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**EMPATHY: ITS SIGNIFICANCE AND MONITORING IN THE DIETETIC
CONSULTATION FOR CHRONIC DISEASE MANAGEMENT**

by

TRACEY PARKIN

A thesis submitted to the University of Plymouth
in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

School of Health Professions

Faculty of Health

April 2011

ABSTRACT

Tracey Parkin

EMPATHY: ITS SIGNIFICANCE AND MONITORING IN THE DIETETIC CONSULTATION FOR CHRONIC DISEASE MANAGEMENT

Communication between the patient and healthcare professional is pivotal in enabling effective self-care management to occur (Street et al., 2009) which in turn leads to improved health outcomes (Kravitz et al., 1993). However, there is little published data exploring the most effective tools for evaluating whether these communication skills occur and what particular attributes enhance the process (Goodchild, Skinner & Parkin, 2005; Heisler et al., 2003; Parkin & Skinner, 2003). This study aims to identify patient-centred communication skills occurring in consultations and to explore their link with a tool-recording agreement on reported decisions made.

Quantitative analysis was conducted on 86 dietetic consultations across four outpatient diabetes services. Audio recordings from 20 of these were qualitatively analysed.

Greater agreement on reported decisions correlated significantly with level of empathy demonstrated ($\tau = .283, p = .0005$). In consultations featuring agreement, dietitians expressed more empathy ($p = .02$), used more active listening skills, asked significantly more exploratory questions on self-care practices ($U = 18.5, p = .007$), provided significantly more supportive/collaborative information-giving exchanges ($U = 11, p = .003$) and were more likely to set an agreed agenda at the start of consultations.

In contrast, consultations featuring disagreement had low levels of empathy, fewer active-listening skills and exploratory questions, significantly greater numbers of *persuasive* information-giving exchanges ($U = 17, p = .007$) and more recommending exchanges. Generally, agendas were not set.

In conclusion, recording patient/healthcare professional agreement on reported decisions made during a consultation is a simple tool that can indicate the presence of patient-centred communication skills. Active-listening skills allow expressions of empathy that facilitate patient involvement and interactive dialogue. The measure of agreement should be used frequently as a marker of effective dietetic consultations and to provide further data on the relationship between patient-centred communication and implementation of behaviour change for improved health outcomes.

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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

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Dietetic Service Clinical Governance Conference, Glasgow, March 2010

What is a patient-centred dietetic consultation?

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CHAPTER ONE: SETTING THE SCENE

1.0 Significance of study

Professionals are increasingly expected to demonstrate the impact of their care on patient outcomes (NHS, 2011). The management of long term chronic conditions poses challenges in this area however, as many of the markers that are currently used to measure successful health outcomes can be influenced by a variety of factors other than the professionals input. This study is therefore significant in that it identifies an outcome measure that relates directly to the dietitians input in the consultation. It provides evidence to support the use of specific patient-centred communication skills/behaviours for chronic disease management and provides a mechanism to explain how these skills/behaviours interact to impact on the outcome measure of agreement on reported decisions made. Furthermore the outcome measure of level of agreement on reported decisions made is shown to be a reliable indicator of the presence/absence of these patient-centred communication skills/behaviours in the consultation.

1.01 Aims and research questions

The overall aim of this study is to identify specific patient-centred communication skills/behaviours occurring in consultations for chronic disease management and to explore their link with a tool recording agreement on reported decisions made.

Empathy, a crucial component of patient-centred communication, is explored alongside other key skills of active listening and information exchange. Mixed methodology design is employed to allow both quantitative and qualitative

research questions to be addressed. The quantitative analysis addresses the following three questions:

1. What is the relationship between empathy and agreement on reported decisions made in the consultation?
2. To what extent do the various components of empathy (statements of challenge, statements of progress and statements of emotion) impact on agreement on reported decisions made in the consultation?
3. What is the relationship between patient satisfaction and empathy?

The qualitative analysis addresses the following four questions:

1. What are the components of information giving in the consultation?
2. How do the components of information giving relate to empathy?
3. How does information giving relate to agreement on reported decisions made in the consultation?
4. How do the components of information giving differ between consultations with agreement on reported decisions made and those with disagreement?

1.02 Structure of thesis

The thesis is structured as follows; Chapter one explores the complex nature of self-care management highlighting issues that may impact on an individual's ability to self-care, using diabetes as an example of a chronic disease.

Lifestyle, particularly diet, is a major component of self-care management in diabetes (NICE, 2003; NICE, 2008a; NICE, 2009) and as a consequence dietitians have a significant role to play in the management of this condition.

This management is delivered predominately through individual patient

consultations and relies heavily on the effective communication skills of the dietitian. Chapter two explores the limited available data on the measurement of communication skills/behaviours against the outcome measure of agreement on reported decisions made. Chapter three provides a broader overview of the literature in this area by exploring patient-centred communication skills reported to impact on outcome measures other than agreement on decisions made. The literature reviewed identifies empathy, information exchange and active listening as important patient-centred communication skills, these skills are needed to support self-care management and therefore their potential impact on patient/professional agreement on decisions made in the consultation is explored. Chapter four reviews the role of patient self-efficacy, patient autonomy and patient satisfaction in patient-centred care. The hypothesised links to empathy and agreement on reported decisions made are outlined, and this provides the rationale for the measurement of these concepts alongside empathy, active listening skills and information exchange. The pilot study described in chapter five aims to clarify suitable methods for the direct measurement of empathy, active listening skills and information exchange in the dietetic consultation. It highlights difficulties with current tools for measuring active listening skills and information exchange, and provides the rationale for a mixed methods study to address questions raised. The design of a two phase mixed methods study to answer questions is outlined in chapter six. The quantitative phase of the study design (Phase I) is detailed in chapter seven, the results of this are presented in chapter eight. The qualitative study design (Phase II) is covered in chapter nine, qualitative methods used are detailed in chapter ten and the qualitative results presented in chapter eleven. The discussion in chapter twelve incorporates the results from both the quantitative

and qualitative analysis as per mixed methodology. The implications of the findings from this study for dietetic practice and other healthcare professionals working with chronic disease are summarised in the final chapter.

1.1 Introduction

The World Health Organisation (WHO) describes chronic diseases as those that persist over a long period of time, that are progressive in nature and that may result in complete or partial disability or even lead to death (WHO, 2009). The Department of Health considers chronic diseases to be conditions that cannot be cured, but that can be managed through medication and/or therapy (Department of Health, 2011). Chronic diseases include a range of conditions: the more common being heart disease, stroke, cancer, diabetes, respiratory disease, obesity, arthritis, chronic obstructive pulmonary disease (COPD), and mental health issues (WHO, 2009).

Chronic disease or long-term conditions are reported to be the most common cause of mortality in the world, representing 60% of all deaths (WHO, 2009). Currently there are around 15 million people in England with at least one long-term condition. Numbers are expected to increase, in particular those people with two or more conditions (Department of Health, 2011). This increase will have a huge impact on resources and care delivery. The specific aspects of the medical management will vary. However, there are generic components to the management of these conditions that will revolve around the individual's ability to learn to live with the condition and manage it on a day-to-day basis (Barlow et al, 2002; Department of Health, 2001; Lorig et al, 2001). This day-to-day management by the individual is referred to as self-care management and will

involve training and education from professionals and others in the specifics of the disease management process through medication and/or therapy (Clement, 1995; Department of Health, 2010a).

Diabetes Mellitus is one of the most common chronic diseases and, as such, provides a good model for exploring the issues concerned with self-care management. It currently affects approximately 2.2 million people in England (Department of Health, 2010c) and the incidence of diabetes is growing at a rapid rate. There are two major classifications of diabetes: type 1 and type 2. The majority (85-90%) of people diagnosed with diabetes will have type 2 (Department of Health, 2007). In some parts of the country, type 2 diabetes is increasing at a rate of 15% per year due to the ageing population and an increase in obesity (Department of Health, 2007). Diabetes UK (2009) estimates that by 2025, over four million people will have diabetes.

Diabetes has a major impact on the health of the individual: increasing the risk of morbidity and mortality and reducing the average life expectancy by 7-15 years (Department of Health, 2007; Roper et al, 2001; Dawson et al, 2008).

Standard 3 of the National Service Framework for Diabetes (NSF for Diabetes) states that

"people with diabetes are empowered to enhance their personal control over the day-to-day management of their diabetes in a way that enables them to experience the best possible quality of life" (Department of Health, 2003; Department of Health, 2010c).

In common with other long-term conditions, the task of managing the condition lies with the individual. People with diabetes may spend on average three hours per year with a professional discussing their diabetes management and

the remaining 8,752 hours caring for themselves (Department of Health, 2007). Self-care is therefore an important component of the management of diabetes, as all behaviours are actioned by the patient. Improvements in self-care depend on the patient's ability to successfully engage in a range of self-care behaviours (Aiken, Bingham & Piette, 2005; Glasgow et al, 1997; Goodall & Halford, 1991; Harrington, Noble & Newman, 2004; Hartz et al, 2006). Information is required to support these self-care behaviours; the ability of professionals to communicate this information to patients forms an essential component of effective self-care management.

The aim of self-care management is to prevent deterioration in health resulting from the chronic condition and to preserve function and quality of life. In diabetes, this will focus on reducing complications associated with macrovascular and microvascular disease. Macrovascular disease (large vessel disease) such as heart disease and stroke (Bell, 1994; Dawson et al, 2008) greatly increases in people with diabetes. The predicted risk of heart disease varies from 17% to 22.5%, depending on the risk score used (Kirk et al, 2007). In general, people with diabetes show a threefold increase in risk for all cardiovascular diseases (Bertoni et al, 2007; Stamler et al, 1993).

Microvascular complications (small blood vessel disease) are a common consequence of having diabetes and occur in the kidneys (nephropathy), eyes (retinopathy), nerves (neuropathy), and limbs (peripheral vascular disease).

Consequently, people with diabetes are more likely to suffer with heart disease and 80% will die of cardiovascular disease (Department of Health, 2007).

Stroke, blindness, kidney failure, gangrene, and amputations are also common long-term problems associated with having diabetes. Treatment of these

specific complications currently accounts for 5% of the NHS budget (Department of Health, 2007), with up to 10% of hospital budgets used to care for people with diabetes (NICE, 2008a). However, economic models predict that the cost of managing the long-term complications in type 2 diabetes will rise to 40-50% by 2030 (Bagust et al, 2002). Diabetes therefore has a huge impact on current and future NHS resources and the general health economy, as well as the overall impact on the individuals themselves.

Many of the complications that are seen in diabetes can be avoided with earlier diagnosis and better preventative care (ADVANCE Collaborative Group et al, 2008; DCCT, 1993; Gillies et al, 2007; Nathan et al, 2005; Norris et al, 2005; Pan et al, 1997; Tuomilehto et al, 2002; UK Prospective Diabetes Study (UKPDS) Group, 1998; Uusitupa et al, 2000; Yamaoka & Tango, 2005).

Studies have demonstrated that intensive lifestyle intervention at the pre-diabetic state (impaired fasting glucose tolerance IGT) can significantly reduce the progression to diabetes by 58% (Gillies et al, 2007; Tuomilehto et al, 2002; Uusitupa et al, 2000; Yamaoka & Tango, 2005). Interventions that target both diet and lifestyle appear to be the most effective for reducing the incidence of type 2 diabetes (Li et al, 2008; Orozco et al, 2008). However, early diagnosis does present some challenges. When patients are diagnosed earlier, glucose levels may not be high enough to cause symptoms, thus patients are presented with a diagnosis at a time when they feel fit and well.

There are a range of issues that individuals will need to address in terms of day-to-day coping and self-care management skills when living with diabetes.

These are highlighted below.

1.2 Treatment of diabetes

The main aims of treating diabetes are to alleviate those symptoms that will help people feel better; to regulate blood glucose levels in order to prevent high or low extremes (hyperglycaemia or hypoglycaemia); to reduce the risk of (macrovascular) cardiovascular disease and diabetic microvascular complications (retinopathy/ neuropathy/nephropathy); to maintain quality of life (NICE, 2008a; NICE, 2009; Williams & Pickup, 2004). These aims are achieved by a combination of drug treatment and lifestyle (diet/activity) management to control and modify parameters known to influence outcomes (Table 1.1).

Controlling blood glucose levels by:

- Eating carbohydrate in the right amount, at the right time and considering the type of carbohydrate eaten
- Checking blood glucose levels to monitor the balance between carbohydrate foods eaten and insulin and or oral hypoglycaemic medication
- Taking the correct amount of medication (tablets or insulin) at the right time of the day

Controlling blood pressure (BP) by:

- Eating specific foods in the right amount and following principles of the “Dietary Approach to Stopping Hypertension” (DASH) (Sacks et al., 2001) including reduction in salt intake
- Taking medication to help lower blood pressure (often 2-3 types of medication are required to lower BP)

Controlling cholesterol levels by:

- Targeting specific foods in the diet and/or by
- Taking cholesterol-lowering medication

Reducing or maintaining weight by:

- Increasing activity
- Eating smaller portions
- Taking medication where prescribed

Reducing cardiovascular risk by:

- Managing blood lipids
- Maintaining or reducing body weight
- Stopping smoking
- Increasing activity

Table 1.1 Summary of key areas for self-care management in diabetes

Other factors associated with reducing the risk of a cardiovascular event, such as smoking cessation, increasing physical activity and eating a healthy diet, are also targeted (Fagard, 2009; Hua & Tuomilehto, 2007; Whiteley et al, 2005).

In summary, people with diabetes are required to engage in a set of complex behaviours in order to manage their condition and reduce the risk of long-term complications (Table 1.1).

1.2.1 Self-care Management

The literature consistently highlights that suboptimal control of blood pressure, lipids, and glucose is commonly experienced in diabetes; and that this is associated with poor long-term outcomes (DCCT, 1993; UK Prospective Diabetes Study (UKPDS) Group, 1998). Although there are some physiological factors that contribute to poor control (such as insulin resistance and other co-morbidities) a major contributor is the low level of patient self-care (Benner et al, 2002; Donnan, MacDonald & Morris, 2002; Morris et al, 1997). Improvements in self-care depend on the patient's ability to successfully engage in a range of behaviours that will ultimately result in successful management of the key areas identified in Table 1.1 (Aiken, Bingham & Piette, 2005; Glasgow et al, 1997; Goodall & Halford, 1991; Harrington, Noble & Newman, 2004; Hartz et al, 2006).

