olmadığı için mecburiyetten bu işi yaptığı” anlayışını temsil eden **“Ekmek Parası”**, ve “Çalışma arkadaşlarının başarısı karşısında arkadaşlarını çekemeyip onun başarısını alt etmek için kolları sıvamak” anlayışını temsil eden **“Diş Bilemek”** olumsuz metaforları ile tanımlamaktadırlar. Oysaki örgütte yapılan her işin, örgütün amaçlarının gerçekleşmesi ve örgütün başarısı için olduğu unutulmamalıdır. Bu süreçte biçimsel kurallardan çok ulaşılan sonuçlar önemli görülmelidir. Örgütte hoşgörü ortamı egemen olmalı, örgütsel çatışmalardan büyük ölçüde kaçınılmalı; meydana gelebilecek çatışmalar karşılıklı anlayış içimde çözümlenmelidir. Örgütte yapılan işlerle ilgili olarak işgörenlerin yapabileceği hatalar hoşgörü ile karşılan-

malı; şikâyetler ise hoş karşılanmamalıdır. Bulgularımızdan yola çıkarak ÇÜBESYO'nun örgüt kültürünün güçlü örgüt kültürü eğiliminde olmadığı söylenebilir.

**Türkiye Milli Olimpiyat Komitesi (TMOK);** çalışanlarının, kurumlarına yeni personel alınırken hangi kriterlerin öne çıktığını “Kuruluşa alınacak personelin gereken bilgi birikimi ve donanımına sahip olması” anlayışını temsil eden “İşin Ehl-i” olumlu metaforuyla tanımlamaktadır. Kurumlarındaki adalet anlayışını “Kuruluşların çalışanlarına eşit davranması” anlayışını temsil eden “*Terazi*” olumlu metaforuyla tanımlamaktadırlar. Bulgular tablosuna bakıldığında TMOK çalışanlarının olumsuz metaforları az, olumlu metaforları daha fazla kullandıkları görülmektedir. Çalışanların “diğer” kısmına yazdıkları “Yardımlaşma, dayanışma” anlayışını temsil eden “İmece” metaforu da olumlu metafordur. Olumlu metaforlarındığer spor kuruluşlarına göre daha yüksek olmasının kamu yararına işleyen dernekler statüsünde olmasından ve gönüllülük ilkesine dayanmasından kaynaklanıyor olmasının bir göstergesi olarak yorumlanabilir. Diğer kuruluşlarda olduğu gibi TMOK’da da ortaya çıkan bir diğer serbest metafor ise “*Cemaat*” metaforudur. “Yöneticilerin çalışanlarının hatalarında ikili ilişkilerin seviyesine göre kendi adamlarına izin verip görmezden gelme, kendi samimi olduğu çalışana ayrıcalıklı davranması” anlayışını temsil eden “*Cemaat*” olumsuz metaforunun ön plana çıkması ister devlete bağlı ister gönüllülük ilkesine bağlı olsun hemen hemen her kademedeki çalışanların işlerini ikili ilişkilerine göre yürüttüğünden kaynaklanıyor olmasının bir göstergesi olarak yorumlanabilir. TMOK ön plana çıkan metaforların, TMOK örgüt kültürü eğiliminin, güçlü kültürlere sahip örgütlerin özelliklerini taşıdığına bir göstergesi olarak yorumlanabilir.

**Türkiye Amatör Spor Kulüpleri Konfederasyonu (TASKK);** Bulgular tablosuna bakıldığında TASKK çalışanlarının olumsuz metaforları az, olumlu metaforları daha fazla kullandıkları görülmektedir. Çalışanları kurumlarının diğerkuruluşlarla olan ilişkilerini “İşlerin sorunsuz bir şekilde işlediği” anlayışını temsil eden “*Güllük Gülistanlık*” olumlu metaforu ile tanımlamaktadırlar. Bu durum TASKK’ın örgüt kültürü eğiliminin, güçlü kültürlere sahip örgütlerin özelliklerini taşıdığına bir göstergesi olarak yorumlanabilir.

Örgüt kültürü eğilimini metaforlarla analiz eden çalışmalar, spor kuruluşlarında belirli periyotlarda tekrarlanmalı ve örgüt çalışanlarının bir önceki çalışmalarda tercih ettikleri metaforlarda, olumlu ya da olumsuz anlamda olan metaforlarda bir değişme olup olmadığı takip edilmelidir.

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## Ankara Üniversitesi Öğrencilerinin Serbest Zamanlarında Egzersize Katılma Sıklıkları ve Nedenleri

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Bu araştırmanın amacı, Ankara Üniversitesi öğrencilerinin serbest zamanlarında egzersize katılma ve katılmama sıklıklarını belirlemek, katılmama/katılmama nedenlerini öğrenmek ve daha sonra serbest zamanları içerisinde ne gibi aktiviteler yaptıklarının belirlenerek, bunların sportif faaliyetler ile ilişkilendirilmesidir. Bu çalışmanın evrenini, 2012-2013 eğitim-öğretim döneminde aktif olarak öğrenimlerini sürdüren Ankara Üniversitesi Fakülteleri ve Yüksekokulları öğrencileri oluşturmaktadır. Bu amaçla, Ankara Üniversitesi'ne bağlı Fakülte ve Yüksek Okulları'nda öğrenim gören toplam 780 öğrenciye bu amaçla geliştirilen ölçek aracı uygulanmıştır. Sonuçlar "Anova", "t testi" ve "frekans analizi" yöntemleri ile yorumlanmıştır. Araştırmaya katılan öğrencilerin tamamı zorunlu ihtiyaçlarının dışında kendilerine serbest zaman ayırabildiklerini ifade etmişlerdir. Serbest zamanlarını çeşitli aktivitelerle geçiren öğrencilerin gerçekleştirdikleri egzersiz harici 3 etkinliği belirtmeleri istendiğinde, ortaya çıkan sonuçlar, öğrencilerden çoğunun internet ve bilgisayar kullanımına (%68,6) ve müzik dinleme/ yapmaya (%73,2) zaman ayırdıklarını göstermiştir. Öğrencilerin büyük çoğunluğu (%33,1) egzersiz dışındaki serbest zaman etkinliklerini haftada 3 gün yaptıklarını belirtmişlerdir. Ölçme aracına katılanların sadece %44,2'sinin düzenli olarak egzersiz yaptığı gözlenmiş ve fitness, yüzme, yürüyüş, koşu ve pilates en çok yapılan düzenli egzersizler olarak belirlenmiştir. Katılımcıların egzersizlere, haftada yoğunluklu olarak 3 gün (%15,3) ayırdıkları ve saat bazında ise yoğunluklu olarak 2 ile 4 saat arası bir zaman (%27,6) ayırmayı tercih ettikleri görülmüştür. Sonuç olarak, katılımcıların serbest zamanlarını çoğunlukla müzik dinleyerek/yaparak ve internette ya da bilgisayar başında geçirdikleri belirlenmiştir. Ankara Üniversitesi öğrencilerinin serbest zamanlarında egzersize katılma oranlarının, katılmama oranlarından daha düşük olduğu görülmüştür. Egzersize yer verme nedenleri arasında ise, yeterli vakit yaratılabilmesi, egzersizi sevme, sağlığına önem verme ve sosyal bir çevre ve arkadaşlık ilişkisi geliştirme, farklı etkinliklere katılma, kendini güçlü hissetme ve hayatın karmaşık yapısından uzaklaşma seçeneklerinin ön planda olduğu görülmüştür. Egzersize yer vermeme nedenlerinin başında egzersizi sevmeme, egzersiz yapacak uygun yerin olmaması, yoğun ders yükü, günlük saatlerin uygunsuzluğu, beslenme yetersizliği ve insanlardan ayrı kalma isteği gelmektedir.

**Anahtar Kelimeler:** Serbest zaman, Fiziksel aktivite, Egzersiz, Rekreasyon, Ankara Üniversitesi öğrencileri

## GİRİŞ

Serbest zaman terimi genel anlamda, bireyde özgürlüğü ve seçiciliği sağladığı gibi, geleneksel olarak da çeşitli şekillerde kullanılır. Fakat özünde genel olarak, bireyin kusurlarını bulması, kendini geliştirmesi, rahatlaması veya memnuniyeti için kişisel ihtiyaçlarını karşılama amacıyla kullanılır. Genellikle gönüllü olarak seçilen aktiviteler katılımını içerse de, varoluşun bütünsel durumu, hatta manevi bir deneyim olarak da belirtilebilir (Kraus, 1996). Genel olarak literatürde, “zorlamalardan özgürlüğe ya da zorunlu sosyal görevler sonrası arta kalan zamanlar” olarak da tanımlanan serbest zaman kavramını, teknolojinin gelişimi ile birlikte; bireyin hem kendisi, hem de başkaları için bütün zorluklardan veya bağlantılardan kurtulduğu ve kendi isteği ile seçeceği bir faaliyetle uğraştığı zaman olarak da tanımlayabiliriz (Aydoğan, 2000). Serbest zaman davranışsal açıdan iki güdüleme gücünün aynı anda etkisi altında kalmaktadır. Bu güdülemelerden birisi, günlük yaşamın tek düzeliğinden, sıradanlığından, çevreden ve ilişkilerden uzaklaşmaktır. Diğeri ise serbest zaman etkinliklerine katılarak kendini tanıma, etkin olma, üstünlük, mücadele, öğrenme, keşif, rahatlama gibi kişisel toplumsal iletişim gibi psikolojik ödül beklentisi ile güdülenmesidir (Kılbaş, 2004).

Gelişmiş ülkelerin zaman kullanımı konusunda bilinçlenmiş ülkeler olduğunu söylemek olasıdır. Bu durum, gelişmiş ve gelişmemiş ülkeler arasındaki en önemli farklardan birisini ortaya kaymaktadır. Descartes, toplumların ileri ya da geri zekâlı diye ayıramayacağını ülkelerin gelişmişlik ve zenginliklerinin, zamanı planlı ve programlı kullanarak çalışmalarından ve dinlenmelerinden kaynaklandığını ileri sürmektedir (Tezcan, 1982). Stebbins (2007), geçici ve gerçek olmak üzere iki tür serbest zaman ayrımı yapar. Bu görüşe göre, geçici serbest zaman doğası gereği ödüllendiricidir. Kısa süreli yarar sağlar, çok az özel eğitim gerektirir ya da hiç özel eğitim gerektirmez. Buna karşın, gerçek serbest zaman aktiviteleri önemli ölçüde kişisel çabaya ve hatta bazen direnç göstermeye ihtiyaç duyar. Gerçek serbest zaman aktivitelerinin sürekli ve kalıcı yararları vardır. Katılımcılar güçlü bir şekilde aktivite ile özdeşleştiği gibi bu aktiviteler onların kariyerleri bile olabilir. Bu katılım, onların yaşamları boyunca aktivite içerisinde farklı basamaklarda farklı katılım ve başarı kazandıkları anlamına gelmektedir (Leitner & Leitner, 2012).

Ücretli çalışma hayatı, erkeklerin olduğu kadar kadınları da kapsayan birçok insanın zamanının büyük bir bölümünü içermektedir. Çünkü 1990’ların ortalarına kadar, İngiltere’de, kadınlar ücretli çalışanların % 49’undan fazlasını ve iş gücünün asıl büyük bölümünü o zamanlar kadınlar oluşturmaktaydı (Noon & Btyton, 1997). Bugün, birçok erkek ve kadın, zamanlarının büyük bölümünde ücretli işlerde çalışmaktadır ve iş hayatı, birçok insanın serbest zaman aktivitelerine harcadıkları gelirin çoğunu karşılamaktadır (Noon & Btyton, 1997). Çalışma hayatı ve serbest zaman kavramı üzerine çalışmalar bu alandaki eksiklerin bir sonucu olarak ortaya çıkmıştır. 1980’lerde araştırmanın yavaşlaması, bu çalışma hayatının serbest zaman ile ilişkisinin, ne önemsiz olarak düşünülmesinden, ne de modasının geçmesinden kaynaklanıyordu. Daha ziyade, bu eksiklik, 1970 ve 1980’lerde serbest zaman ve çalışma hayatı ile ilgili konuların öneminin azalmasından, kısmen de o dönemdeki soruların çoğunun tatmin edici bir şekilde cevaplanmasından, aynı zamanda çalışma hayatının değişiyor olması ve araştırma konularının tekrar tanımlanması gereğinden kaynaklanıyordu. Biraz geç olsa da, geçmişte sosyal

ve psikolojik alanda çalışma hayatı-serbest zaman ilişkisi o dönemde daha büyük önem arz eden sosyal ve ekonomik akımlar tarafından gölgede bırakılmıştır (Roberts, 2006).

İnsanın, yoğun çalışma yükü, rutin hayat tarzı veya olumsuz çevresel etkilerden tehlikeye giren veya olumsuz etkilenen bedeni ve ruhi sağlığını tekrar elde etmek korumak veya devam ettirmek aynı zamanda zevk ve haz almak amacıyla, kişisel doyum sağlayacak, tamamen çalışma ve zorunlu ihtiyaçlar için ayrılan zaman dışında kalan bağımsız ve bağlantısız serbest zaman içinde, isteğe bağlı ve gönüllü olarak ferdi ve grup içinde seçerek yaptığı etkinlikler rekreasyondur (Kılbaş, 2004). Rekreasyon, bir anlamda toplumsal refah hizmeti, bir anlamda ise yaygın bir eğitim niteliğindedir. Bu ayrımlaştırmayı daha iyi yapabilmek için rekreasyonun tarihi gelişimindeki iki önemli oluşuma bakmak gerekir; Rekreasyon, başlangıçta eğlenme ve dinlendirmeyi amaçlar. Eğitsel önemin kavranmasıyla birlikte, kişilere toplumsal değerler aşılmasını amaçlamıştır (Kılbaş, 2004). Aristo, rekreasyon ve serbest zaman arasındaki ayrımı şöyle yapmıştır: Serbest zaman birbiriyle kesişen 3 kategoriye ayrılabilir: Düşünme, rekreasyon, eğlenme. Düşünme bir şeyi dikkatle inceleme anlamına gelmektedir, rekreasyon serbest zamanın, aktif ve katılımı gerektiren parçasıdır, eğlenme ise izleyiciler ya da dinleyiciler tarafından gerçekleştirilen ve aktif katılımı içermeyen parçadır. Bugün ise rekreasyon terimi belirlenmiş ve biçimlendirilmiş birçok aktiviteyi tanımlamak için kullanılmaktadır (Cordes, 2013).

Serbest zaman fiziksel aktivitesi, sağlıklı yaşam biçiminin bir parçasıdır ve çeşitli yaş gruplarında, etnik toplumlarda ve çeşitli kronik hastalık durumlarında sağlık üzerinde olumlu etkileri olduğu gözlenmiştir (Wagner, Lacroix, Buchner, Larson, 1992; Pahor ve ark., 1994; Crespo, Keteyian, Heath, Sempos, 1996; Calfas, Long, Sallis, Wooten, Pratt, Patrick, 1996; Kushi ve ark., 1997). Serbest zaman fiziksel aktivitesi, boş zaman sırasında en az 20 dakika boyunca yapılan ve kalp hızı ile nefes alış verişini önemli ölçüde arttıracak kadar güç gerektiren egzersiz olarak tanımlanmaktadır (Sallis ve ark., 1989). Yürümek, koşmak, bisiklet sürmek ve aerobik gibi birçok farklı serbest zaman fiziksel aktivitesi çeşidi vardır ve bu aktivitelerin tümü enerji harcamayı sağlar. Hareketsiz bir birey, yaklaşık 7 günlük süre içinde 500 kcal/hafta'dan daha az enerji harcayan birey olarak tanımlanır (Dergance ve ark., 2003). Doğadaki pek çok canlı, sadece yaşamsal faaliyetlerini sürdürmek için çaba gösterir, ancak insanoğlu farkını yaşamsal faaliyetlerin yanı sıra istediği standartlarda yaşama dürtüsünü ortaya koyarak göstermiştir. Kalitesi artmış bir yaşam, uygun zaman dilimleri ile üretmeye, dinlenmeye, eğlenmeye, temel gereksinimlere göre ayarlanmış sağlıklı bir yaşamı tanımlar. Sağlık, kaliteli yaşamın olmazsa olmaz koşulu olarak kabul edildiğine göre, teknolojik gelişmelerle günlük aktivite yoğunluğunu azaltmak her ne kadar yaşamı kolaylaştırırsa da uzun vadede hareketsiz bireylerin sayısını arttırmakta ve sağlığı olumsuz etkilemektedir (Bek, 2008).

Sağlık için egzersizin temel amacı, hareketsiz bir yaşantının neden olduğu organik ve fiziki bozuklukları önlemek veya yavaşlatmak, beden sağlığının temeli olan ve fizyolojik kapasitesini yükseltmek, fiziksel uygunluğu ve sağlığı uzun yıllar muhafaza etmektir. Gelişmiş ülkelerden başlayarak, egzersize olan ilginin artışıdaki nedeni, biyolojik bir dengeleme ihtiyacı şeklinde açıklamak mümkündür (Zorba, 1999). Bireylerin fiziksel aktiviteye karşı tutumları hem kişilik özellikleri hem de sosyal çevreleri tarafından belirlenmektedir. Bir bireyin fiziksel

olarak aktif olup olmadığı hem, cinsiyet, yaş ve etnik altyapı gibi demografik özelliklere, hem de gelir seviyesi ve eğitim gibi sosyo-ekonomik özelliklere bağlıdır. Bunların dışında en az 3 faktör daha sayılabilir: birincisi, bireysel tutum, tercihler, motivasyon ve fiziksel aktiviteye özgü beceriler; ikincisi, fiziksel aktiviteye katılımı kolaylaştıran fırsatlar ya da zorlaştıran engeller, üçüncüsü, rekabet içeren aktivitelerde teşvik edici ya da caydırıcı unsurlar. Bu üç faktörden son ikisi bireyin dışındaki olgulardır (Committee on Physical Activity, Health, Transportation, and Land Use, 2005).

Düzenli fiziksel aktivitenin insan sağlığı üzerindeki sosyolojik ve psikolojik etkilerine baktığımızda kişide; iş veriminin artması, hastalık yüzünden çalışılmayan gün sayısının azalması, daha enerjik hissedilmesi ve tembellikten uzaklaşılması, sağlam, canlı hareketli, egzersiz yapmaya hevesli bir kişi haline gelmesi, öz saygının geliştirilmesi, organizmayı beden ve ruhsal streslerin yıpratıcı etkisinden koruması, kişiyi hayata daha mutlu bakmaya ve endişelerden uzaklaşmaya yöneltmesi, asabi ve hiperaktif yapıyı sakinleştirilmesi, kendine güveni arttırması, düzenli uyku ritmine sahip olunması ve insanlarla çabuk arkadaşlık kurma, paylaşma ve yardımlaşma duygularını geliştirmesi şeklinde yorumlayabiliriz (Zorba, 1999).

Sportif etkinlikler temel olarak üç açıdan pozitif dışsallık etkisi yaratmaktadır; bunlar bireyde oluşan bireysel etki, spor etkinliği sırasında oluşan grup etkileşimi sonucu sağlanan sosyal etki ve bölgede spor organizasyonu sonucunda oluşan ekonomik etkidir. Spor etkinliği esnasında, etkinliğin büyüklüğüne, sporun türüne, katılma ve yer gibi değişkenlere bağlı olarak sosyal ilişkiler yaratılmaktadır. Bununla birlikte genel kabul edilen görüş, sportif etkinliklerin bireyin sosyal uyum düzeyini ve sosyal anlamda tanınmışlığını arttırdığı yönündedir (Çağlarır, 2009).

## **MATERYAL VE METOT**

Tarama modeli bu çalışma ile Ankara Üniversitesi öğrencilerinin serbest zamanlarında egzersize katılma ya da katılmama nedenleri belirlenmeye çalışılmış, egzersize katılmaları durumunda ise egzersiz yapma sıklığını etkileyen faktörler incelenmiştir. Çalışmanın evrenini, 2012-2013 eğitim öğretim döneminde aktif olarak öğrenimlerini sürdüren Ankara Üniversitesi Fakülteleri ve Yüksekokulları öğrencileri oluşturmaktadır. Güncellenmiş 2012-2013 öğretim yılı rakamlarına göre ölçme aracının uygulanması aşamasında mevcut öğrenci sayısı yaklaşık 38868 kişi olarak Ankara Üniversitesi Rektörlüğünden bildirilmiştir. Bu sayıdan tabakalı örneklem tekniği ile seçilmiş ve her fakülte ve yüksekokulu temsil etmesi bakımından belirlenmiş oransal büyüklüklerle, 394 öğrenci örneklem olarak alınmış (Ural & Kılıç, 2006) olup, bu sayının yaklaşık iki katına denk gelen 780 öğrenciye bu amaçla geliştirilen ölçek aracı uygulanmıştır. Verilerin toplanması sırasında ilgili literatür taranarak, araştırmanın alt amaçları ile ilgili yazılı kaynaklardan gerekli ham veriler derlenmiş, bu verilerden yararlanılarak ölçme aracı geliştirilmiştir. Ölçme aracının yapı geçerliliği için madde toplam korelasyon analizi ve faktör analizi yapılmıştır. Ölçek aracının güvenilirliği Cronbach Alpha (Alfa) güvenilirlik katsayısı ile hesaplanmıştır. Ölçek aracındaki soruların analizlerinde cinsiyet için “t testi”; gelir, bütçe, ikamet ve sınıf değişkenleri için “Anova testi” yapılmıştır. Anova testi sonucunda fark-



lı grubu bulmak için “Scheffe testi” kullanılmıştır. Bu testlerin yanında betimsel istatistiksel yöntemler uygulanmıştır.

## BULGULAR

Katılımcıların %46,2’sini erkek, %53,8’ini ise kadınlar oluşturmaktadır. Katılımcı öğrencilerin sınıf dağılımları incelendiğinde, %41,2’si ikinci sınıf, %22,1’i birinci sınıf, %20,4’ü üçüncü sınıf, %16,4’ü dördüncü sınıfta okumaktadır. Katılımcıların bütçe durumu karşılaştırıldığında ise, %34,1’inin bütçesi 500 TL’nin altında, %30,4’ünün bütçesi 501-1000 TL arasında, %25,6’sının bütçesi 1001-1500 TL arasında, %6,2’sinin bütçesi 1501-2000 TL arasında, %3,7’sinin bütçesinin de 2001 ve üstü TL olduğu görülmektedir. Katılımcıların ikamet ettikleri yerlere bakıldığında ise, %47,6’sı aile yanında, %23,7’si arkadaş yanında, %28,7’si ise diğer yerlerde (yurt, pansiyon v.b.) kaldıklarını belirtmişlerdir. Katılımcıların tamamı zorunlu ihtiyaçlarının dışında kendilerine serbest zaman ayırdıklarını belirtmişlerdir.

Araştırmaya katılan öğrencilerin serbest zamanlarında egzersiz harici tercih ettikleri üç etkinliği işaretlemeleri istenmiş ve ortaya çıkan bulgulara göre katılımcıların, %47,6’sı kitap okuduklarını, %73,2 si müzik dinledikleri ya da yaptıklarını, %68,6’sı bilgisayarda ya da internette vakit geçirdiklerini, %49,4’ü sinema veya tiyatroya gittiklerini, %36,2’si ise gezi ve eğlencelere gittiklerini belirtmişlerdir. Katılımcıların bu aktiviteleri en çok haftada 3 gün (%33,1) ve 3 saat (%26,7) yaptıkları ortaya çıkmıştır. Katılımcıların günlük yaşamlarında sosyal medya araçlarını düzenli olarak kullanıp kullanmadıkları sorulduğunda ise, %37,1 gibi çoğunluğun 46 dakika ve üzerinde kullandıkları belirlenirken, %10,4’ü herhangi bir sosyal medya aracı kullanmadığını belirtmiştir.

Ankara Üniversitesi öğrencilerinin serbest zamanları içerisinde düzenli egzersize zaman ayırıp ayırmadıkları incelendiğinde, %44,2’lik oranla 345 öğrencinin düzenli egzersize yer verdiği, %55,8’lik oranla 435 öğrencinin ise düzenli egzersize yer vermediği görülmüştür. Katılımcıların serbest zamanlarında yaptıkları egzersiz çeşitleri incelendiğinde, büyük çoğunluğu %9,9 ile fitness, %7,1 ile taekwondo, %6,6 ile yüzme, %6,8 ile yürüyüş, %6 ile tenis ve %4,7 ile futbol oluşturmuştur. Katılımcılar, bu egzersiz çeşitlerini büyük çoğunlukla haftada 3 gün (%15,3) ve 2 saat (%12,4) zaman ayırdıklarını belirtmişlerdir.

Ankara Üniversitesi öğrencilerinin serbest zamanlarında düzenli egzersize yer verip vermedikleri incelendiğinde aşağıdaki çizelgede verilen sonuçlar elde edilmiştir (Çizelge 1).

**Çizelge 1.** Katılımcıların Serbest Zamanlarında Düzenli Egzersize Katılma Frekans ve Yüzde Değerleri

<i>Düzenli Egzersize Zaman Ayırıp Ayırmadıkları</i>			
		<b>f</b>	<b>%</b>
	Evet	345	44,2
	Hayır	435	55,8
	<b>TOPLAM</b>	<b>780*</b>	<b>100</b>

(\* Ankete katılan toplam öğrenci sayısı)

Serbest zamanlarında düzenli olarak egzersize yer veren katılımcıların bu egzersizleri yapmak için nerelerden faydalandıkları, herhangi bir ücret ödeyip ödemedikleri ve bu egzersizler için antrenör/eğitmen desteği alıp almadıkları incelendiğinde aşağıdaki çizelgede verilen sonuçlar elde edilmiştir (Çizelge 2).

**Çizelge 2.** Katılımcıların Düzenli Egzersiz Yapmak İçin Ücret Ödeme, Egzersiz Yapılan Yer ve Antrenör/Eğitmen Desteği Alınması İle İlgili Frekans ve Yüzde Değerleri

		f	%
<i>Ücret Ödeme</i>	Evet	210	26,9
	Hayır	135	17,3
	<b>TOPLAM</b>	<b>345*</b>	<b>100</b>
<i>Egzersizin Yapıldığı Mekânlar</i>	Spor Salonu	123	15,8
	Özel Spor/fitness salonu	97	12,4
	Yüzme Havuzu	23	2,9
	Ev	18	2,3
	Açık Alanlar	84	10,8
	<b>TOPLAM</b>	<b>345*</b>	<b>100</b>
<i>Antrenör/Eğitmen Desteği</i>	Evet	185	23,7
	Hayır	160	20,5
	<b>TOPLAM</b>	<b>345*</b>	<b>100</b>

(\* Düzenli egzersiz yapan katılımcı sayısı)

### Serbest Zamanlarında Düzenli Egzersiz Yapan Katılımcıların Cinsiyet Değişkeni Açısından Değerlendirilmeleri:

Serbest zamanlarında düzenli egzersiz yapan katılımcıların cinsiyet değişkeni açısından tutumları incelendiğinde, “Egzersiz seviyorum”, Sosyal bir çevre oluşturuyorum”, “Farklı etkinliklere katılarak bilgi düzeyimi geliştiriyorum” ve “Kendimi daha özgür hissediyorum” seçenekleri arasında erkekler lehine anlamlı farklılıklar bulunmuş, “Kendimi iyi hissediyorum” seçeneğinde ise kadınlar lehine anlamlı farklılıklar bulunmuştur.

### Serbest Zamanlarında Düzenli Egzersiz Yapmayan Katılımcıların Cinsiyet Değişkeni Açısından Değerlendirilmeleri:

Düzenli egzersiz yapmayan katılımcılar arasında ise “Beslenme durumum yetersiz” cevap seçeneğinde erkekler lehine anlamlı bir fark bulunmuştur.