The support provided by healthcare professionals (particularly dietitians) in supporting lifestyle and dietary change is fundamental to fostering self-care management in several key areas. These are: understanding food choice and lifestyle change, supporting the emotional changes, and understanding drug regimens more fully. The delivery of patient training and education in these areas may be provided through group education sessions (DAFNE Study Group, 2002; Davies et al, 2008; Deakin et al, 2006) and / or more commonly through one to one consultations (Duke, Colagiuri & Colagiuri, 2009). Training and education in these areas requires the professional to utilise a range of communication and teaching strategies in order to engage patients successfully in the self-care management of their condition (Anderson et al, 1991; Roach et al, 1992; Skinner et al, 2008; Stetson et al, 1992). However, this support can

only be effective if the structure of the healthcare system is also facilitatory. Each of these components can be explored for its significance in supporting self-care management by the patient.

Self-care management in diabetes can therefore be summarised as: effective lifestyle change and effective medication use. Evidence suggests that more effective self-care management leads to better metabolic control and improved functioning (DAFNE Study Group, 2002; Davies et al, 2008; Lorig, Ritter & Jacquez, 2005; Norris et al, 2002).

1.3. Possible rationale for poor self-care management

1.3.1 Lifestyle / Dietary compliance

There are problems documented with adherence to lifestyle management, which is a major component of diabetes care (Dietrich, 1996; Donnan, MacDonald & Morris, 2002; Foreyt & Poston, 1999; Huang, Gorawara-Bhat & Chin, 2005; Mc Nabb, 1997; Morris et al, 1997; Toobert, Hampson & Glasgow, 2000). Patient-reported adherence to lifestyle management is consistently poor, eg a rate of 33% for adherence to activity recommendations compared to 47% for foot-care (Toobert, Hampson & Glasgow, 2000) and 50% for dietary recommendations (Ary et al, 1986). In patients over 65 years of age, the figure for dietary compliance drops to 25%, with no further change in activity compliance (Huang, Gorawara-Bhat & Chin, 2005). Another small study (N= 75) reported daily dietary compliance rates of 26.7% (Travis, 1997). A large cross-sectional study (N = 5104): Data from the Diabetes Attitudes Wishes and Needs (DAWN), shows self-reported diet-adherence rates of 37% and 39% in people with type 2 and type 1 diabetes respectively (Peyrot et al, 2005).

However, the real levels of self-care may be much lower than this, as self-reported data regarding exercise and dietary behaviours are known to have a bias (Adams et al, 1999; Kristal et al, 1989; Krutz, 1990; Lichman et al, 1992) and are therefore unreliable (Mc Nabb, 1997).

The difficulty with dietary compliance may well reflect the multiple layers of potential dietary change and the many barriers in people's lives that may inhibit these changes from taking place (Sherman et al, 2000). Food is more than just fuel for the body and plays many roles in our day-to-day lives. The type and amount of food eaten may be determined by social, cultural, or religious factors, peer group pressure, food status and emotional drivers (Sherman et al, 2000; Vijan et al., 2005). The communication skills of the healthcare professional are therefore important when counselling patients on this complex area of dietary behaviour change (Gable, 2007; Pearson & Rapoport, 2007). Focus groups suggest that cost and smaller portion sizes were common barriers to dietary adherence in patients with diabetes (Vijan et al, 2005). The lack of desire to plan for meals may also affect appropriateness of food choices (Kavookjian et al, 2005), as may the lack of ideas for cooking (Brekke et al, 2004). Situational factors also play a role, eg eating out, a lack of appropriate food choices when eating out (Brekke et al, 2004), inappropriate food offers from others and lack of time to plan and prepare food (Ary et al, 1986; Maldonato et al, 1995; Tang et al, 2008). Interestingly, a survey of 446 people with type 2 diabetes showed that a modified diet of sugar and fat reduction was seen as more of a burden to participants than taking oral hypoglycaemics. This finding was related to age, with younger patients reporting this as more of an issue than older patients (Vijan et al, 2005). A strict diet aimed at weight loss that modified sugar, fat and

calorie intake was rated as burdensome as taking twice-daily insulin. Strict timings of meal times were also rated as burdensome (Vijan et al, 2005). Self-reported adherence was much higher for both, oral hypoglycaemics and insulin than moderate dietary changes (Vijan et al, 2005). It may be that individuals see these dietary changes as restrictive (Gentili et al, 2001) and impacting on their perceived quality of life (Watkins et al, 2000). Habit also plays a role in food choice and behaviour (Griffin et al, 1999; Lally, Chipperfield & Wardle, 2008). Dietary change and behaviour take time and require self-discipline (Kiuru et al, 2004) and people may forget and slip back into old routines (Brekke et al, 2004).

Lack of coping skills and the use of food to deal with emotions may also contribute to difficulties in adapting dietary intake (Rosenstock, 1985; Travis, 1997). Many factors interlink to affect the complex food choices that are made on a daily basis and account for the fact that dietary changes are generally the hardest for people to make when they have diabetes (Brown et al, 1998; Harrington, Noble & Newman, 2004; Peyrot & Rubin, 1994; Rubin, Peyrot & Saudek, 1991; Sullivan & Joseph, 1998). In addition, where conflict exists in balancing health and wellbeing, liberties are often taken with diet in order to minimise impact on wellbeing (Maclean, 1991). Lack of adherence may therefore be unintentional as life takes over (Rustveld et al, 2009). Numerous decisions may need to be taken when small changes in the diet are advised, such as cost considerations (Golin, DiMatteo & Gelberg, 1996; Jeon et al, 2009), availability, taste and impact on the rest of the family to name but a few. In addition, the positive benefits from making dietary changes must continually outweigh any barriers to change in order for these changes to be maintained

(Nestle et al, 1998). Uncertainty over the consequences of dietary changes and long-term benefits may further limit change from taking place (AbuSabha & Ahterberg, 1997). Not all of the food choices that people make are conscious decisions and there may be up to 200 daily food choices made that are unconscious (Wansink & Sobal, 2007). When multiple dietary changes are required, the level of complexity regarding food choices increases, resulting in a larger number of potential barriers that may inhibit or prevent these dietary changes from being maintained in the long term. Good communication skills are therefore needed to help the professional engage with the patient. Also needed is an understanding of the range of issues that may influence patient behaviour and food choices (Epstein, Alper & Quill, 2004).

Diabetes is a multi-faceted disease and different aspects of management may take precedence at different times (Glasgow & Toobert, 1988). Adherence to one part of the diet or diabetes regimen may be unrelated to adherence to another part of their self-care management (Goodall & Halford, 1991; Kasila et al, 2003; Maldonato et al, 1995; Webb et al, 1984; Wing et al, 1985). Diabetes management is therefore not a unitary concept, but a complex package of care. Patients will be engaged in different stages of change for differing elements of the diabetes management (Kasila et al, 2003) requiring the juggling of multiple unrelated behaviours on a daily basis (Asimakopoulou, Hampson & Morrish, 2002). The complexities of diabetes management may in part account for the poor levels of compliance and concordance seen in the literature (Kravitz et al, 1993; Sherman et al, 2000).

1.3.2 Understanding

There may be a more general lack of understanding of the importance of the need to take medication effectively (Rubin, 2005) or change lifestyle, and the importance attached to these changes may be low (Levy, 2009). Patients may not appreciate the seriousness of their condition (Arundel et al, 2003; Clark & Hampson, 2003; McCaul, Glasgow & Schafer, 1987) or misunderstand both the condition and its management (Holmstrom & Rosenqvist, 2005; Kravitz et al, 1993; Lerman, 2005). Additionally, the information provided may not be clearly perceived by the patient as beneficial and therefore is unlikely to aid patient understanding (Street, 1992a). One study questioned 200 patients with type 2 diabetes found that 64% thought that diabetes was a chronic disease and only 76% of patients with longstanding diabetes agreed that it was a chronic condition (Skinner et al, 2003c). This lack of understanding will ultimately be reflected in the lack of application to lifestyle change in the individual patient (Anderson et al, 2003; Skinner, 2004). Change only occurs in a specific health-related behaviour if the patient believes that continuing the current behaviour will put them more at risk and that change will decrease this risk (Harvey & Lawson, 2009; Travis, 1997). As with other personal belief models, if the patient believes that diabetes is not serious then they will be unlikely to change their behaviour in order to reduce the risks (Gentili et al, 2001). These studies suggest that healthcare professionals need to be communicating more clearly and effectively with patients in order to increase patient understanding (Heisler et al. 2002). Good communication skills will also improve professional understanding of the patient's perspective, allowing misconceptions to be addressed (Holmstrom & Rosenqvist, 2005).

Issues regarding health literacy and the ability of patients to grasp and understand information being delivered are therefore important (Powell, Hill & Clancy, 2007), lack of understanding results in patients being unable to interpret and use provided information to improve self-care management practices (Ishikawa et al, 2009). Good professional communication skills are essential as these can support appropriate delivery of accessible information to patients (Holli, Calabrese & O'Sullivan Maillet, 2003).

1.3.3 Emotional factors

Emotional factors as well as psychosocial factors also play a role in self-care management. Depression has been reported to be more prevalent in people with diabetes, and studies suggest having diabetes is a risk factor for developing depression (Eren, Erdi & Sahin, 2008). A recent large population study (N=37,291) found 20% of people with diabetes were depressed, compared to 4% of the non-diabetic controls. Interestingly, those individuals who reported symptoms of depression and anxiety at baseline had an increased risk of developing type 2 diabetes at 10-year follow up. This finding was independent of other known risk factors such as socioeconomic, lifestyle and markers of metabolic syndrome (Engum, 2007). Depression greatly reduces people's ability to engage in self-care management. In diabetes, this has been related to poorer glycaemic control and a greater risk of associated micro and macro vascular complications (Glasgow, Toobert & Gillette, 2001; Lustman et al, 2000; The DAWN, 2002). In a 5-year follow-up study, depression increased the hazard risk of microvascular complications by 1.36 and macrovascular complications by 1.24 (Lin et al, 2010). Depressed patients also have lower adherence rates to drug therapy (Cramer, 2004) and in one meta-analysis, non-

adherence was reported as 3 times greater in depressed patients compared to non-depressed patients (Lustman et al, 2000). Exercise, diet, and medication are particularly difficult areas to maintain when depressed (Lin et al, 2004), with high levels of depressive symptoms being reported in patients with poor adherence to diet (Ciechanowski, Katon & Russo, 2000). This effect appears to be more marked in men than in women (NauAikens & Pacholski, 2007). It has been suggested that this effect is mediated through higher perceptions of barriers and reduction in self-efficacy (Chao et al, 2005; Sacco et al, 2007). The concept of “burnout” has been used to explain this unwillingness to change, ie previous lack of success, constant failure and general fatigue with trying to bring about change, especially when efforts are not rewarded (Polonsky, 1996). There are also the day-to-day stresses and hassles of living with diabetes and trying to make things fit (Albright et al, 2001; Anderson, 1995). In one study, emotions accounted for 41.3% of reasons for failure to adhere to a dietary regimen. This effect was significant ($p < .05$) for younger patients (< 65 years of age) and for females (Travis, 1997).

In addition, there is a higher incidence of eating disorders in the diabetic population that predisposes this group to higher morbidity and mortality rates (Herpertz et al, 2001; Steel et al, 1989; Takii et al, 2008). In type 1 diabetes, this will contribute to poor control, as insulin is omitted in order to prevent weight gain, resulting in elevated blood glucose levels (Goebel-Fabbri, 2009; Takii et al, 2008). Binge eating, restraint and body dissatisfaction frequently occur in individuals with type 2 diabetes, resulting in low self-esteem and further contributing to poor outcomes (Yannakoulia, 2006). Type 2 patients are more likely to be overweight and will have a greater body mass index (BMI) and this

is a predisposing factor for developing type 2 diabetes (Sacco et al, 2007). A greater BMI has also been found to increase depression in diabetes (Sacco et al., 2007). Binge eating is reported as preceding the diagnosis of type 2 diabetes (Herpertz et al, 2001). This could be one of the causes of obesity, leading to type 2 diabetes and will contribute to poor self-care practices.

The method of treatment may add to the emotional distress and burden felt by individuals, with those patients requiring insulin reporting greater levels of diabetes-related emotional distress (Delahanty et al. 2007). Changing behaviours relating to exercise and weight control may have a far more dramatic effect on health outcomes, as these changes may mediate the relationship between depression and outcomes (Wing, Phelan & Tate, 2002). Emotions therefore play an important role with regard to the patient's ability to cope, eg emotional wellbeing has been seen to contribute significantly to effective self-care management (The DAWN, 2002). These studies suggest that addressing emotions raised in the consultation is important in supporting the patient's ability to cope. This requires good communication skills in order to listen to and respond to the emotions raised appropriately (Gable, 2007).

1.3.4 Drug compliance

Drug compliance also plays a part in the self-care management of diabetes. Data on medication adherence highlights difficulties with single drug use, with only 33% of patients on monotherapy taking their medication for more than 80% of their days on therapy (Morris et al, 1997). This suggests that more complicated medication regimens involving multiple drug use, may achieve lower levels of compliance. Other studies and reviews looking at drug

compliance have highlighted decreasing adherence as medication prescription use increases (Claxton et al, 2001; Donnan et al, 2002; Odegard & Gray, 2008). Maintaining adequate medication use over a period of time is also problematic, with studies showing adherence rates falling to 16 - 80% over a 6-24 month period (Cramer, 2004). Medication adherence was also found to be poor in patients who are socially deprived and who have both macrovascular and microvascular complications and in those people with a long duration of diabetes (Donnan et al, 2002). People with a long duration of diabetes are more likely to have complications and other co-morbidities (Maddigan et al, 2005) resulting in multiple medication use. This complexity may add to the daily struggle to manage diabetes (Albright et al, 2001; Shah et al, 2003; Stewart & Liolitsa, 1999) contributing to poor adherence to their medication. This is similar to findings from a large study of 7227 patients with chronic kidney disease, where adherence to medication was found to decline with severity of condition (Schmitt et al, 2010). 33% of patients with long-term severe chronic kidney disease had poor medication adherence.

Interventions for improving effective long-term use of self-medicated drugs are complex and are reported as being generally not effective (Haynes et al, 2005). It has been suggested that improving outcomes may be made by taking time to explain to patients how best to use their medication (Odegard & Capoccia, 2007), as well as explaining its function, and developing strategies to support this (Bezie et al, 2006). A review by Haynes et al (2000) suggests that this may be too simplistic a view but that it could form part of an overall care package that includes dedicated time spent in discussion with patients, reviewing drug use, function and strategies to support effective drug uptake. A more recent

review by Haynes et al (2005) also noted that telling patients about adverse effects of their medication did not affect their use of the medication. Forgetting to take medication and running out of medication are commonly cited reasons for non-adherence to medication therapy (Hill-Briggs et al, 2005; Odegard & Gray, 2008). Habit can therefore be seen to play a role in medication adherence, and it has been suggested that patients should be taught at the start of drug therapy to “form habits integrated within their cognitive procedures” to help assist adherence to the drug treatment (Reach, 2005, p.419). Data from the Diabetes Control and Complications Trial (DCCT) suggests that targeting tight control at diagnosis significantly reduces the risk of cardiovascular events by 15% and decreases mortality by 14% (Gaede et al., 2008). Additional studies predict reductions in microvascular complications when drug compliance is improved (Yu, Yu & Nichol, 2010). Focusing on drug compliance may therefore be one way by which health outcomes in diabetes could be improved (Kogut et al, 2004). Theory-based interventions to address medication adherence in people with Type 2 diabetes are currently under development (Farmer et al, 2008). A recent intervention into medication adherence in chronic disease in adolescents and children suggests that a behavioural component is required alongside the education to enhance medication adherence (Dean et al, 2010). The delivery of a behavioural component in patient education will require good communication skills from the professional to be effective (NICE, 2007).

1.3.5 The Structure of Healthcare Delivery

The structure of current healthcare delivery systems, including patients returning for management review, access to the services of health providers

and access to healthcare information may also contribute to poor self-care (Eccles et al, 2007; Renders et al, 2000). Eccles et al (2007) have suggested that restructuring the delivery of care may lead to more effective outcomes as it better deals with the needs of the patients (Hiscock et al, 2001). Continuity of care and/or having a personal source of care, have positive effects on adherence (Rosenstock, 1985). Healthcare teams may have different impact on individuals within consultations and within teams and across different organisational structures (Francis et al. 2008) leading to further variability in patient outcomes for self-care management (NHS, 2011). Although professionals can be a source of influence in promoting positive dietary changes they may not always be seen as helpful (Goldstein et al, 2004).

As well as a variety of healthcare delivery systems, patients are also exposed to multiple sources of advice, not just from professionals, but also from well-meaning friends and relatives (Chapman et al, 2005). Lack of support and family issues have been cited as common barriers to following dietary recommendations in people with type 2 diabetes (Vijan et al, 2005). Younger patients and those with a shorter duration of type 2 diabetes who work long hours and live in rural communities are reported as having lower dietary compliance (Beisecker & Beisecker, 1990; Shah et al, 2003). This may reflect lack of patient engagement, as a shorter duration of diabetes will mean less chance of complications. Individuals are likely to feel fit and well and other life issues may take priority (Shah et al, 2003). Advice on diabetes can be obtained from a variety of media sources (Huang et al, 2005) including the internet. This advice may be conflicting and this will add to the confusion over which self-care behaviours should be undertaken. Reasons for poor self-care are therefore

varied but may relate to one or more of the following: lack of education, poor understanding, conflicting information, inaccurate information and advice, inappropriate drug treatment and dietary changes.

The life of patients outside their diabetes will greatly influence their self-care management strategies. Social support from families remains an important issue, with strong family support being a consistent predictor of adherence (Beverly & Wray, 2010; Glasgow & Toobert, 1988; Kelsey et al, 1996; Searle et al., 2007; Vijan et al., 2005). This is especially true for diet (Albright et al, 2001; Stephens et al, 2010; Tang et al, 2008) and particularly when support provided is positive rather than coercive (Stephens et al., 2010). Married men achieve better dietary adherence compared to those who are single (August & Sorkin, 2010). Social control using persuasion resulted in better dietary control among married patients (August & Sorkin, 2010). Other dietary features shown to benefit from social support are adherence to a healthy eating plan, spacing out carbohydrate over the day (Tang et al, 2008) and adherence to lipid lowering diets in hypercholesterolemic men (Bovbjerg et al, 1995).

1.4 The factors demonstrating improved self-care management

As previously quoted, Standard 3 of the National Service Framework for Diabetes (NSF for Diabetes) states that *“people with diabetes are empowered to enhance their personal control over the day-to-day management of their diabetes in a way that enables them to experience the best possible quality of life”* (Department of Health, 2003; Department of Health, 2010c). The healthcare professional becomes a critical component in empowering the patient to good and sustained management.

A major part of improving self-care management is the acquisition of the necessary knowledge and skills needed to enable effective day-to-day self-care management to occur (Anderson et al, 1991; Department of Health, 2003; King et al, 2002). In practice, these skills and knowledge are delivered by the diabetes care team, who aim to work in a multi-professional way, providing consistency of care and consistent messages with regard to diabetes management (Department of Health, 2003; Department of Health, 2007; NHS, 2011). Contact with members of the diabetes care team will depend on the stage of the diabetes, the presence of complications and whether the patient is managed primarily in the community setting or in the acute setting. Figure 1.1 illustrates some of the members of the diabetes care team who may be involved.

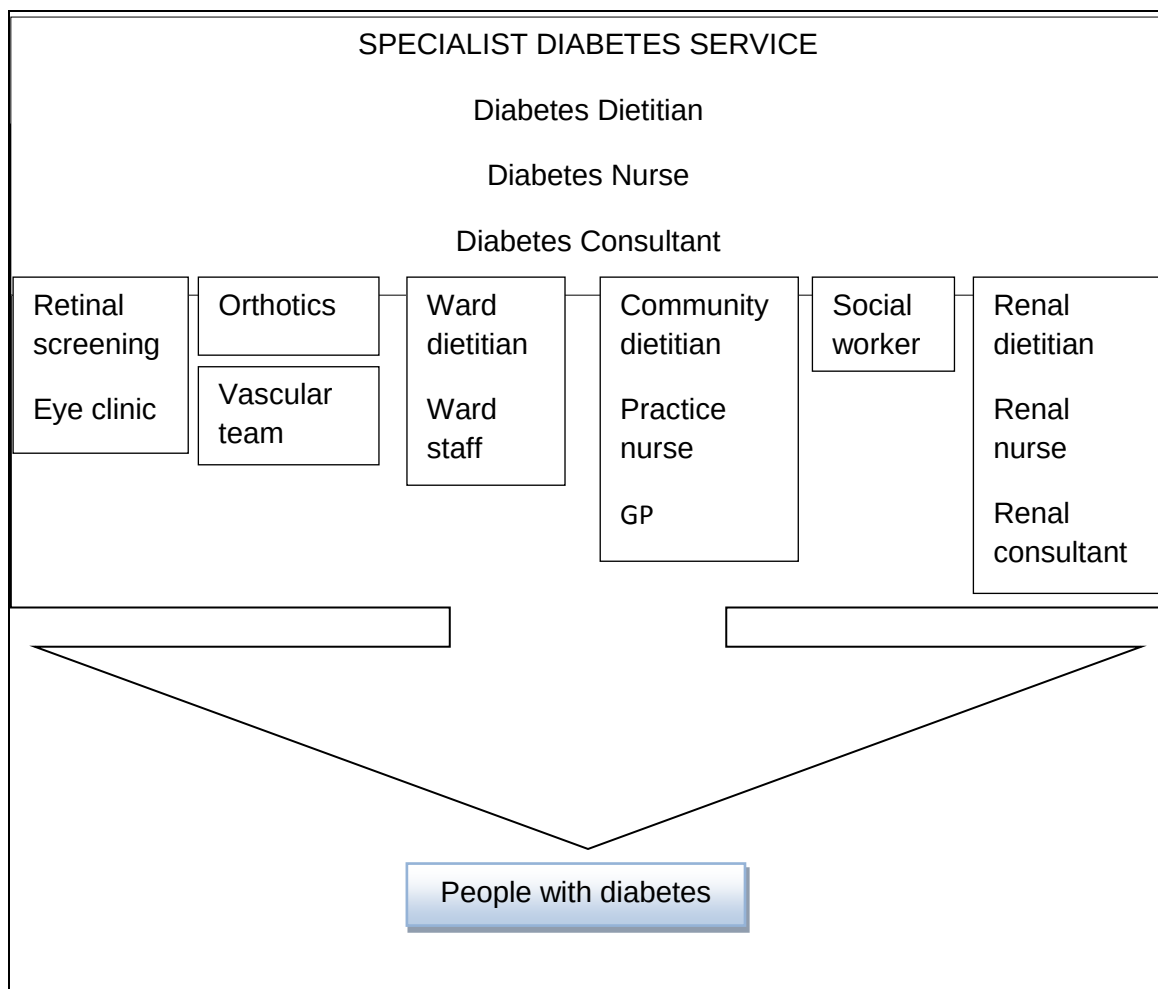


Figure 1.1: The diabetes care team and the person with diabetes

The work of the team is only as effective as each of its component parts and the attitude of the practitioner at the point of diagnosis is also crucial, as this conveys the sense of importance and seriousness of the disease and may influence subsequent compliance levels (Dietrich, 1996). Patient perceptions of professionals at diagnosis, in terms of reassurance and provision of a clear action plans, has a long-lasting impact resulting in less diabetes distress and better outcomes 1-5 years after diagnosis (Polonsky et al., 2010). Beliefs regarding treatment effectiveness have been shown to be predictive of dietary intake (Hampson et al, 1995). The assessment of personal belief models and individual strategies in patients that are consistent with their perspectives are therefore important factors to be considered (Hampson, Glasgow & Foster,

1995; Vijan et al, 2005). Time also needs to be spent raising awareness and exploring misconceptions (Sherman et al, 2000), which might have arisen due to different explanatory models used by patients and professionals (Loewe & Freeman, 2000). These studies highlight the importance of communication skills within the consultation to assess the patient's perceptions, beliefs, needs, and areas of misconception. Worry, guilt, uncertain acceptance of diagnosis as well as unclear treatment goals are further factors that may contribute to patient distress (Delahanty et al, 2007). This further highlights the need for good communication skills to identify and address patient concerns appropriately. Failure to address these issues due to the poor communication skills of professionals involved in care delivery may increase levels of poor compliance (Freeman & Loewe, 2000). Empowering patients to take more responsibility for the management of their condition (Poskiparta et al, 2001) may help to improve outcomes, as demonstrated by those patients who belong to patient organisations and support groups (Selvais et al, 2008; Simmons, 1992). Lack of problem-solving skills may also contribute to the inability of patients to implement required changes (Bonnet et al, 1998). This is particularly true for those self-care areas that demand complex behavioural lifestyle adjustments, such as exercise and diet (Glasgow & Osteen, 1992; Heisler et al, 2007).

The age and gender of the physician may also influence the outcome of the consultation and should be considered when reviewing data (Hall et al, 1994; Schmid Mast et al, 2007; Siminoff et al, 2006). Figure 1.2 summarises key factors that may affect consultation outcome.

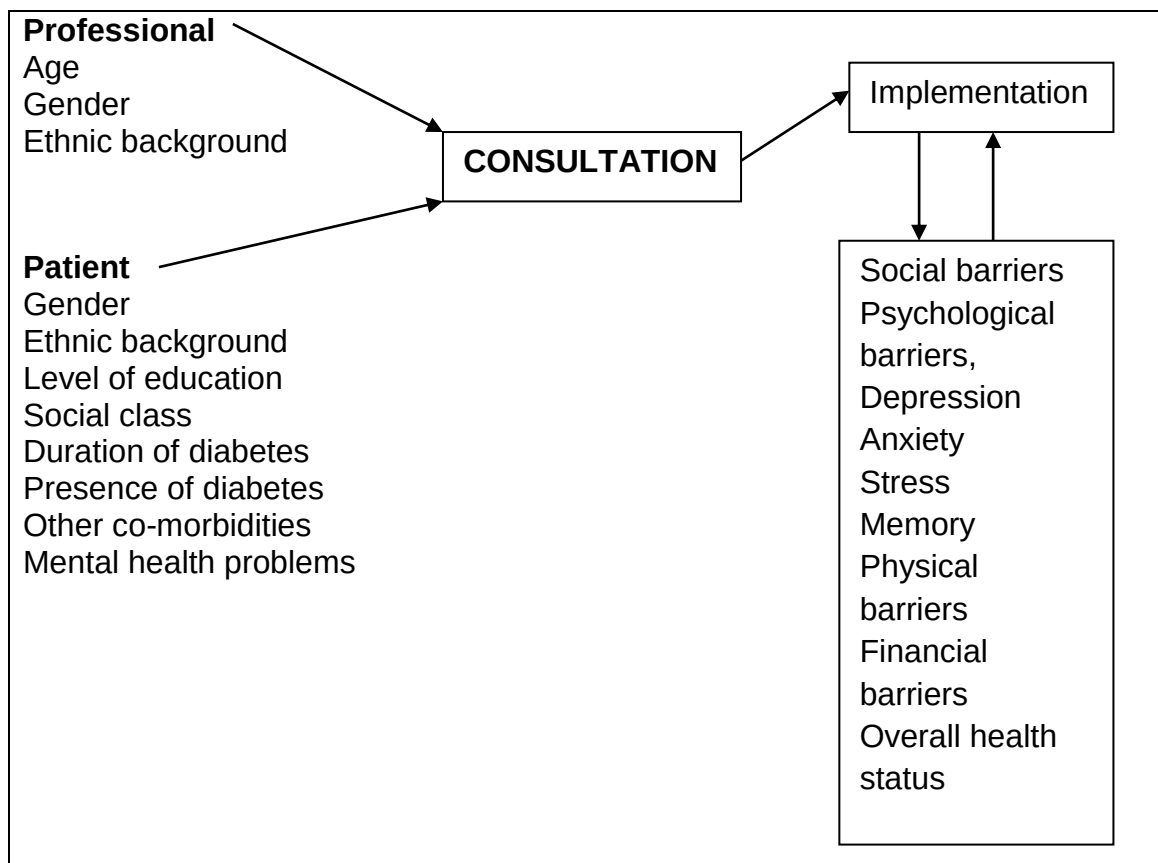


Figure 1.2 Factors that may influence the outcome of the consultation

Earlier diagnosis may mean patients are presenting fit and well, with no obvious symptoms of diabetes, whilst medicating for the newly diagnosed condition of diabetes. Furthermore, the drugs taken to manage the long-term effects of diabetes may cause side effects, resulting in individuals feeling unwell (American Diabetes Association Position Statement, 2002). Consequently individuals may perform a cost-benefit analysis and conclude that the future benefits of continuing with the treatment are outweighed by current factors such as feeling unwell (Kolbe, 2002). This is a difficult issue to deal with, as earlier diagnosis and intensive management have been shown to lower overall risk associated with diabetes (Ambady & Chamukuttan, 2008; Gaede et al, 2008). This raises the question of how to engage people with diabetes effectively while acknowledging these complex sets of behaviours (Anderson et al, 1991). The

aim is to enable effective self-care management and for these behaviours to continue over time to improve health outcomes.