### Serbest Zamanlarında Düzenli Egzersiz Yapan Katılımcıların “Gelir Durumları” Değişkeni Açısından Değerlendirilmeleri:

“Hayatın karmaşık yapısından uzaklaşıyorum”, “Arkadaşlık ilişkisini geliştiriyorum” ve “Fiziksel yeteneklerimi egzersiz içerisinde kullanıyorum” seçeneklerine verilen cevaplarda 500 TL altı bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Kendimi güçlü hissediyorum” ve “Egzersiz konusunda bilinçli biriyim” seçeneklerine verilen cevaplarda 501 – 1000 TL arası bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Vak-

tim var” ve “Egzersiz seviyorum” seçeneklerine verilen cevaplarda 1001 – 1500 TL arası bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Sağlığıma önem veriyorum”, “Sosyal bir çevre oluşturuyorum” ve “Egzersize katıldıkça eğleniyorum” seçeneklerine verilen cevaplarda 1501 – 2000 TL arası bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

#### **Serbest Zamanlarında Düzenli Egzersiz Yapmayan Katılımcıların “Gelir Durumları” Değişkeni Açısından Değerlendirilmeleri:**

“Günlük programım/saatlerim uygun değil”, “Çok ders çalışmam gerekiyor” ve “İnsanlardan ayrı kalmak istiyorum” seçeneklerine verilen cevaplarda 500 TL altı bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Egzersiz sevmiyorum” ve “Beslenme durumum yetersiz” seçeneklerine verilen cevaplarda 501 – 1000 TL arası bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Egzersiz yapacak yerim ve ortamım yok” seçeneğine verilen cevaplarda 1001 – 1500 TL arası bütçeye sahip katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

#### **Serbest Zamanlarında Düzenli Egzersiz Yapan Katılımcıların “İkamet Ettikleri Yer” Değişkeni Açısından Değerlendirilmeleri:**

“Kendimi iyi hissediyorum” ve “Vaktim var” seçeneklerine verilen cevaplarda aile ya da arkadaş ile herhangi bir ev ortamında ikamet etmeyen katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Farklı etkinliklere katılarak bilgi düzeyimi geliştiriyorum”, “Yaşamımda kullanabileceğim beceriler geliştiriyorum”, “Hayatın karmaşık yapısından uzaklaşıyorum” ve “Fiziksel yeteneklerimi egzersiz içerisinde kullanıyorum” seçeneklerine verilen cevaplarda aile yanında ikamet eden katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

#### **Serbest Zamanlarında Düzenli Egzersiz Yapmayan Katılımcıların “İkamet Ettikleri Yer” Değişkeni Açısından Değerlendirilmeleri:**

“Vaktim yok”, “Egzersiz sevmiyorum”, “Egzersiz yapacak yerim ve ortamım yok”, “Fiziksel durumum uygun değil”, “Maddi durumum uygun değil”, “Çok ders çalışmam gerekiyor”, “Günlük programım/saatlerim uygun değil” ve “İnsanlardan ayrı kalmak istiyorum” seçeneklerine verilen cevaplarda aile yanında ikamet eden katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

#### **Serbest Zamanlarında Düzenli Egzersiz Yapan Katılımcıların “Öğrenim Gördükleri Sınıf” Değişkeni Açısından Değerlendirilmeleri:**

“Kendimi daha özgür hissediyorum” seçeneğine verilen cevaplarda 1. sınıfta öğrenim gören katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Egzersiz seviyorum”, “Sosyal bir çevre oluşturuyorum”, “Yaşamımda kullanabileceğim beceriler geliştiriyorum” ve “Hayatın karmaşık yapısından uzaklaşıyorum” seçeneklerine verilen cevaplarda 4. Sınıfta öğrenim gören katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

#### **Serbest Zamanlarında Düzenli Egzersiz Yapmayan Katılımcıların “Öğrenim Gördükleri Sınıf” Değişkeni Açısından Değerlendirilmeleri:**

“Egzersiz konusunda bilinçli değilim” seçeneğine verilen cevaplarda 2. Sınıfta öğrenim gören katılımcılar lehine anlamlı bir farklılık tespit edilmiştir. “Egzersiz sevmiyorum” ve “Maddi durumum uygun değil” seçeneklerine verilen cevaplarda 3. sınıfta öğrenim gören katılımcılar lehine anlamlı bir farklılık tespit edilmiştir.

## TARTIŞMA VE SONUÇ

Ankara Üniversitesi’nde öğrenim gören öğrencilerin serbest zamanlarında egzersize katılma sıklıkları ve nedenleri incelendiğinde, düzenli egzersiz yapan bayan öğrencilerin kendilerini daha iyi hissettiği, erkek öğrencilerin egzersizi sevdiği, sosyal bir çevre oluşturarak farklı etkinliklere katılıp bilgi düzeylerini geliştirdiği ve bununla birlikte egzersiz yaparken kendilerini daha özgür hissettiği, diğer bir yandan beslenme yetersizliğinin ise erkek öğrencilerde egzersiz yapmaya engel teşkil ettiği görülmüştür. Yüksek gelire sahip öğrencilerin sağlığına dikkat ettiği, eğlence ve sosyal çevre amaçlı sportif egzersiz yaptığı, düşük gelire sahip öğrencilerin ise, insanlardan uzak kalmak istediği, derslerine ağırlık vermek ve egzersiz yapacak uygun ortam bulamamak gibi nedenlerle düzenli egzersize yer vermediği görülmüştür.

Aile dışında kalan öğrencilerin egzersize daha çok vakit ayırdığı ve egzersizin kendilerini iyi hissettirdiği, aile yanında kalan öğrencilerin ise vakit azlığı, ders çalışma yoğunluğu, fiziksel yetersizlik, egzersizi sevmemek ve düzenli egzersiz yapacak ortam bulamamak gibi nedenlerle düzenli egzersiz yapamadığı belirlenmiştir. Katılımcı öğrencilerden 4.sınıfta öğrenim görenlerin kendilerini özgür hissetme, egzersizi sevmek, sosyal bir çevre oluşturma ve yeni beceriler kazanma amacı ile düzenli egzersiz yapmayı tercih ettiği, 2. ve 3. sınıf öğrencilerinin ise, maddi yetersizlik, egzersiz konusunda yeterli bilgiye sahip olmama ve bununla birlikte egzersizi sevmeme gibi nedenlerle egzersize yer vermedikleri sonuçları çıkarılmıştır.

## ÖNERİLER

Üniversitelerin spor olanakları konusunda öğrencileri bilgilendirilmeleri ve çeşitli spor branşlarında çeşitlilik sağlamaları, öğrencilerin ders saatleri dışında kalan serbest zamanlarında tek tip egzersiz çeşidine bağlı kalmayıp, egzersizin bu çok çeşitli yönlerinden faydalanabilmelerini ve onların egzersizi sevmesini sağlayabilir.

Üniversitelerde birden fazla egzersiz alanı olduğu düşünüldüğünde, henüz öğrenci olan ve fazla bir geliri olmayan, özel yurtlarda, ya da arkadaşları ile ev ortamında kalan öğrencilerin bu egzersiz alanlarını kullanmaları, hem daha az zaman kaybı, hem de daha az ücret ödeyerek serbest zamanlarında egzersiz yapabilmelerini sağlayabilir. Özellikle yürüyüş ve koşu aktiviteleri yapılırken, bu egzersizlerin arkadaş grubu ile organize edilerek yapılması, hem egzersizlerdeki sıkıcılığı ve tekdüzeliği ortadan kaldırabilmekte, hem de grup psikolojisini sağlamaktadır. Bu şekilde organize edilen spor aktiviteleri kişiler arasındaki bağlantıyı da güçlendirebilir.

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No.99

## **An Assessment of the Fitness Centres in the Lagos Metropolis of South West Nigeria: Implication for Sports Development in Nigeria**

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### **Abstract**

*Physical inactivity is a leading public health issue in recent time, not only in the advanced nations of the world, but also in developing countries, including Nigeria. This calls for all forms of motivation and awareness for individuals to lead active lifestyle. Fitness centres and clubs play major roles in this respect. This study was carried out to evaluate the fitness centres in the Lagos metropolis of South-West Nigeria. Eighty one (81) respondents (Male- 56, Female- 25) who are staff of 28 fitness clubs and centres participated in this study. They responded to a self-developed and validated instrument (r-value =0.79) that sought information on departments, facilities and equipment available at the centres. It also sought related demographic information of the participants, and fitness/wellness assessment procedure for clients. The data collected were analysed using frequency counts, simple percentage and pictorial analytical tool of component bar chart. Findings showed that many of the centres were not adequately equipped to meet an expected standard of a fitness centre. Most of the staff lacked the professional qualifications and adequate knowledge to operate in such centres. This reflected in poor fitness and wellness assessment practices revealed in this study.*

**Key words:** Physical fitness, Wellness, Fitness Centres, Assessment

### **Introduction**

The Nigeria economy is mainly an oil-driven one (crude oil exploration) which comes mainly from the Niger-Delta (South-south) region of the nation. However, many of the industries are mostly located in Lagos metropolis in South-West Nigeria, which used to be the nation's capital before it was relocated to Abuja in the middle belt region of Nigeria. The majority of the fitness centres are located in Lagos, with many of them cited in five star hotels and high blow areas like Ikoyi and Ikeja environs. Popoola (2000) opined that since independence successive governments in Nigeria have made provision of qualitative medical and health services as their priority area. The government has made it a matter of policy to allocate at least 5 percent of its budget to the health sector in every fiscal year. The author also observed that a humane approach to health care involves the considerate and courteous treatment of patients, good communication and information giving, and a health-promoting environment, in short, quality health care.

Aibueku & Ogbouma (2011) noted that the desire to lose weight, keep fit, and live a healthy, disease-free lives in order to function maximally in our increasingly tasking environment is gradually becoming one of the decisive factors that shape the day to day activities of individuals in contemporary societies. In response to the need to satisfy these desires, there has cropped up, series of services ranging from medical services, through health and wellness-related services to traditional services.

The fitness boom arising during the last half of the 20<sup>th</sup> century has created an explosive growth in the health fitness industry. For decades, participation in physical activity, mem-

bership in health clubs, and expansion of fitness facilities increased exponentially (Grantham, Patton, York & Winick, 1998).

According to Sanya (2009), in Nigeria, there is unfortunately a dangerous political “keep fit” programme whereby governments at the various levels bring out their staff once a week or once a month to jog for a pre-determined distance or time with full press coverage. This political keep fit programme has produced casualties, who suffered heart attack, hemiplegic stroke, elevated blood pressure and severe musculoskeletal stress after a sudden bout of exercise session they are unaccustomed to.

Sanya (2009) also observed that an individual can promote his health and keep physically fit in many ways; clients can engage in sporting activities like swimming, badminton, tennis etc; on the other hand the client can register in a gymnasium and participate in aerobics and other exercises which build cardio-respiratory endurance. Unfortunately, gymnasias and sporting facilities are not affordable and are inaccessible to more than 70% of Nigerians.

The patronage enjoyed by fitness centres is currently on an unprecedented increase as evidence have shown that in recent times, there have been a dramatic increase in and greater public awareness of the benefits of physical activity to human and societal developments (Aibueke & Ogbouma, 2011). The health fitness industry can be divided into four distinct segments, described as commercial, corporate, clinical, and community settings. Although each setting is distinct, there are many similarities in operational functions and management concepts (Grantham, Patton, York & Winick, 1998).

Five levels of fitness centres have been identified in the literature in relation to the facilities used for such fitness centres. They are, unsupervised exercise room such as those in hotels; single exercise leader; fitness centre for general membership; fitness centre offering special programmes for clinical populations; and medically supervised clinical exercise programmes (Aibueku & Ogbouma, 2011 ). Therefore this study seeks to assess the fitness centres in the Lagos metropolis of South West, and its implication to sports development in Nigeria.

## **Research Questions**

Three basic research questions underpin this study. These are:

1. What are the names of departments, facilities and equipment in operations within the fitness centres in the Lagos metropolis of South West of Nigeria?
2. What fitness and testing equipment are utilized in the fitness centres in the Lagos metropolis of South West of Nigeria?
3. What fitness and medical testing or assessment procedures are employed within the fitness centres in the Lagos metropolis of South West of Nigeria?

## **Research Methods**

### **Sample**

This research is based on data gathered from 81 respondents who are employees from 28 fitness centres located within the Lagos Metropolis of South West Nigeria. The chief officer in charge of each of these fitness centres constituted the respondents for the study.



## Procedure

The fitness centres used in this study and the participants were selected using the purposive sampling technique. This was found appropriate for the study due to the metropolitan nature of Lagos. Paschal, Wamukoya & Mwangi (2013) in a very recent study used the purposive sampling technique to select 58 health and fitness centres countrywide in Uganda. The study targeted clients to gymnasias, aerobics clubs, aqua-based activities and specific sports.

## Research instruments

The main research instruments used to generate data for the study were a validated, self-developed, structured questionnaire (r-value=0.79). The questionnaire was made up of three sections, 1, 2, 3 and 4. The first section labelled 1 contained item designed to elicit demographic information from the respondents. The second, third and fourth sections (2, 3 and 4) contained 24 items designed with response option viz: yes and No. The checklist was designed to reflect the department and facility type, fitness and testing equipment and fitness and medical testing/assessment procedures employed.

## Statistical Analysis

Data obtained were analysed using descriptive statistics of frequency counts, simple percentage and pictorial analytical tool of component bar chart with the application of statistical package for the social sciences (SPSS)

*Research Question 1: What are the names of departments, facilities and equipment in operations within the fitness centres in the Lagos Metropolis?*

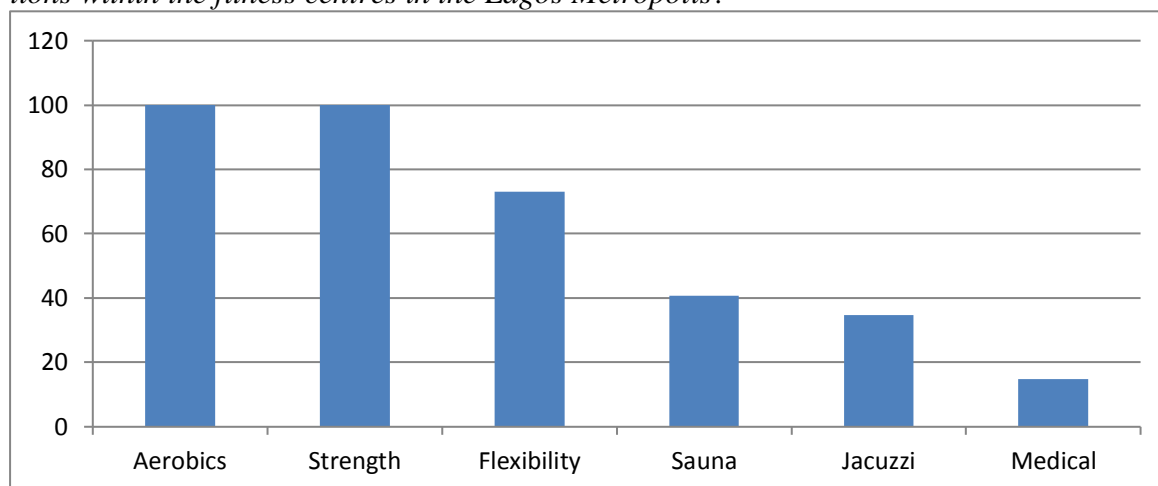


Figure 1: Component bar chart on the units within the organisation

Figure 1 shows the availability of units within the organisation of respondents. Responses indicate that all the fitness clubs/centres have cardio/ aerobics unit and strength training unit, while 73% indicate availability of flexibility unit. 40.7% and 34.6% indicate availability of sauna and Jacuzzi respectively while Medical and health assessment were only 14.8%. These responses were further corroborated by on-the-spot assessment of the facilities in the centres by the researchers.

*Research question 2: What fitness and testing equipment are utilized in the fitness centres in the Lagos Metropolis?*

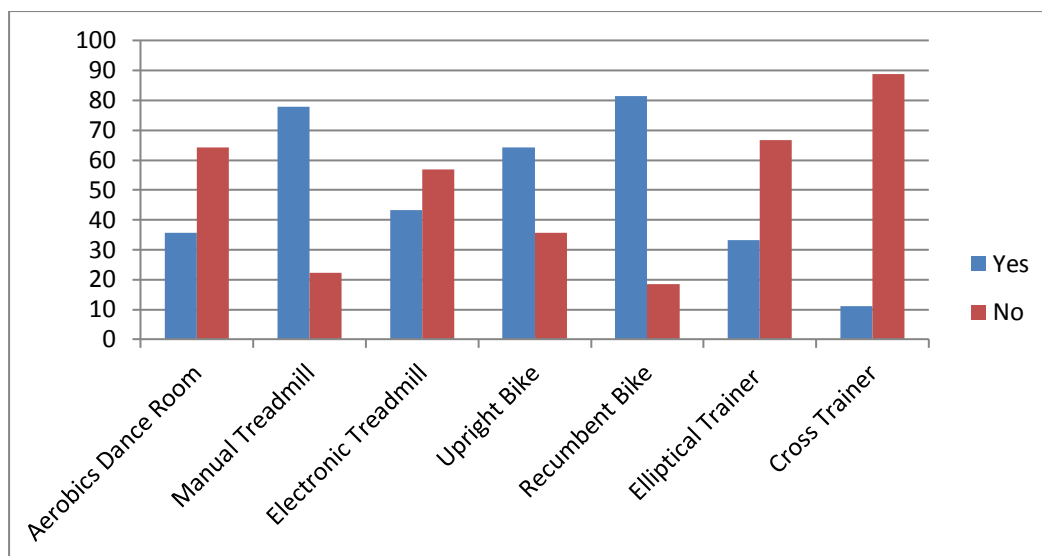


Figure 2: Component bar chart on availability of fitness and testing equipment

Figure 2 addresses the availability of fitness and testing equipment in the clubs and centres of participants of this study. Only 35.8% respondents indicated that their centre have aerobics dance room; while 77.8% and 43.2% indicated for manual and electronic treadmill respectively. 64.2% and 81.5% responses shows that the fitness centres have upright and recumbent bicycle ergometers respectively. 33.3% responses shows that the surveyed centres have elliptical trainer, and only 11.1% of the 81 responses shows that the centres have cross trainer. These responses were further corroborated by on-the-spot assessment of the facilities and inventory taken in the centres by the researchers.

Table 1: Frequency and percentage distributions on sufficiency of fitness and testing equipment

Equipment	<2 [%]	2-4 [%]	5 & + [%]	Total
Aerobics Dance Room	9 [100]	0	0	09 [100]
Manual Treadmill	6 [26.1]	11 [47.8]	6 [26.1]	23 [100]
Electronic Treadmill	7 [46.7]	5 [33.3]	3 [20]	15 [100]
Upright Bike	9 [37.5]	9 [37.5]	6 [25]	24 [100]
Recumbent Bike	17 [65.4]	6 [23.1]	3 [11.5]	26 [100]
Elliptical Trainer	11 [100]	0	0	11 [100]
Cross Trainer	03 [100]	0	0	03 [100]

Result presented in table 1 shows that not all the 28 centres surveyed in this study have fitness and testing equipment. Only 9 have aerobic dance room, and 3 with cross trainer. Of the 26 centres that have recumbent bike, 65% of them have less than 2; and of the 15 centres with electronic treadmill, 47% have less than 2.

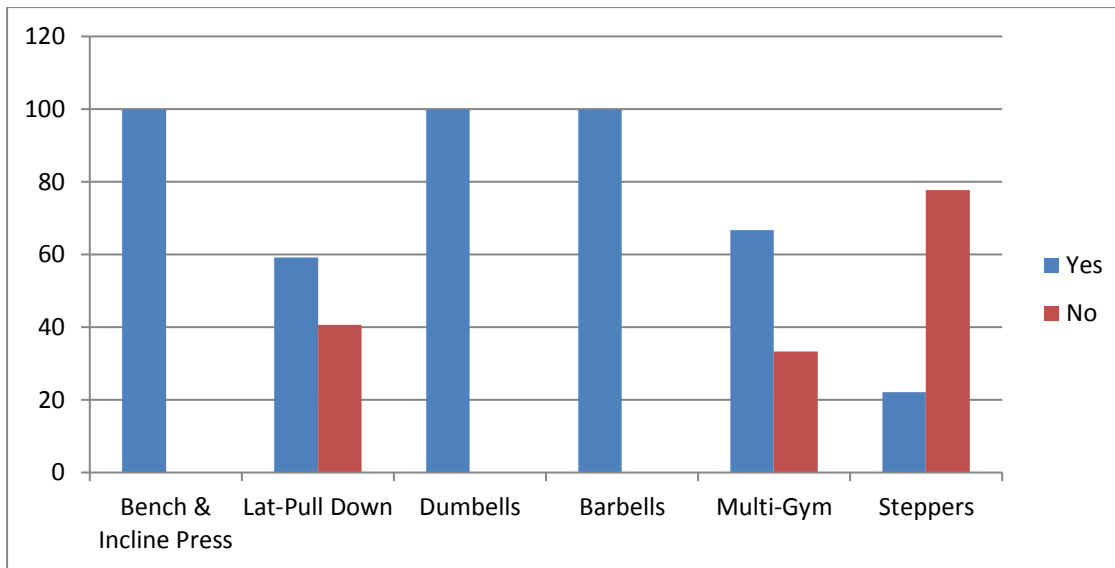


Figure 3: Component bar chart on availability of strength training equipment

Figure 3 shows those responses on availability of strength training equipment in the centre. 100% of the total 81 responses show that bench and incline press; dumbbells and barbells are available in all the fitness centres. 66.7% shows that multigym machines are available and 59.3% shows that lat-pull down machines are available. Only 22.2% responses indicated that steppers are available in the centres.

Table 2: Frequency and percentage distributions on sufficiency of strength training equipment

Equipment	<2 [%]	2-4 [%]	5 & + [%]	Total
Bench & Inc. Press	2 [7.1]	19 [67.9]	7 [25]	28 [100]
Lat-Pull Down	13 [61.9]	7 [33.3]	1 [4.8]	21 [100]
Dumbbells	0	3 [10.7]	25 [89.3]	28 [100]
Barbells	0	15 [53.6]	13 [46.4]	28 [100]
Multi-Gym	17 [68]	7 [28]	1 [4]	25 [100]
Steppers	06 [75]	2 [25]	0	08 [100]

Result presented in table 2 shows that bench and incline press, dumbbells and barbells were available in all the 28 centres of this study. Multi-gym were available in 25 of the 28 centres, of which 68% have less than 2 in the centres. Only 8 centres have steppers; and of the 21 with lat-pull, 61.9% have less than 2.

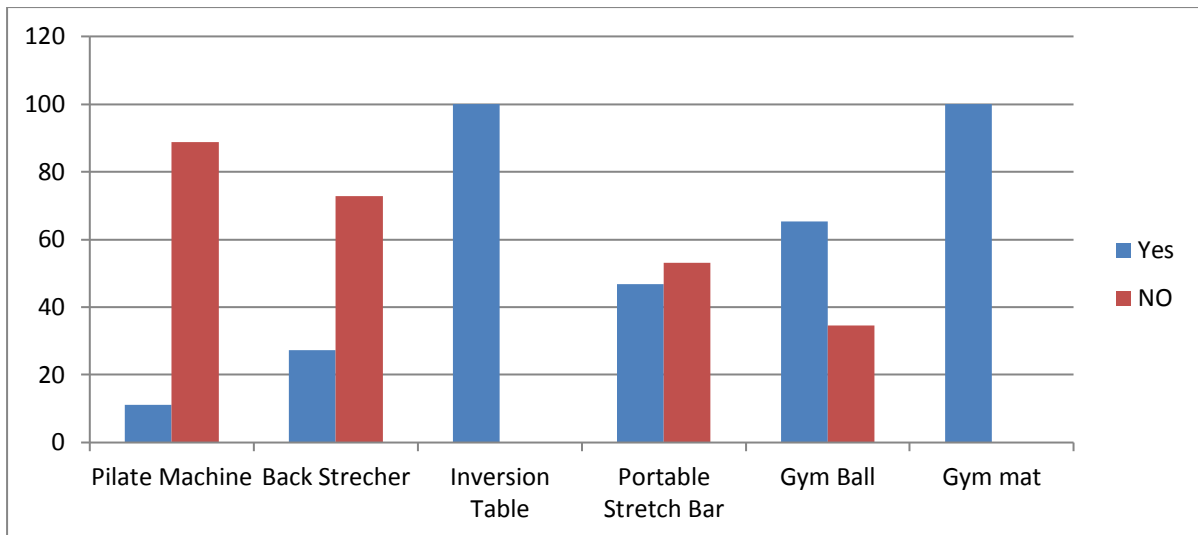


Figure 4: Component bar chart on availability of flexibility equipment

Figure 4 describes responses on availability of flexibility training equipment. The figure shows that 100% of the responses indicated availability of inversion table and gym mat in the centres, while 11.1% showed availability of Pilate machine. 27.2% and 46.9% responses indicated availability of back stretcher and portable stretch bar respectively.

Table 3: Frequency and percentage distributions on sufficiency of flexibility equipment

Equipment	<2 [%]	2-4 [%]	5 & + [%]	Total
Pilate Machine	3 [75]	1 [25]	0	04 [100]
Back Stretcher	8 [61.5]	4 [30.8]	1 [7.7]	13 [100]
Inversion Table	2 [7.1]	19 [67.9]	7 [25]	28 [100]
Port. Stretch Bar	4 [23.5]	11 [64.7]	2 [11.8]	17 [100]
Gym Ball	16 [72.7]	6 [27.3]	0	22 [100]
Gym mat	0	11 [39.3]	17 [60.7]	28 [100]

Result presented in table 3 shows that inversion table and gym mat were available in all the centres, but only 4 have Pilate machine. Of the 13 with back stretcher, 61.5% have less than 2, and 23.5% of the 17 with portable stretch bar have less than 2 bars.

Research question 3: What fitness and medical assessment procedures are employed within the centres in the Lagos Metropolis

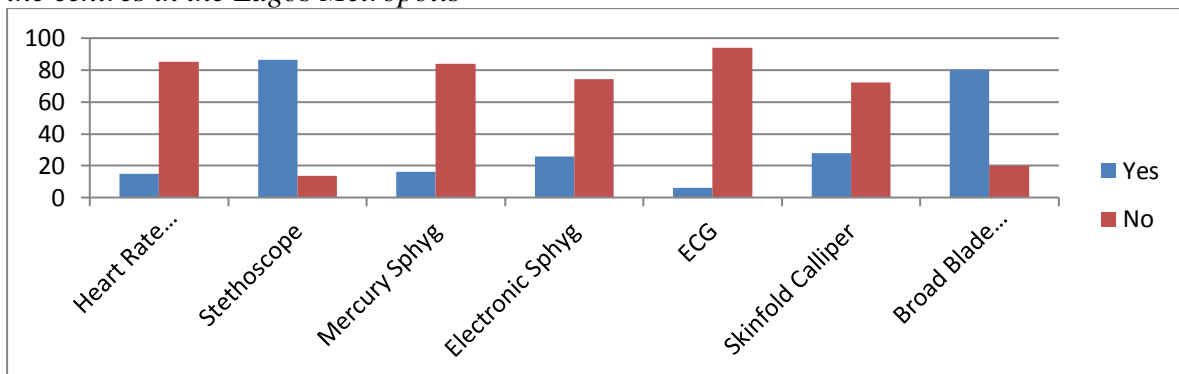


Figure 5: Component bar chart on availability of health and medical equipment

Figure 5 describes the availability of health and medical equipment in the fitness centres. Result showed that only 14.8% responses indicated that heart rate monitors are available in the centres, while 16.1% and 25.9% shows availability of mercury and electronic sphygmomanometer respectively. Only 6.2% indicated availability of ECG machine.

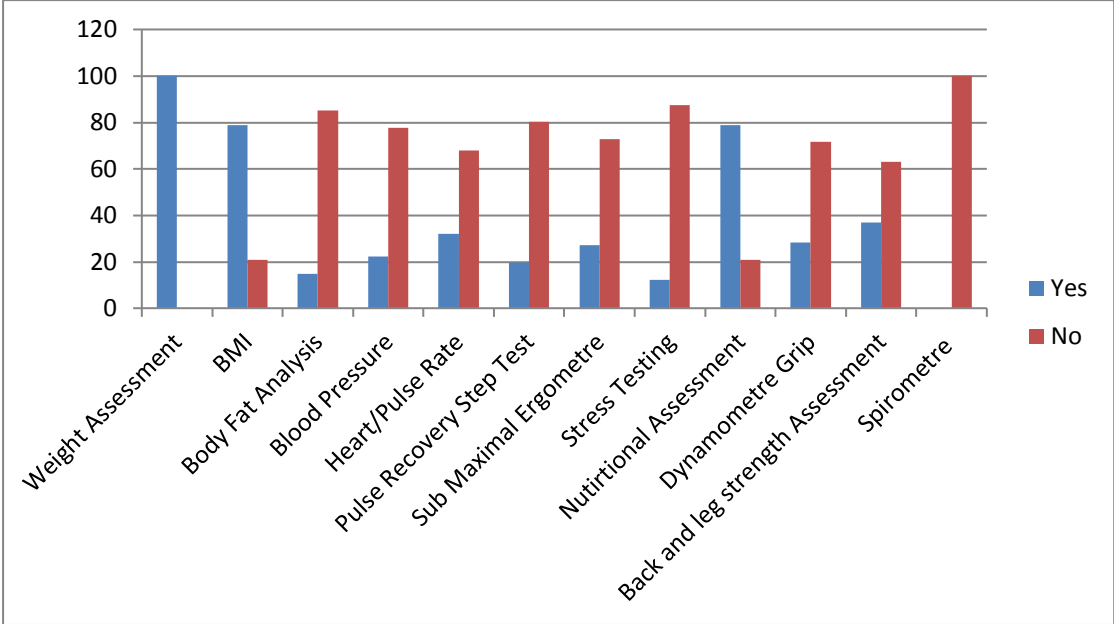


Figure 6: Component bar chart on fitness and medical assessment procedure employed

Figure 6 presents results on fitness and medical assessment procedure employed by the centre on clients. The figure shows that 100% assess clients using weight assessment, but 100% do not have spirometer for lung functions assessment. 79% Of the responses shows that BMI assessment is carried out in the centres, while 14.8%, 22.2% and 19.8% were for body fat analysis, blood pressure and heart/pulse rate analysis respectively. 79% responses shows that nutritional counselling and assessment were carried out in the centres, and 37% shows that strength assessment were also carried out.