1.4.1 Role of the Dietitian

The dietitian has a major role to play in the diabetes care team, as dietary management features in both the short term (to alleviate symptoms) and the long-term (to reduce the risk of complications) (Choudhary, 2004; Diabetes and Nutrition Study Group of the European Association for The Study of Diabetes, 2000). Diet may require additional adaptation depending on the age of the patient, the presence of complications, and other co-morbidities (NICE, 2008b; NICE, 2009). Poor manipulation of diet may add to the burden of greater drug use in order to manage the condition (Franz 2004). The effectiveness of drugs could be improved by the appropriate manipulation of the diet (Delahanty & Halford, 1993; Fleming, 1996; Franz 2004; Garg, 1998; Gillies et al, 2007; Harsha, 1999; Jenkins et al, 2005; Mulrow et al, 2000; Thomas & Elliott, 2009). As highlighted, dietary change is complex; there are many possible factors that can influence food choice and behaviour and these will differ from person to person. The ability to communicate effectively with patients is an essential skill needed by dietitians in order to manage this complex area of behaviour change (British Dietetic Association, 2008b; Davidson et al, 1987; Horacek, Salomón & Nelsen, 2007; Pearson & Rapoport, 2007; Whitehead et al, 2009).

Dietitians also play a key role in the ongoing support and training of the rest of the diabetes care team to ensure that consistent and accurate messages around food are delivered by all. There is therefore a need to know that

dietitians are practising effectively (Cant & Aroni, 2008; Jarret & Payne, 1995) in order to instil effective practice in others (Ross, Bower & Ibbald, 1994).

1.5 Summary

Diabetes mellitus is a complex chronic disease and as such is a good model for the study of long-term conditions and interventions that will improve self-care management. Poor self-care management has huge implications both to the individual with diabetes and to the larger health economy (Bagust et al, 2002).

There is evidence to show that the risk of complications and therefore cost implications and impact to individuals can be reduced with improved control of the diabetes (DCCT, 1993; UK Prospective Diabetes Study (UKPDS) Group, 1998). However, good diabetes management requires the patient to engage in a complex range of self-care management behaviours, which will be rooted in their individual life situations (Moser et al, 2008). The evidence in this chapter suggests that patients struggle with self-care management for a variety of reasons, the main factors being complexity, permanency, and the requirement for substantial behavioural change from the individual (Moser et al, 2008). The different aspects of the self-care management taking priority over others at different times during the course of the patient's life with diabetes (Kolbe, 2002), adds further complexity.

This raises the question of how professionals should engage with people with diabetes to enable empowerment and enhanced personal control to occur in order to meet standard 3 of the National Service Framework (Department of Health, 2003).

Although systems play a role in effective diabetes care, a major contributing factor to the patient's self-care management will be the interaction that occurs between the patient and the professionals involved in the delivery of care. The patient consultation is the main vehicle through which patients are educated and supported in managing their diabetes. In order to improve self-care management there is a need to review the consultation process to ensure that professionals are able to work effectively with patients (Department of Health, 2003; Department of Health, 2010c) to improve long-term health outcomes (Aiken, Bingham & Piette, 2005).

The communication process that occurs in the consultation is pivotal to this success. Professionals have an important role to play, not just in providing the necessary technical skills and information required for management, but also in understanding the issues from the patient's perspective. Developing this understanding through good communication will allow information provision to be tailored to meet the individual's needs (Epstein, Alper & Quill, 2004; Thorne, Paterson & Russell, 2003), thereby supporting self-care management that is achievable for that patient. Good communication skills are more likely to result in improved self-care resulting in improvement in long-term health outcomes (Epstein et al, 2005; Heisler et al, 2007; Stewart, 1995).

CHAPTER TWO: LITERATURE REVIEW

This chapter describes the literature review undertaken to identify behaviours and skills used in consultations that have been highlighted as supporting patient-centred care. In particular, it reviews those skills and behaviours that have been linked to improvements in outcomes. The method used for the literature review is outlined and a summary of the key findings is provided.

2.0 Background

The primary function of the professional's consultation is to provide the patient with education and information to help develop their knowledge and understanding and provide them with skills for effective self-care management (Anderson et al, 1991; King et al, 2002). This should help the patient to implement lifestyle changes and improve adherence to medication/treatment that will enhance or improve their health and reduce the risk of long-term complications associated with diabetes (Ellis et al, 2004). Education of the patient involves much more than just offering information (Matteucci & Giampietro, 2003), as information alone does not change behaviour. This is a finding that is consistent across healthcare professional groups (Arborelius, 1996; Clement, 1995; Coates & Boore, 1996; Contento, Balch & Bronner, 1995; Cullen, Baranowski & Smith, 2001; Daneman et al, 1985; Day, 2000; Dunn, 1988; Glasgow, Marrero & Fisher, 1999; Goodall & Halford, 1991; McClusky & Lovarini, 2005; Norris, Engelgau & Narayan, 2001; Schnoll & Zimmerman, 2001). Provision of information should aim to improve patient's knowledge and understanding, encourage informed decision-making (Anderson et al, 1991; Kavookjian et al, 2005). This requires an individualised approach to setting goals, gathering information, and giving advice (Chapman et al, 2005). This

process should also allow consideration of the psychological, social, and emotional impact of having a chronic disease such as diabetes (Funnell et al, 2005; Rapoport, 1998). The way that healthcare professionals communicate with patients is acknowledged as having an important role to play in the transfer of information to assist patient understanding and this requires further clarification (Griffin et al, 1999). This is particularly pertinent for dietitians, whose primary tool for engaging patients in behaviour change is through the communication process that occurs in the consultation (Pearson & Rapoport, 2007). A study in 2005 of people with diabetes and their interactions with providers in a range of primary and specialist clinic settings demonstrated that patient self-care management and patient-provider communication were independent (Aiken, Bingham & Piette, 2005). This highlights the further need for research into effective communication between patients and professionals to improve health outcomes.

In a normal clinical setting, at the end of the consultation, all professionals record in the patient's notes the decisions that have been made regarding care management, (BDA, 2008; Department of Health, 2008). The majority of these decisions will inevitably require the patient to implement new behaviours or change their current behaviours (as outlined in Chapter One). The ultimate aim of these decisions is to improve self-care management practices, with a view to enabling better long-term health outcomes for that individual (Kaplan, Greenfield & Ware, 1989). If patients cannot recall decisions made in the consultation then they cannot implement them and improvements in health outcomes are unlikely to occur. Understanding the processes that lead to clear and accurate recall of decisions made in the consultation is therefore a good

starting point for addressing the issue of appropriate communication skills in consultations (Shaw et al, 2005). The ability to recall the decisions made at the end of the consultation is an important first step for patients in enabling them to implement long-term improvements in outcomes. However, the consultation is a two-way communication process involving the patient and the professional. A more accurate measure of communication effectiveness would therefore be the level of patient and professional agreement on reported decisions made in the consultation.

2.1 Aim

The aim of this review is to identify behaviours and/or skills used in consultations that are linked to the outcome measure of recall.

2.2 Search method

A literature search was conducted to identify published papers through the following search engines: Medline, Embase, CINHALL, AHMED, and PsycInfo. The three known papers in this area were not retrieved in the initial search when including the terms *dietitian/dietician/dietetics*. The difficulty in retrieving papers initially may reflect the limited research in this area. As a consequence, a backward search was conducted meshing the key words on the three known papers in this area. This search was then further expanded and refined to capture other papers relevant to the key search terms (see Table 2.2). The concepts used in the search are equally legitimate domains for other professional groups and it was reasoned that it would remain valid for the questions involving professional behaviours, without the need for the inclusion of the terms *dietitian/dietician/dietetics*.

As the earliest article retrieved on dietetic-patient interaction was from 1987, the search was limited to articles published in English between 1985 and 2011. The completion date for the initial search was December 2005. This was the start date for the exploratory study detailed in Chapter Five. The search was re-run from December 2005 to March 2011; no further papers were retrieved.

The search strategy involved retrieval of relevant abstracts and scanning according to selection criteria, before full text copies of papers were obtained and reviewed as outlined in Figure 2.3.

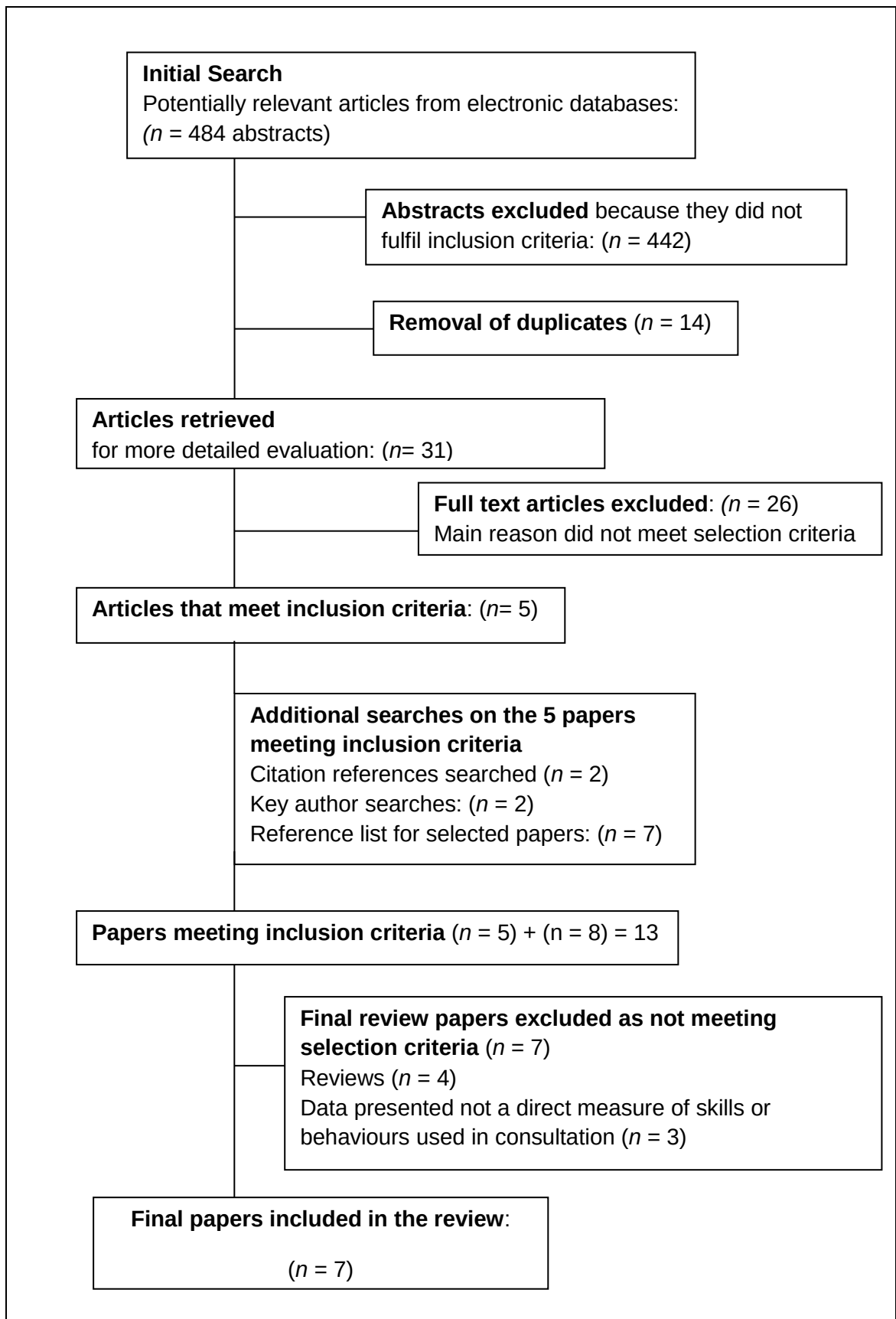


Figure 2.3: Search strategy used for literature review

2.2.1 Criteria for inclusion

The results included articles that mentioned specific behaviours and/or skills that had been measured in consultations in relation to self-care outcomes, specifically: goals, decisions made, and recall.