**Discussion**

This study has demonstrated that the majority of fitness centres in the Lagos metropolis concentrated mostly on aerobics and strength training. Sanya (2009) opined that a gymnasium which has only one exercise package for everybody with a general tempo, intensity and type, and duration of exercise for all comers is not safe for health promotion. A good gymnasium should have about three of your exercise classes such that a client can enter the programme at his self-selected intensity and progress gradually to more intense levels. In the same vein, Grantham, Patton, York & Winic (1998) observed that health fitness centres that are product oriented define their mission in terms of delivering products and services. Within these organisations, every deliverable aspect of the organisation is viewed as a separate product. Aerobics classes, locker room services, tennis courts, swimming and spa services amongst others are evaluated in terms of delivering the best product to members.

The study further revealed what fitness equipment is utilized in the fitness centres in the Lagos metropolis of South West Nigeria. As we can see in Figure 2 and Table 1 a good number of the fitness centres assessed have the latest equipments for their customers use. Balady, Chaitman, Driscoll, Foster, Froelicher & Gordon et al (1998) submitted that persons seeking

health/fitness facilities should select one that meets professional and industry standards. Facilities should be clear and spacious enough to ensure the comfort and safety of programme participants. Moreover, exercise equipment and facilities should be well-maintained. According to Lagrosen & Lagrosen (2007) most fitness centres are relatively small organisations, which should provide more opportunities for real leadership. However, the influence of organisational consciousness must also be taken into account. Nevertheless, the AHA, the IHRSA, and the ACSM recommend that all health or fitness facilities have written emergency policies and procedures that are reviewed and practiced regularly (Peterson & Tharrett, 1997; International Health, Racquet and Sports club Association [IHRSA]/American sports Data, 1997).

Again, this study also examined the fitness medical testing or assessment procedures that are employed within the fitness centres in the Lagos metropolis. Fig. 5 indicates that a very few number of the fitness centres assessed, carry out any meaningful assessment on their members. Grantham, Patton, York & Winic (1998) opined that commercial organisation in the US are increasingly forming joint ventures with hospitals and other health care providers seeking venues for cost-effective delivery sites for preventive managed care. In the case of Nigeria, Sanya (2009) noted that when an individual registers in a gymnasium for health promotion, there should be an initial assessment on the first attendance. The assessment should include measurement of weight, height, blood pressure (BP), heart rate (HR) and exercise tolerance test. This initial assessment should be used to assign the client to an appropriate exercise programme. The assessment from a gymnasium can be the basis for a client being advised to see a medical doctor for screening.

The goal of an effective screening programme should be to identify patients at risk for significant cardiac events during strenuous exercise as non-invasively and cost effectively as possible. Currently, there is no accepted standardised approach to screening (Soni & Deanfield, 1997). Financial and technical limitations restrict the implementation of comprehensive screening in most countries, especially in a developing country like Nigeria where basic infrastructure like power supply is a major challenge. It is essential to acknowledge that emergency equipment alone does not save lives: training and preparedness by a state professional staff who can readily handle emergencies is paramount (Balady et al, 1998).

Well-trained health/fitness facility staff members are essential to maintain strong links in the chain of survival for their clients (Balady, Chaitman, Foster, Froelicher, Gordon & Van Camp, 2002). Lack of adequate screening and evaluation services may be as a result of paucity of well trained and qualified officials in the fitness centers. Lagrosen & Lagrosen (2007) re-emphasised that this 'human aspect' is important in fitness centres, which entail significant interaction between staff members and customers. According to Adelman, Ahuvia & Godwin (1994), services that are consumed in the leisure time of consumers often involve social support, which means that the communication of the service provider's staff improves the customers' self-esteem, creates a sense of social connection or reduce uncertainty.

The implication of the current discussion for sports development is that the expansion of the fitness industry in Nigeria is an avenue that could lead to the improvement in the participation of our youths in other sports enterprise, apart from football (soccer). The average Nigerian is obsessed with football, which is unarguably the number one sport in Nigeria. The Nigerian government spends billions of Naira in the promotion of the game of football to the detriment of other sports, recreation and leisure pursuits. Aibueku & Ogbouma (2011) observed that in Nigeria today, sports development initiative is in a bottom- of- the-bucket condition, policy attention, political ill will, financial misappropriations and unending crises have seriously

eroded the foundations of the sports and leisure sub sector. This has resulted in a situation where charlatans and quacks flourish at the expense of the health of individuals and the nation

Moreover, Aibueku & Ogbouma (2011) also noted that the poor state of the country's sports sector resulting from all manners of political aberration coupled with poor policy formulation and implementation process have created a fertile ground for the prosperity of every kind of fitness and sports anomalies, including the existence and operation of substandard fitness centres. Needless to say that this has far reaching negative implication on the populace and the nation in general.

### **Conclusion and Recommendations**

It is concluded in this study that many of the fitness centres studied in the Lagos metropolis of South West Nigeria are not adequately equipped to meet an expected standard of a fitness centre compared to what is obtained in America and Western Europe. Many of the staffers lacked the professional qualifications and adequate knowledge to operate in such an environment. Furthermore, the commonest programme in most fitness establishments in the Lagos metropolis are that of weight control and general fitness programmes like aerobics and strength training, which are considered inadequate. Health and fitness assessment procedures like nutritional counselling and stress testing were mostly non-existent. This reflected in poor fitness and wellness assessment practices revealed in this study. Therefore, it is recommended that

- i) Government at all levels should provide a conducive and safe environment for every individual in Nigeria to be able to exercise regularly for the attainment and maintenance of optimum physical fitness.
- ii) Enabling facilities for health promotion through physical fitness should be available, accessible and affordable for all, irrespective of age, gender, educational attainment and socio-economic status.
- iii) There should be constant monitoring of all fitness and sports outfit to ensure that there is compliant with set rules and regulations, and that service delivery does not deviate from set norms.

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**RECREATIONAL SPORT  
ORAL PRESENTATION**

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## **A Study on Leisure Motivation, Life and Leisure Satisfaction: a Case of Recreational Exercise Participants**

Tennur Yerlisu Lapa

*Akdeniz University, School of Physical Education and Sports, Recreation Department*

Nowadays, there are many studies about positive effects of participating in recreational exercise due to some reasons such as to cope with different problems and stay healthy on leisure motivation, life and leisure satisfaction. From this point of view, the aim of this study was to determine the relationship between leisure motivation, life and leisure satisfaction of recreational exercise participants and to compare leisure motivation, life and leisure satisfaction according to gender and level of participation on recreational exercise. The population of the study consists of individuals making exercise in “Outdoor and Indoor Areas of Municipality” and “Health and Fitness Centers” in Antalya. A total of 963 participants (aged 18 to 72 years, Mean=35.52, SD=8.12) were selected randomly and consisting of 500 males and 463 females who were making recreational exercise 3-4 times of week with a ratio of 38.9%. “The Satisfaction with Life Scale” which was developed by Diener et al (1985) and was adapted into Turkish by Koker (1991) and Yetim (1991) was used to determine life satisfaction, “Leisure Satisfaction Scale” which was developed by Beard and Raghed (1980) and was adapted into Turkish by Gokce (2011) was used to determine leisure satisfaction and the “Leisure Motivation Scale” which was developed by Pelletier et al. (1989, 1991) and was adapted into Turkish by Mutlu (2008) was used to determine leisure motivation of the participants. Pearson’s Correlation Analysis was used to determine the relationships and Two-Way (MANOVA), One-way (ANOVA) and t-test were used to detect differences for data analysis. In conclusion, it was found that there was a positive linear relationship between leisure motivation, life satisfaction and leisure satisfaction ( $p<0.001$ ). Also leisure motivation, life and leisure satisfaction is higher in females and participants with high levels of participation.

**Keywords:** *Leisure motivation, life satisfaction, leisure satisfaction, recreational exercise participants*

## Recreation as a Complementary Capacity Building Strategy among Oyo State Civil Servants, Nigeria

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### **Abstract**

Meaningful capacity building should include promotion and maintenance of workers' health. The nature of the office responsibilities, if care is not taken could easily predispose workers to sedentary life styles and etiology of heart diseases capable of promoting social, physical and mental health problems with adverse consequences on workers' productivity. This study focused on the complementary role of recreation capacity building among civil servants of Oyo State in order to enhance, sustain, and maintain their health. There were 2800 participants including males and females drawn from 20 governmental ministries on an equal basis, through randomization. We developed a questionnaire validated for construct and content assurance. It was employed to collect data that were analyzed with chi-square ( $X^2$ ) non-parametric statistics at 0.05 alpha levels. Based on the conclusions, recommendations were proffered on strategies to promote recreation among workers with the provision of recreational facilities at secretariats as well as introducing mandatory monthly "walk for fitness" exercises by workers of every rank and file, under the leadership of recreation experts.

## **Floormatics: A New Dimension to Recreational Sports**

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### **Abstract**

Recreational sports (an activity involving physical exertion and skill that is governed by a set of rules or custom and often undertaken competitively) have witnessed tremendous growth in Nigeria and around Africa in recent years. This is due in part to the fact that African societies are sports-oriented. Since recreational sports require physical exertion and skill, observations have shown that only few with sufficient sports skills are able to participate and get the maximum benefits. To encourage participation with less physical exertion and skill, Franz Atare modified and reintroduced floormatics, which is played in most primitive African culture. Floormatics, a floor activity can be performed with no special equipment on any type of surface. This presentation will introduce the nature, play pattern, play dimensions and rules for maximum satisfaction. Experiments on floormatics in different parts of Nigeria revealed that participants whose ages ranging from 6 - 55 not only had fun, they also developed physical fitness qualities such as mental alertness, accuracy, agility, coordination, leg power, and balance over time. These qualities are vital for attaining total fitness and wellness. It therefore recommended that this game be introduced to different groups in different settings so as to popularize floormatics as a highly organized recreational sport.

## The Influence of Cellular Phone Addiction on Leisure Satisfaction, Depression, and Life Satisfaction for Korean Adolescents

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### **Abstract**

Cellular phone addiction is a fast growing addiction in Korea. Cellular phones seem to be necessary devices for the digital age, giving us access to communication, game, and data services almost everywhere. However, there is a serious problem to our dependence on them. Studies have found that addiction in cellular phones use may have a negative impact on long-term health. Cellular phone addiction is the inability to give up using cellular phones. The purpose of this study was to explore the impact of cellular phone addiction on leisure satisfaction, depression, and life satisfaction for Korean adolescents. The sample consisted of 251 children who attend elementary schools in Seoul, Korea. Data were collected by using the convenience sampling technique in Seoul, Korea. The average age of the respondents was 14.1 years old. Of the respondents, 65% were males. Findings indicated that cellular phone addiction is significantly and negatively related to leisure satisfaction and life satisfaction for children. Findings also showed that cellular phone addiction is positively and significantly associated with depression. That is, adolescents who are highly addicted in cellular phone use are more likely to be depressed and unsatisfied with their leisure and life than their counterparts. This may be caused mainly due to their inactive, passive, unhealthy leisure lifestyle. Thus, it is important to provide physically active and healthy leisure programs during leisure time for adolescents. Future research direction and possible solutions will be discussed.

## Recreation Role in Tourism Marketing

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Tourism has many positive effects not only to national economy and society but also to other fields. In this context, to increase the positive effects of tourism, recreative activities in tourism marketing should be research with more carefully. In this study, recreative activities in tourism industry has examined and relationship between recreation and tourism marketing has discussed. The purpose of this study is to identify the role of recreation in tourism marketing. In this respect, related literature has searched, a SWOT analysis was made and some suggestions were made. Also, a survey was made to 340 tourist who spent their holiday in 34 five stars hotels in Bodrum and Marmaris. The results indicate that tourists like participating the hotel animations and animations provide having a good time. Thanks to the recreative activities tourist would like to come to their hotels again for next season. Another result shows that children and old people more care about the recreative activities. Also, additionally the recreative activities being made inside and outside the hotels, the recreative activities, in the city/district, such as yacht tours, safaris, night club-pub activities, fishing and mounting horse increase the sustainable tourism. For all these reasons, practitioners and scholars should care about the recreation in Tourism and experts should be employed in this industry. So it will help increasing the tourist and tourism revenues and they will go back to their home as happy.

**Keywords:** *Recreation, Tourism, Marketing*

# **POSTER PRESENTATION**





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**PSYCHOSOCIAL FIELDS IN SPORT  
POSTER PRESENTATION**

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## The Associations Between Anxiety, Depression And Physiological Characteristics Among Female Long Distance Runners

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### **Abstract**

The purpose of this study was to examine the associations between anxiety, depression and physiological characteristics. The subjects were 17 female college long distance runners (20.3±0.9 year, 5000 m race record: 16:22.12±0:41.00). Psychological tests consisted of State-Trait Anxiety Inventory (STAI) and the Beck Depression Inventory (BDI), and physiological tests consisted of the running velocity, heart rate (HR), ratings of perceived exertion (RPE) at a lactate concentration of 2mmol/L and 4mmol/L.

BDI during the on-season was higher than BDI during the off-season ( $p<0.01$ ). They were classified into two groups (HG: higher group, LG: lower group) by degrees of BDI during the on-season. 4mmol/l-RPE of HG was higher than LG ( $p<0.01$ ). 4mmol-HR, 2mmol-RPE and 2mmol-HR of LG were higher than LG (n.s). Trait Anxiety Inventory of HG during the on-season was higher than LG ( $p<0.01$ ).

The results suggest that depression is associated with physiological characteristics during running competition. There is a possibility that the depression reduces the performance of the athlete.

*Keywords:* Lactic acid, State-Trait Anxiety Inventory, Beck Depression Inventory, runner

### **Introduction**

Pre-competition psychological state, for example, anxiety, tension and depression, has a major influence on sports competitors' performance. Many previous studies have shown the relationship between a state of high pre-competition anxiety and low performance (DeMojà & DeMojà, 1986; Liao & Masters, 2002).

In addition, statistical research reports show that high level sports competitors suffer anxiety disorders and other psychological problems (Schaal, Tafflet, Nassif, Thibault, Pichard, et al.,

2011). In particular, problems such as anxiety, depression and eating disorders are likely to affect female athletes, and this tendency is strong among female long-distance runners (Parker & Hadzi-Pavlovic, 2001; Kajiwara, Yokokura, Hirashita & Ono, 2007). For this reason, it is important to understand psychological characteristics and prevent deterioration of health and performance when coaching female long-distance runners.

However, there seems to be little research on the links between psychological characteristics of female long-distance runners and their exercise physiology characteristics. There is insufficient information to make use of in actual coaching. The aim of this study was to investigate changes in psychological stress among Japanese female student elite athlete long-distance runners during competition season (on season) and non-competition season (off season), and to compare exercise physiology characteristics of high stress and low stress competitors.

## **Methods**

### **Participants**

Participants were 17 Japanese female university student long-distance runners. Mean age and standard deviation were  $20.3 \pm 0.9$  years, and mean time and standard deviation for season best 5000 m race were  $16:22.12 \pm 0:41.00$ . The university team the participants belonged to was a top team winning championships in university female long-distance road relay competitions. Individually, they included Japan's competitor in the women's 10 000 m at the 13<sup>th</sup> IAAF World Championships in Athletics (2011, Daegu), a prize winner (3<sup>rd</sup> place) in the women's 10 000 m at the 26<sup>th</sup> Summer Universiade (2011, Shenzhen), and a prize winner (7<sup>th</sup> place) in the women's half marathon at the same event.

### **Psychological characteristics test**

The STAI (State Trait Anxiety Inventory) Japanese Version and BDI-II (Beck Depression Inventory) Japanese Version were conducted in June (on season) and February (off season). Trait Anxiety, State Anxiety and BDI were calculated from these tests.

### **Exercise physiology characteristics test and performance test**

A lactic acid test was used for the exercise physiology characteristics test. Running speed at 2 mmol/L and 4 mmol/L were measured, together with heart rate (HR) and Rating of Perceived Exertion (RPE). Measurements were done on a treadmill (Super Treadmill ELG-2 made by Woodway Inc.), using intermittent speed increase repetitions of 3 min running and 1 min rest. The running speed protocol was six stages of 200 m/min, 240 m/min, 260 m/min, 280 m/min, 300 m/min and 320 m/min. Lactic acid concentrations in the blood were measured during the 1 min rest periods, taking blood from a fingertip on the left hand and using a simple lactic acid measuring instrument (Lactate Pro made by Arkray Inc.). HR was measured using a HR monitor (Heart Rate Monitor Vantage MV, made by Polar Inc.), with mean HR at 2 min 20 s to 2 min 40 s of the 3 min running period being recorded as the HR for that stage. RPE was measured immediately after the 3 min running period. Running speed at 2 mmol/L and 4

mmol/L, HR and RPE were calculated using linear regression for the two stages before and after lactic acid concentrations in the blood were 2 mmol/L and 4 mmol/L.

Best annual record speeds for 1500 m and 5000 m were taken as performance tests. Level of performance ability for 1500 m and 5000 m records in relation to 2 mmol/L and 4 mmol/L running speeds was calculated in the following way:

1500 m level of performance ability at 2 mmol/L running speed = 1500 m running speed – 2 mmol/L running speed... (1)

5000 m level of performance ability at 2 mmol/L running speed = 5000 m running speed – 2 mmol/L running speed... (2)

1500 m level of performance ability at 4 mmol/L running speed = 1500 m running speed – 4 mmol/L running speed... (3)

5000 m level of performance ability at 4 mmol/L running speed = 5000 m running speed – 4 mmol/L running speed... (4)

## **Analysis**

Nonparametric and paired difference tests on Trait, State and BDI mean scores were conducted to examine changes in competitors' psychological characteristics on season and off season.

In order to investigate whether there was any difference in exercise physiology characteristics according to high or low BDI scores, the Mann-Whitney U test was implemented and compared between the High BDI group ( $\geq 10$ ) and Low BDI group ( $< 10$ ) for mean scores of HR, RPE and running speed at 2 mmol/L and 4 mmol/L, for on season BDI.

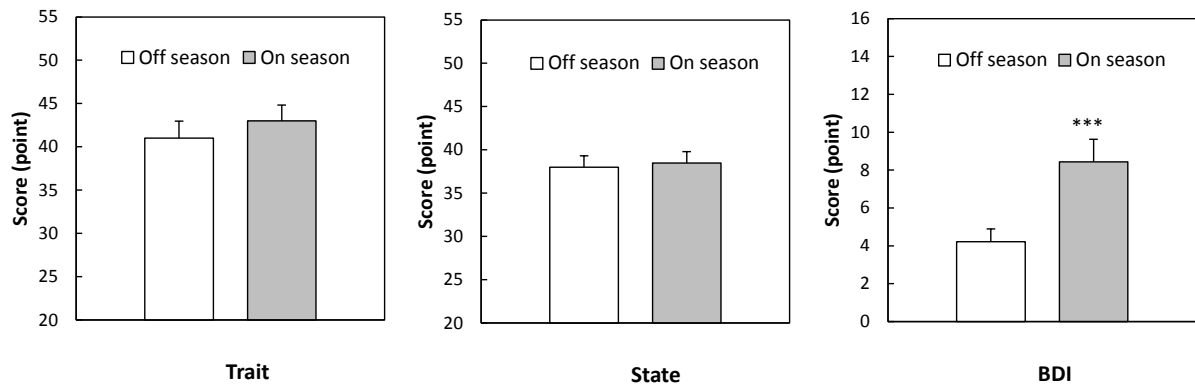
To investigate links between BDI scores and level of performance ability, Pearson product-moment correlation coefficients were calculated for on season BDI and 1500 m level of performance ability at 2 mmol/L running speed, 1500 m level of performance ability at 4 mmol/L running speed, 5000 m level of performance ability at 2 mmol/L running speed, and 5000 m level of performance ability at 4 mmol/L running speed.

All statistical processing was done using SPSS 16.0J, with the level of significance set at less than 5%, and marginal significance at less than 10%.

## **Results**

### **On season and off season changes in psychological characteristics**

Figure 1 shows mean  $\pm$  standard error for on season and off season Trait, State and BDI. On season BDI was proven to be significantly higher from off season ( $p < 0.001$ ).



**Figure 1.** Changes in Trait, State and BDI in on season and off season.

\*\*\*p<0.001 compared with off season. Values are mean ± SE.

**Table 1.** Comparison of the lactic acid and psychological parameters between the high BDI and low BDI groups.

Variables	High BDI group (n=6)	Low BDI group (n=11)	p Value
<b><i>Lactic acid test</i></b>			
2 mmol/L running speed (m/min)	289.2 ± 7.55	283.7 ± 2.04	
2 mmol/L HR (beats/min)	161.2 ± 2.25	156.8 ± 2.67	
2 mmol/L RPE (points)	14.0 ± 0.45	13.0 ± 0.26	
4 mmol/L running speed (m/min)	313.5 ± 6.89	312.0 ± 2.52	
4 mmol/L HR (beats/min)	171.9 ± 1.86	166.8 ± 2.27	
4 mmol/L RPE (points)	15.8 ± 0.29	14.8 ± 0.31	0.049*
<b><i>Psychological test</i></b>			
<b><i>On season</i></b>			
Trait (points)	49.5 ± 1.88	34.7 ± 1.43	0.001***
State (points)	42.8 ± 2.07	36.6 ± 1.95	0.055
BDI (points)	16.2 ± 1.14	5.6 ± 0.89	0.001***
<b><i>Off season</i></b>			
Trait (points)	44.8 ± 5.09	34.8 ± 1.77	0.088
State (points)	40.5 ± 1.68	34.2 ± 1.02	0.015**
BDI (points)	4.0 ± 1.00	3.6 ± 0.79	

Values are mean ± SE. \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

## Difference in exercise physiological characteristics according to high or low BDI scores

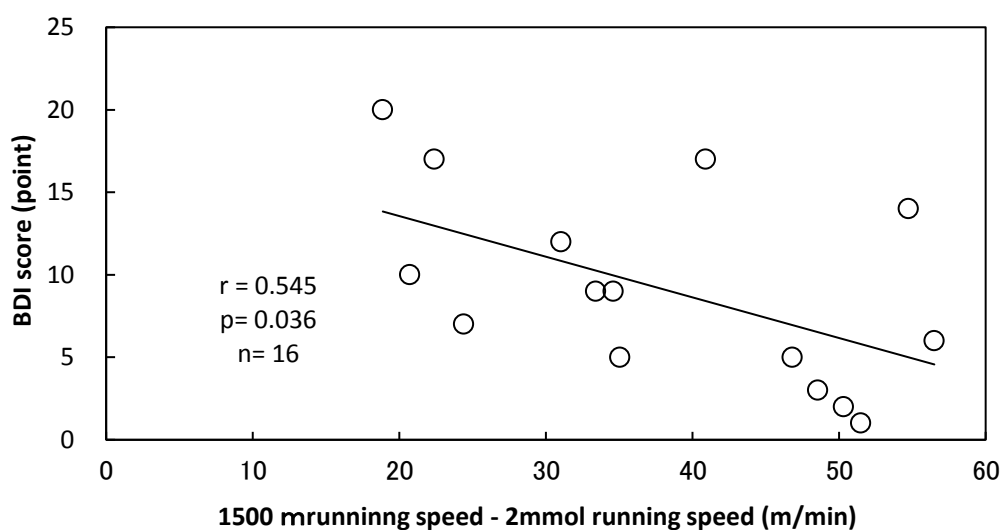
Table 1 shows lactic acid test mean  $\pm$  standard deviation for the High BDI group and Low BDI group. 4 mmol/L RPE was significantly lower for the High BDI group compared to the Low BDI group ( $p < 0.05$ ). 2 mmol/L HR and RPE, and 4 mmol/L HR were all higher for the High BDI group (no significant difference). On season Trait and BDI were significantly higher for the High BDI group than for the Low BDI group ( $p < 0.001$ ), and State also showed a higher tendency for the High BDI group. Off season State was significantly higher for the High BDI group ( $p < 0.01$ ), and Trait also showed a higher tendency for the High BDI group. However, there was no significant difference between the High BDI group and Low BDI group for off season BDI.

## Relationship of BDI scores and level of performance ability

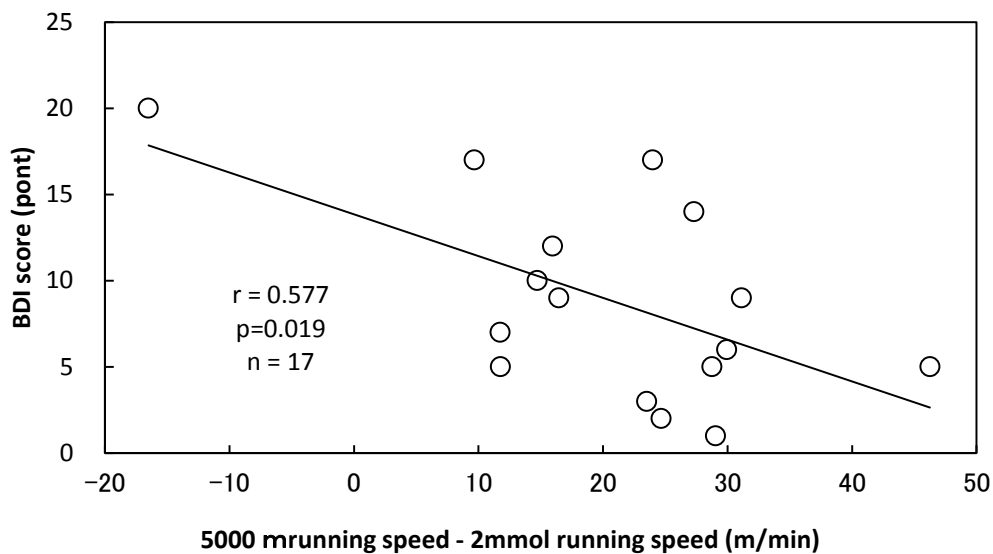
The relationship between on season BDI scores and 1500 m and 5000 m level of performance ability at 2 mmol/L running speed are shown in Figure 2 and 3. A significant positive correlation was evident between higher BDI scores and lower level of performance ability in competitors in level of performance ability at 1500 m and 5000 m at 2 mmol/L running speed ( $p < 0.05$ ). The same tendency was apparent for level of performance ability in both 1500 m and 5000 m for 4 mmol/L running speed.

## Discussion and conclusions

This study investigated changes in psychological stress using STAI and BDI among Japanese female student elite long-distance runners during competition season (on season) and non-competition season (off season), and links between psychological characteristics and exercise physiology characteristics.



**Figure 2.** Relationship of BDI score and 1500 m level of performance ability at 2 mmol/L running speed.



**Figure 3.** Relationship of BDI score and 5000 m level of performance ability at 2 mmol/L running speed.

In previous research on the effects of psychological stress on sports performance, it has been reported that anxiety and tension lead to increased breathing rate and HR (Tanaka, Funase, Sekiya, Sasaki, & Takemoto, 2011; Tanaka & Sekiya, 2010), but no studies seem to have addressed the issue of RPE or the relationship between BDI and level of performance ability.

This study proved that BDI is higher in the on season, and that the psychological stress of female long-distance runners can be better confirmed through the BDI test than by STAI. There are many reports on the low weight of female competitors in sports such as long-distance running, rhythmic sports gymnastics and figure skating, and occurrence of the “female athlete triad” health problems of eating disorders, menstrual disorders and lowering of bone density is high. In addition, anxiety, eating disorders, depression and sleep disorders occur more frequently in female athletes than in male athletes (Nattiv, Loucks, Manore, Sanborn, Sundgot-Borgen, Warren; American College of Sports Medicine, 2007; Torstveit, & Sundgot-Borgen, 2005). This seems to explain the rise in psychological stress in the on season. However, the reason for the lack of change in State remains unclear.

This study showed that competitors with high BDI have high RPE and lower levels of performance ability. Competitors who score high on the depression scale feel the same level of lactic acid more intensely. It may be that competitors with the psychological tendency to become depressed or stressed easily have low exercise intensity and performance thresholds.

This study shows the relationship between psychological characteristics and exercise physiological characteristics. It is important to understand the psychological characteristics of competitors in coaching female long-distance runners.



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## Study of Track and Field Athletes' Anxiety Levels

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### **Abstract**

The aim of this study was to determine the level of trait and state anxiety of athletes who attended 18. Balkan Athletics Championship. Trait anxiety levels of 100 athletes which includes 52 male and 48 female were researched. In addition to this, 22 female and 26 male athletes' state anxiety level was researched. For this aim 'State Trait Anxiety Inventory' was used. For the statistical analysis Mann Whitney-U and Kruskal Vallis tests were used. When trait anxiety points were searched, it was found that athletes' anxiety states do not change according to their sexes, level of income and education, track and field branch and sport ages ( $p>0.05$ ). On the other hand, it was determined that athletes' trait anxiety points, who have become physically disabled in last 6 months, were statically higher than the ones who have not. Additionally, trait anxiety points of athletes who have attended more than 31 races were statically lower than the ones who have attended less than 31 races ( $p<0.01$ ). When state anxiety level was searched, it was seen that female athletes have higher anxiety points than males ( $p<0.05$ ). It was also understood that state anxiety points do not change according to the level of income and education ( $p>0.05$ ). It was seen that state anxiety rates of athletes, who have become disabled in last 6 months, were higher than the ones who have not ( $p<0.05$ ). In conclusion, it was seen that trait anxiety rate decreases as athletes attend the races. It was also seen that both state and trait anxiety rates are high in athletes who have become physically disabled. Taking into the athletes' anxiety levels into consideration, it is necessary to take precautions to decrease these anxiety rates.