2.2.2 Selection of papers

To determine which papers were to be selected for review, the titles of the abstracts and the abstracts were reviewed. The paper was included if the information given suggested that a behaviour or skill of the professional had been measured against an outcome measure of goals, recall or decisions and self-care. If there was any doubt regarding these criteria, from the information given in the title and abstract, or if the abstract was absent or not clear enough to draw conclusions, the full article was retrieved for further consideration.

Studies were eliminated if a clear behaviour or skill had not been measured, or if the measured skill had not been assessed against the outcome measures listed.

2.2.3 Search Strategy

The databases were searched using the key words shown in Table 2.2. The Medline search below clarifies the search process used:

	AND	AND	AND
Treatment outcomes	Motivation	Patient education	Self-care
Agreement	Personal autonomy	Professional patient	
Decisions	Self-efficacy	interaction	
Patient compliance	Goals	Recall	
Patient adherence		Communication skills	
Patient concordance		Communication behavio*	
		Empathy	
		Professional patient	
		relations	
		Attitude of health	
		personnel	
		Consultation skills	
		Patient-centred* care	
		Patient focused care	
*Donates various suffices searched including American and English spellings, eg behaviour/behaviours, behavior/behaviours			

Table 2.2: Search terms used to identify the measurement of consultation skills / behaviours against outcome of recall / goal or decisions.

Medline and Embase had similar search strategies applied, whereas the search terms used for PsycInfo, CINAHL and AMED were amended slightly to reflect the databases being searched.

2.3 Results

Due to the limited number of papers initially retrieved a further search was conducted on some of the key themes identified in these papers, specifically empathy, empowerment, motivation, goal setting, adherence strategies, behaviour change, and cognitive behaviour therapy. These key terms were then searched independently against *dietitian/dietetics/dietician* to see if this enabled retrieval of any further papers in the field of dietetics. A total of 1,336 references were retrieved and none of these met the inclusion criteria. One additional paper was identified from a conference abstract and the author was contacted and a copy of the findings was provided.

A total of seven papers met the inclusion criteria, six were empirical studies (three observational, and three cross-sectional) and one was a qualitative study.

Papers are grouped in a logical way according to the behaviour/skill or outcome measure assessed. Table 2.3 shows a summary of the study design, participant characteristics, identified behaviours, outcome measures, results, and implications reported by authors.

Author	Study design	Participants	Identified behaviours	Measures	Results related to behaviours and outcomes	Implications
Coughlan (2003)	Observational study 1 centre, (secondary care)	N=30 patients with diabetes Gender male=50% N=2 male consultants	Empathy	Empathic communication coding system (ECCS) RIAS global affect ratings Levinson's empathic clues and missed opportunities Patient autonomy (HCC)	Empathy correlated to agreement on decisions made ($r = .486, p = .016$) using the ECCS. The male physicians in this study were found to be significantly more empathic to female patients than male patients $t(16.16) = -2.35, p = .032$. The more empathic the consultant the shorter the consultation ($r = -.41, p = .026$) using Levinson's coding	More empathic the consultants the greater the agreement on recall and the shorter the consultation.
Goodchild et al (2005)	Observational study 1 centre, (secondary care)	N= 40 patients with diabetes Mean age = 55.7years Gender male = 57.5% Type 1 diabetes 40% N = 3 female dietitians (3-12 years working in diabetes)	Empathy	Patient and professional recall agreement on goals/ decisions Patient satisfaction (MISS) Patient autonomy (HCCQ) and Empathic opportunities presented in the consultation and providers response to these (ECCS)	The more empathic the professionals' response to emotional opportunities, the more satisfied patients were with their consultations ($r = .41, df = 15, p = .05$). There was a non-significant trend that the more empathic opportunities that arise during a consultation, the higher the agreement between patient and dietitian on what was discussed ($r = 0.28, p = .07$). Patients reported more autonomy support when they created more empathic opportunities during their consultation. ($r = -.29, p = .07$).	Professionals response to empathic opportunities may be a useful component to dietetic consultations

Heisler et al (2002)	Cross sectional study 1 VA centre (survey)	N= 2,000 surveyed (66% completed survey of the total sample this equates to N= 1,314) Mean age 67 years Gender male 98%	Decision-making Clear information on decisions treatment options Desire to participate in decision-making needs assessing	Provider participation decision-making style (PDM style) Providers communication (PCOM) Patient self-management Patient understanding of diabetes self-care	Provider communication significant predictor of self-management β 0.18; $p < .001$ Understanding was strongly and independently associated with self-management β 0.25; $p < .001$	Provider styles enhance self-management through increased patient understanding or self confidence
Heisler et al (2003)	Cross sectional study In 2 settings	N = 127 patients Gender male 81% Mean age 64 years 100% type 2 97% were on oral medication 67% had diabetes for 4 or more years N = 50 providers 56% males Mean 12 years in practice professionals (endocrinologists and primary physicians)	Shared decision-making	Recall agreement on treatment goals and treatment strategies Self-efficacy Patient centeredness of providers (HCCQ) Patients belief in treatment efficacy	When there is agreement on goals there is higher patient self-efficacy and assessments of diabetes self-management. Shared responsibility in treatment decisions The stronger the belief in efficacy of treatment the greater agreement on goals $p = .013$ Patients more educated more likely to agree with providers goals $p = .015$ Sharing responsibility in treatment decisions resulted in greater agreement on treatment plans $p = .026$ Patients who shared providers top treatment strategy had higher	Need to focus on strategies that increase agreement on goals and goal strategies as these improve self-efficacy and self-management. Greater concordance on goals may be mechanism by which patient provider communication and contribute to improved patient outcome

					self-efficacy $p = .005$ Patients who agreed with providers on more treatment goals rate diabetes self-management more positively $p = .004$	
Kravitz et al (1993)	Cross sectional study Data collected from physicians in four specialities (internal medicine, family practice, endocrinology, cardiology) In three systems of care, health maintenance organisations, large multidisciplinary groups and solo practices) In three cities	N = 1751 patients Mean age =61 years Gender male =45% 13% diabetes 50% hypertensive 3% MI in past year 5% congestive heart failure Of these patients (16% had diabetes and hypertension) 3% had diabetes and heart disease 6% had hypertension and heart disease 4% had diabetes, hypertension and heart disease	None	Self- reported data on recall of 15 possible recommendations provided by physician on current treatment plan Patient questionnaire administered 3-4 months later asked extent to which they had performed the 15 behaviours during the past 4 weeks and adherence to these clinical measures of disease activity	Proportion recalling recommendations to take medications ($\geq 90\%$) exceeded the fraction recalling recommendations to follow a restricted diet, exercise regularly and perform various self-care activities (22% to 84%) Adherence to recommendations was correlated to reduced serum glucose $r = -.33$ and glycohaemoglobin ($r = -.25$) in patients with diabetes and reduced diastolic blood pressure in hypertensive patients ($r = -.15$)	Patients failed to recall important medical advice did not always adhere to advice recalled Even when patients do recall information many patients do not incorporate treatment recommendations into their daily lives Self-reported adherence measures are at least weakly associated with clinical measures and the associations tend to be in the direction one would expect Research needed to help patients understand recall and carry out

						recommendations
Parkin & Skinner (2003)	Observational study 1 centre (secondary care)	N= 141 patients with diabetes Mean age = 55.6 years Gender female 54% Type 1 =31% Professionals all female N= 2 dietitians N= 7 diabetes specialist nurses (1-17 years diabetes practice)	Perception of autonomy and autonomous motivation	Patient and dietitian recall agreement on a) goals b) decisions Patient satisfaction (MISS) Patient autonomy (HCCQ) Autonomous motivation (TSRQ)	Patient and professional's perceptions of consultation don't correlate. Patient and professionals disagreed on the issues discussed 19.6% of the time, on the decisions made 20.7% of the time and goals set 44.3% of the time. Autonomy support in the consultation was associated with greater autonomous motivation for self-care ($r = .31$; $p < .001$) More controlled motivation was associated with less agreement on issues discussed and goals set ($r = -.20$; $r = -.24$; $p < .05$). Multiple regression suggests more autonomy support; older age predicted more autonomous motivation in patients, accounting for 29% of variance seen	Increasing behaviours that support patient autonomy may be one way in which agreement on recall can be improved.

Huang et al (2005)	Qualitative study Exploratory Semi- structured interviews using grounded theory approach	N = 28 patients all type 2 diabetes mean age 74 years gender female 57% 27 out of the 28 had complications	Self- reported health goals Factors that shape health goals Self-care practices and how these relate to self-care behaviours influencing these	Key themes explored 1. Patients healthcare goals 2. Diabetes mellitus care goals 3. Experiences with diabetes mellitus 4. Priorities for self-care strategies 5. Daily self-care tasks	Patients describe healthcare goals in global and functional terms rather than biomedical Patients couched goals in aspects of daily routine life rather than the specifics of diabetes mellitus care Patients predominant healthcare goal was to maintain independence in activities of daily living Greatest variability in self-care was around diet and exercise.	Enhance communication by exploring patient's specific circumstances; reframing diabetes treatment goals in patients own language Crucial step for developing individualised care plans
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Table 2.3: Study design, participants, behaviours, measures, results, and implications of findings of papers reviewed

2.3.1 Methodological quality

In order to be significant, study findings need to be generalised to the larger population. Huang et al (2005) selected a group of patients who volunteered to talk to interviewers. This group comprised older patients (>65 years), with type 2 diabetes, and were predominately African American. The ethnic identity of this group may influence the applicability of findings to the wider population (Huang, Gorawara-Bhat & Chin, 2005). Three of the studies focused on patients in one diabetes centre. However, these studies did not explore whether the participating patients were typical of the usual patient population attending these clinics (Coughlan, 2005; Goodchild, Skinner & Parkin, 2005; Parkin & Skinner, 2003). In addition, patients attending secondary care for diabetes management may have greater disease severity and therefore present with differing expectations and complexity of needs that may impact on measured outcomes (Maddigan, Feeny & Johnson, 2005). One of these studies reported only patient gender; additional demographic data was not provided (Coughlan, 2005). Heisler et al (2003) used two large settings and it would be supposed that this would be more typical of the larger population. The population studied in Heisler et al (2002) were predominately older male patients and therefore did not represent the population as a whole. Kravitz et al (1993) presented a good methodological study, recruiting a large number of patients (N = 20,223) from a wide range of settings and therefore the sample of patients used was representative of the population group as a whole. Data in this study is presented on participating and non-participating clinicians and patients.

In terms of the professional groups involved in the studies, one study looked at dietitians (Goodchild, Skinner & Parkin, 2005) and one looked at nurses and dietitians (Parkin & Skinner, 2003). Data was not provided on the number of consultations completed by nurses and dietitians in the later study, so comparisons between groups cannot be drawn. In addition, each study collected data from a single site. The practice of individuals working in the same centre may be influenced by exposure to the working practice of other professionals and to delivery of care within that setting (Francis et al, 2008). This may have skewed results, and therefore the findings may not reflect the practice of nurses/dietitians as a whole. This may also be true for the small data set from the two consultants working in the same site in the Coughlan (2005) study. However, data collected on consultations for physicians/clinicians was much larger in the Heisler et al (2002) and Kravitz et al (1993) studies and covered multiple settings. Therefore, findings are more likely to accurately reflect practice in that group as a whole.

2.3.2 Recall as an outcome measure

Recall as an outcome measure was used in five of the identified studies, although different methods were used to measure recall. Immediate auditory recall was used in three of the studies (Coughlan, 2005; Goodchild, Skinner & Parkin, 2005; Parkin & Skinner, 2003) whereby patients and professionals were asked to independently report all decisions or goals made in the consultation. The other two studies used prompt lists to assist recall (Heisler et al, 2003; Kravitz et al, 1993).

A total of 181 nurse/dietitian consultations were assessed using immediate auditory recall. In the Coughlan (2005) study patients were asked to recall decisions made at the end of the consultation, and consultant decisions were extracted from the letters that were dictated to the patient's GP at the end of the consultation. The agreement rate on recalled decisions for patients seeing dietitians and nurses (N= 141) was 47.1% (Parkin & Skinner, 2003). Although Goodchild et al (2005) measured recall on issues discussed in 40 dietetic consultations; the exact level of recall was not reported in their study. The rate of recall for patients and consultants (N=30) was reported as 64.08%, however this appears to be over-inflated due to the method used to calculate recall agreement (Coughlan, 2005). When recall agreement was recalculated using the method in Parkin & Skinner (2003), an agreement rate of 50% was recorded, which is similar to the Parkin & Skinner agreement rate.

Heisler et al (2003) used prompt lists to assist recall. Patients and providers were contacted by post and asked to rank their top three goals from a list of eleven possible treatment outcomes. They were then asked to rate their top three strategies from a list of nine treatment strategies. These lists were posted to patients within three months of seeing the primary care physician, and emailed to the latter on the day that the patients attended the clinic. Overall agreement on the top three treatment outcomes was low (κ from 0.00 to 0.24) and in addition, priorities listed by professionals were found to differ from those of the patients. Overall agreement on treatment strategies was also low ($\kappa < 0.4$). Once again there were differences between patients and professionals in recalled treatments. Professionals and patients achieved a 40% agreement on one treatment goal and a 36% agreement on two treatment goals. The low

agreement rates achieved may reflect the delay in collecting data, as recall is known to deteriorate over time (Campos & Alonso-Quecuty, 2006; Pesudovs, Luscombe & Coster, 2006). It may also reflect the differing agendas of the patients and professionals in this study, indicating potential problems with the communication that occurred between patients and physicians in the consultation.

Kravitz et al (1993) also used a prompt list with 15 specific items. The items were read out to patients during a telephone interview to identify whether the physician had recommended any of the 15 specific behaviours as part of their treatment plan. Physicians were not asked directly about recommendations that they had made, but were asked after the visit whether they had counselled the patient about compliance with therapy for at least 3 minutes. Patients, whose physicians reported doing so were significantly ($p < .05$) more likely to recall having received 12 of the 15 recommendations. Recall was greatest for recommendations to take prescribed medications and lower for recalled advice on diet, exercise, and performance of various self-care activities.