**Key Words:** *Anxiety, track and field athletes*

## The Examination of Psychological Strength Perceptions of Students of School of Physical Education and Sports by Confirmatory Factor Analysis

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The aim of this research is to identify how the students of school of physical education and sports perceive their psychological strengths by confirmatory factor analysis and to present from which subdimension that psychological strength perception is effected. The sample group of this research consisted of 465 students who are educating in Ondokuz Mayıs University Yasar Dogu School of Physical Education and Sports. The Psychological Strength Scale which was used in the research, was developed by Friborg and his colleagues (2003) and involves dimensions such as “personal power”, “structural style”, “social sufficiency”, “family accordence” and “social sources”. Turkish reliability of the scale was done by Basım and Nedim (2011). LISREL shelfware was used in analysing the datas. CN value of measurement model was calculated as 221.40. This value shows the study model is reliable as well as the number of participants is sufficient. The six factors which were accepted to measure psychological strength, was also seen in our study to clarify and justify perceived psychological strength. Again in our study it was also seen that the most important determiner of perceived psychological strength were the subdimensions of “perception of future and “self perception. “Structural style”, “family accordence”, “social sufficiency” and “social sources” subdimensions were found significant but compared to “self perception” and “perception of future” subdimensions, they became relatively unimportant. When “Family accordence” subdimension has less importance compared to other subdimensions, according to this, it was assumed that the participants have sufficient accordence with their families.

**Keywords:** *Psychological hardiness, Students, Confirmatory factor analysis*

## Why Do Young Adults Participate in Recreational Exercise and Sports?

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The purpose of this study was to determine motives of young adults for participating in recreational exercise and sport. The study was also aimed to examine motives for participating in recreational exercise and sport with regard to gender and some exercise behaviors (frequency & years of exercise/sport participation). “Physical Activity and Leisure Motivation Scale (PALMS)” was administered to 250 individuals who participated exercise or sports on a regular basis. Male and female exercisers were classified into two groups with respect to frequency (4 or more times per week & 3 or fewer times per week) and they were also classified into three groups with respect to their years of exercise/sport participation (1- 5 years, 6- 10 years & 11 years and more). Physical condition, appearance, and psychological condition were the most important motives of young adults for participating in recreational exercise and sport. T-test results revealed significant differences in affiliation, competition and other’s expectation motives between males and females ( $p < 0.05$ ). In addition, a significant difference was obtained in appearance, other’s expectation and competition motives with regard to frequency of exercise. The only significant difference was obtained in other’s expectation motives in terms of year of exercise participation. It can be concluded that the physiological wellness is the most important reason of young adults for participating in recreational exercise and sport. Furthermore, gender and exercise/sport behaviours may have an influence the motives of young adults.

**Keywords:** *Exercise, Sport, Motivation*

## **Cope with Stress Situation of Volleyball Players A Comparison of the Level of Gender and Regional League**

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The objective of the current study is specify the ways of coping with stress for male and female volleyball players who at the level of regional league in Turkey. Participants is who plays at the team of regional league in cities of Eskisehir, Karabük, İstanbul, Kocaeli, Kütahya, Konya, Çankırı, participated in the study voluntarily in total 142 female and male volleyball players 77 male volleyball players (Age, Mean: 24, 12±6,36), 65 female volleyball players (Age Mean:20,70±4,36). Inventory to Cope with Stress in Sport (SSBÇSE) which developed by Gaudreau and Blondin (2002) has used for specify the strategy of cope with stress. Descriptive statistics and MANOVA analysis were conducted on the collected data. The results of analysis show that at the level of regional league level used to cope with stress between the volleyball players; There is no significant difference in the sub-dimensions Coping with Cognitive and Physical ( $p>0,05$ ), Avoidance ( $p>0,05$ ), Social Withdrawal ( $p>0,05$ ), Disagreeable Expression of Emotions ( $p>0,05$ ). On the other hand a significant difference was found sub-dimensions of relaxation ( $p<0,05$ ) and Seek support ( $p< 0,05$ ).

**Key words:** *Gender, stress, stress with Coping, regional volleyball league.*

## According To Some Variables; A Research on Leisure Attitudes of Students And Workers

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This study aimed to determine students' and employees' leisure attitudes and factors that influence their attitudes. Sample of this study was 250 university students, 70 middle school students, 81 high school students, 50 officers, 40 employees, 30 self-employed workers, 250 men, 271 women from Düzce and Bolu. "Leisure attitude scale" is used which was developed by Ragheb and Beard(1982)and adapted by Akgül and Gürbüz(2010). T-test, one-way analysis of variance(ANOVA)and descriptive analysis techniques were used. It was found significant difference in "cognitive dimension" according to department variable between School of Physical Education and Sport (SPES)with middle school and high school ( $F(6,514)=3,198;p<0,05$ );"affective dimension" according to age variable between 11-14 and 20-24 age groups, according to department variable between SPES with middle school and Faculty of Arts and Science. There was significant difference in "Behavioural dimension" according to age variable between 20-24 with 11-14, 15-19 and 40-56 age groups according to department variable between SPES and other departments. With regard to the total scores of attitude, in age variable between 11-14 and 20-24 age groups, in income variable between 3401TL-over and 800TL-below groups, in department variable between SPES and other departments were found significant difference. Consequently; variables of age, department and family income found as a significant predictors on leisure attitudes.

**Keywords:** *Leisure, attitude, student, worker.*

## Examination of Critical Thinking Disposition and Professional Sufficiency Perceptions in Candidates of Physical Education Teachers According to Gender and Academic Success Perception

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The aim of the study was to examine of critical thinking disposition and professional sufficiency perceptions in candidates of physical education teachers according to gender and success status. The sample group of the study was consisted of 112 fourth year university students who studied at the school of physical education teaching of four universities in the Aegean Region. As the data collection tools, California Critical Thinking Disposition Index-T (CCTDI-T) adapted into Turkish by Kökdemir (2003) and Self-Efficacy Perception Scale of Pre-service Teachers developed by Çakır, Erkuş and Kılıç (2004) were used. For the data analyses; Kruskal Wallis test and regression analysis were used. As a result; it was found out that professional sufficiency perception of the female students were higher than male students. The students who had high academic success perception had higher critical thinking disposition and professional sufficiency perception. Analytical thinking was found to be a significant predictor in professional sufficiency perception ( $t=2.452$ ,  $p=.016$ ;  $p<.05$ ).

**Keywords:** *Critical Thinking, Thinking Disposition, Professional Sufficiency Perception, Candidate Teacher of Physical Education*

## Football Fans Motivation Evaluation Forms Educational Levels

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Sports and football clubs and advocacy that have made a navigational tool phenomena. Sloan (1989), as a leisure sport to watch sports audience thinks of separating the individuals, advocacy event in the sport, athlete, and that long-term interest in the team, any time of day to see themselves as a part of the team referred to dedicate their lives and stated that evangelism. Wann, sports supporter sport, athlete or team, and the following individuals who are interested in, after that time or a sports event sports audience listens to the individual identified. Aim of the study is to evaluate in terms of education level forms of motivation soccer fans. The study selected 251 by the method of random selection taraftarından Eskisehirspor club football fans participated in the study. Descriptive statistics and MANOVA analysis of the research data was used. Data collection, Sport Spectator Motivations Scale. Study was to examine the results of the analysis, Hearing the fans Education Levels and Honor ( $F=13.51$ ,  $p<0.01$ ), Education Levels of Aggression ( $F=22.98$ ,  $p<0.01$ ), Education Levels and Proximity ( $F=7.49$ ,  $p<0.05$ ), Education Levels of Awareness and Understanding- ( $F=15.59$ ,  $p<0.01$ ) and Education Levels of Escape ( $F=19.85$ ,  $p<0.01$ ) were found to have a significant. Excitement Search with fans Education Levels and no significant relationship between aesthetics. As a result, causes the fans to go to football games, and that levels of education have a significant relationship with the size of this study should not be a lot of reasons.

**Keywords:** *Football, Fans, Motive*



## Racism and Sport

Neslihan Filiz - Bilge Donuk

There is no sharp definition of 'race', which has been mostly defined based on biological and cultural features of people, in a historical manner. However, 'racism' is basically recognized as an ideology that implies the superiority of a race over others. In different communities, racist acts are seen in different ways and areas. They spread to sport too. The purpose of this study is to analyze the alienation experienced by the foreign athletes who are transferred to work in countries other than their own, within the context of racism. These athletes compete in the games which are won via the superiority of an athlete/team over the other. In this context, corruption in sport is seen in Turkey and abroad in the games that are defined over "win" and "superiority". This brings the games in which the athletes are subjected to any violence and insult by the racist names. When the athletes alienated from the essence of sport, they see sport as a means to an end; corruption in sport is observed. If the athletes who improve and develop their sporting abilities as if a machine runs perfectly in any condition and strive to win at all costs; the athletes are alienated to sport. Besides, in any sport environment in which the meaning of sport is detached from the essence of sport and overwhelmed by 'winning at all costs', all of the sportspeople use sport as a means to an end and this creates corruption in sport, such as racist acts.

**Keywords:** Alienation, Sport Worker, Racism, Discrimination

## The Examine The Deciding And Problem Solving Skills Of The Super Amateur Division Football Players

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In this study it is aimed to examine the deciding and problem solving skills of the super amateur division football players. 101 sports players of 6 teams which played football in super amateur division in season 2012-2013 and which ended the league as first two, as middle/average and as last two. “Melbourne deciding scale I-II” has been used to examine the deciding skills of sports players, problem solving inventory is used to examine the sports players’ problem solving skills which was improved by Heppner and Petersen and for which the translation was done first by Akkoyun and Öztan and then by Taylan, Savaşır, and Şahin (Taylan 1993, Savaşır, Şahin 1997). To the data, in the environment of SPSS 18.0 package, percentage, frequency, average, standard deviation amounts are applied in order to determine the relationship between the variants pearson correlation analysis is applied. When the survey results are examined; it is detected that There is a negative correlation ( $r=-.238$ ) between their avoidance levels and self respect; positive correlation ( $r=.493$ )between their postponing features and avoidance levels; negative correlation ( $r=-.231$ )between their panic levels and self respect level; negative correlation ( $r=-.253$ ) between the panic levels of the sports players and careful deciding; positive correlation ( $r=.643$ ) between the panic levels of the sports players and avoidance levels; negative correlation ( $r=.261$ ) between problem solving skills of the sports players and avoidance. Eventually; we can say that the football players that play in Muğla super amateur division cannot make healthy decisions in any panic situation and, the sports players that make avoidant decisions in instant decisions have low problem solving skills, as expected.

**Key Words:** Football – Deciding, Problem Solving, Amateurs, Skills

## Evaluation Of Motivational Climate Levels Perceived By Students In Physical Education Lessons

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The objective of the current study is to evaluate the levels of motivational climate that secondary school 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> graders perceive. A total of 607 students studying in 6 different secondary schools from two central districts in Eskişehir participated in the study voluntarily, and 318 of these participants were female (Age  $\bar{X}$  : 12.74  $\pm$  0,90) and 289 of them (Age  $\bar{X}$  :12.84  $\pm$  0,94) were male. In order to determine the motivational climate, *Learning and Performance Orientation in Physical Education Classes Scale (LPOPECS)* developed by Papaionnou (1994) and adapted to Turkish by Daşdan Ada et al (2012) was employed. Descriptive statistics and MANOVA analysis were conducted on the collected data. The results of analysis show that while there is a significant difference in terms of gender in the sub-dimensions of Learning and Performance Orientation in Physical Education Classes Scale including learning orientation caused by teachers, anxieties of students about their mistakes and orientation to conclusion without any efforts ( $p < 0,05$ ), there is not a statistically significant difference in competition orientation and learning orientation sub-dimensions ( $p > 0,05$ ). Consequently, some sub-dimensions of learning and performance orientation in physical education lesson might differentiate in terms of gender.

**Keywords:** Physical Education, Motivational Climate, Gender

## Evaluation of The Mental Toughness of Youth Turkish Swimmer's

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**Object:** The aim of this study was to evaluate mental toughness of elite Turkish swimmers with different swimming styles (breaststroke, freestyle, backstroke, and butterfly) **Material and Method:** 49 male and 45 female in total 94 swimmers (all different swimming styles) with age average  $16.2 \pm 1.71$  volunteered to participate in this study. In this study the mental toughness was measured as swimmers psychological performance inventor. Mental Toughness Questionnaire consist of 42 questions each has 5 items (Likert type scale). Certain tests show that this inventor is trusted and reliable. This inventor has 7 subtitles. These are self control( self confidence), negative energy control( competition, control of focusing), visualizing and control of vision( positive motioning of future), motivation( power of will), positive power( having fun from the job), control of act(positive thinking). These tests implemented on swimmers face to face.**Conclusion:** All data results were analysed by using SPSS program (version 18.0; SPSS, Inc., Chicago, IL). Frequency analyses were done with gender and different swimming styles.**Result and discussion:** According to results we see that swimmers competing in two or three different swimming styles had more positive thoughts, higher confidence and better focusing ability then swimmers competing only in one style. Male swimmers were better in self confidence focusing positive thinking and mental toughness but they have less excitement for competitions comparing with female swimmers. It is suggested that all specifications about mental wellness in swimmers with one style should developed with one on one treatments

**Keywords:** *Swimmers Mental Toughness Inventory*

## Physical Self Perception Levels of University Students

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Many people place emphasis on their appearance and body image with their desire to be liked being always in priority nowadays. The physical sense of self and establishing a relationship with our physical surrounding is important starting with our childhood for our healthy development. A positive self perception in physical terms is also critical in having a positive self concept. Individuals perceive their bodies positively while gaining a new physical appearance through physical activities. Participation in physical activities may not only transform the physical appearance into the desired shape but it will also positively affect the body image and self respect. The purpose of this survey is to determine the opinions of the Ankara University students related to the levels of their physical self perception. The screening model was used in this survey. The “Physical Self Perception Inventory” of Fox and Corbin, which was adapted to Turkish by Aşçı et al. (1998), was used as the data collection tool. The scale covered thirty items related to physical perception comprising of the sub dimensions of sports ability, physical condition, body appeal, and general physical competence. The population of the survey consisted of the Ankara University students. The assessment instrument was applied to a sample group consisting of 379 students. The reliability coefficient of the scale was found to be ,92. The data related to gender and school variables were assessed with the unrelated t test and those concerning age and exercising frequency were tested with the one way analysis of variance. The Scheffe test was applied in order to determine the source of the difference that is found to be meaningful as a result of this application. The students of the Physical Education and Sports School were determined to perceive themselves more positively in physical terms compared to other students of the school. It was determined that male students perceived themselves more positively compared to female students in the “power” sub dimension. It was also found that students at and over the age of 24 perceived themselves more positively in physical terms compared to those between the ages of 18 and 28. Students, who exercised regularly, perceived themselves more positively compared to others, who exercised occasionally and those, who never exercised, and students, who exercised occasionally, perceived themselves more positively compared to others, who never exercised.

**Keywords:** *Physical Self Perception, University Students*

## Folk dance within Literature

Kadidia Doumbia

### Abstract

A community of shared and common habits has an identity of its own. Groups of people are different from each other as one human being is different from the rest of humanity. Customs are based on legends and mythology but nobody cannot trace their original roots. Each individual is a folk concept by his everyday routine, by his place in the society and by accepting its rules. Dance can be the way we walk, the pattern we follow to have lunch, or the traditional rituals. Depending on our understanding of what movements mean or should be, one may say that daily activities are a dance. Every place on earth where there is a group of people, dance is a prevailing part of the social life. From the Mandingo Epic of Soundjata Keita in West Africa to the Tibetan Epic of King Cesar, cultural customs of populations are depicted through dances and heroic poetry. How does Folk literature puts in evidence the place of dance as a performing art, a folk entity and a component of social life?

## Examination of Assertiveness Levels of Young Athletes

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The research was carried out in a survey model which aimed at examination of the assertiveness level of the athletes from six different branches. The sample of the study was composed of 319 athletes (115 female athletes and 204 male athletes) who played in 30 Sports Clubs under Kayseri Sportive Directorate, whose mean age was  $12.45 \pm 1.86$  years and whose mean sportive age was  $3.25 \pm .11$  years. "Rathus Assertiveness Inventory (RAI)" the Turkish adaptation of which was performed by Voltan (1980) was used in the study. For the statistical analyses, arithmetic means, standard deviation, t-test, One Way Variance Analysis and Kruskal Wallis test were used and results were considered significant at  $p < 0.05$ . The findings indicated that there was no statistically significant correlation between RAI scores and gender variable but there was significant correlation between family attitudes and sportive field and RAI scores. As a conclusion, although no difference between assertiveness levels and gender was found in terms of Assertiveness levels of the athletes, it was seen that Assertiveness levels of the athletes whose families showed a free attitude were higher than those whose families showed a democratic attitude. Also; it was noted that handball players had higher Assertiveness levels as compared with athletes of other branches.

**Keywords:** *Young athletes, Team sports, Assertiveness.*

## Turkish Exercise Participants' Opinions About Supplements and Supplement Use

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Studies claim that supplement use is an increasing practice especially among young population depending on age, sex, education and culture. In the light of these studies, this study aims to examine the Turkish exercise participants' opinions about supplements and supplement use. Data were collected with "Exercise Participants' Supplement Use Survey" which was developed by the researchers by considering the previous studies and research questions of the study. Survey consists of 34 questions aiming to examine the participants' opinions about supplements and supplement use. Participants are 67 women ( $\bar{x}$  age= 25.6  $\pm$ 2.7) and 57 men ( $\bar{x}$  age= 27.2  $\pm$ 2.1). Supplements were used by 31% of participants. According to the chi-square analysis, differences between women and men's supplements use are significant ( $\chi^2_{(1)}=4.67$ ,  $p = .03$ ,  $p < .05$ ), and men's supplement use are higher. Most popular supplements used were protein (29,8%), creatin (7,3%) ve vitamins (4,8%). Reasons for supplements are enhancing muscle mass (26.6%), exercise performance (18.5%) and physical appearance (16.1%). Main reasons keeping the participants away from supplement use are side effects (72,6 %), lack of knowledge about supplements (38,7%) and affordability (20.2%). In Turkey, there is no regulations about supplement or illegal drug use in gyms. Supplement use in gym can increase the probability of illegal supplement use. Thus it is considered that this study can be effective in developing anti-doping and health care policies in sport and exercise field.

**Keywords:** *supplements, protein, exercise, exercise participants*



## Takım Birlikteliği ve Hedef Yönelimi Arasındaki İlişki: Plaj Hentbolcuları Üzerinde Bir Araştırma

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Bu araştırmanın amacı sporcularda takım birlikteliği ve hedef yönelimi ilişkisini belirlemektir. Bu amaçla, 2012 yılında yapılan 15. Yaşar Sevim Köyceğiz Üniversiteler Plaj Hentbolu Turnuvası'na katılan takımlardan 104 sporcu gönüllü olarak araştırmaya katılmıştır. Veri toplama aracı olarak Duda ve Nicholls (1992) tarafından geliştirilen ve Türkçe'ye uyarlaması Toros (2001, 2004) tarafından yapılan Sporda Görev ve Ego Yönelimi Ölçeği ile Carron ve diğ. (1985) tarafından geliştirilip Türkçe uyarlaması Öcel (2002) tarafından yapılan Takım Sporlarında Takım Birlikteliği envanteri kullanılmıştır. Veriler SPSS 17. programı ile analiz edilmiş ve anlamlılık düzeyi 0,05 olarak belirlenmiştir. Verilerin analizinde tanımlayıcı istatistikler ve Pearson korelasyon analizi kullanılmıştır. Bulgulara göre takım birlikteliği alt boyutları ile hedef yönelimi arasında anlamlı bir ilişki tespit edilmiştir. Bu ilişkiler görev yönelimi ile görev bütünlüğü arasında ( $r=0,326$ ,  $p<0,05$ ) ve ego yönelimi ile sosyal bütünlük arasında ( $r= -0,223$ ,  $p<0,05$ ). Bu bulgulara göre, takım performansının açığa çıkmasında önemli unsurlardan biri olan takım birlikteliğinin sporcuların benimsedikleri hedef yönelimleri ile ilişkili olduğu söylenebilir.

**Keywords:** Takım birlikteliği, hedef yönelimi, plaj hentbolu

## Girls and Boys High Schools Students Receiving Special Education Teaching Thought of Physical Education and Sports

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The aim of the study is evaluated to conducted to attitudes Physical Education and Sports Lesson the education of young people involved in Private high schools around Izmit. The research consisted of, 15 years and under age, 71 people; 16-17 age, 98 people; 18 and over age, 25 people and total 194 people between physical education and sport students in the four number private high schools in 2012-2013 academic year. Attitude scale questionnaire was used to collect the data of physical education and sport. Applied questionnaire consists of two sections, the first section, the subjects were asked to demographic information, the second part is to get the data about attitudes towards physical education. All the data is obtained using SPSS and descriptive statistics and independent t-tests were conducted. %54.4 Of the participants are first grade students. Mothers were housewives (%79.4) and had completed high school (%45) and fathers were the self-employed parents (%63.9) and high school graduates (%41). %50.5 of the participants are family doing sport. The vast majority of families allows their children to do sports (%89.7). Male and female participating in the study of physical education and sports attitude scale score  $55.89 \pm 7.46$  and  $58.11 \pm 7.02$ , respectively. As a result, between male and female students were difference statistically significant views on physical education and sport( $P<0,05$ ).

**Keywords:** Attitude scale, questionnaire



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**PHYSICAL EDUCATION AND SPORT  
EDUCATION POSTER PRESENTATION**

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## **A Research On Emotional Intelligence Level and Communication Skills of Youth Camp Leaders**

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This resarch aims to compare emotional intelligence level with communication skills of youth camp leader candidates who will serve at youth camps and examine variances such as age, gender, type of secondary school and type of undergraduate study. 147 trainees who have attended the training course for youth camp leaders in 4 periods, have taken part in this research. Emotional Intelligence Scale and Evaluation of Communication Skills Scale have been applied as data collection tools and according to statistical analysis results, emotional intelligence of youth camp leader candidates has positive relationship with their communication skills. In addition to this , it has been determined that emotional intelligence level increases in proportion to age. Any significant difference hasn't been determined between emotioanl intelligence level and perception of communication skill level regarding to gender, type of secondary school and type of undergraduate study.

**Key words:** *Youth camps, leadership, emotional intelligence, communication skill*

## Examination of the factors affecting students' motor skill learning

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The aim of this study is to investigate and determinate motor skill learning of high school students according to their demographics. Motor skills, which are the primary focus in physical education studies, can be classified in several ways. To classify skills is to group them by the characteristics they have in common. Classifying skills can lead to a greater understanding of the nature of skills and how they can best be practiced and learned. It is generally agreed that learning involves practice and time. Over time, and with practice, someone who is a beginner will progress through various stages to become a skilled player. Skill-learning is a continuous and dynamic process without distinct and definite stages. For convenience, however, certain general changes can be described in skill-learning. On that note “National Education” is the one of the best places where teachers can teach regular skills basically. In this context, the aim of this study is to investigate and determinate motor skill learning of high school students according to their demographics. During in 2011 – 2012 study period, 19 physical education teachers who work at the high schools and 704 students in the ninth grade have participated to study that applied by permission of local government, at the high schools in the city centre of Muğla. First of all, volleyball skills of students have been recorded with camera and evaluated by three specialists. Demographics of students have compared and correlated according to their variables with independent samples t-test and correlation analysis and evaluated according to  $p < .05$  significant level. The teachers who young according to others and have graduate degree, have been more successful in terms of motor skill learning of students. In result, if physical qualification and academic knowledge levels of teachers increases, motor skill learning of their students is going to rise.

**Keywords:** Motor, Skill, Learn, Student, Education

## Examination of the Effects of Special Teaching Methods on Motor Skill Learning

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The aim of this study is examining of the effects of special teaching methods on motor skill learning. It is generally agreed that learning involves practice and time. Over time, and with practice, someone who is a beginner will progress through various stages to become a skilled player. Skill-learning is a continuous and dynamic process without distinct and definite stages. For convenience, however, certain general changes can be described in skill-learning. On that note “National Education” that it means school is the one of the best place where teachers can teach regular skills basically. In this context, The aim of this study is examining of the effects of special teaching methods on motor skill learning. During in 2011 – 2012 study period, 19 physical education teachers who work at the high schools and 704 students in the ninth grade have participated to study that applied by permission of local government, at the high schools in city centre of Muğla. Special teaching methods used of teachers were determined by using teacher information form. Volleyball skills of students have been recorded with camera and evaluated by three specialists. Correlation between special teaching methods of teachers and motor skill learning of students was analysed by multiple linear regression analysis in regard to  $p < .05$  significant level. In result, the most used special teaching methods of teachers were determined as practice, demonstration, and expression methods. Means of frequencies of the preferred methods by teachers was correlated with motor skill learning of students. The teachers who young according to others and have graduate degree, have been more successful in terms of motor skill learning of students. In result, the correlation between the preferred special teaching methods by teachers and the motor skill learning of students were determined that it is positive.

**Keywords:** Motor, Skill, Learning, Teaching Methods

## The Origin of Physical Education at KWASSUI Girls' School in Japan

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### **Abstract**

This study was conducted to identify the origin of physical education provided in Kwassui Girls' School (the forerunner of Kwassui Gakuin), which is generally attributed to the achievements of Ms. Mariana Young, the second principal of the school. This research aimed to reveal the details of physical education in the Meiji Era, based on school magazines of that time, testimonies of graduates who had attended the school at that time, and records of staff meetings, etc. The following old photographs concerning the new exercise method were confirmed to be in possession: two that showed girls wearing a new-style gym suit; one that showed girls marching in the school grounds; and two that showed girls performing the new exercise method.

### **Introduction**

Kwassui Girls' School in Nagasaki was founded in Nagasaki City on December 1, 1879, by Ms. Elizabeth Russell, sent by the American Methodist Episcopal Church. In the School's history of over 130 years, the first to promote physical education was Ms. Mariana Young, who succeeded Ms. Russell in 1898 as the second principal. The new exercise method introduced by Ms. Young became popular, and several valuable photographs taken in 1902 showing scenes of physical education at that time still remain at Kwassui Gakuin. However, its historical significance has not been verified.

### **Purpose**

The study was to clarify the contents of the new-type exercise that Ms. Young introduced into Kwassui girls' school in the Meiji era in Nagasaki, Japan.

### **Methods**

We conducted a historical analysis based on old photographs and school regulations at that time, records of testimony given by graduates, and other historical documents in the category: "the period of Principal Mariana Young", stored in the archive room at Kwassui Gakuin.



## Results and discussion

Ms. Young (Fig. 1) was the second principal of Kwassui girls' school from 1898 until 1920. After graduating from Ohio Wesleyan University, Department of Humanities in June, 1893, Ms. Young had been in charge of the classes for Latin, Greek, German, and English, both at Marinette Public School in Wisconsin and Allegheny College, Middle School in Meadville, Pennsylvania. The challenges for the future regarding Ms. Young are to clarify the facts: when, where, and from whom Ms. Young received guidance for physical exercise, prior to arriving at Kwassui Girls' School in September, 1897.



**Fig. 1.** Ms. Mariana Young, June 27, 1901

Ms. Young made the schoolgirls tie their hair into one ponytail with a ribbon, and wear Western-style uniforms, consisting of long-sleeved sailor-style jackets, sheep's hoof-style pants with narrow hems, and shoes, in gymnastics classes (Fig. 2).



**Fig. 2.** Western-style uniforms

Ms. Young had already started an exercise class before July, 1898 in order to strengthen the weak bodies of schoolgirls in Japan, after just having attained the post of principal at Kwassui Girls' School. The physical exercises introduced by Ms. Young were performed by using dumbbells, cudgels, and rings, with music, and with all orders given in English (Fig. 3).



**Fig. 3.** Dumbbell exercises

The new exercise method introduced by Ms. Young became popular in Nagasaki City, and was opened to the public for a fee at Maizuru-za (Maizuru playhouse) on April 26, 1902. This event was aimed at collecting contributions as donations for a Christian charity, and conducted as “A Charity Event with a Concert and Physical Exercise,” with the support of the upper-class ladies in the city. The proceeds were donated to an orphanage (Fig. 4).



**Fig. 4.** “A Charity Event with a Concert and Physical Exercise,” at Maizuru playhouse on April 26, 1902

It was found, based on records of testimony from the graduates of the school, that Ms. Masa Okajima, who had graduated from Kwassui Girls’ School and become a teacher there, was appointed to teach physical education to the students in place of Ms. Young (Fig. 5).



**Fig. 5.** New-type exercise by Ms. Okajima.

Ms. Masa Okajima excelled in music, and was fluent in English. So, she must have been just the very person for teaching the new exercise method in place of Ms. Young (Fig. 6).



**Fig. 6.** Ms. Masa Okajima, graduated from Kwassui Girls' School, Advanced Course, in June, 1901, and was hired as a teacher of English, English literature, and music at the school in September of the same year.

## Conclusion

The challenges for the future regarding Ms. Young are to clarify the facts: when, where, and from whom Ms. Young received guidance for physical exercise, prior to arriving at Kwassui Girls' School in September, 1897.

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## **Türkiye Ve Çin'deki İlköğretim Beden Eğitimi Dersi Öğretim Programlarının, Öğretmen Görüşlerine Göre Karşılaştırmalı Olarak İncelenmesi**

Mihriay Musa  
Belgin Gökyürek

*Gazi Üniversitesi*

Comparative Education is a discipline that describes national education systems, assists in defining the similarities and differences between educational systems in different countries, describes similar cases, and which provides new and beneficial recommendations and proposals concerning educational programs. The aim of this study is to perform a comparative evaluation of the physical education teaching programs in elementary schools in Turkey and China according to the views of teachers.

**Keywords:** Comparative Education, Comparative Physical Education, Physical Education Curriculum, Turkey, China (East Turkestan)

## An Investigation of Physical Education and Primary School Teacher Candidates' Perceptions of Metaphors

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This study was carried out to determine metaphoric perceptions about teacher, teaching, learning, instructional material and evaluation between physical education teacher candidates and primary school teacher candidates. Screening model used, the sample of the study was consisted of 117 physical education teacher candidates and 145 primary school teacher candidates totally 262 students from Bolu. "Metaphors Scale Oriented Concepts in Education" was used, designed by Eren and Tekinaslan (2012). Comparing obtained data with various variables was utilized from t-test, anova-post hoc and descriptive analysis. It was found significant difference in "teaching" sub-dimension between physical education teacher education and primary school teacher education ( $t=3,064sd=260p<0,05$ ) and between gender groups ( $t=2,222sd=260p<0,05$ ) when the findings of study examined. According to class variable in "learning" sub-dimension, it was found significant difference between 2. and 3. classes ( $F(3,258)=2,766p<0,05$ ). It was found significant difference in "evaluation" sub-dimension between departments ( $t=-3,138sd=260p<0,05$ ) according to class variable 2. and 3. class, 1. and 4. class, 2. and 4. class ( $F(3,258)=6,083p<0,05$ ); in the same sub-dimension concerning age variable between 24 years and over with 18-20 and 21-23 age groups ( $F(2,259)=3,997p<0,05$ ). Consequently, it was emerged metaphoric perceptions related with education concerning "department", "class", "age" and "gender" variables.

**Keywords:** *Teacher, Teaching, Learning, Instructional Material And Evaluation*

## The Effect of Block and Serial Practices on Tennis Skill Acquisition

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Block practice improves performance more than serial practice in skill learning but serial practice better memory helps than block practice. The purpose of this study was to compare effect of serial and block practices on ground stroke performance in tennis. Twenty seven university students (age  $22.62 \pm 1.71$  years) were assigned to a block (n=14) or a serial (n=13) practice group. Tennis education was given two groups 4 hours per week during 5 weeks tennis education. All participants in the study were performed tennis skill test. There were no significant between pre ( $54.87 \pm 15.79$ ), ( $44.75 \pm 17.39$ ) and post ( $68.50 \pm 14.85$ ), ( $74.12 \pm 10.39$ ) ( $p > 0,05$ ) but there were significant difference in tennis skill tests between % differences of blocks and series groups ( $p = 0,03$ ), ( $p < 0,05$ ).

**Keywords:** *Tennis, skill learning, serial practice, block practice.*



## The Analysis of Opinions of Students From Different School Types on Children's Games

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In this research the game playing behaviour of 8-12 year age group children was analysed in terms of age, gender and school type. Research was conducted among a total of 450 students at two private and two state schools. In order to analyse the game playing behaviours of students, the researcher developed and administered a questionnaire with 14 items consisting of multiple choice and open-ended questions. In data analysis, multiple regression, percentage and frequency analyses were used. The survey results show that children usually spare time for game playing; pc games are among the top listed favourite games; children play mainly in the garden and streets; at school the most played games are dodgeball, hide-n-seek and hopscotch; among the group plays the most played ones are children and computer group games; they tend to play more group games than individual games and children know our traditional games of hide-n-seek, hopscotch and dodgeball. As a result, in order to avoiding children from directing to computer games and preventing them from health problems due to inactivity, to enhance natural game atmosphere may provide new generation move more and lessen health problems. At one side, conveying the traditional games to new generations families have great responsibility but at the other side to let children to evaluate acquired games in Arts, Music and Information Technology classes effectively, to have them repeating acquired games in spare time activities may provide children to play more traditional games and not to forget them.

**Key Words:** *Children, Children's games*

## **Assessment of Sports Equipment and School Supplies Found in Malatya, Turkey**

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This research aims to determine which branches of sports are practiced more often in physical education courses through the analysis of sports equipment in Malatya public schools. The main method of this qualitative research was document analysis. The study group is based on an easy sample of 24 public schools located in the center of Malatya, Turkey. The research data derives from a 10-question questionnaire developed by the researchers after an examination of which books the schools have used and which are still in stock. The results of the research are as follows: Sport tools and equipments which are used in physical education in schools focuses mostly on 3 team sports (football, basketball, volleyball) and 2 racket sports (table tennis, badminton) (87.5%); there is a deficiency of closed sport areas in which to do sports at most of the schools (70.84%); there are sport clubs and branches in all schools (100%); and there is differences in the popularity of the books which have been used and of those that are still in stock.

**Keywords:** *Sports equipment, school supplies*

## Investigation of Student Selection Methods for Physical Education and Sports College in Turkey

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The purpose of this study is to examine the student selection methods of Physical Education and Sport Colleges in Turkey in 2012. The main method of this qualitative research was document analysis. In 2012, the research group is made up of 20 universities that were chosen via random selection and an internet announcement about the study. The research data were obtained by examining special aptitude test booklets, which were published by the universities. Then the data obtained from booklets were divided into themes, and from this, percentages and frequencies were determined. As a result of this research, the researchers found the following: there was a difference between the YGS scores and the special aptitude test application criteria; many schools preferred to use more than one exam (60%); the schools selected different numbers of students; there were 7 fundamental athletic abilities that the majority of the schools tested the candidates for (74%); all of the universities used a curve in the special aptitude test.

**Keywords:** *Student selection methods, physical education and sports college*

## Comparison of Tennis Skill Acquisition Improvements of Physical Education and Sport Students

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It is known that previous experiences facilitate to acquire of some current skills related to physical education and sports. Accordingly, the purpose of this study was to compare tennis performance improvement among students who enrolled in Physical Education & Sport Teaching (PE&ST), Sport Management (SM) and Recreation (R) departments. The students matriculated in Physical Education & Sport Teaching and Sport Management departments achieved a Special Ability Exam. But Recreation department students did not need to achieve an ability exam like other students. They admitted to the Recreation Department only University Entrance Exam in this study. Eighty three students took part in the study as a volunteer. Tennis education was given to the all students for two hours and twice a week during 8 weeks. The tennis performance improvement of students was tested with Tennis Ability Test the beginning and at the end of the tennis education. According to the results, there was no significant difference among departments at pre-test (PE&ST<sub>n=23</sub>:52.77±17.16%, SM<sub>n=27</sub>:50.00±17.05%, R<sub>n=33</sub>:44.76±16.39%; F=1.655, P=0.198). But significant difference appeared between Recreation (57.58±15.94%) and other department measurements at posttest in favor of PE&ST (82.02±7.18%) and SM (71.21±12.98%) departments (F=24.429, P=0.000). Consequently, previous athletic experiments of PE&ST and SM students might be facilitated to improve their tennis performance.

**Key words:** *Tennis, recreation, skill acquisition, exam, student*

## Department of Physical Education Students 'Knowledge Levels of Doping: The Case of Istanbul

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The aim of this study students who are studying in Istanbul, physical education and sports departments to make detection of doping levels of knowledge. Study is conducted in May-June, The spring semester of the 2012-2013 academic year. The questionnaire used to collect data in this study, that his higher education in Istanbul, sports three universities (University of Istanbul Gedik, Marmara University, Istanbul University) of undergraduate students in 1900, 278 men and 145 women, a total of 423 students applied. The evaluation of the data obtained from the survey with the SPSS 16.0 statistical software was used and the frequency and percentage values and the chi-square test was performed. Students in the study, use of stimulants they know (39%), but did not have enough knowledge about the harmful drugs (39.3%) or partially they are familiar with (37.9), they are knowledgeable about doping (32.4%) or partially they are familiar with (41.1%) was observed. In addition, although doping is a current topic, it is not well known by athletes, managers, administrators the coaches (58.3%) were observed. Doping with knowledge of the participants also believe that the psychological (57.2%), and believed that doping leads to unfair competition (74.7%). In the light of this event in our country in recent years in the international arena doping spite of many students of physical education and sports department was not have enough information on the subject.

**Keywords:** *athletes, doping, physical education department, the university, questionnaire*

## **Researching of The Effects of Games And Movement Activities With Parent Participation To Preschool Age Children's Motor Development**

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His study aimed to investigate the effects of games and movement activities with parents' participation to preschool age children's motor development. 6 boys, 11 girls in total 17 preschool age children whose ages' mean is =5,020,76 and their 17 mothers participated a program which includes games and movement activities. The program has continued 2 hours per a week during 12 weeks. Motor performance tests has applied twice one is before starting of the program and the other one is after practicing the program. The tests was measuring that balance on one leg, quickness, catching, long jump by stopping, throwing tennis ball and speed running. Results: The research has shown that according to the boys' motor performance results their mean value improved positively. Was established that the girls who participated the games and movement activities developed on the motor performance tests excluded the test of speed running. According to first and second measures the tests have shown that about balance on one leg girls' performance was better than boys', about quickness girls' performance was better than boys', about speed running girls' performance was better than boys' while about throwing tennis ball boys' performance was better than girls'. Has discovered that boys improved more than girls did on long jump by stopping. About catching skill girls improved more than boys did.

**Keywords:** *Preschool, Parent Participation, Games And Movement Activities, Motor Performance.*



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**PHYSICAL ACTIVITY, SPORT  
AND HEALTH SCIENCES  
POSTER PRESENTATION**

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## The Effect of Taurine Supplementation on Exercise Time to Exhaustion

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There is information regarding the taurine load increase the exercise performance by protecting the contents of the skeletal muscle taurine that is decreased during exercise period, by regulating the calcium homeostasis, by reducing exercise-induced oxidative stress, by reducing exercise-induced muscle damage, by increasing the cardiac and skeletal muscle contractility during an exercise period, by inhibiting exercise-induced blood lactate production. This study was planned for the purpose of examining the exercise time to exhaustion in acute exercise when different dose of taurine is applied. 21 individuals participated in the study whose mean age was  $23.56 \pm 0.56$  years and mean height  $176.26 \pm 1.59$  cm. Bruce test was applied on these individuals before and after the 1 week placebo, 3g and 6g taurine load periods. In order to prevent the possible exercise effects of the performed Bruce tests, the order load of placebo, 3g and 6g taurine load was applied to 3 groups of 7 by randomizing consecutively. As a result, while there was no significant difference statistically in the respiratory exchange ratio measure during the loading period of placebo, 3g and 6g of taurine, in the maximal oxygen consumption, in the maximal carbon dioxide production and in the metabolic equality values ( $p > .05$ ); the total time to reach the 1.1 respiratory exchange ratio and the total test period did not change after the placebo and the 3g taurine load but significantly increased ( $p < .01$ ) after the 6g taurine load.

**Keywords:** Taurine, Respiratory exchange ratio, Total test period

## **The Study of Individuals' Aims of Doing Exercises According to Body Mass Index, Age and Gender**

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This study has been conducted to determine the objectives of doing exercise for the people that go to sports centres. Total 1250 people including 441 women and 808 men going to a fitness centre between the years of 2007 and 2013 took part in the study. The aims of these participants in doing sports were studied according to their Body Mass Index (BMI), age and gender. For the statistical analysis of the data obtained from this research, Chi-Square test was used. It has been established that the 66.8 percent of the participants do exercise to lose weight, 15.7 percent of them do so to gain weight and 17.5 do sports to tighten their body. It has been observed that the answers of the participants to the question of “Why do you do exercises?” differs according to BMI ( $p<0.01$ ). While it has been seen that 99.5 percent of the obese and 98.7 percent of the fat people do sports to lose weight, this percentage appears to be 0 in slim people and 42.1 in normal people. A statistically meaningful association has been found between the ages of the participants and their objectives of doing exercise ( $p<0.01$ ). And similarly, a statistically meaningful association has been found between the genders of the participants and their objectives of doing exercise ( $p<0.01$ ). In conclusion, it has been observed that the majority of the participants do exercises for the purpose of losing weight. Furthermore, it has been determined that BMI affects the aim of doing exercise and the percentage of those who do sports “to lose weight” increases along with the increase in their ages.

**Key Words:** *Aim of Doing Exercise, Body Mass Index, Age, Gender.*

## Analyzing the Physical Activity Levels and Healthy Life Style Behaviors of University Students

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Students can develop a life style that will negatively affect their health due to their leaving from the family environment they have been accustomed to, their being open to external effects and their making their own choices significantly in university years concurrent with their youth. It is also possible for the young to carry this life style into their life after their education at university. In the research, it was aimed to analyze the physical activity levels and healthy life style behaviors of the university students. 1260 out of 9264 students studying at the central campus were reached. In the research, anthropometric body measurements were performed to the experimental subjects, and physical activity and healthy life style behaviors scale were carried out, as well. When the data as result of the analysis were analyzed, 47,94% (604 students) of the university students participated in the research were determined as male and 52,06% (656 students) were determined as female. In the research, it was concluded that there has been a positive significant relationship below the average between the healthy life style behaviors and physical activity levels of the university students.

**Keywords:** *Healty Life Style, Physical Avtivity, Student.*

## Obesity Frequency of The University Students and Analyzing the Level of Physical Activity

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Obesity is a chronic disease which affect the adults more day by day as well as children and prevalence of which has been increasing in both developed and developing countries. Recently, prevalence of the obesity has increased at any age groups. the reason for this is the breaking of the food habits introduced by the modern life and individual's maintaining a sedentary life style avoiding from the physical activities. This research which has been carried out to determine the frequency of obesity among the university students and behaviors with the level of physical activity was Performed upon the students studying at Adiyaman University in 2012-2013 academic year. 1260 of the 9264 students studying in the central campus were reached. Anthropometric body measurements were performed upon the experimental subjects in the research, and level of physical activity scale was performed. When the data were analyzed as result of the research, 47,94% (604 students) of the university students participated in the research were determined as male and 52,06% (656 students) were determined as female. When age variable of the students was analyzed, 31,12% of the students were determined as being 18 years old and below, 52,69% as being between 18-23 years old and 16,19% as being 24 years old and over. As result of this, 815 (64,69%) of the university students participated in the research were determined as having normal weight, 322 (25,55%) were determined as being overweight and 123 (9,76%) were determined as being obese.

**Keywords:** Obesity, Physical Activity, student.

## The Effects of Step Counts in Early Childhood on Motor Fitness Performance

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### Abstract

In early childhood, the nerve functions develop significantly, and in response, the motor function, spacing cognitive function, language ability, etc. develops significantly, too. In this study, we performed the total research on the daily step count which reflects amount of physical activities in early childhood, athletic performance test, lifestyle habits, degree of health, personality, and so on, and analyzed the research results for the relationships among them. Significant correlations were observed between the daily step count and the athletic performance test results. Kindergarten and nursery school children who have obtained better test results have more physical activities on a daily basis and have more friends. Some correlations were observed between some of the athletic performance test items that involve complex factors such as ball catch, ball throw, etc. and the development of sociality, motivation, having a regular life, etc. From these results, we concluded that young children should take more physical activities through playing, and that they should play and do physical activities that should be complex and stimulate the high-order functions.

### **Introduction**

The advance in science and technology improves the convenience of daily life, and, at the same time, it is reducing opportunities for humans to walk. Similarly, children in Japan have been reducing the amount of physical activities gradually. It is thought that the nerve function develops significantly in early childhood and approximately 80% of the nerve function is developed by about age 5. Therefore, in this period, the ability to coordinate body movements such as moving at the right time and controlling muscle power improves remarkably. The ability to coordinate body movements serves an important function for acquiring a new motion, and therefore enhancing this ability in early childhood has a significant meaning as it contributes to formation of the foundation for motor development in the period after the

childhood. To enhance the ability, it is thought to be important to encourage young children to experience having fun to play with physical activities so that the nerve system network connecting the brain with muscles can be appropriately formed. Change in quality of play in early childhood and decrease in its amount may possibly impair the development of these abilities, which is a critical social problem, as decrease in amount of playing with physical activities will drain the vitality out of the future society. Insufficient amount of exercise in this period can cause obesity and be likely to develop juvenile life-related diseases. Acquiring of exercise habit and experiencing of the joy of exercise in early childhood are considered effective to reduce possibilities of developing diabetes, hypertension, dyslipidemia and other diseases in the future.

In 2013, “Health Japan 21” (Second Phase) has begun, aiming at establishment of “a society in which the entire nation support each other and live healthy and happy lives.” It means that the importance of exercise in early childhood has just started to attract attention. However, in fact, the physical activity base and the physical activity guideline do not have concrete measurable targets. One of the major reasons may be a low number of systematic reviews. Based on this point of view, it can be an important intervention study to be implemented urgently to seek the correlation between physical activity amount in early childhood and physical and emotional development, motor fitness performance, healthy and others. The purpose of this study is to research the relationship between daily step counts and motor fitness performance in early childhood.

## **Methods**

### **1 The region, facilities and the number of children under study**

The study was conducted in Ishikawa prefecture, located in the central part of Japan. For the study, we received corporation from 18 kindergartens and nursery schools, 720 kindergarten and nursery school children, and 720 households. The physical characteristics of subject children are shown in Figure 1. Some children whose measurement results had not properly specified in the records were excluded from the study. These study and measurement were conducted on the subject children only when the nursery schools and kindergartens or the parents for the subject children understand and agree the aim of the study and measurement after fully explained to them.

### **2 Measurement and research items**

- 1) Daily step count:** Each subject’s steps were counted with a pedometer (by Omron) on the subject, on arrival at the kindergarten or nursery school, during activity time at school, and before leaving for home every weekday (for 5 days in total), and the step counts were added up for each day and, with these counts, the mean value of the daily step counts for 5 weekdays was calculated as the average daily step count.

2) **Athletic performance test:** The athletic performance test was conducted with the following test items: 20-meter run, 25-meter run, ball throw, standing broad jump, repeated jumps with both feet, duration of body self-support, and ball-catch count based on the method of the MKS athletic performance test for young children. The detailed method of each test is as follows.

- ① **25-meter run / 20-meter run:** First, the subject gets set to start the run with the posture of “ready” – with one foot forward and the other back without standing on the start line. The starter standing 3-meter forward from the start line gives a sign to “Go” to the children raising a flag above the head at the same time. The children start running to the 30-meter goal line. Two persons to take the time standing around the lines of 20 meter and 25 meter each record the lapse time when the children pass through the lines. Two boys or two girls were selected for each run.
- ② **Ball throw:** The subject stands with a tennis ball in a hand with one foot opposite to the hand with the ball forward and the other back (when throwing a ball with the right hand, the child stands with the left foot forward). Then, the child throws a ball overhand as far as possible without running. The distance between the throwing point and the point where the ball has landed on the field/floor is measured. Before throwing, each child is taught on how to throw a ball by a teacher.
- ③ **Repeated jumps with both feet:** First, 10 boxes of 7 cm in height or PET bottles are placed in line at 50 cm intervals to the distance of 4 m 50 cm on the floor. The children jump over the 10 boxes or bottles with both feet continuously. The time to finish all jumps was measured. They have two runs for measurement and the shorter time is only recorded.
- ④ **Standing broad jump:** A scratch line 2 m wide is put on the floor with a vinyl tape. The subject jumps forth from the scratch line as far as possible. The shortest distance between the scratch line and the landing point is measured. The figure less than 1 cm was rounded down.
- ⑤ **Ball-catch count:** Two lines are drawn at a 3-meter interval and a stunt 170 cm high is put in the middle with strings. To the chest of the child, 10 rubber balls (12 cm to 15 cm in diameter, 150 g in weight) are thrown and how many balls the child has caught is measured. Before starting the test, the child practices throwing a ball three times.
- ⑥ **Duration of body self-support:** The child stands between two tables. With a sign of “ready”, placing each hand on the table with the arms straight, and with a sign of “start”, the child leaves both feet away from the floor and supports the own weight with both arms while keeping the feet off the floor. The elapsed time was measured when the child can no longer support the own weight with both arms and the feet contact the floor. The child is encouraged with a call to try hard to support the weight as long as possible.

## Results

1) Average daily step count: Figure 1 shows the average daily step counts:

Boys step counts were  $6408 \pm 1803$  for 4-year-old boys,  $7281 \pm 2273$ , 5-year-old boys,  $7247 \pm 2267$  for 6-year-old boys, and Girls it were  $5293 \pm 1773$  for 4-year-old,  $6041 \pm 2329$  for 5-year-old g, and  $6621 \pm 2253$  for 6-year-old.

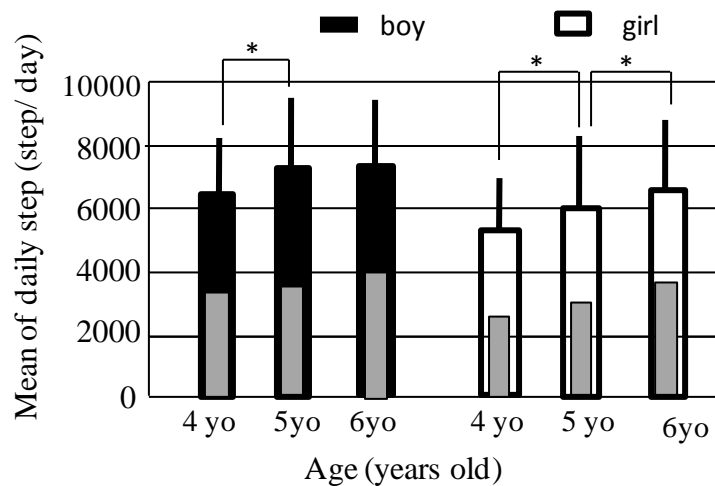


Fig.1 The average of daily step counts in early childhood.  
 ■ at the kindergarten or nursery school Values are mean  $\pm$ SD \*P<0.05

2) Figure.2 shows Motor fitness performance tests (physical strength test)

The results of **25-meter run** were  $7.13 \pm 0.77$  seconds for 4-year-old boy,  $6.41 \pm 0.67$  seconds for 5-year-old boy, and  $5.99 \pm 0.6$  seconds for 6-year-old boy, and  $77.45 \pm 0.96$  seconds for 4-year-old girl,  $6.71 \pm 0.75$  seconds for 5-year-old girl, and  $6.32 \pm 0.62$  seconds for 6-year-old girl. Boys and girls both improved the time with age.

The results of **ball throw** were  $4.5 \pm 1.7$  m for 4-year-old boys,  $6.8 \pm 2.8$  m for 5-year-old boys, and  $7.6 \pm 2.8$  m for 6-year-old boys, and  $3.4 \pm 1.2$  m for 4-year-old girls,  $4.4 \pm 1.4$  m for 5-year-old girls, and  $5.1 \pm 1.8$  m for 6-year-old girls. Boys and girls both improved the results significantly with age.

**The results of repeated jumps** were  $6.67 \pm 7.67$  seconds 4-year-old boys,  $5.64 \pm 8.4$  m for 5-year-old boys, and  $4.87 \pm 0.79$  m for 6-year-old boys. And for girls,  $6.76 \pm 9.71$  seconds,  $5.43 \pm 1.67$  seconds, and  $4.92 \pm 0.57$  seconds for age 4, 5 and 6 respectively. There was no significant gap between the results for boys and girls. On the other hand, remarkable differences were observed among individuals at age 4 and the differences have been reduced with age.

**The results of standing broad jump** were  $90.3 \pm 19.28$  cm,  $107.25 \pm 19.61$  cm, and  $115.78 \pm 18.5$  cm for age 4, 5 and 6 respectively. For girls, the results were  $87.1 \pm 18.12$  cm,



98.77±16.49 cm, and 107.49±16.5 cm for age 4, 5 and 6 respectively. For both boys and girls, the results of standing broad jump significantly improved with age.

**The numbers of successful ball catches** at ages 4, 5 and 6 were 4, 7 and 8 for boys and 4,5 and 7 for girls respectively. The results for boys were slightly higher than those for girls.

**The durations of body self-support** at ages 4, 5 and 6 for boys were 25.6±21.9 seconds, 43.8±27.7 seconds, and 47.9±41.8 seconds respectively. Those for girls were 22.6±20.7 seconds, 35.4±26.7 seconds, and 49.1±31.3 seconds respectively. Boys and girls both improved the results significantly with age. No significant differences were observed between the results for boys and girls.

### 3) The relationship between average daily step count and athletic motor fitness performance

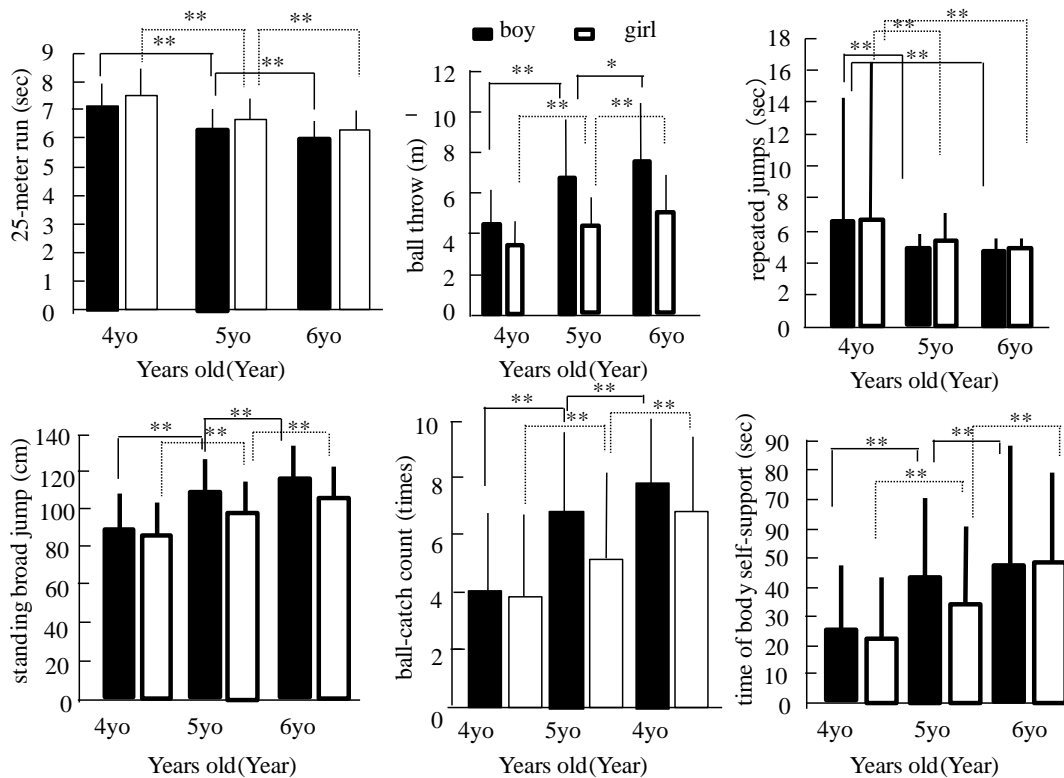


Fig.2 Figure 2: Motor fitness performance test results by sex and age (25-meter run, 25-meter run, repeated jumps, standing broad jump, ball-catch count, duration of body self-support) ■: boys, □: girls Values are mean ±SD \*\*P<0.01, \*P<0.05

Figure 3 shows the relationship between the average daily step count and the results of the athletic performance tests: 25-meter run, ball throw, repeated jumps, standing broad jump, ball-catch count, and duration of body self-support. The higher the average daily step count they take, the better the athletic performance test results they obtained. The relationships were shown as  $r = 0.311$ ,  $r = 0.332$ ,  $r = 0.187$ ,  $r = 0.264$ ,  $r = 0.233$ , and  $r = 0.186$  in each test respectively. The correlation coefficients were low, however, each of them showed signif-

icant correlation (\*\*p < 0.01). Table 2 lists the relationships between the average step counts and the results of the athletic performance test.