2.3.3 Empathy and agreement on recall

Godchild et al (2005) measured empathy against recall agreement in 40 dietetic consultations, involving three dietitians, using the Empathic Communication Coding System (ECCS) (Bylund & Makoul, 2002). This provides a direct measure of empathy from direct statements of emotion, progress, or challenge made by patients during consultations. Although not significant, a trend was noted between increasing number of empathic opportunities and the level of agreement between dietitians and patients on reported issues discussed ($r =$

.28, $p = .07$). In addition, the more empathic the response by the professional to emotional opportunities offered, the more satisfied the patient ($r = .41$, $df = 15$, $p = .05$). The satisfaction measure used focused on the patient-provider relationship (Kinnersley et al., 1996), suggesting that the communication that occurred between the patient and the dietitian was a significant factor in this study. Greater autonomy support was associated with a greater number of empathic opportunities occurring in the consultation ($r = -.29$, $p = .07$).

Coughlan (2005) measured empathy in 30 consultations involving two consultant physicians and patients with diabetes. This study uses three different tools to measure empathy: the ECCS, the Roter Interactive Analysis System (RIAS) of global affective ratings (which provides a measure of the emotional context of the dialogue by rating the overall affective impression of speakers) and Levinson's coding of empathic clues and missed opportunities. (Levinson codes patient-initiated clues, which are defined as hints, direct statements of aspects of the patient's life, expressions of feelings that offer opportunity for empathy, physician-initiated clues and open-ended questions that invite possible discussion of emotions). Empathy was found to correlate with agreement on decisions made ($r = .486$, $p = .016$) using the ECCS. The male physicians in this study were found to be significantly more empathic to female patients than male patients ($t(16.16) = -2.35$, $p = .032$). The more empathic the consultant the shorter the consultation ($r = -.41$, $p = .026$) using Levinson's coding system. The coding systems were found to correlate positively to each other, suggesting that they were all measuring a similar construct of empathy. Although communication skills were not measured directly in this study, the measurement of empathy using the ECCS codes

professional responses to the patient's empathic opportunities. As communication skills are needed to demonstrate empathy (Egan, 2002), the levels of coding for empathy achieved will be reflecting different communication skills used by the professionals in the consultation, thus highlighting the importance of good communication skills to ensure that empathy is expressed appropriately.

2.3.4 Patient autonomy

Parkin & Skinner (2003) found greater autonomy support was associated with greater autonomous motivation for self-care ($r = .31$; $p < .001$), with more controlled motivation being associated with less agreement on issues discussed and goals set ($r = -.2$; $r = -.24$; $p < .05$). Patient autonomy was correlated with satisfaction in this study. Patients were found to report more autonomy support when they created more empathic opportunities during their consultation ($r = -0.29$, $p = .07$).

2.3.5 Self-efficacy, self-care management and agreement

Heisler et al (2003) found that patients who shared their professional's top treatment strategy had higher self-efficacy. Patients who agreed on more treatment goals also rated their diabetes self-management more positively. Sharing of responsibility when making treatment decisions resulted in greater agreement on treatment strategies and goals. Patients who were more educated and had a greater belief in the efficacy of their treatment were more likely to agree on treatment goals and strategies.

2.3.6 Communication, decision-making and self-care management

Heisler et al (2002) surveyed 2,000 patients with a postal questionnaire that achieved a 66% completed response rate. The provider participatory decision-style questionnaire used four questions that examined “how often the professional offered patient choices in medical care; Discussed the pros and cons of each choice with patient; Got patients to state which choice or option they would prefer; Took patient preferences into account when making treatment decisions” (p 245). They found that higher ratings of provider participatory decision-making and patient provider communication were associated with higher self-management assessments $p < .01$. Patient understanding was strongly associated with self-management ($\beta:0.25$; $p < .001$). Provider participatory decision-making was found to be a significant predictor for observing a good diet ($p = .003$).

The study by Huang et al (2005) used semi-structured interviews with 28 patients with type 2 diabetes aged 65 and older. Patients in this study defined their goals in reference to aspects of daily routine life rather than specifics of diabetes management. Seventy one per cent of patients reported maintaining independence in daily activities as a goal. Remaining alive and healthy was the next most frequently cited goal, whereas adhering to medications, controlling weight and managing other risk factors were much lower on the list of self-reported goals. The greatest variability in patient self-care practices were in diet and exercise with 29% of patients reporting that they had not altered their diet in any way since diagnosis. This study highlights the need to review the type of language used when working with patients, ie the use of language that moves away from biomedical terms where the dietitian takes time to explore the

circumstances of patients so that goals and decisions can be framed in a way that patients can understand and relate to.

2.3.7 Recall and adherence

In this study Kravitz et al (1993) measured patient recall of physician recommendations made in the consultation, and then their adherence to these recalled recommendations. Four months after patients were asked to recall recommendations made in the consultation, they were questioned about their adherence. Adherence to diet and medication was found to be higher among patients who were able to recall these recommendations being made. Sixty nine per cent of the diabetic patients ($n = 601$) reported following a diabetic diet, 52% reported following a low-fat diet and 74% of hypertensive patients ($n = 1291$) reported following a low-salt diet. Interestingly 41% of patients in this study reported following specific self-care behaviours while not recalling a specific recommendation to do so. Self-reported adherence was measured against clinical indexes: for type1 diabetes this was correlated with lower blood glucose levels ($r = -.33$) and lower glycohaemoglobin level ($r = -.25$). In type 2 diabetes higher self-reported adherence was correlated with fewer hyperglycaemic symptoms (polyuria and polydipsia), lower blood glucose levels, and lower body mass index. Self-reported adherence in hypertensive patients was correlated to lower diastolic blood pressure and lower BMI, and self-reported measures in heart patients correlated with less dyspnoea ($r = -0.17$). In general, self-reported adherence rates in patients with diabetes, hypertension, and heart disease were all found to correlate in those patients who were less obese ($r = -.28$). Self-reported adherence was found to be associated with improvements in clinical measures.

2.4 Discussion

The final outcome of the patient consultation is the recording of decisions or treatment recommendations that have been made with regard to care management. If patients cannot recall decisions made in the consultation, then they will be unable to implement them. The communication process that occurs in the consultation is therefore essential for engaging patients in order to allow effective dialogue to occur (Poskiparta et al, 2001; Rosal et al, 2001; Vickery & Hodges, 1986). The establishment of a good rapport with patients facilitates the process of understanding and information exchange (Brown et al, 1998; Gable, 2007; Roter, 2000) and would be expected to lead to decisions that are relevant to the individual, thereby increasing the chances of recall.

This review aimed to establish whether specific communication skills such as empathy, active listening, and communication behaviours have been linked to the outcome measure of recall. Although there are studies that have examined patient recall of information (Anderson et al, 1979; Flocke & Stange, 2004; Madan & Tichansky, 2005; Mauffrey et al, 2008; Michie et al, 1997; Page et al, 1981; Skinner et al, 2003b; Ward & Sanson-Fisher, 1996) these have failed to explore the exact presence or absence of communication skills in the consultation that may account for the level of agreement or disagreement obtained.

Although the study by Kravitz et al (1993) did not measure specific communication behaviours, it was included in this review as it provides compelling evidence to support the use of recall as an intermediate measure of long-term outcomes. The findings suggest that recall indicates client

engagement and commitment to decisions made in the consultation. This leads to adherence, and self-reported adherence relates to improvements in clinical measures. Although this was reported as a weak association, this may reflect the complex interaction of the multiple behaviours impacting on self-care management and their role in improving outcomes. In addition, there is evidence to suggest that self-reported data is likely to have a bias, as people tend to over-report (Adams et al, 1999; Kiviniemi & Rothman, 2006; Kristal et al, 1989; Schrimmer et al, 2005). Therefore, the weaker associations may also be a result of self-reporting of adherence. Despite the challenges associated with measuring adherence, when patients recalled recommendations, their adherence particularly to diet and medications was higher, suggesting that recall may be a useful intermediate measure of outcomes. This association between adherence and recall was seen in three separate chronic conditions (diabetes, heart disease and hypertension) and this suggests that recall could be used as an intermediate measure of adherence for patients with a variety of chronic conditions. Furthermore, the communication skills used by the professionals and the level of empathic engagement of the patient in the consultation are all factors that are likely to contribute to patient recall. Recall may therefore be a useful indicator of the communication skills used in the consultation.

If recall is an important intermediate measure of outcomes, then there is a need to consider how recall data is reliably collected, quantified, and measured. The studies reviewed used different measures to assess different types of recall, eg auditory (Coughlan, 2005; Goodchild, Skinner & Parkin, 2005; Parkin & Skinner, 2003) or using visual prompts (Heisler et al, 2003; Kravitz et al, 1993). The use

of prompt lists (written material) is reported to increase recall, rather than relying on auditory memory alone (Campos & Alonso-Quecuty, 2006; Jansen et al, 2008b; Mauffrey et al, 2008). Age differences are known to impact on auditory recall (Pesudovs, Luscombe & Coster, 2006) and cognitive decline is accelerated in older patients and those people with diabetes (Jansen et al, 2008a; Stadtlander & Coyne, 1990). This population group may therefore have greater difficulty recalling decisions made, and this will impact on the level of agreement recorded (Asimakopoulou, Hampson & Morrish, 2002). This may account for the low recall levels seen in studies where patients are greater than 65 years of age (Barnard et al, 2006; Jansen et al, 2008b; Pesudovs, Luscombe & Coster, 2006; Rost & Roter, 1987). However, when younger patients (< 65 years of age) use prompt lists to aid recall, a 46% agreement rate on recall was achieved (Madan & Tichansky, 2005). This is comparable to the 47.1% obtained using auditory recall (Parkin & Skinner, 2003). This suggests that the method of collecting recall data may be an important consideration when working with older patients (Stadtlander & Coyne, 1990). The studies assessing recall in this review all had patients with a mean age of less than 65 years and it was unlikely that age would be a factor influencing the recall data reviewed.

The lower rate of recall achieved in Heisler et al (2003), when compared to Parkin & Skinner (2003) is likely to be a function of the delay in collecting recall information, as recall is known to decline over time (Campos & Alonso-Quecuty, 2006). Equally, poor communication skills may have resulted in the lack of clarity on goals recalled. Professionals may have chosen goals from the list that they felt they should have made, and patients may be choosing goals that

are broad and so may not reflect their perception of the decisions made (D' Eramo-Melkus & Demas, 1989). The prompt list used by Kravitz et al (1993) used very broad statements such as, "*Follow a diabetic diet*" (p 1872), but what does this actually mean? Variations in perception of what this statement means may impact on the measures obtained (D' Eramo-Melkus & Demas, 1989; Simmons et al. 2007; Street, 1992a). Patients often did not recall elements of advice provided and equally did not always adhere to advice that was recalled (Kravitz et al., 1993; Theunissen et al., 2003). In addition, lack of specific detail on recalled decisions makes it difficult for patients and professionals to assess the impact of changes made. Lack of clarity may result in patients interpreting decisions differently from the intended meaning, resulting in changes to biomedical measures that differ from those expected (Kravitz et al, 1993). Lack of clarity may be a reasonable contributing factor to the lack of adherence seen in this study. This also suggests that, to acquire meaningful data on decisions made, auditory recall may provide more meaningful data as it allows patients to express their perception of decisions made rather than using a pre-constructed list.

The issues raised over clarity of recall, as well as ability to recall decisions, suggests that there is a need to help patients understand (Heisler et al, 2002) and recall recommendations. If patients can recall and understand recommendations and decisions made this may increase the chances of their successful implementation (Kravitz et al, 1993). Having raised the importance of effective communication, clear guidance on how to achieve this improvement is lacking (Heisler et al, 2003; Kravitz et al. 1993). In addition, Heisler (2002) noted that reported understanding of self-care behaviours was likely to be a

result of professional communication that enhanced self-management through increased patient understanding. This relationship still held even when controlling for socio-demographics and health variables, such as age and health status. Patient perceptions of goal importance will vary (Kuijer & De Ridder, 2003) and may explain the variations seen in the reviewed studies (Heisler et al, 2003; Kravitz et al, 1993; Parkin & Skinner, 2003). There is a need to understand this difference in perception in order to set meaningful and relevant goals for individuals (Bradley et al, 1999; De Fine Olivarius et al, 2001; Huang et al, 2005). Those goals that support the ability of patients to live independently may be more successful than goals that focus on preventing complications alone (Huang et al, 2005), suggesting the need to focus on the agenda of the patient in the consultation. Focusing on the language used to frame goals may have an impact on this communication process (Thorne et al, 2003). Reflecting on behaviours and responses to information is seen to be important, as it requires the professional to consider the patient as a person rather than as a condition (Anderson et al, 2003; Bradley et al, 1999; Gentili et al, 2001; Goodchild et al, 2005; Huang et al, 2005; Kravitz et al, 1993; Krichbaum et al, 2003). Bogardus et al (2004) showed that patient agreement with treatment plans increased patient adherence. Therefore actively involving patients in treatment decisions through facilitated discussions (Naik et al, 2008; Poskiparta, et al, 1998) may be a useful strategy to increase agreement on recall and ultimately improve health outcomes.

Older patients with complex needs prefer professionals to make decisions for them (Huang et al, 2005; Little et al, 2001b), highlighting further the need for the professional to be able to listen and understand the patient's need for

information and involvement, as some patients may not wish to be actively involved in decision-making (Wetzels et al, 2007). This need to understand the individual's situation and preference for involvement requires the professional to be able to use a range of active listening skills, including reflection, summarising and exploratory questions, as these help to demonstrate listening and understanding (Egan, 2002; Gable, 2007). The ability to demonstrate understanding of a patient's situation, emotions and thoughts is a process referred to as empathy (Egan, 2002), in other words, the ability to identify with another person's situation and perspective by 'putting yourself in their shoes' (Hemmerdinger et al, 2007). This ability to understand the patient appears to be crucial to developing effective dialogue with the patient (Bellet & Maloney, 1991; Egan, 2002; Gable, 2007; Reynolds & Scott, 1999). However, this review identified only 2 studies that had attempted to link empathy with the outcome measure of agreement on recall. One study identified a trend between empathic opportunities and agreement (Goodchild et al, 2005), whereas the other was able to correlate empathy with agreement (Coughlan, 2005). However, as previously mentioned, both of these studies were small and exploratory in nature and further larger studies across a range of sites is needed to substantiate the importance of the link between empathy and recall (Coughlan, 2005; Goodchild et al, 2005). In other studies, it has been suggested that patient demographics may impact on measures of empathy and recall (Golin et al, 1996; Heisler et al, 2002; Kravitz et al, 1993; McDonald-Miszczak et al, 2005; Rost et al, 1990) and should therefore be included in any researching in this area.