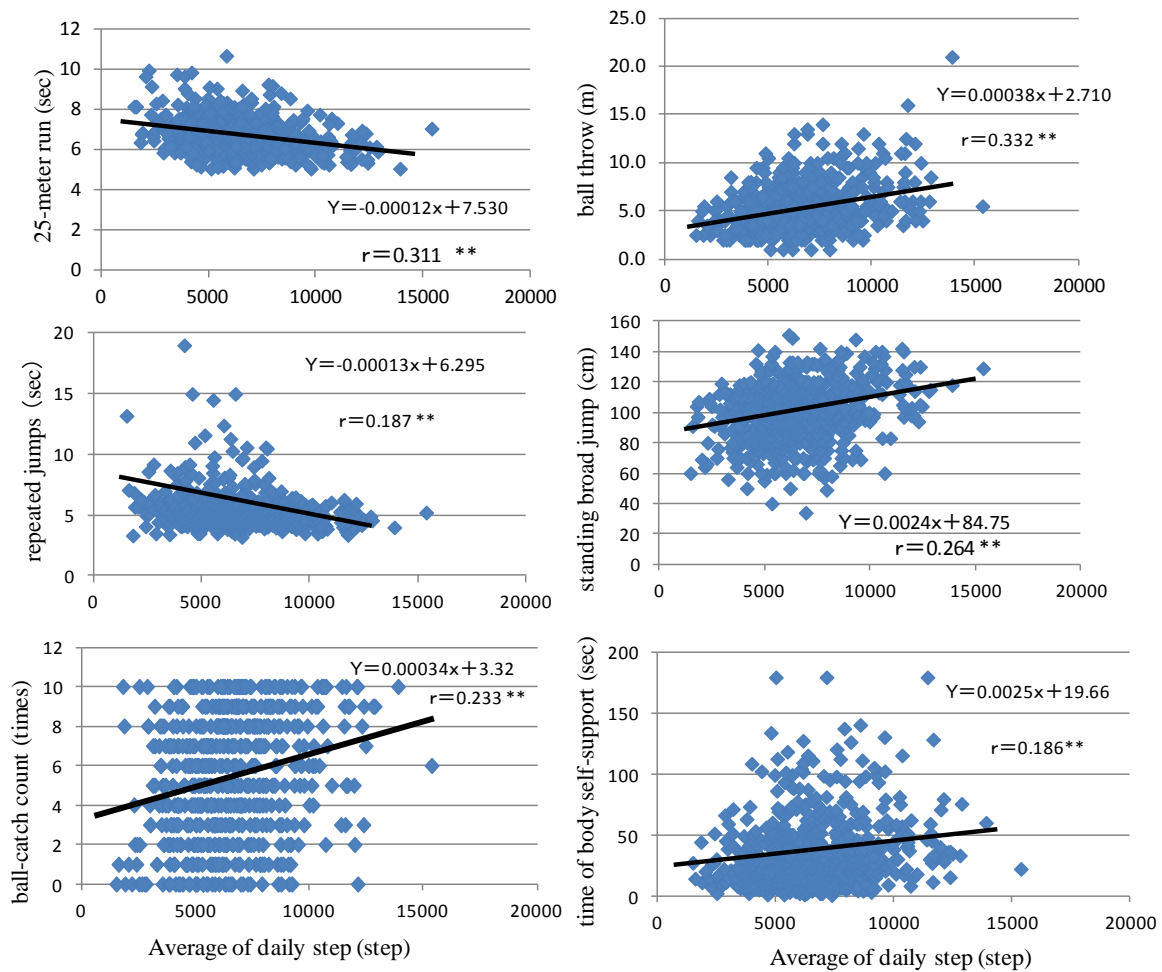


Fig.3 Relationship between average daily step count and athletic motor fitness performance. Pearson product-moment correlation coefficient(r) : \*\*P<0.01.

#### 4) The relationship between daily activity (exercise habit) and motor fitness performance

To examine the relationship between various items of motor fitness performance and exercise habits, the indicator questionnaires on exercise habits – A: which does your child play more frequently, inside or outside?; B: how often does your child play with active physical exercise at home?; C: how many friends does your child play with on a daily basis?; D: how many family members does your child live with?; and E: how many hours a day does your child watch TV? – were established to figure out the relationship with the average daily step count and the result of athletic performance test. The answers for these questionnaires on exercise habits are based on the ordinal scale (not the ratio scale) and were thought to be less affected by the impact of the category ([age x sex]). Therefore, the rank correlation coefficient between each motor fitness performance and the answer to each question was calculated without categorization. The result of the calculation is listed in Table1.

**Table 1.** The relationship between daily activity (exercise habit) and motor fitness performance

	A	B	C	D	E
Average of daily step count (step)	0.25 ** N=618	0.30 ** N=683	0.26 ** N=681	0.07* 605	0.04 n=694
25-meterrun (sec)	0.22 ** n=618	0.25 ** n=671	0.19 ** n=680	0.07 * n=595	0.05 n=685
Ball throw(m)	0.20 ** n=617	0.26* N=669	0.26 ** n=678	0.07 * n=591	0.04 n=682
Repeated jumps(sec)	0.12 ** n=609	0.17 n=661	0.08* n=670	n=583	0.01 n=674
Standing broad jump(cm)	0.17 ** n=620	0.27 ** n=672	0.15 ** n=681	n=594	0.01 n=685
Ball-catch count(times)	0.17 ** n=620	0.25 ** n=672	0.15 ** n=681	n=594	0.01 n=685
Duration of body self-support(sec)	0.13 ** n=618	0.19 n=670	0.17 ** n=679	n=592	0.04 n=683

A: which does your child play more frequently, inside or outside?; B: how often does your child play with active physical exercise at home?; C: how many friends does your child play with on a daily basis?; D: how many family members does your child live with?; and E: how many hours a day does your child watch TV? (\*\*P < 0.01, \*P < 0.05).

In all athletic performance test items, significant correlations were observed in the relationship with the questions: “which does your child play more frequently, inside or outside?” and “how often does your child play with active physical exercise at home?” (P < 0.01. Significant level is 1%). In other words, it is observed that the more children take physical activities outside at home frequently, the better they obtain motor fitness performance. Similarly, although not described in here, significant correlations were also confirmed in the relationship

between the question E1 (how often does the child play with active physical exercise during the free time at kindergarten or nursery school?) and the test items: 25-meter run (correlation coefficient is  $r = .26$ . Significant level is 1%), 20-meter run (correlation coefficient is  $r = .25$ . Significant level is 1%), ball throw (correlation coefficient is  $r = .18$ . Significant level is 1%), standing broad jump (correlation coefficient is  $r = .20$ . Significant level is 1%), ball catch (correlation coefficient is  $r = .14$ . Significant level is 5%), duration of body self-support (correlation coefficient is  $r = .15$ . Significant level is 1%). In other words, it is found that the more children take physical activities at kindergarten or nursery school frequently, the better they obtain these items of motor fitness performance. In addition, the significant correlations between the question “how many friends does your child play with on a daily basis?” and all items of the athletic performance test was observed ( $P < 0.01$ . Significant level is 1%). Unexpectedly, any significant relationship was not observed between the athletic performance test results and the question “how many hours a day does your child watch TV?”. Anyway, it was confirmed that there was low correlation between active physical exercises regardless of at home or at school and motor fitness performance level.

## Discussion and Consideration

In this study, the average daily step counts for kindergarten and nursery school children were about 7,000 steps for boys and about 6,000 steps girls. Shimizu(2009) reported that the average daily step counts were 11,000 steps for boys and 10,000 steps for girls in Tokyo, which are about 35% higher than those in Ishikawa<sup>6)</sup>. The lower step counts taken by the kindergarten and nursery school children in Ishikawa is quite unlikely to be contributed by a difference in the living habits, or rather an impact of the weather. In Ishikawa, snowfall and coldness in winter is highly likely to affect the living habits. Lower daily step counts in early childhood mean that children have less opportunity to play with active physical exercises<sup>6)</sup>. reported the relationship between the daily step count and degree of health in early childhood from the parents' perspectives. According to their report, the parents feel their children are actually in good health when their children take 10,000 or more steps a day. In this study, the steps taken by 4-year-old and 5-year-old kindergarten and nursery school children in Ishikawa were 3,000 to 4,000 steps lower than the findings of the research in Tokyo. Playing full of energy in early childhood promotes development of various functions of children's body and strongly affects their future health. Therefore, children need to increase amount of physical activity. This study indicated that almost 50% of the daily step count was achieved at nursery school or kindergarten (Figure 1). This is consistent with the result of the research done by Ministry of Education, Culture, Sports, Science and Technology that the more frequently children take active physical exercises at kindergarten or nursery school, the better motor fitness performance they have in early childhood<sup>4)</sup>. In addition, the research by Ministry of Education, Culture, Sports, Science and Technology shows that kindergarten and nursery school children who have learnt to run, jump, throw a ball, dribble a ball, catch something, roll, walk on a balance beam, and do other basic motions in early childhood had better results of the physical strength test at elementary school and are more likely to join sports clubs. For this reason, active physical exercises at kindergarten and nursery school are necessary.

### **The relationship between athletic performance test and step counts**

It was observed that the higher the average daily step count was the better results children obtained in all athletic performance test items (Figure 3). In early childhood, it is thought that the nerve functions significantly develop to about 80% of adult's by about age 5. In other words, in this period of early childhood, the ability to coordinate body movements such as moving at the right time and controlling muscle power improves remarkably<sup>3,6</sup>). The features of the development are shown in Figure 2.

It was observed that there were small differences among individuals in the 25-meter run and the results were improved with age. It was also observed that there were great differences among individuals in the ball throw, standing broad jump, ball-catch ratio, and duration of body self-support and the result of each test item improved with age while the differences were maintained. Throwing a ball is a complex motion which involves coordination of the movement of upper body in front-back direction, movement of wrists, elbows and shoulders, shift of the body weight, and so on<sup>2</sup>). And standing broad jump is also a complex motion that needs not only instantaneous force of lower limb but also flexibility of lumber part and muscle coordination with swinging arms, and other factors. In addition, catching a ball involves the ability to recognize space of a flying ball (Spacing) and time against the flying ball speed (Timing)<sup>5</sup>). For the motion involving more complex factors, the difference in the performance of the motion may be greater among individuals.

Thus, it appears that proper amount of physical exercises taken by children can possibly reduce the difference in their performance, i.e. reducing the gap in performance between “children who can do it or those who can not do it”. The performance level of ball throw in 2012 decreased significantly compared with that researched in 1977<sup>1</sup>). This may be one of the evidences that suggest children in modern society have less physical activities.

In the repeated jump counts, there were great differences among individuals at age 4, and the differences among individuals have become smaller at ages 5 and 6. In other words, children at age 4 may be in an important period - the critical period -, when their ability to coordinate repeated jumps with both feet is sophisticated.

### **Habits affecting motor fitness performance**

Table.1 shows the relationship between the athletic performance test and exercise habits in early childhood. It was found that “the more children play outside frequently”, “the more they play with physical activities frequently at home” and “the more friends they have to play with” the better results they obtained in the athletic performance test. In addition, it was also found that the more family members they have, the better results they achieved in the step counts and ball-throw test. However, surprisingly, there was no significant relationship with the duration of time for watching TV. This study highlighted the issues that are difficult to be solved in modern society long facing an increasing number of nuclear families and double-income families, a reduced number of playmates, and less frequency of outdoor play.

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## Analysis of Obesity Frequency And Physical Activity of Elementary Education Students

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Health and physical fitness states of children and the young have been in the spotlight of many countries. In this study, there has been aimed to determine physical activity status, obesity and inheritance of overweight of 6th, 7th, 8th grade students. This study has been practiced into 14 elementary education schools chosen with random sampling method in Adiyaman in 2011-2012 academic year, and totally 627 students participated in the study voluntarily. There were used Physical activity scale developed by Bouchard and personal information form as data collection tool. Moreover, for determination of obesity there was performed Skinfold caliper to measure skinfold thickness and body analysis has been calculated using Tanita BC-418 segmental body composition analyzer. Physical activity score was calculated with the formula of daily calorie burn / basal metabolism rate and data obtained from these was analyzed using SPSS packaged software. As result of our analysis, there has been determined that average age of students was  $13,05 \pm 0,30$  years, average height was  $157,59 \pm 7,54$ cm, average bodyweight was  $46,66 \pm 3,41$ kg, average body mass index (BMI) was  $19,03 \pm 3,21$ kg/m, average daily caloric need was  $2412,15 \pm 649,95$ kcal, average basal metabolism rate was  $1034,12 \pm 267,12$  kcal/kg and average physical activity score (FAP) was  $2,14 \pm 0,67$ . Considering the data, there has been determined a significant difference between the obesity state and physical activity scores of students ( $p < 0.05$ ). when average values have been taken into consideration, there was noticed that the research has been supported through the literature information.

**Keywords:** *Elementary Education, Student, Obesity, Physical Activity*

## A Survey About H.C.V for Our Future Teachers in Mansoura University

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Hepatitis C is the most common form of chronic viral hepatitis in western countries. Of individuals exposed to the hepatitis C virus. Approximately 70 to 85% develop chronic hepatitis and of those, approximately 20 to 30% develop cirrhosis usually over a 20-30 years period of time. Of those with cirrhosis small subset will develop hepatic failure and, or hepatocellular carcinoma. Our aim of the work is to evaluate degree of knowledge of future teachers about H.C.V In the present study a (written) questionnaire was administered to fourth year students (900 students) in some faculties in Mansoura University (Egypt) like Faculty of Sport Education, Faculty of Education. Results to certain survey questions were as follows: Educational lectures were important (86.6% of participants responded yes ) Marriage tests must include special examination for this disease ( 82.2% yes ). Would agree marring of your relative to one infected by this disease (76.2% No) I do not mind using HCV infected tools (74.45% no). There exists a relationship between HCV and schistosomiasis disease (33.3% partly).

### Introduction

Hepatitis C virus (HCV) infection is gaining increasing attention as a global health crisis. Egypt reports the highest prevalence of HCV world wide. Ranging from 6% to more than 40% among regions and demographic groups (Lehman & Wilson 2009)

HCV was cloned and characterized in 1989, and it's now clear that it is the major cause of post- transfusion hepatitis (DiBisceglie et al., 1991).

Hepatitis C is the most common form of chronic viral hepatitis in western countries of individuals exposed to the hepatitis C virus . approximately 70 to 85% develop chronic hepatitis and of those , approximately 20 to 30% develop cirrhosis usually over a 20-30 years period of time of those with cirrhosis small subset will develop hepatic failure and, or hepatocellular carcinoma (Davis et al 1989, Saracco et al 1995 & Mchutehison et al 1998)

Prevalence of HCV in USA is approximately 2 % (Chak et al 2011)

Hepatic fibrosis gradually increases in patients with chronic liver disease and ultimately leads to portal hypertension and hepatic dysfunction (Hoefs et al, 2011) Hepatocellular carcinoma is mostly a hepatitis C virus related disease (Kouroumalis et al. 1997)The virus is parenterally



transmitted and routes of infection include transfusions of blood and blood products abuse of I.V. drugs tattoos, and sexual or house hold transmission (Watson et al.1990) Recommendations have to be individualized, some individuals may choose to use a condom to prevent sexual transmission if they are unwilling to take a small but defined risk , safe sex should be practiced with multiple sexual partners, reducing the number of partners, using barriers to prevent the exchange of body fluids, informing their partners of their infection. The data don't support against pregnancy based on anti-HCV status alone, but individual couples need to be told about the small but defined risk to the baby. (Alter, 1995). Saliva has also been incriminated as a possible way of HCV infection (Leou, 1992), human bites (Dusheiko, 1990) and sexual transmission (Peirillo, 1991)HCV along with schistosomal parasite infection is the major risk factor for chronic liver disease (Halim et al, 1999)A direct experimental evidence for the contribution of HCV in the development of insulin resistance in human HCV infection which finally leads to the development of type 2 diabetes (Shintani et al, 2004)Lau 1995 stated that genotyping by detection of genotype- specific antibody elicited by the host and it allows assigning genotypes from 1 to 6.Many patients who become infected with HCV are asymptomatic for decades and remain undiagnosed until they present with symptomatic advanced liver disease early diagnosis is important as treatment with interferon is more likely to be successful in the asymptomatic stage before progression to cirrhosis (Gretch et al, 1993).

The failure to demonstrate protective immunity after single or multiple episodes of infection raises doubts about the existence of neutralizing antibodies and concerns about the potential for the development of vaccine against HCV (Iwarson et al.1995)

### **Aim of the work**

Our aim was to detect level of knowledge for students about HCV in the light of hazardous effects and high incidence.

### **Subjects, materials and methods**

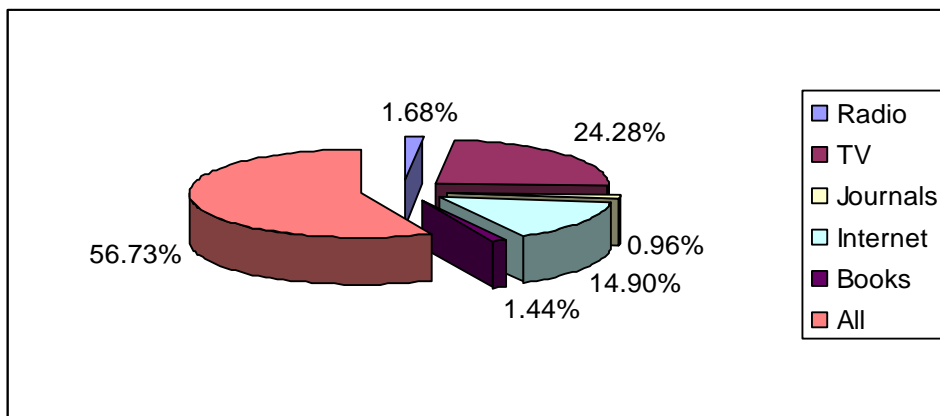
A written self administered questionnaire between October and December 2012 was given to fourth year students (900) in Mansoura university Egypt , faculty of sport education and faculty of education , it included 23 questions as MCQ and students reply either yes , no or partly in 20 questions and choice of the answer in 3 , it was prepared by two medical doctors and revised with the other two authors for suggestions , it included the opinion of the students about relation of HCV with other diseases as schistosomiasis , diabetes mellitus , liver cancer , vertical and sexual transmission , is it only one type and possible vaccine and treatment . Also about dealing with a patient as regard eating , drinking , shaking hands , sitting , speaking and kissing him , sharing his tools and clothes too , their opinion about the sources of infection , it's spread and their sources of information about it , if they had relatives affected with HCV and place specified for its treatment , agreement about inclusion in pre marital tests and lastly if the educational lectures of HCV are important or not ? the students completed the questionnaire during the lectures , data was analysed according to chi square method .

## Results

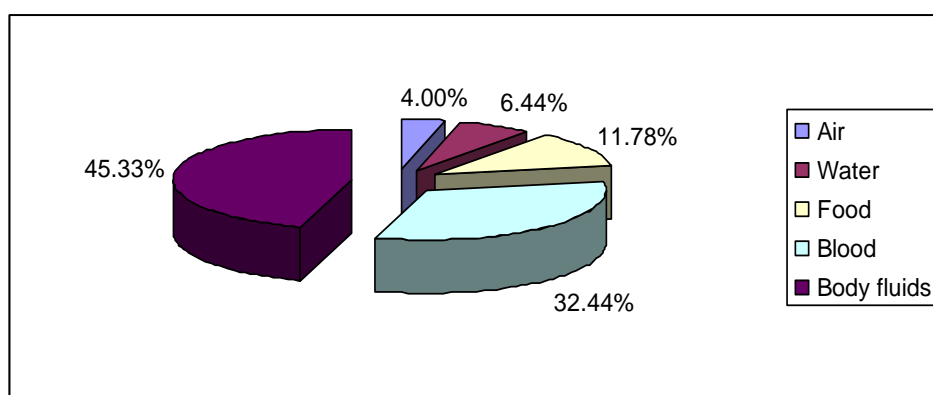
They are presented in the following table for most questions with answer yes , no or partly and figures 1, 2 and 3 for direct choices .

**Table 1:** shows the questionnaire for the students about HCV.

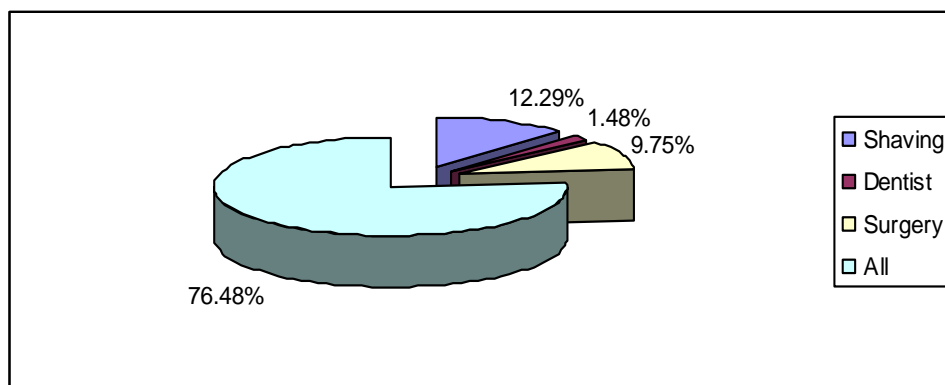
	Phrases	Yes		Partly		No		Ch <sup>2</sup>	Ranking
		n	%	N	%	n	%		
1	Do you think that there is a relationship between the incidence of (HCV) and schistosomiasis?	398	41.1%	322	33.3%	248	25.6%	34.9	8
2	Do you think there is a connection between (HCV) and diabetes?	178	18.4%	302	31.2%	488	50.4%	150.9	15
3	Do you agree marriage of your relative to diseased one?	82	8.5%	148	15.3%	738	76.2%	808.7	19
4	Do you think that the disease is transmitted from mother to her baby?	380	39.3%	296	30.6%	292	30.2%	15.3	10
5	Do you agree that marriage tests should include a special screening for this disease?	796	82.2%	94	9.7%	78	8.1%	1041.9	2
6	Do you think the possibility of recovery from this disease?	500	51.7%	346	35.7%	122	12.6%	223.9	4
7	Do you think that the hepatitis C virus only one type?	68	7.0%	164	16.9%	736	76.0%	808.5	20
8	Do you know the existence of vaccine as (HBV)?	330	34.1%	218	22.5%	420	43.4%	63.5	12
9	Do you know that this disease can cause liver cancer?	596	61.6%	146	15.1%	226	23.3%	357.2	5
10	If you know that your colleague infected with (HCV) can you eat with him?	456	47.1%	206	21.3%	306	31.6%	98.1	9
11	I do not mind drinking water from his cup?	216	22.3%	92	9.5%	660	68.2%	552.8	17
12	Sharing handshake with infected one?	566	58.5%	150	15.5%	252	26.0%	291.4	6
13	I do not mind kissing the infected one?	344	35.5%	154	15.9%	470	48.6%	156.9	13
14	Can you sit down with the patient?	554	57.2%	170	17.6%	244	25.2%	257.3	7
15	I do not hesitate to talk with the patient?	602	62.2%	144	14.9%	222	22.9%	372.2	3
16	Can you share his clothes if obliged to?	188	19.4%	200	20.7%	580	59.9%	308.1	16
17	I do not mind using his tools?	146	15.1%	102	10.5%	720	74.4%	736.9	18
18	Is educational lectures important for this disease?	838	86.6%	80	8.3%	50	5.2%	1236.0	1
19	Do you have relatives infected with hepatitis virus (HCV)?	392	40.5%	100	10.3%	476	49.2%	241.4	11
20	Did you know a place dedicated to the treatment of (HCV) patients?	318	32.9%	128	13.2%	522	53.9%	240.7	14
Sum		7948		3562		7850		7996.46	



**Figure 1:** Shows sources of information about HCV disease.



**Figure 2:** Shows sources of infection as students think



**Figure 3:** Shows what helps spread of infection as students think.

## Discussion

Such surveys are slightly lacking due to the low incidence in developed countries , in USA It's only 2 % (Chak et al, 2011) hence the difficulty in comparing the results. Unfortunately, the incidence in Egypt is still high 6-40 % (Lehman and Wilson 2009) So this market difference may be duo to lack of enough informations about HCV available for the public, we

found in the answers that 40.5% have affected relatives however, only 32.9% knew specific place for its treatment . Although proved relation with schistosomiasis (Halim et al , 1999) only 41.1% agreed with this , again 18.4 % knew relation with DM which is proved (Shintan et al , 2004) Vertical transmission only known by 39.3% which is proved by Alter since 1995. Unexpectedly, 76.2 % not agreed marriage of a relative to known patient and 82.2 % agreed to be in the premarital tests as sexual transmission proved by Peirillo 1991 and 76 % think it's more than one type stated by Lau 1995 , 48.6 % refused kissing and 68.2 % refused drinking from a patient glass that coped with Leou 1992 , till now no vaccine for HCV (Iwarson et al ,1995) and this is the opinion of 43.4 % but 51.7 % agreed it's curable which stated by Gretch et al ,1993. 61.6% knew it's precancerous which stated by Kouroumalis et al , 1997. Many didn't mind eating , shaking hands , sitting and speaking with a patient (47.1 % , 58.5 % , 57.2 % and 62.2%) . Also 74.4% refused using his tools and 59.9 % refused wearing his clothes and this for the suspicion or not of presence of body fluids which also suspected to be major source of infection by 45.3 % (figure 2) stated by Alter , 1995 . Also figure 3 showed 76.48 % agreed that shaving , dentist and surgery could help spread of infection , lastly 86.6 % found that educational lectures were important to improve their information and 56.73 % had it from all media especially television and internet.

## Conclusion

Arousing awareness of our students especially future teachers by mass media and educational lectures is needed.

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## Analyzing the Attendance Level of Trainers to Sport Activities and Their Communication Skills

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In this study, level of sports trainers to sports activities and their communication skills were analyzed. The study sample included sports trainers carrying on their duties in provinces of Adiyaman, Elazığ and Şanlıurfa. In the research, personal information form including 10 questions and level of attendance to sports activities determining form including 7 questions were used. Finally, communications skills inventory developed by Ersanlı and Balcı (1996) including 45 questions was performed. As result of the analysis, a significant difference was found in favor of female sports trainers on communication skills sub-dimension. These differences were specified to be more at 31 years and over at the end of the research ( $p<0.05$ ). Consequently, level of attendance to sports activities and communication skills can be said to differ according to the variables of gender differences, educational status of parents, and the differences according to the level of income. Similarly, communication skills and level of attendance to sports activities were determined to differ according to the educational status of parents and level of income.

**Keywords:** *Sports Trainer, level of attendance to sports, communication skill*

## An Investigation on the Effects of 3-Months Fitness Exercise on the Body Compositions of Sedentary People

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The effects of 3-months fitness exercise on the body compositions parameters of sedentary people were studied in the present study. 3 months cardio based exercises (45/60 min: 10 min warming up+stretching, 25 min running, 15 min bicycle, 10 min cross, 7 min cooling down+stretching) were applied to 299 sedentary people (206 men, 93 women) at the Life Gym Sport and Health Center in Istanbul-Turkey. The parameters related to body composition were measured by using bioelectrical impedance method for three times during three months. The medicinal background, readiness to physical activity and participation to physical activity of the individuals were monitored during three months. The data were evaluated based on the gender and age. For statistical evaluation, descriptive statistics and repeated measures analysis of variance were used. We found the positive contributions of 3 months fitness exercise on the body composition parameters of sedentary people. The most remarkable changes were observed in men. The most observable changes were determined in both gender at age between 25 and 44. However, the lowest effect was found at the group of 45-64 age. In conclusion, we confirm the positive effects of regular physical activities at all age groups and both gender.

**Key words:** *Body composition, Physical activity, Sedentary people.*

## **Analysing the Effects of Eight Weeks Step – Aerobic Exercises on the Body Compositions of Young Women**

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By the study, it's aimed to analysis the effects of eight weeks step-aerobic exercises on the body compositions of young women. 8 women university students, their average age  $21.8\pm 3.45$  years, took place in this study voluntary. The body compositions of all the subjects are measured by Tanita body composition analysis method pre-exercises and post-exercises. Data scaled statistically via SPSS 12; the relation between findings is analyzed and interpreted. For the test of data Wilcoxon T Test and Pearson Correlation Test used and  $p < 0.05$  is determined as significance level. The average results of measured parameters pre-exercises of study group are as: body weight  $59.35\pm 6.07$  kg, body fat rate  $26.83\pm 3.28$  %, muscle rate  $8.04\pm 7.34$  %, BMI  $23.11\pm 1.70$  kg/m<sup>2</sup>, total body water  $31.16\pm 2.18$  kg, mineral intensity  $3.38\pm 0.32$ , protein quantity  $8.72\pm 0.55$ , body fat  $16.07\pm 3.41$  kg, basal metabolic rate  $1265.88\pm 41.22$  kcal and the average results of measured parameters post-exercises of study group are as: body weight  $57.96\pm 6.37$  kg, body fat rate  $26.34\pm 3.77$  %, muscle rate  $39.21\pm 2.70$  %, BMI  $22.56\pm 1.79$  kg/m<sup>2</sup>, total body water  $30.61\pm 2.18$  kg, mineral intensity  $3.31\pm 0.34$ , protein quantity  $8.60\pm 0.53$ , body fat  $15.44\pm 3.72$  kg, basal metabolic rate  $1258.44\pm 41.47$  kcal. As a result, step-aerobic exercises had a significant effect on the body compositions of young women in the direction of fat rate decrease. It's supposed that for the reason of decrease on fat rate after a long timed step-aerobic exercises can prevent obesity, cardiovascular diseases etc.

**Keywords:** *Step-aerobic exercises, body composition.*



## The Evaluation of the Impact of Spinning Exercises on the Body Composition of Women

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In this study the effects of a 6 week spinning exercises on the body composition of women were investigated. Twelve sedentary women (32-47 years old) voluntarily participated in this study. A 6-week (3 times weekly) aerobik based spinning exercise program were applied to participants. The intensity of the exercise program that was kept low in the beginning was increased in the subsequent weeks. The exercise sessions including the warm-up and cool down lasted for 55-60 minutes. The analyses on the body compositions were measured regularly every week with bioelectrical impedance method. In data analysis descriptive statistics and repeated-measures analysis of variance were used. In the end of the 6 week spinning work positive improvements were observed in many parameters related to body composition. Particularly after the 3rd week the significant changes recorded were noteworthy. At the end of the 6th week those who were overweight by WHO (World Health Organization) standards moved onto normal weight category and those who were obese became overweight. In conclusion it was seen that the spinning exercises were seen as as effective method to lose weight and reduce the body fat ratio among women in this age group. This method may be recommended for getting good results among obese and overweight women in a short period of time.

**Key words:** *Body composition, Spinning exercise, Women*

## Examination of Physical Activity Social Support among Middle School Students

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This study examined physical activity related social support of public and private middle school students in central district of Canakkale. 296 middle school students ( $n_{\text{male}} = 155$  and  $n_{\text{female}} = 141$ ) voluntarily participated to the current study. Turkish version of “Physical Activity Social Support” questionnaire (PASS) was completed by the students. PASS questionnaire involves three constructs that evaluates mother, father and friend support related to physical activity. Collected data was analyzed with descriptive and Analysis of Variance (ANOVA) statistics ( $p < .05$ ). ANOVA results between sex and social support indicated significant difference in friend support [ $F(1,294) = 6.45, p = .01$ ]. However, there was no statistical difference between sex of students and parental support [Mother =  $F(1,294) = 0.02, p = .89$  and Father =  $F(1,294) = 1.36, p = .24$ ]. Another finding was significant difference between grade and parental support [Mother =  $F(3,292) = 7.55, p = .00$ , Father =  $F(3,292) = 5.84, p = .00$ ] however; there was no statistical difference in friend support [Friend =  $F(3,292) = 2.01, p = .11$ ]. Lastly, there were no significant difference between school type and social support of participants. It can be concluded that social support among middle school students should be increased by parents. Future research should seek and include parental support to develop physical activity behavior of students in middle schools.

**Keywords:** *Physical activity, social support, middle school students*

## Physical Activity Self-Efficacy and Exercise Stages of Change Levels of High School Students: A Cross Sectional Study

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Physical activity participation level decreases with age among adolescents and had major decline during the high school years. So far, however, there has been little research about students' self-efficacy and their intention about physical activity. Therefore, purposes of the study were two folded; (a) analyze high school students (n=1278) physical activity self-efficacy (PASE) and exercise stages of change (ESC) levels, (b) examine high school students' PASE and ESC levels with respect to gender, age and school type. For the data collection "Physical Activity Stages of Change" and "Physical Activity Self-Efficacy" questionnaires were used. Descriptive statistics (frequency, mean, percentage), nonparametric statistical methods Pearson chi-square and One-Way Analyses of Variance (ANOVA) tests were used for the data analysis. According to the results on self-efficacy and exercise stages of change, male students had higher levels of self-efficacy and were at upper stages as compared to the females. Type of school and sex of students were significantly related to ESC ( $p < 0.05$ ). In addition, ANOVA results indicated that sex of students was significantly related to self-efficacy. However, there was no significant difference on age and self-efficacy of students. ( $p > 0.05$ ). In conclusion, male students were more in higher stages and had higher self-efficacy in physical activity compared to females. Further studies should focus on developing exercise behavior of female students with increasing self-efficacy and exercise behavior intention through stage specific interventions.

**Keywords:** *Physical activity, self-efficacy, exercise stages of change, high school students*

## Examining Health Related Fitness Knowledge of Students in Public and Private Middle Schools

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The aim of this study is to investigate the health related fitness knowledge (HRFK) of students in public and private middle schools. A total of 723 students, 154 female and 181 male students from four public and 188 female and 200 male students from three private middle schools in the central district of Çanakkale, participated voluntarily in the study. The HRFK test (Hunuk and Ince, 2010) was used for data collection. Data analysis was conducted on SPSS (20.0) statistical program. Collected data was analyzed through descriptive statistics and non-parametric tests of Mann-Withney U and Kruskal- Wallis to explore schools, sex, and grade differences between health related fitness knowledge tests. As a conclusion, health related fitness knowledge scores of those students studying at private schools were found to be higher than those studying at public schools ( $\bar{X}=24,62\pm4,02$ ;  $\bar{X}=20,96\pm4,64$  respectively) and this difference was statistically significant ( $p<.05$ ). No statistical difference was found regarding sex of students ( $p>.05$ ) whereas in terms of grades statistical differences were found [ $\chi^2=30,961$ ;  $P=.000$ ] between 5th-6th, 5th-7th, 6th-8th, 7th-8th grades ( $p<.05$ ), and no statistical difference was found between 6th and 7th grades ( $p>.05$ ).

**Keywords:** *Health related fitness knowledge, middle school, public schools, private schools*

## Sports Injuries in the Women and Men Volleyball Players

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This study is done sports injuries to determine male and female volleyball athletes playing the first leagues in Turkey. Population of the study is composed Turkey's Volleyball first leagues teams consisted of men and women. The sample is generated the men and women athletes of 10 major league teams play in the league. Questionnaire was used to collect data. SPSS 16.0 statistical software package was used to evaluate the data and the data calculated by the percentage and frequency distributions. The average age of 77 athletes participated in the study is  $25.27 \pm 5.31$  year and average sports age is  $13.59 \pm 5.31$  year. According to the results of a survey conducted to spiker setter most injured athletes (%32.5). While upper extremity injury low back (%24.7) and right shoulder (%23.4), lower extremity right ankle (%26) and left ankle (%22.1). The great majority of injuries is been during competition (%40.3), because of overuse (%49.4) and taraflex floors (%50.6) and hardwood floors (%46.). The leading cause of injury is coming overload and volleyball players may remove from sports at least a month.

**Keywords:** *Volleyball, Sports injuries, Questionnaire*

## Study of Feeding Habits of Judo Athletes

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The objective of this study is to try to determine the feeding knowledge and habits of Judo athletes. Total 57 judo athletes including 36 male and 21 female were participated in the study from the Kocaeli Metropolitan Municipality's Sporting Club in the City of Kocaeli. Survey method was used in this study. Survey of the study is the survey of determining the feeding habits which was developed by the dieticians of the Nutrition Unit of SESAM (Athlete Training Health Centre of the Directorate General of Youth and Sport), of which validity and reliability were provided (Akil, 2004). In order to determine the feeding habits of the athletes participated in the study, the frequency % test was conducted and Mann Whitney U test was used in comparing against the genders. The obtained data was evaluated on the SPSS 20.0 programme and according the results, a significant difference in the level of  $p < 0,05$  between the female and male athletes for the questions of "I am trying to stay at my ideal weight paying attention to feeding", "I consume rich foods and beverages which contain additional carbohydrate even at the last meal before training and competition", "I take care of the last meal is satisfactory and that they are the ones I eat at my last meal before the competition", "I take care of feeding knowing the energy system and energy need used in my branch".

**Keywords:** *Sports, Judo, Feeding, Gender*

## The Effects of Slide Board Exercises on Aerobic Capacity of Beginner Rowers

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The purpose of this study is to examine the effects of the slide board training on aerobic capacity and strength development with new oarsman. Junior 18 Galatasaray rowers who start rowing newly attended to our study. Their age average is  $14.94 \pm 0,966$ , height average is  $180.35 \pm 3,952$  and weight average is  $70.24 \pm 6,942$ . While the first group was doing the slide board exercises (SBG, n=9), the second group did the classic training (KHG, n=9) during the 12 week preparation trainings. The beginning and the end of the rowing ergometer training can MaxVO<sub>2</sub> preparation used in the measurement. For the definitive statistic, standard deviation (SS) and mean(AO) are used for the analysis of the obtained values. Test of Wilcoxon used for comparison of the pre and post measurements of both group also test of Mann Whitney U performed for determination the differences of the groups. With respect to definitive MaxVO<sub>2</sub> statistics and results of the Wilcoxon test, significant differences are obtained ( $P < 0,05$ ) between the pre and post measurements in (SBG) group I. which participate to the study.

**Keywords:** *MaxVO<sub>2</sub> , Rowing, Slide Board*

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**MOVEMENT AND TRAINING  
SCIENCES POSTER PRESENTATION**

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## The Analysis of 2012 FIFA Futsal World Cup

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The purpose of this study is to analyze the 2012 FIFA Futsal World Cup competitions played. The data used in the study was obtained from international TV channels publishing competitions and the official website of FIFA. The data obtained in this study was recorded in SPSS program and interpreted by calculating frequency and percentage values. Range of goals scored by winner and defeated teams in form of 5 minute periods, ball possessions, shots on goal, corner, time outs, contributing to the score by starting 5 and substitutes, accumulated fouls, yellow-red cards, the range of goals according to shot techniques and goal zones were examined. While a total of 349 goals were scored with an average of 6.71 goals per game, with 61 goals (17.47%) most goals was laid between 36 and 40 minutes. 47.3% of goals were scored in penalty area, 52.7% of goals were scored from outside penalty area. The percentage of ball possessions of winner teams was %51.68, defeated teams was %48.32. While the rate of shots on goal in winner teams was %43.4, this rate in defeated teams was %34.8. Substitutions in winner teams scored 133 goals, in defeated teams only 31 goals were scored. As a result, while shots on goal are accepted as an important factor to win a match, high number of players in winner teams who are starting 5 and score a goal, players who are substitutions and contribute to the score is thought as a very important criteria to win futsal competitions.

**Keywords:** Futsal, World Cup, Competition, Analysis, Goal.

## **Acute Effects of Different Warm-Up Procedures on 30 m Sprint, Slalom Dribbling, Vertical Jump And Flexibility Performance in Women Futsal Players**

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The aim of this study was to determine the acute effects of warm-ups procedures which was applied different days on slalom dribbling, 30m sprint, vertical jump performance and flexibility in women futsal players. Ten women athletes who play futsal in Mugla Sıtkı Kocman University, participated this study. Ten women athletes were assigned randomly to 3 different warm-up procedures( warm up group I; 5 minutes jogging, warm up group II; 5 minutes jogging and static stretching, Warm-up group III; 5 minutes jogging and dynamic exercises) on non-consecutive days. After each warm-up session, all athletes were tested on slalom dribbling, 30 m sprint, vertical jump and flexibility performances. 30 m sprint and slalom dribbling test performances was measured with a stopwatch. For Flexibility, Sit and reach test was used. Vertical jumping performance of athletes were measured by taking difference between the height that they can reach by standing and the height that they can reach by jumping. For the analysis of the data obtained from the study, SPSS 16.0 program was used. To find out whether there are any significant differences between the groups, the Kruskal-Wallis test was used and to find out which group cause the difference, Tukey HSD test was used. As a result of the study, significant differences were found 30 m sprint and slalom dribbling performance ( $P < 0,05$ ). Consequently, different warm up procedures may have different effect on slalom dribbling and 30 m sprint performance in women futsal players

**Keywords:** *Futsal, Dynamic exercises, Static stretching, Slalom dribbling, Women*

## Investigation of Relationship Between Anaerobic Performance and Isokinetic Muscle Strength in Super League Female Handball Players

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The purpose of this study was to investigate the relationship between anaerobic power/capacity and isokinetic muscle strength in female handball players. 19 super league players who played handball at least for 6 years participated in this study (age:  $19.68 \pm 2.18$  years; training age:  $9.52 \pm 2.03$  years; height:  $166.82 \pm 54.5$  cm; weight:  $63.17 \pm 6.11$  kg; BMI:  $22.75 \pm 1.89$  kg/m<sup>2</sup>; body fat percentage (%):  $22.53 \pm 3.75$ ; training: 6 week/day, 4 day/h). After a standardized warm-up of 10min of cycling (Monark) at 55-60 rpm against no load the isokinetic test session started for 60, 150 and 2400/sec (CSMI Humac/Norm<sup>TM</sup> -770, USA). First 3 attempts were performed for familiarization and the following 5 were the real trial for each angular velocity. The best maximal peak torque for knee extension and flexion (out of the 5 trials) was calculated automatically. After a sufficient rest the classical Wingate anaerobic test (WAnT) was performed (894Ea, Monark, Sweden) (30sec, load 7.5%). The correlations between anaerobic power and isokinetic muscle strength was evaluated using the Pearson Product Moment Correlation and statistical significance was set at  $p < 0.05$ . Isokinetic strength of right and left leg at 600/sec angular velocity and also isokinetic strength at 2400/sec angular velocity (except left knee flexion) were significantly correlated with WAnT load ( $p < 0.05$  and  $p < 0.01$ ;  $r > .483$ ). There was significant relationship between isokinetic strength at 600/sec and absolute PP(w) and anaerobic capacity ( $p < 0.05$  and  $p < 0.01$ ;  $r > .530$ ). On the other hand there was not significant relationship between isokinetic strength (except right knee extension at 600/sec) and relative PP(w/kg) and anaerobic capacity.

**Keywords:** *isokinetic Strength, Female Athletes, Anaerobic Performance*

## The Effect of Block and Serial Practices on Tennis Skill Acquisition

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Block practice improves performance more than serial practice in skill learning but serial practice better memory helps than block practice. The purpose of this study was to compare effect of serial and block practices on ground stroke performance in tennis. Twenty seven university students (age  $22.62 \pm 1.71$  years) were assigned to block (n=14) or serial (n=13) practice group. Tennis education was given two groups 4 hours per week during 5 weeks. All participants in the study were performed tennis skill test. As a results, there were no significant difference between pre ( $54.87 \pm 15.79$ ), ( $44.75 \pm 17.39$ ) and post-tests ( $68.50 \pm 14.85$ ), ( $74.12 \pm 10.39$ ) of two groups ( $p > 0,05$ ). But, there were significant difference in tennis skill tests between % differences of blocks and series practices groups. ( $p = 0,03$ ), ( $p < 0,05$ ).

**Keywords:** *Tennis, Skill Learning, Serial Practice, Block Practice.*

## **The Evaluation of Motor Features with Balance and Balancing Skills of 14-16 Year Olds Attending Summer and Winter Football School Camp (Istanbul-Sarıyer district sample)**

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In this research the effects of a 12 week football exercise upon the summer and winter football sports school students' speed, agility, strength and balance skills were assessed. The research was conducted among 33 healthy adolescent males in the 14-16 years age group attending the summer and winter football school in Sarıyer district of Istanbul. Single sample with pre and post test approach was applied. The football exercise that consisted of strength, speed, balance, agility, team work and tactical work was done twice a week for 12 weeks. In data analysis, paired-sample t-test, within-subject repeated measures analysis of variance and pearson correlation methods were used. With the exception of height values, all other variables have significantly changed ( $p < 0.01$ ). The longer the years of playing football the further was the the stand and jump distance ( $p < 0.05$ ). The development in balance have positively affected the 30m sprint performance ( $p < 0.05$ ). The increased strength have contributed to the development of basic movements such as skipping, jumping and hopping. The pretest and post test changes were not affected by the positions in the football game. It would be stated that the static and dynamic drills have resulted in enlarging the gravity line resulting in positive balance development. It could further added that due to the transitional nature of their adolescence, the positive development of their muscle and skeleton system was stimulated. It can be pointed out that this football exercise model is appropriate for the motor development and growth of football talent for this age group.

**Key words:** *Football, Balance, Speed, Agility, Strength*

## The Effect of 12 Weeks Whole Body Vibration Training on Visual Foot Reaction Time

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Whole body vibration occurs a reflexive contraction of the muscle through the tonic vibration reflex. Tonic vibration reflex activation brings about an increase in motor unit synchronization and also increases voluntary muscle contraction. Accordingly, the purpose of this study was to investigate the effect of 12 weeks whole body vibration training on visual foot reaction time. Forty eight healthy male participants were included in this study as a voluntarily. Participants randomly divided in to experimental group (n=23 ) and control group (n=25). While the experimental group attended whole body vibration training three times a week for twelve weeks which the session of training consists of minimum 25 min. and maximum 55 min., the control group did not participate in any training. Participants was performed to visual foot reaction time test by New Test 2000 battery after and before training period. According to result of study, there were no significant difference between the experimental group (260.61±65.59 ms.) and control group (299.48±79.56 ms.) at pre- test ( $p>0.05$ ). But significant difference appeared between experimental group (237.26±32.40 ms.) and control group (326.52±90.59 ms.) at post-test. Visual foot reaction time was significantly decrease after the 12 weeks training period in experimental group ( $p<0.05$ ). There were no significant difference in control group at the end of the 12 week process. Consequently, 12 weeks whole body vibration training might have improved the visual foot reaction time.

**Keywords:** *Whole Body Vibration, Foot Reaction Time, Training*

## The Examination of the Effect of Glutamine Use on Endurance Performance in Elite Soccer Players

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In this study, the aim is to examine the effect of glutamine supplement on the distance covered during a 90-min football endurance training. 12 voluntary football players took part in our study. Each player completed total 90-min training protocol twice every other week. Players used placebo in one training and glutamin in the other. The training protocol consisted of two 45-min training loads in the pace of heart beat which is equal to individual anaerobic threshold with a 15-min rest on a football training course called Hoff. At the end of each 45-min training, the covered distance and the average lap time were recorded. Whereas there was a statistically significant difference between the covered distance and average lap time variables of the first and second 45-min loads after glutamin use ( $p < 0.05$ ), there was no statistically significant difference after placebo use ( $p > 0.05$ ). Besides, when variables of covered distance and average lap time of glutamin and placebo use were compared at the end of each 45-min, there was no statistically significant difference ( $p > 0.05$ ). This study signalled that there are effective results of glutamin supplement, which was used on football players before endurance training, on endurance performance.

**Keywords:** *Glutamine, Endurance performance, football*

## **Climbing Effect into High Altitude, As Subsequent on Supplement of Q10 Coenzyme on Frap Changes, GLU, HCT and WBC Value in Male Mountaineers' Serum**

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### **ABSTRACT**

The aim of this research was to study the climbing effect into high altitude contribution as subsequent to supplement of Q10 coenzyme on Farp changes, Glu, HCT and Wbc rates in male mountaineers' serum. Thus, 24 experienced and skilled male mountaineers (average 181 cm height, 25.5 years old, 75 kg, Body mass index 22, Percent of hypodermic fat 10 cm in Ave., VO2 MAX 80.5 lit/min, with experience of 5-15 years) were selected randomly and divided into 2 Experimental and Control groups. Before climbing, they consumed Q10 supplement and Placebo for 14 days. Their blood samples were analyzed in 4 different altitudes; 1500m, 2800m, 4300m and 5671m during climbing to Damavand summit. The results were considered by special kits of laboratory and auto-analyzer machine. Data were analyzed by F Test (as variance test with repeating in related factor). The relation among Q10 supplement on FARP changes, Glu, HCT and Wbc was not meaningful, but altitude effects and its changes on Glu, HCT and Wbc got a meaningful relation. So, we can conclude that there is no meaningful relation among Q10 supplement with FARM, Glu, HCT and Wbc Factors.

*Key Words: High Altitude, Glucose, Hematocrit, Leukocytosis, Coenzyme Of Q10, Mountaineering.*



## The Effects of Jumping Exercise on Lower Limb During Drop Jump

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Purpose was to examine the effects of jump exercises on vertical jump height and lower extremity biomechanics during a drop vertical jump. The volunteers were 11 School of Physical Education and Sport students who were healthy and physically active. Six weeks specific depth jump exercise applied to participants. Before and after the training program, 40 and 60 cm drop jump performances were recorded single camera (50 Hz). Although there is no significant differences jump height ( $h$ )( $p>.05$ ), significant differences was determined in terms of the height of center of gravity of the body at the time of crash ( $h_{VAM(min)}$ ) and knee angle ( $\theta_{knee}$ ) ( $p<.05$ ). Although there is no significant increase in jump height, determined a positive effect on the phase of amortization (during takeoff after drop jump from 60 cm) of training for lower extremity.

**Keywords:** Vertical jump, Depth jump, Lower extremity, Biomechanics,

## Determination of Anaerobic Power and Capacity of Elite Modern Dancers

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Despite modern dance being more popular in recent years there is still limited study related with modern dancer. Modern dancers need to have significant physical and physiological features in order to accommodate physical demands or dance. To effectively demonstrate their artistic talent and stage performance the anaerobic capacity is quite important. The purpose of this study is define anaerobic power and capacity of elite modern dancers. Totally 27 volunteer modern dancers participated this study. Male dancers(n=13) mean age is  $23.00\pm 3.21$ , height is  $176.38\pm 7.00$ , body weight is  $66.60\pm 9.06$  and percentage of body fat is  $17.07\pm 3.54$ . Female dancers (n=14) mean age is  $20.78\pm 1.71$ , height is  $163.85\pm 5.90$ , body weight is  $52.97\pm 6.54$  and percentage of body fat is  $22.49\pm 3.15$ . In order to determine anaerobic power and capacity of dancers, active vertical jump and 10 -60 seconds multiple jump test were performed. Omega wave system was used as a test device. According to test results average vertical jump height, alactic and lactic power indexes were found respectively for male;  $51.18\pm 4.32$  cm,  $3.88\pm 0.38$  w/kg,  $3.44\pm 0.44$  w/kg for female;  $41.23\pm 3.74$  cm,  $3.74\pm 0.42$  w/kg,  $3.27\pm 0.37$  w/kg . As a result alactic and lactic power indexes value are between 1-7. As a conclusion, when we consider our study, results are indicated that vertical jump, alactic and lactic power index performances are significantly lower than athletes who perform similar physical activity.

**Keywords:** *Modern dancers, Anaerobic power, Capacity*

## The Effects of Eight Weeks Modify Stretch Shortening Cycle (Ssc) Training Program on The Horizontal Jump, Muscle Power And Flexibility Parameters of 15-16 Years Old Male Soccer Players

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The purpose of the study was to investigate the effect of modify stretch shortening cycle (SSC) Training program on the horizontal jump, muscle power and flexibility parameters of 15-16 years old male soccer players. 32 subjects (16 of them as the experimental group and 16 of them as the control group) participated in the study. The both groups regularly participated in soccer trainings and also the experimental group was trained by stretch shortening cycle (SSC) training method three days a week along eight weeks and each session continued 90 min. A pre-test and a post-test were applied before and after the whole training session. In statistical analysis, meaning level was selected as  $\alpha=0.05$ . Paired sample t-test for within group analysis and independent sample t-test for between group analysis were used. The significant level was accepted as  $p<0.05$  and  $p<0.01$ . The speed and agility parameters of the subjects were tested with scientifically accepted area tests. At the end of the 8 week training program, the meaningful changes were obtained from explosive power (SSC) group in horizontal jump, muscle power and flexibility percentage ( $p<0.01$ ). In conclusion, it was determined that, 8 weeks modify stretch shortening cycle training applied concurrent with the standard soccer training increased the horizontal jump, muscle power and flexibility parameters of 15-16 years old male soccer players.

**Key Words:** Soccer, Stretch shortening cycle training, horizontal jump, muscle power, flexibility

## Functional Training Approach on Children Tennis Players

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Purpose of this study is to investigate the effects of functional training model on athletic performance on children. This study included 28 children tennis players (mean age:  $9.6 \pm 0.7$ , height:  $134.1 \pm 6.8$ , weight:  $31.3 \pm 4.1$ , fitness age:  $3.1 \pm 1.1$ ) who have 80% or more dominant side on lateralization test and functional movement screening(FMS) score below 75%. 10 subjects included in functional training group(FTG), 10 subjects added in the traditional training group(TTG), 8 subjects included in the control group(CG ). Training program was three non-consecutive days a week, during eight weeks. CG application implemented by all participants. FTG has applied functional training model and TTG has traditional training model additionally. Flexibility, vertical jump, speed, agility, balance and FMS tests were conducted before the training program, at the end of week four and week eight. According to the data there were no difference in performance measurements between CG, TTG and FTG before season( $p > 0.05$ ), but the difference in mid-season and end of season was significant( $p < 0.01$ ). Significant decrease in FMS score was found( $p < 0.01$ ) in CG while no difference was apparent in other parameters( $p > 0.05$ ). In TTG, FMS score significantly decreased( $p < 0.01$ ), dynamic right balance( $p < 0.01$ ) and dynamic left balance( $p < 0.05$ ) increased while no statistically significant difference was found in other parameters( $p > 0.05$ ). In FTG all parameters improved and differences were statistically significant( $p \leq 0.001$ ). When the results are analysed, functional training model appears to be a more effective work out then a model based on the traditional training in terms of increasing athletic performance.

**Keywords:** Athletic performance, FMS, functional training, Tennis

## Body Mass Index, Physical Activity Level and Motor Property Relationship for Young People

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The aim of the study, between the ages of 14-19 high school youth body mass index, physical activity level and to determine the relationship between the engine feature. The study of 631 girls and 641 boys studying in high school, a total of 1,272 students participated. Students' height and weight measurements, 20 m. shuttle run test, 20 m. sprint running test, sit-up, push-up, sit and reach and vertical jump tests have been performed and Physical Activity Level of Access Survey (FAD) were administered. All data obtained from the statistical program SPSS, Student's t test, ANOVA, Tukey test assessed by Posthoc. As a result of this study, men and girls is a significant difference between the anthropometric characteristics and motor characteristics ( $p < 0,05$ ). Female students' body mass index (BMI) with FAD, 20 m shuttle run test, 20 m. sprint running test, push-up was found significant relationship between the values of the vertical jump test ( $p < 0.05$ ). Men students' with a BMI of 20 m. shuttle run test, 20 m. sprint running test, sit-up, push-up was found significant relationship between the values of the vertical jump test ( $p < 0.05$ ). However, FAD and sit and reach test isn't significant relationship between the values ( $p > 0.05$ ). Although the sexes meaningful relationships with their own tests, all tests have achieved good results in men than girls.

**Keywords:** *body mass index, physical activity level, motor property, young people.*

## The Effects of Dominance and Nondominance Leg Preferences on Balance Performance of Football Players and Wrestlers

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The purpose of this study is to investigate dominant and nondominant leg effects of football players and wrestlers on static balance performances. 35 football players and 33 wrestlers were participated in this study. Static balance measurements were made by the CSMI brand isokinetic balance test systems. According to dominant leg preferences, football players' applied pressure on X platform was found as 2.82 while wrestlers' applied pressure was 3.51 and Y platform pressure average was 3.28 for footballers and 2.81 for wrestlers. In accordance with nondominant leg preferences, average pressure on X platform was measured as 3.37 for football players while it was 3.54 for wrestlers and Y platform pressure was found as 3.65 for footballers and 3.57 for wrestlers. As a result of T-test conducted to find the difference between two groups as per their dominant leg preferences, a significant difference was determined in favor of football players ( $p < 0.05$ ) on X platform pressure values while no significant difference was found regarding Y platform pressure. No difference was also identified statistically for nondominant leg preferences. The reason of this dominant leg preference difference can be explained such that football players use dominant legs more often by the nature of football game which leads to the development of dominant leg biomotor skills that positively contributes to balance performance. The absence of difference for nondominant leg preference can be explained by the fact that both groups use their nondominant legs equally as per their sportive performances.

**Keywords:** Balance, Leg Preferences, Football players, Wrestlers

## **Searching About Bicycle Athletes' Mental Training Knowledge Levels and Practice Levels in Kocaeli**

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The purpose of this search is to examine the mental training knowledge level and practice level of the bicycle athletes in Kocaeli. 35 Athletes in total are participated to this search out of which 24 athletes came from Brisa Sport Club and 11 athletes came from Gençlik Sport Club. Most of the male athletes placed on this search are below the age of 18 and / or between 18-23 while the age of females are ranged between 18-23. Most of the athletes have background in sports lasted between 1 -3 years. The result of the search is obtained via questionnaire filled by the athletes and it places their idea about determining bicycle athletes' usage of mental training & mental skills. The questionnaire consists of 66 questions .The questionnaire contains the mental training and ability of the athletes such as mental visualization ability, mental preparation, self confidence, anxiety & concern management, concentration ability, relief ability, motivation, attitude & experience of mental training as well as the questions about the demographich information & social life of them (Şinforoğlu, 2006). The questionnaire used in the search is prepared by Osman Tolga and both its validity and reliability work is done. Frequency and percentage proportion of the obtained results are indicated after figurative statistical calculations (such as average, standard deviation) are applied to. The results are evaluated in SPSS 20,0 programme. According to the results it can be said that the athletes should work on developing their mental abilities and mental works should be spread over.