Involving patients in shared decision-making (Heisler et al, 2002) and providing them with choices through increasing autonomy (Parkin & Skinner, 2003) may be another method for improving self-care and this has been linked to recall agreement (Parkin & Skinner, 2003). Patient autonomy requires the use of good communication skills that enable the professional to acknowledge the perspectives of patients, support the initiatives of patients, offer choice about treatment options, provide relevant information, minimize pressure and control (Williams et al, 1998). The Coughlan (2005) study did not find a significant correlation between empathy and autonomy support. This study suggests the lack of correlation may be contributed to the presence of a 'consultant effect', whereby patients scored consultants highly as a result of their status, expertise and their perceived power and authority over treatment (Coughlan, 2005, p.43). In contrast, patients in dietetic consultations created more empathic opportunities when they reported more autonomy support from the dietitian (Goodchild et al, 2005). This appears to suggest that there may be differences in the way that dietitians and consultants communicate with patients. In addition Parkin & Skinner (2003) found that when nurses and dietitians were less controlling, patients reported greater levels of autonomy support. This was linked to more agreement, particularly for older patients. Equally greater control in the consultation over decisions made may reflect higher levels of patient self-efficacy (Heisler et al, 2003). Improving self-efficacy may improve self-care management ability (Krichbaum et al, 2003). This issue of self-efficacy is particularly important in dietetics, as it has been shown to have strong associations with dietary adherence (Senécal et al, 2000; Williams et al, 1998).

2.5 Conclusion

The limited data obtained from the review suggests that further work is needed to establish the links between communication skills in the consultation and the outcome measure of agreement on recall of decisions made.

The empirical studies reviewed were cross-sectional and therefore hard conclusions cannot be drawn about directional effects of behaviours in relation to adherence and outcomes. It has been suggested that patient adherence may be mediated by recall (Bartlett et al, 1984; McCann & Weinman, 1996) and the evidence from Kravitz et al (1993) appears to support this finding. Memory of advice is also important (McCann & Weinman, 1996) and agreeing with recommendations through improved collaboration (Heisler et al, 2003; Stewart, 1995) can promote adherence and goal attainment (Bogardus et al., 2004). Greater agreement on recall of decisions made in the consultation may therefore be a marker for success of the consultation, leading to improved patient outcomes (Heisler et al, 2003).

Agreement on recall may therefore be a useful intermediate measure of long-term outcomes in chronic long-term conditions. However, the literature reviewed highlights significant gaps in understanding of the specific communication skills and process needed to achieve agreement on recall (Bradley et al, 1999; Watson & McKinstry, 2009). The Watson & McKinstry review of interventions to improve recall of medical advice provides general guidance on behaviours, such as the importance of repetition of decisions and the positioning of important information within the consultation. However, this

still fails to clarify the specific communication skill set needed in the consultation to improve recall.

Although some skills such as empathy have been measured, and tentative links with agreement on recall made, further larger studies are required to substantiate the relationship of empathy with agreement on recall. In addition, the demonstration of empathy requires the use of active listening skills, which may in turn influence a patient's perception of autonomy support and self-efficacy leading to agreement on recall. The skills of empathy and active listening therefore require additional exploration to clarify their role and importance in achieving agreement on recalled decisions made in the consultation.

The questions that this review raises are as follows:

Does greater empathy result in higher levels of patient/professional agreement on reported decisions made in the consultation as suggested?

What are the specific communication skills needed to support empathy in the consultation?

If decisions are made in the consultation, then at some stage during the consultation, information exchange would have occurred. So how does information exchange relate to empathy and communication skills in the consultation and what is their impact on agreement on reported decisions made?

CHAPTER THREE: PATIENT-CENTRED COMMUNICATION

The literature reviewed in Chapter 2 has highlighted a significant gap in our understanding of the link between specific communication skills/behaviours in the consultation with the outcome measure of agreement on recall. However, tentative links between empathy and agreement on reported decisions were made. This chapter provides further supporting evidence for the need to explore the following:-

- The presence of empathy in the consultation and its importance in patient-centred communication.
- The literature supporting the use of patient-centred communication for effective self-care management in long-term conditions.
- The communication skills that may be needed to support empathy and information-giving in the consultation
- The potential impact of these communication skills on patient/professional agreement on decisions made in the consultation.

3.0 Patient-centred care

The approach required to manage chronic long-term conditions, such as diabetes, differs from that used for medical acute care management (Anderson, 1995; Anderson & Funnell, 2005b; Department of Health, 2001; Glasgow et al, 2001). In the past, professionals would have seen themselves as being in charge of, and responsible for, the treatment of patients (Anderson, 1995). The professional would have made decisions on how the condition was to be managed (Byrne & Long, 1976; Fieldhouse, 1979) without regard to the impact of the condition or these changes on the individual (Cohen et al, 1994; Weston et al, 1989). Professionals would have seen themselves as 'experts' with

patients as 'passive' recipients of information provided (Glasgow et al, 2001). Patients who failed to conform would have been labelled as non-compliant (Glasgow et al, 2001) and strategies aimed at increasing their level of compliance would have been implemented (Anderson & Funnell, 2000). These would have contributed to increases in patient distress levels (Hiscock et al, 2001) and thus impacted on outcomes. Metabolic control and patient compliance/adherence would have been the primary measures of the educational approaches used (Brown, 1990; Glasgow & Osteen, 1992; Padgett et al, 1988; Wolpert & Anderson, 2001). However, there are problems with using this approach for a chronic disease (Glasgow & Anderson, 1999). Acute conditions respond well to expert-led approaches, as changes that are made during an acute period of illness tend to be short term, as the illness abates and patients revert back to their usual habits. However, with chronic diseases the changes needed to manage the condition are not short term, they require long-term commitment and involve major changes in the way that the patients conduct their day-to-day lives (Anderson & Funnell, 2005b; Glasgow & Anderson, 1999; Moser et al, 2008; Wolpert & Anderson, 2001). They also involve changes to the way that individuals perceive themselves and their sense of health and well-being (Hiscock et al, 2001). This lack of consideration of the needs of the individual and the complexity of the changes required may in part account for the poor levels of compliance documented in the literature (Ary et al, 1986; Donnan et al, 2002; Glasgow & Toobert, 1988; Glasgow et al, 2001; McNabb, 1997; Thorne & Paterson, 2001; Toobert et al, 2000) and highlighted in Chapter One.

Understanding this basic difference between acute medical care and chronic care is essential and it means that chronic disease management carries a different emphasis to acute disease management (Anderson, 1995). Focusing on the behaviours in the consultation that help engage people actively in their day-to-day care may be more productive than focusing on information-giving alone. In particular, when these behaviours are underpinned by theory (Abraham & Michie, 2008; Cullen et al, 2001; Ley, 1982), this may lead to improved diabetes outcomes (Murphy & Kinmouth, 1995). Improvement requires a subtle change in the emphasis of the consultation: focusing on the individual and their health problems rather than solely on the management of their disease (Anderson & Funnell, 2005b; Greenfield & Kaplan, 1988; Kinnersley et al, 1999; Lewin et al, 2001; Peel et al, 2005).

The patient therefore becomes a key player in the successful implementation of the care package and as a result their needs are considered alongside the medical management of the condition (Anderson & Funnell, 2005b; Anderson et al, 1982; Rubin et al, 2002; Wilson, 2002). This need to understand and work more closely with patients to enable effective self-care management is reflected in the literature. Patient education moves from professional-led medically driven concepts of care to a chronic disease model that focuses on patient-centred care (Anderson, 1995; Brown, 1990; Deakin et al, 2006; Norris, Engelgau & Narayan, 2001; Padgett et al, 1988; Skinner et al, 2003a; Stewart et al, 2000). A key example of a patient-centred collaborative approach is the model of patient empowerment that has been used in diabetes education (Anderson, 1995; Anderson et al, 1995; Anderson et al, 1991; Anderson et al, 1982; Funnell et al, 2005). This approach encourages professionals to focus on

the patient as an expert within the consultation (Anderson, 1995; Lorig et al, 2001; Peel et al, 2005; Smith et al, 1999) thus challenging the professionals' view of themselves as expert providers (Funnell & Anderson, 2004). The shifting emphasis means that the role of the professional is changing from that of an expert provider to that of an expert teacher facilitator and guide (Anderson, 1995; Smith et al, 1999). This approach recognises that

“Knowing about an illness is not the same as knowing about a person’s life” and that, by default patients are the primary decision makers in control of the daily self-management of their diabetes” (Funnell & Anderson, 2004, p 124).

Patient-centred care brings with it therefore some challenges in terms of how best to balance evidence based medicine and patient-centred medicine (Anderson, 1995; Anderson & Funnell, 2005b; Bensing, 2000; Smith et al, 1999). Bensing (2000) uses the following model to explore the dimensions of patient-centredness (Figure 3.4).

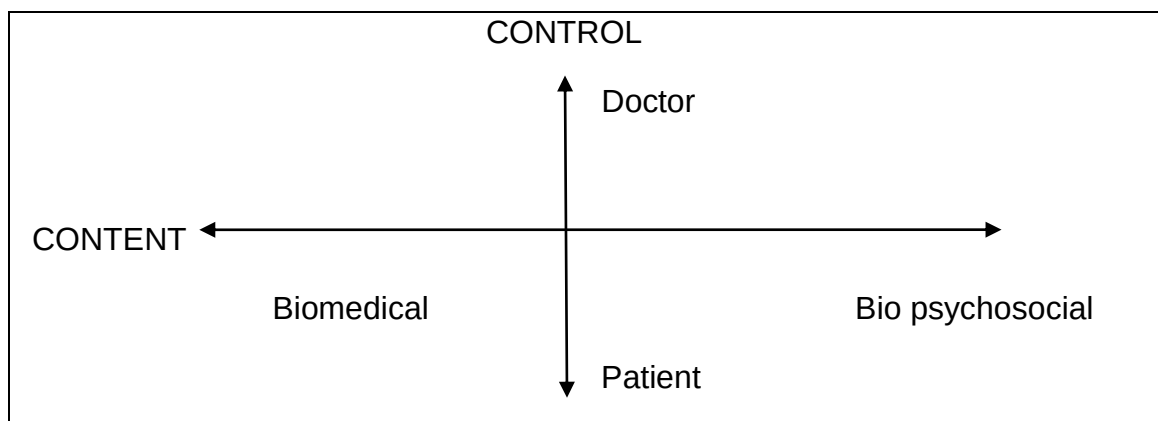


Figure 3.4: Dimensions of patient-centredness (Bensing, 2000)¹

This suggests that patient-centredness involves listening to the patient in order to understand their needs and values (de Haes, 2006) and where they wish to

¹ Reprinted from Bensing, J. (2000) 'Bridging the gap. The separate worlds of evidence-based medicine and patient-centred medicine', *Patient Education & Counseling*, 39 pp. 17-25 with permission from Elsevier)

be on the axes shown in Figure 3.4 (Bensing, 2000). The professional's use of communication skills is therefore important. The listening and questioning skills employed will help in identifying the level of control that the patient wishes to have in the consultation, and the information that the patient requires from the professional to address their needs (Bensing, 2000; Cant & Aroni, 2008; Fallowfield & Jenkins, 1999; Hambly et al, 2009; Lang et al, 2000; Levinson & Roter, 1995).

The consultation therefore becomes a learner-centred activity with the professional facilitating the process of patient learning (Anderson et al, 1991; Coles, 1990; Lorenz et al, 1996; Maldonato et al, 1995). The growing awareness of the need to facilitate patient learning in order to enable effective self-care management is underpinned in various national guidance documents on patient education (NICE, 2003) and care for people with diabetes (Diabetes UK, 2009). These include the National Service Framework (NSF) for diabetes and the National Institute of Clinical Excellence (NICE) guidance documents on patient care and group education (Department of Health, 2001; Department of Health, 2003; Department of Health, 2007; Department of Health and Diabetes UK, 2005; NICE, 2003; NICE, 2008a). Changes within the health service also mirror this shift in culture, in particular the 'Creating a patient-led NHS: Delivering the NHS improvement plan' and the new white paper 'Equity and excellence: Liberating the NHS'. Both continue this theme and place great emphasis on patient-led services that increase choice, personalised care and empowerment of people to improve their health (Department of Health, 2005; Department of Health, 2010b; Department of Health, 2011).

3.1 How equipped are dietitians to deliver patient-centred care?

The dietetic profession recognises the importance of communication to engage effectively with patients and this is reflected in the pre-registration education and training curriculum. Here, psychology, sociology, and communication training form an integral part of the curriculum for student dietitians, helping to develop the skills needed for working with others effectively (British Dietetic Association, 2008b). The concept of patient-centred care is reflected in the dietitians' professional code of conduct, which states that dietitians should:

“respect the decisions of service users concerning their own health and independence, even when such decisions conflict with professional opinion... give sufficient information and time to enable them to make informed decisions about their health and social care...present information in a way that service users can understand” (British Dietetic Association, 2008a, p.8).

However, these are broad concepts and specific guidance on how to achieve these aims is not provided, leaving their application open to individual interpretation. This issue of interpretation has been raised by others who found that whilst Canadian dietitians were familiar with the concept of ‘client-centred’ nutritional counselling, they required further clarification to remove ambiguity from their interpretation of this term (MacLellan & Berenbaum, 2003). Whilst most dietitians would agree that patient-centred care is essential for their practice (Brown et al, 1998; Whitehead et al, 2009), the inability to describe this process hinders critical evaluation of the effectiveness of the dietetic consultation.