## A Comparison of Women's Football Leagues in Terms of Discipline Practices

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While football has always been a sport mostly preferred by men, recently it has become to be liked by women, too, both in our country and throughout the world (Can and Erden,2006). Attitudes and behaviors of players affect acts of violence in football. The purpose of this study is to compare women's leagues in terms of discipline practices. The study has researched a total of 160 competitions from Turkey Football Federation 2012-2013 Football Season Women's first league and second league. The analysis of data has been made by SPSS 18.0 Statistics Programme. For the statistical analysis of data, descriptive statistics and t-test with a significance value of  $\alpha=0.05$  have been used. The results of the study have shown that there are no significant differences between Women's first league ( $2,63\pm 1,89$ ) and Women's second league ( $1,84\pm 1,76$ ) in terms of averages of yellow card ( $P>0,05$ ), and also that there are no significant differences between Women's first league ( $0,15\pm 0,45$ ) and Women's second league ( $0,13\pm 0,45$ ) in terms of averages of red card ( $P>0,05$ ). The results of the study have also shown that there are more discipline practices in the first league of Women's league when compared with the second league and the players of the first league show more violence and unfair behaviors; however, this difference is not significant ( $P>0,05$ ).

**Key Words:** *Football, Women, Violence, Discipline Practices*



## The Relationship Between Anaerobic Power and Sprint Speed Between Athletes and Sedentary Individuals

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The aim of this study was to elucidate the relationship between anaerobic power and 30 m sprint speed in athletes and sedentary individuals. The study was conducted with total 102 people, 52 sedanter individuals (26 male and 26 female) and 50 volunteered athlete (25 male and 25 female). Age, length, body weight, vertical jump and body mass index values were detected by measurement devices. Obtained data was analyzed by SPSS software. Mann Whitney U test was used to calculate among-group differences and Pearson correlation tests were applied to analyze the relationship. Mean anaerobic power values in sedentary determined as  $75.68 \pm 5.95 \text{ kg.m/s}$  in females and  $101.68 \pm 6.56 \text{ kg.m/s}$  in males while it was  $87.17 \pm 9.19 \text{ kg.m/s}$  in females and  $118.44 \pm 5.97 \text{ kg.m/s}$  in males for athletes. Mean 30 m sprint speed of sedentary was  $6.52 \pm 0.37 \text{ s}$  in females and  $5.16 \pm 0.26 \text{ s}$  in males while it was  $6.1 \pm 0.26 \text{ s}$  in females and  $5.01 \pm 0.22 \text{ s}$  in males. As a conclusion, there were significant differences at  $p < 0.05$  level of significance for anaerobic power and sprint speed values between male athletes and sedentary, also between female athletes and sedentary. However, there was no significant relationship between these features ( $p > 0.05$ ).

**Key words:** Athletes, Sedentary, Anaerobic power, speed.

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**SPORT MANAGEMENT  
POSTER PRESENTATION**

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## Industrial Transformation of Football in Sports Clubs and Corporate Governance

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Due to globalization, the world is in a big wave of transformation. Sports industry which has become a sector in this wave is experiencing a big change with the development of technology since the 1990's. As a result of this transformation, culture of achievement has precluded sports values per se. Football, which compasses the biggest field of sports economy, has rapidly receded from the olympic concept and has become a buying and selling merchandise . However, sports industry faces several problems stemming from the general directors having inadequate skills and inconsistent managerial models, unstructured industry and ambiguous requirements. Considering the regional, national and local power of sports organizations, in order to work in coordination and synchronously with stakeholders, there is a need to transform these clubs into modernized institutions, so this study tries to reveal the important inadequacies and inaccurate treatment techniques and give suggestions to practitioners. Underlying assumption is "how to gain a competitive advantage via corporate governance, strategic planning, well-supported organizational culture, effective human resources management, sustainable achievements and suitable financial asset management. However, the most important factor in this process is **Corporate Governance** which has three pillars: determining the most suitable strategic managerial style; adopting and applying the standards envisaged by Total Quality Management and implementing all prescribed standarts.

**Key Words:** *Corporate Governance, Sports Clubs, Football Industry, Strategic Management*

## **The Analysis of International Sports Researches With the Theme of `Youth`**

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Since it engenders big marks and impacts in the next periods of an individual's life, the youth period constitutes an important place. The significance given to youth primarily results from the desire for a healthier and happier society in the future. For self-nurture of an individual - in a physically and mentally healthy, socially and psychologically positive manner- the time consumed for sports during youth and a conscious exercise program would be effective. Due to a healthy and conscious sports perception that is obtained during youth, the following adulthood and old age stages of an individual would be healthier and more comfortable, which would act on the success in social and occupational life. Regarding their place and importance in the multilateral improvement of an individual; the studies in the field of `sports` and the ones under the theme of `youth`, which is the stage when prospective investments are made, will always be contemporary and essential. From this point of view, the aim of this study that concentrates on international sports researches with the theme of `youth` is to make a general assessment of international level studies concerning the topics of `sports` and `youth`. The analysis of international sports researches with the theme of `youth` is important in terms of the classification of studies which leads to prospective endeavors. In this study, the problem issues of the articles written about the field along with the results and proposals are handled. The qualitative research pattern and content analysis techniques are used.

**Keywords:** *Youth, Youth Sport, Youth Sport Researches*

**A Multivariate Perspective of the Higher Education in “Sports-Leisure” Departments Within the Foundation and Public Universities: An Econometric Case Study of the Lessons to be Learned from the Privatization Efforts of the Turkish Higher Education in “Sports” Sciences.**

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While in 1985, there were 31 universities with only one foundation university, towards the end of 2011 there were 166 universities, with 102 public and 64 foundation universities, with student population of the foundation universities approaching to 10% of the total by the end of 2012. In this study, first we provide descriptive statistics on “Sports Sciences” Departments of the Public and Foundation Universities, Then, we further classify the “Sports Sciences” education on the basis of 4-year and 2-year systems. Here, “Supply” and “Demand” characteristics of the Departments within each group are presented. Data for 2003 and 2009 is then compiled for “Sports Sciences” and “Non-Sports Sciences” Departments taking candidate inputs with similar “Entrance Examination” Scores. The two groups are then further classified as departments of public and foundation universities. We run a chi-square analysis to find proof of any independency. This is followed by regression analysis with each group assigned the 0-1 dummy scores for departments from foundation universities, versus those from the public universities, as a dependent variable (Y). “Entrance Scores for the Department”, (X1), the percentage of seats filled by ÖSYM(X2) as independent variables. The regression results show student inclinations towards the public universities. We run the model again by adding independent variables namely, dummy variables for seven regions of Turkey, (X3); prosperity index of the region (X4), and population of the region. The inclination seems to move further towards the Public universities in higher population, and prosperity regions. The tendency has intensified from year 2003 to 2009 (R<sup>2</sup> has increased). This indicates a severe dilemma of the “Regional Development Context” of the Turkish Higher Education System. It shows the importance of regional developmental aspects in the model. We supplement these findings with the peculiarities of “Public” and “Foundation” universities through descriptive statistics results, rendering support for an early warning signal for the regional implications of “Strategic Planning of the Turkish Higher Education System”, posing enormous re-planning as well a growth potential. The result of this study has made it possible to develop further platforms of research, which may include cross cultural studies.

**Keywords:** *Higher Education in Sports Sciences, Higher Education; Turkish Higher Education System; Econometric Methods; Statistical Analysis; Discriminant Analysis; Turkish Foundation Universities; Turkish Public Universities; Quality of Private Education; Strategic Planning of the Higher Education, Early Warning Models.*

## Investigation of Organizational Silence and Organizational Commitment of Physical Education Teachers

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The aim of the study was to investigate organizational silence and organizational commitment of physical education teachers in terms of gender and length of service and to determine the correlation between organizational silence and organizational commitment. The sample of the study was consisted of 209 physical education teachers who taught at public primary schools located in Kayseri Province during 2012-2013 academic year. As the data collection tools; Organizational Silence Scale developed by Dyne, Ang and Botero (2003) and adapted into Turkish by Karacaoğlu and Cingöz (2009), and Organizational Commitment Scale developed by Rich, Lepine and Crawford (2010) and adapted into Turkish by Kurtpınar (2011) were used. As a result; no statistically significant difference was found between organizational silence and commitment and gender and length of service. There was a negative and significant correlation between organizational silence and cognitive commitment ( $r = -.168$ ,  $p = .015$ ,  $p < .05$ ).

**Keywords:** *Organizational Silence, Organizational Commitment, Physical Education Teacher.*

## A Research on Metaphoric Perceptions of Teacher Candidates

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This study was carried out to determine metaphoric perceptions about teacher, teaching, learning, instructional material and evaluation between physical education teacher candidates and primary school teacher candidates. Screening model used, the sample of the study was consisted of 117 physical education teacher candidates and 145 primary school teacher candidates from Bolu. “Metaphors Scale Oriented Concepts in Education” was used, designed by Eren and Tekinaslan (2012). Comparing obtained data with various variables was utilized from t-test, anova-post hoc and descriptive analysis. It was found significant difference in “teaching” sub-dimension between physical education teacher education and primary school teacher education ( $t=3,064sd=260p<0,05$ ) and between gender groups ( $t= 2,222sd=260p<0,05$ ) when the findings of study examined. According to class variable in “learning” sub-dimension, it was found significant difference between 2. and 3. classes ( $F_{(3,258)}=2,766p<0,05$ ). It was found significant difference in “evaluation” sub-dimension between departments ( $t=-3,138sd=260p<0,05$ ) according to class variable 2. and 3. class, 1. and 4. class, 2. and 4. class ( $F_{(3,258)}=6,083p<0,05$ ); in the same sub-dimension concerning age variable between 24 years and over with 18-20 and 21-23 age groups ( $F_{(2,259)}=3,997p<0,05$ ). Consequently, it was emerged metaphoric perceptions related with education concerning “department”, “class”, “age” and “gender” variables.

**Keywords:** Metaphor, teacher candidates, teacher, learning, instructional material, evaluation.

## The Examination of Leadership Behaviours of Students of Physical Education And Sports By Confirmatory Factor Analysis

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The aim of this study is to determine the factors affecting leadership behaviour by confirmatory factor analysis and accordingly to present from which subdimensions participants affected. Screening model was used in the study. The population of study consisted of 167 students registered in Erzincan University School of Physical Training and Sports. The research sample of the study involved 126 students educated in School of Physical Education and Sports Teaching during 2012-2013 academic year. In the study Leader Behavior Description Questionnaire (LBDQ) which was developed by Hemphillve Winer (1957) and Leadership Behaviour Identification Scale which was translated in Turkish for the first time by Önal (1979) as data collection tool. In original scale there are totally 30 items relating leadership behaviour. 15 of them are "forming structure" and 15 "showing understanding" size. Cronbach's Alpha value of the data collected in the study was found to be 0.79. 70 of the participants were male and 56 of them were female and most of them were in range of 20-23 years old. The obtained accordance measurements for Metering Model NFI (0.84), NNFI (0.96), CFI (0.96), SRMR (0.78), AGFI (0.82), RMSEA (0.34),  $X^2/sd$  (1.14), P (0.87) show that metering model is significant and suitable model as a whole. According to the study the greatest determiner of perceived leadership is "forming structure" subdimension. "Showing understanding" dimension is represented by lower coefficient. According to these results, the subdimension of "showing understanding" having lower coefficient than "forming structure" subdimension show relatively unimportant in explaining leadership behaviour.

**Keywords:** Leadership Behaviour, School of Physical Education and Sports



## The Perception of The Physical Education Teachers with Regard to the Relationship Between Inter Personal Communication Skills and Conflict Management Strategies About Their School Administrators

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The aim of this study was to investigate the perception of the physical education teachers with regard to the relationship between inter personal communication skills and conflict management strategies about their school administrators. In the year 2011-2012 within the boundaries of the city of Şanlıurfa 130 public school physical education teacher serving as volunteers participated in the research. "Inter personal Communication Skills Inventory" and "Conflict Management Strategies Scale" are applied on the PE teachers. The data analyzed by Kolmogorov-Smirnov test for normal distribution or not. It is analyzed non parametric tests according to age and years of service of teachers ( $p = .000 < \alpha = 0.05$ ) because the data did not show a normal distribution pattern. Data analysis, descriptive statistics, Mann-Whitney U test and Spearman's rho test was used; the margin of error was accepted as 0.05. In the research, determined on the PE Teachers respectively not want conflict strategy ( $\chi = 2.44 \pm, 494$ ), control strategies ( $\chi = 2.42 \pm, 623$ ) and solution-oriented strategy ( $\chi = 2.35 \pm, 473$ ). As a result, according to the perceptions of PE teachers were found highly significant relationship between interpersonal and communication skills, conflict management strategies of their school administrators. Statistically, differences according to age and years of service were not significant between the scores of the workplace communication scale and sub-dimension scores of conflict management strategies.

**Keywords:** Physical Education Teachers, Communication Skills, Conflict Management Strategies

## Determining The Dimensions of The Impact of Major Sports Events in A Host City

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The purpose of this study is to determine the dimensions of impact of major sport events in a host city. For this purpose, the ideas of the General Directorate of Sports employees and managers were used as well as those of the president of the federation and the federation staff, NOC Turkey's members, physical education and sports sciences students, referees, tourism, cultural groups, local sports clubs, and media professionals. Key professional groups were also involved such as sport scientists, sports educators, coaches, referees, and of course the athletes who participated. The twenty-five participants involved in this study were selected by the purposive sampling method. A semi-structured interview technique was used with the participants. In the interview process, in addition to questions based on demographic characteristic designed to identify the impact of the major events, the participants in face-to-face interviews were asked open-ended questions. The NVivo 9.0 statistical program was selected to analyze the qualitative data and to perform content analysis. When analyzing the data collected in this study, a numeric code of 1 to 25 was assigned to each participant. A code for a set of qualitative data obtained from the participants was then used to create another list of appropriate codes based on the degree of impact of the sport event ranging from high to low. Some important dimensions of the impact of the event were identified by the participants and codes assigned by the researcher. A number of dimensions emerged, namely, positioning, human resources, sports capital and investment, social and cultural development, sport sustainability, environmental awareness, the development of sports consciousness and to increase participation in sport in the host city.

**Keywords:** *Major sport event, impact, host city*

## **Determination of The Dimensions of Sport Sustainability**

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The purpose of this study is to determine the dimensions of sustainability in sport. For this aim, the ideas of the General Sports Directorate workers and managers were used as well as those of physical education and sports school administrators, university faculty, physical education and sports teachers, coaches, presidents of the federation and the federation staff, physical education and sports sciences students, referees, athletes, etc. The study group working in the field of the various dimensions of sport and its objectives used a purposive sampling method for the 30 subjects to be interviewed. Semi-structured interviews techniques were used to identify the extent of sustainability in sport. Demographic characteristics of the participants were identified, using interviews in order to determine the dimensions of sustainability in sport. Face-to-face semi-structured questions were given to participants in written form and were recorded. NVivo 9.0 statistical program was used for the analysis of the qualitative data which was analyzed descriptively. The data collected in this study was carried out and was analyzed using numerical codes 1 to 30 which were assigned to each participant. Written documents were examined within the framework, which is consistent with the literature on sustainability in sport and appropriate codes (categories) were created. Sustainability in the field of sports reported by 30 participants generated codes that referred to "organizational sustainability", "individual" sustainability "social sustainability", "economic sustainability", "support for participation in sports," and "environmental sustainability" as they occurred.

*Keywords: Attitude, Sports, Sustainability*

## Motivational Factors of University Students Toward Volunteering in Sports Events

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To reduce the high costs of hosting mega sports events the contribution of volunteers is quite important. Volunteering is a civic activism which emerges in case of necessity by utilizing people's possessed skills, experiences and intellectual background for benefit of others and environment without any financial expectation. That sport organizations help the host country's recognition of international arena, enhance its prestige by contributing its economic and social integrity increases the importance of volunteer support. In terms of sport organizations, there are a set of motivational factors affect people commencing volunteering and being active. Purpose of this study is to identify effects of department, gender, attending sports, monitoring sport events, and following sport events through media on undergraduate university students' motivational factors toward volunteering for mega sports events. Sampling was 388 undergraduate university students. Using "The Motivational Factors on Sport Volunteering Scale" developed by Alay et al. (2004) consists 6 factors of personal satisfaction, social relation, personal development, thinking as opportunity and fun, helping others, and make use of free time. Factor loadings vary between .82 and .49, cronbach's alfa values vary between .69 and .83. The study applied descriptive model and t-test and ANOVA method for the analysis of data. According to findings, motivational factors toward volunteering showed difference on department, attending sport, and following sport events through media. Conversely, gender and monitoring sport events showed no difference. Source of the difference arose from lower scores of personal satisfaction and make use of free time when compared with other factors.

**Keywords:** *Volunteering, Sports events, University students, Motivational factors*

## A Road Map to Set Up Qualified and Sustainable Fitness Centers for Entrepreneurs in Accordance with Turkish Legislation

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Fitness centers, where serve for physical activity, sports, recreation, health and wellness, have been attracting the attention of entrepreneurs, as peoples' interest for becoming members of them has been increasing, recently. While spending time and money, members require not only qualified service, but also well-designed materials and infrastructure within these facilities. The construction and installation of fitness centers cause inevitable effects on the ecosystem, environment and hygiene where sports and physical activities are taken place. Regardless of scope and size, fitness centers in Turkey appear to be different among each other in terms of quality and sustainability during their service. These emerged differences primarily affect human health and safety as well as the environment. On the one hand the need for developing strategies, where fulfilling the customers' satisfaction is on the other, the investors are challenged to found and maintain their complex structured enterprise in a decent way. The purpose of this study is to found a road map and an action plan for entrepreneurs who would like to invest in qualified and sustainable fitness centers in accordance with the relevant legislation of the Ministry of Youth and Sports, the Ministry of Industry and Trade, the Ministry of Health and municipalities.

**Keywords:** *Entrepreneurship, Fitness Center, Sustainability, Legislation*

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**RECREATIONAL SPORT  
POSTER PRESENTATION**

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## **Determination of Constraints Against Participate in Recreational Activities: Perspectives of University Students**

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The purpose of this study was to examine university students' perceptions of leisure constraints and to compare these with regard to some demographic variables. The sample of this study was 650 (413 female and 237 male) university students from different universities in 2011-2012 Spring Semester. In this study, Leisure Constraints Questionnaire-18 (Gürbüz et al., 2012) was used as a data collection tool. In Order to demonstrate whether there were significant differences between the scores of some independent variable acquired from the scale, t and One-Way Anova tests were processed. The findings of the study showed that there were significant differences between university students' perceptions of leisure constraints and some demographic variables which were gender, university, economic level and the state of being interested in any sport branches in the past.

**KeyWords:** *Leisure, recreation, leisure constraints.*

## **Determination of Levels of Public Interest and Knowledge About the Folk Dances of Ankara University Students**

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The purpose of this study is to determine the levels of public interest and knowledge about the folk Dances of Ankara University Students. Study, four schools, a college, including girls and fifty men and fifty students from each department, a total of five hundred students participated in the study. Questionnaire was used to collect research data. Survey on students' knowledge and interest levels of the Turkish folk dances. The survey is based expert interviews. The survey consists of three parts; the first section of personal information, the second is of interest ( 15 questions), the third is the level of knowledge (16 questions) a total of 34 questions. Analysis of the data obtained from the study, performed the statistical description of arithmetic mean and interpreted in tables frequencies. In thid study student's gender, age and faculty were in order to evaluate their level of interest and knowledge Chi-square test was used. As a result of this study, high levels of interest of the students at the University of Ankara (59.6%), the level of knowledge was low (% 40,4) was observed. 61.2% of the students have indicated that people love games. 41.6% of the students play folk asylum. If play-ers 34.3% of the Eastern Anatolia play games. With 37.7% of the students in the Black Sea region of interest has been yore. Reasons for going to those who build social relationships and the course is mainly located in close relationship with his friends is gone. The most important factor that foster their interest in folk dances "costume" was. Some of the students felt that it was a waste of the folk dances and argued that it does not like as a result. Folk dances of the study, the students of the facul-ties and schools at the University of Ankara liking, monitoring and Articles of course going to be sta-tistically significant differences were observed ( $p < 0.005$ ).

**Keywords:** Folk Dances, The University Students



## Perception of Constraints to Recreational Activities: The Case Study of University Students

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The purpose of the present study was to investigate the perceptions of university students with regard to constraints that influence their participation in recreational activities. A Leisure Constraints Questionnaire was used developed by Alexandris and Carroll (1997) to measure university students' perceptions of constraints on leisure participation. The reliability and validity of the T-LCQ were determined by Gürbüz, Öncü, Emir (2012). The data was collected via T-LCQ with 91 female and 141 male university students, 18-30 years old in 2012-2013 academic years. Independent samples t-tests were used to examine the mean differences regarding gender and age compared to T-LCQ subscales. One-way Analysis of Variance (ANOVA) was also used to compare the mean scores of the subscales of the T-LCQ with regard to average amount of weekly leisure time. Although, female university students had higher mean scores in all sub-scales of the T-LCQ, t-test analyses revealed no significant ( $p>.05$ ) was obtained in mean scores between female and male students for all sub-scales. There were also no significant differences in mean scores among the age groups ( $p>.05$ ). Furthermore, ANOVA analyses indicated that there were no statistically significant mean differences ( $p>.05$ ) in mean scores with respect to average amount of weekly leisure time. Overall findings indicated that while the facilities/services and accessibility subscale was the biggest constraint to leisure, lack of partners was the least constraining subscale for all the participants.

**Keywords:** *Leisure, Recreation, Constraints, University students.*

## **Impact of the recreational physical activities on university students' self-esteem in Turkey**

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The purpose of this study is to investigate the effect of participation in recreational physical activities on self-esteem of university students in Turkey. 111 volunteer university students participated in the study and were randomly assigned to experimental (n=51) and control (n=60) groups. The experimental group participated in the recreational physical activities which was conducted in two sessions, each lasting one hour a week. During this period, the control group did not participate in any regular physical activity program. Coopersmith self-esteem scale was administered to participants before and after 12-week period. In conclusion, there was a significant increase in self-esteem scores of participants in the experimental group in comparison to the ones in control group ( $p<0.05$ ). To sum up, the recreational physical activities positively affected the self-esteem of university students.

**Keywords:** *Recreation, Physical Activities, Self-esteem*



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**ADAPTED PHYSICAL ACTIVITY  
POSTER PRESENTATION**

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## Professional Skills Perception of Coaches of Hearing Impaired Athletes

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This study is done to determine how coaches of hearing impaired athletes' professional skills perception is shaped according to some varieties. For this reason, 417 athletes, 313 male and 104 female, are added into the example group. 125 athletes of these are from the branches of football, 45 from volleyball, 56 basketball, 25 wrestling, 18 swimming, 73 athletics, 27 handball, 17 taekwondo, 14 tennis and 17 table tennis. These athletes are from 22 different countries at 11 championships, 4 of them World and 7 of them Europe held in 2011-2012. There is 55 db volume loss in both ears of all of the athletes in the study. Coach Rating Scale For Hearing Impaired Athletes including technics, competition and social sub-dimension of the coach developed by Aak and Karademir (2011) is used to obtain the necessary data from the study group. SPSS (15.0) program is used to analyse the data obtained from the study. Binary comparison about the independent samples is tested by t-test and multiple comparison is tested by ANOVA. Statistical significance level is alpha ( $\alpha$ ) and error level is  $p < 0.05$ . At the end of the study, it is identified that female athletes find their coaches more adequate at technical and sub-dimension of competition and perceive their non-disabled coaches more adequate at each of three sub-dimensions than hearing handicapped coaches or coaches with headphones. Furthermore, athletes think more positively about the coaches communicating with the help of a translator than those communicating by the sign language at the social sub-dimension. In individual sports and at the technical dimension, athletes are happier, there is no difference in the competition environment and the athletes in team sports think more positively about their coaches in social dimension.

**Keywords:** Sports, Hearing-impaired, Coach, Professional skill.

## Effects of Swimming Education on Physical Fitness Improvement in Children with Cerebral Palsy

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The aims of this study were to determine the effects of swimming program on physical fitness in cerebral palsied children, which of these parameters was most affected by swimming program, and to determine whether these effects provided additional benefits to ordinary rehabilitation. Subjects (n:23, aged 5-10 years) randomly assigned to an exercise group (EG) and control group (CG). Both of the groups continued to their rehabilitation program and EG participated a fourteen-week swimming program consisted three sessions per week. The weight, height, body mass index, trunk-lift, sit-and-reach, extended arm hang, grip strength, standing broad jump, shuttle-run and energy expenditure index were measured before and after swimming program and the responses were compared between 13 exercised subjects and 10 control subjects. There were significant effects of time for the sit-and-reach, extended arm hang, grip strength, shuttle run ( $p < 0.007$ ) and height ( $p < 0.01$ ). Repeated measures ANOVA showed a significant between-subject effects for trunk-lift ( $p < 0.007$ ). The components of all outcome measures most affected by swimming were consequently; trunk lift, sit-and-reach, grip strength, extended arm hang and energy expenditure index ( $\geq 0,8$ ). These results indicate that there is improvement in some of the variables, however, fourteen weeks of swimming is a short period for the clear improvement.

**Keywords:** *Cerebral Palsy, Swimming, Physical Fitness*

## **"Effects of Rehabilitation Sports Physical Activity Program on the Motor Skills and Physical Performances Of Children with ASD (Autism Spectrum Disorder)"**

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The present study was conducted in order to examine the level of effect physical activity has on the physical development, motor skills and severe crisis of autistic children. 17 male and 6 female children diagnosed with ASD and that experience 11,6 severe crises a week on average were subjected to a 50-minutes physical activity program three days a week, for a period of 36 weeks. Four tests as basic test, pretest, intermediary test and posttest were conducted. After the activity observations were made for a period of 12 weeks. BPTF and MABC tests were carried out respectively for motor fitness and physical competence. IBM SPSS 21 Statistical package was utilized in the evaluations made. It is determined that regularly implemented physical activity affects the physical performances and motor skills of children diagnosed with ASD positively ( $p < 0,000,1$ ). In most of the children that had an average of 12 strong crises in a week the crises ceased and the frequency fell down to 0,6 per week for male and 0,5 per week for female children ( $p > 0,000,1$ ). During the 12 weeks observation period where no physical activity was carried out, number of crises increased to 4,9 for male children and to 6,5 for female children. The present study demonstrates that physical activity has positive effects on motor competence and skills, and also significantly reduces strong seizures. With regular physical activity of 50 minutes in a day, development of motor skills of autistic children can be supported and the seizures can be completely stopped.

**Keywords:** *Autism Spectrum Disorder, rehabilitation sports, movement therapy, physical activity*

**Physical Education and Sports Teaching People with Disabilities;  
Coaching; Leading Coaching Modular Comparative Education  
Programs (Turkey, the European Union, The Mediterranean Region,  
Italy, Asia And The Pacific, Australian Perspective)**

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Physical Education and Sports Sciences in time in Turkey today, 5 elements of fitness in different areas of the departments have not been educated. But; their borders are not as flexible. There is not possible multi purposes, two, three, diplomas programs from Associate Diploma to the Undergraduate deg-ree completion program approaches and models, such as do not contain exact-ly. Turkey Thus, tens of thousands of teacher that Disabled Sports Coaches; Leading Sports your coach is needed. Turkey, the European Union, the Mediterranean Region, Italy, Asia and the Pacific, Australian Perspective for the cultivation of the elements mentioned in the multipurpose studies on the structure of the modular programs are and teaching educational programs are envisaged as a goal. This is the method of investigation; Open Education, Distance Education, Formal Education Models in different, distinct and com-mon aspects are taken a new approach to solve the problem as compared to solutinal succeeded extra supporting. Related documents mentioned regions, countries were obtained. UNESCO Asia and the Pacifica Higher Education Law subjects were evaluated according to the Treaty of higher education. Transna-tional and national findings of the European Union and Turkey, made in Aust-ralia, then the implementations and some Sports Department Federations; like Ondokuz Mayıs University, and some sectors of civil society in the execute-button pointing have been supported.

**Keywords:** *Disabilities, Physical Education, Coaching*



## **Volunteerism Concept from the Perspectives of Volunteers Who are Working with Individuals with Disabilities: Sample of Volunteers Who are Working with Autism**

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The purpose of this study was to examine the volunteerism perspective of volunteers who are working with individuals with autism. 9 volunteers who participated in this study. Data were collected by one focus group and three one on one interview. Each interview took approximately one hour and type-recorder was used. The content analysis method of qualitative analysis was used to analyze the data. The data obtained from the interviews was sorted into three themes: Perception of Volunteering, Guiding Agents, Expectations & Suggestions. Under the theme of Perception of Volunteering, individuals indicated they perceive volunteerism as altruism, to act charitably with no thought of personal gain, to be able to empathize, moral relaxation and to feel good. Under the theme of Guiding Agents, participants reported that, they started being volunteer by the effects of university lecturers, friends and parents. Under the theme of Expectations & Suggestions, participations reported that, they expect moral satisfying, learning new knowledge, meeting and teeming different persons, maturation, gaining perspectives, developing creativeness from being a volunteer. Nonetheless, participants suggested organizing the encouraging campaigns by universities, mass media, municipalities, large companies for increasing the volunteerism and also suggested that, volunteer tasks should be explained clearly to prevent volunteers. In conclusion, it can be said that, volunteers working with autistic individuals get benefit from volunteerism to get emotional satisfaction as well as individual development is oriented and affected by their university lecturers. Also together with themselves many individuals and institutions should take part in volunteerism to increase volunteerism.

**Keywords:** *Volunteerism, Volunteer Motivation*