Professional issues concerning time in the consultation (Whitehead et al., 2009) and resources, as well as differing goals of patients and professionals (Heisler et al, 2003; Julien et al, 2009; Kravitz et al., 1993; Kuijer & De Ridder, 2003;

Levy, 2009; Parkin & Skinner, 2003; Vijan et al, 2005) have been cited as additional challenges to implementing a patient-centred approach and may contribute to the perceived difficulties of implementation amongst dietitians (Maclellan, 2006). This may account for the difficulties reported by Rosal (2001) in identifying evidence of integration of skills needed to support behaviour change in American dietitians. Canadian dietitians also report the need for further training in behaviour modification skills (Barr et al, 2004). In the UK, a report on dietetic consulting skills highlighted that dietitians generally recognise the need for additional skills to support behavioural approaches for delivering patient-centred care, but in practice feel that their skill set to support this approach may not be adequate (Rapoport, 1998; Rapoport & Perry, 2000; Stetson et al, 1992). Although there is a move to consider psychological and counselling skills in much greater depth in dietetic practice (Hunt, 1995; Isselmann et al, 1993; Pearson & Rapoport, 2007) particularly for consideration in student training (Curry & Jaffe, 1998; Davidson et al, 1987; Horacek et al, 2007; Huyck, 1986; Lawrence, 2003; Long et al, 1983; Pearson & Rapoport, 2007), clear definitions and research in this area are lacking.

Dietitians are not alone in struggling to conceptualise and therefore utilise the concept of patient-centred care for self-care management. Doctors and nurses have also been reported to struggle with the concept (Brown, 1990; Golin et al, 1996; Griffin et al, 1999; Norris et al, 2001; Norris et al, 2002; Padgett et al, 1988; Stewart, 1995). Additionally, the numerous definitions of 'patient-centred' care create problems when reviewing research in this area, resulting in limited and mixed evidence on the effects of interventions on patient behaviours and health status (Lewin et al, 2001). Patient-centredness has been

described as a set of professional attitudes, a set of knowledge (Mead & Bower, 2000a) and consultation behaviours (Stewart, 1984; Stewart, 1995). Add to this the variety of measures used to assess patient-centredness and this may explain why the evidence on the effectiveness of patient-centred care is inconsistent (Lewin et al, 2001; Mead & Bower, 2000a; Whitehead et al, 2009). There is some evidence to suggest that patient-centred approaches are more effective in enhancing patient communication and thereby improving subsequent patient health (Anderson et al, 1995; Golin et al, 1996; Griffin et al, 1999; Stewart, 1995). For example, interventions designed to increase patient participation and autonomy (the degree to which a person feels that they are in control) have resulted in improvements in self-care behaviour and glycosylated haemoglobin (HbA1c) (Anderson et al., 1991; Davies et al, 2008; Greenfield & Kaplan, 1988; Harrington et al, 2004). However, work is still required to strengthen the associations seen between patient-centred care and effective communication as demonstrated through improved health outcomes (Bensing, 2000; de Haes & Bensing, 2009; Epstein et al, 2005).

3.2 Patient-centred Communication

Further exploration and definition of the concept of patient-centredness is required to provide clear direction and understanding of process and outcomes (Epstein et al, 2005; Lewin et al, 2001; Mead & Bower, 2000b). Epstein et al (2005) suggest the need to distinguish between patient-centredness, patient-centred care, and patient-centred communication, as the overlapping use of these terms in the literature distorts findings of what exactly is being examined. The authors clarify patient-centredness as a moral philosophy with three clear values: Considering patients needs, wants, perspectives and individual

experiences; Offering patients opportunities to provide input into and participate in their care; Enhancing partnership and understanding in the patient-physician relationship. These three broad values encompass the five dimensions of patient-centredness as described in Mead & Bower's (2000) review:

Understanding a patient's illness in general within a broader bio-psychosocial framework; understating an individual's experience of an illness; sharing power and responsibility; the therapeutic alliance; the influence of the personal qualities of the doctor.

Epstein et al (2005) go on to state that "*patient-centred communication focuses on the relationship between the patient the health care professional and family members that promote patient-centredness*" (p 1517). The operational definition of patient-centred communication, which this paper provides, focuses on four key aspects as outlined in Table 3.4.

1. Eliciting and understanding the patient's perspective-concerns, ideas, expectations, needs, feelings and functioning.
2. Understanding the patient within their unique psychosocial context
3. Reaching a shared understanding of the problem and its treatment with the patients that is concordant with the patient's values
4. Helping patients to share power and responsibility by involving them in choices to the degree that they wish

Table 3.4: Operational definition of patient-centred communication adapted from (Epstein et al, 2005)²

These definitions provided further direction and clarity when studying patient-centred communication and outcomes (Epstein et al, 2005). The key essence

² Reprinted from Epstein et al. (2005) 'Measuring patient-centred communication in patient-physician consultations: Theoretical and practical issues' *Social science & Medicine*, 61 pp.1516-1528 with permission from Elsevier

of patient-centred communication is said to derive from Carl Rogers work in the late 1950s and his development of the concept of “client-centred counselling”. His guiding principles, when working with patients, were respect, genuineness, and empathy (Rogers, 1957). These principles are still considered to be essential for effective patient-centred communication and provide the scaffold for effective relationships between patients and professionals (Anderson, et al, 1982). Epstein et al (2005) define a similar set of principles for patient-centred communication as being attentiveness, critical curiosity, informed flexibility, and presence. Understanding how empathy impacts on the consultation process and its subsequent impact on intermediate outcomes is essential (Street et al, 2009).

3.3 Empathy

Empathy is a central construct in patient-centred communication (Reynolds & Scott, 1999). Carl Rogers first defined the concept in the 1950s (Rogers, 1957) and later he defines empathy as a “*process*” and goes on to say that...“*being empathic is a complex, demanding and strong yet also subtle and gentle way of being*” (Rogers, 1980, p143). Others have defined empathy as the ability to identify with another person's situation, by being able to “*put yourself in their shoes*” and understand their perspective of the situation (Hemmerdinger et al, 2007). Empathy requires the professional to be non-judgemental in their ability to understand another's feelings and in their ability to communicate that understanding back to the individual (Wiseman, 1996). Empathy is a separate construct from sympathy: empathy is concerned with sharing understanding whereas sympathy is about sharing feelings (Egan, 2002; Hemmerdinger et al, 2007; Norfolk et al, 2007). Empathy is concerned with the ability to

demonstrate an understanding of another's situation and communicate this back to the individual where helpful (Egan, 2002; Norfolk et al, 2007). Egan (2002) and Rogers (1980) describe empathy as an active process of listening, which involves the professional engaging with patient's feelings and perceptions of the world that they are experiencing, and then reflecting their words and experience back to provide meaning. The experience of being listened to by someone who demonstrates understanding is itself a process that helps individuals to reflect (Ong et al, 2000; Rogers, 1980) and is said to be an intrinsically therapeutic process (Egan, 2002). For a chronic disease such as diabetes, this acknowledgement and understanding may help to reduce the burden of living with the condition (Jansen et al, 2010). Empathy is therefore about understanding an individual within and through the context of their lives (Rogers, 1980). This allows the discrepancies in a patient's viewpoint and reality to be explored more easily (Egan, 2002).

Empathy may occur at a non-verbal level, but there are times when it must be verbalised to demonstrate that understanding and awareness of what someone is going through (Egan, 2002). This process is referred to as behavioural empathy (Hemmerdinger et al, 2007), and requires the use of the patient's own words to reflect back what has been heard (Gable, 2007; Lussier & Richard, 2007; Rogers, 1980). It is important that communication of this understanding back to the patient is conducted in a language that reflects both content and feeling accurately (Egan, 2002; Reynolds & Scott, 1999) and shows the same level of intensity (Egan, 2002; Gable, 2007).

Being non-judgemental is important when reflecting back a patient's thoughts, feelings, and ideas. These non-interpretative reflections demonstrate that the professional is listening and trying to understand, for example: *"that must have been hard"...* *"It sounds' like it was difficult..."* (Egan, 2002; Gable, 2007).

Basic empathic listening has been described as a crucial skill for effective listening in the consultation (Lussier & Richard, 2007; Norfolk et al, 2007) and as such, empathy should be measured to assess its presence in (and therefore impact on) the consultation and outcomes. Rogers (1980) describes early work by therapists such as Truax (1967) and their attempts to measure empathy, such as developing a coding system for psychotherapists looking at empathy which stated the lowest level as:

"bored, disinterested, actively offering advice with no communication of awareness of patients current feelings"

Whereas the highest level of empathy coding stated that:

"voice tone reflects seriousness and depth of empathic grasp accurately interprets patient's present acknowledged feelings voices meanings in patient's experience, sensitive and accurate" (cited in Rogers, 1980, p144).

The coding system contained eight levels to convey empathy, demonstrating the complexity of attempting to study and measure this concept. This suggests that a range of skills may be needed to effectively demonstrate empathy when communicating. This adds further weight to Egan's statement that empathy is an *"interpersonal communication skill"* (Egan, 2002, p 48).

Other researchers have highlighted the importance of empathy in establishing a therapeutic dialogue and its relationship to effective communication skills (Neumann et al, 2009; Norfolk et al, 2007). The latter have developed a conceptual framework to explain how empathy underpins the consultation dialogue and suggest that empathic listening skills enable negotiation and

establishment of treatment plans, and adherence to these, alongside better patient satisfaction (Norfolk et al, 2007). The model they propose suggests that empathy may play a role in the way that information is delivered and the subsequent flow of the consultation. Particular importance can be attached to the patient/provider rapport. The quality of the patient/provider relationship may affect outcomes (Mead & Bower, 2000a). Adherence to diet has also been reported to relate to perceptions of the patient/provider relationship (Epstein et al, 2005; Maddigan et al, 2005) and may be crucial to the successful working relationship between patients and professionals (Barlow et al, 2002; Ellis et al, 2004; Norfolk et al, 2007).

A review of the literature suggests that developing empathy and identifying and handling emotional problems may be useful skills for the professional in the delivery of effective patient-centred communication (Lewin et al, 2001; Mercer et al, 2008).

3.3.1 Measurement of empathy

Although empathy is an accepted construct in dietetic education and training (Isselmann et al, 1993; Pearson & Rapoport, 2007) very little research has been conducted to explore either the presence of empathy in dietetic consultations (Goodchild et al, 2005) or how best to educate student dietitians to improve their empathic skills in practice (Spraggins et al, 1990). In contrast, medical schools have invested a lot of energy into trying to measure and assess empathy in medical student training (Bellet & Maloney, 1991; Hemmerdinger et al, 2007; Spiro, 1992). Nurses have also started to address issues around definitions of empathy to assist in identification and measurement that will

improve patient outcomes (Brunero et al, 2010; Hope-Stone & Mills, 2001; Yu & Kirk, 2008).

Difficulties in measuring empathy have been highlighted, particularly the most important dimension of empathy and exploring the best methods for validating this (Stepien & Baernstein, 2006). The medical literature provides a number of dimensions of empathy that include emotive, moral, cognitive, and behavioural dimensions, as summarised in Table 3.5 (Stepien & Baernstein, 2006).

Emotive	being the ability to imagine patient's emotions
Moral	being the physician's internal motivation to emphasise
Cognitive	being the intellectual ability to identify and understand patient's emotions and perspectives
Behavioural	being the ability to convey understanding of those emotions and perspectives back to the patient

Table 3.5: Dimensions of empathy highlighted by Stepien & Baerstein (2006)³

In the nursing literature, empathy has been summarised by Wiseman (1996) as seeing the world as others see it, being non-judgemental, being able to understand another's feelings and being able to communicate that understanding. In addition, Kunyk & Olson (2000) have described empathy as a professional state, a communication process, as caring and as a special relationship. The parameters of empathy within these definitions have been found to vary, with some researchers describing empathy as a communication process whereas others have defined empathy as preceding a broader

³ Reprinted from Stepien, K. A. & Baernstein, A. (2006), 'Educating for Empathy', *J Gen Inter Med*, 21 pp. 524-530 with permission from Elsevier

communication model (Kunyk & Olson, 2000). Reynolds & Scott (1999), in their exploration of empathy in nursing, suggest that the definition of empathy should reflect what nurses should be doing during their interactions with patients. They state that the definition of empathy for nursing should be an

“accurate perception of the client’s world and an ability to communicate this understanding to the client, in order that the client is aware of the nurse’s perception of the client’s position” (p 367).

This behavioural approach to the definition of empathy resonates with the small number of studies in the dietetic literature, with previous surveys of dietitians highlighting this behavioural dimension as one that they recognise as important (Cant & Aroni, 2008; Maclellan, 2006). The varying definitions of empathy have also led to a number of different measures to assess this concept (Hemmerdinger et al, 2007; Pedersen, 2009; Yu & Kirk, 2008). Typically these have been conducted in one of three ways: either through self-assessment questionnaires which focus on the individual’s assessment of their level of empathy; through the use of questionnaires that explore individual’s perception of empathy from care givers that they have encountered and through the use of standardised assessment tools that are used to measure the observed empathy demonstrated in clinical encounters. These standardised assessment tools may include indirect measures of empathy (Levinson et al, 2000; Suchman et al, 1997) or direct measures of empathy (Bylund & Makoul, 2002; Hemmerdinger et al, 2007). These measures may be applied directly whilst observing consultations or when viewing video recordings of consultations. However, the range of measures used prevents direct comparisons between studies conducted so far (Butow et al, 2002; Del Piccolo et al, 2008; Hulsman, 2009; Jansen et al, 2010; Levinson et al, 2000; Pedersen, 2009; Zimmermann et al, 2007).

Hojat et al (2002) used a questionnaire to measure professional perception of empathy across a range of psychiatrists and physicians. They showed significant differences in professional perception of empathy, with psychiatrists scoring higher than physicians. They also suggested possible gender effects on empathy, with females being more empathic than males. Direct measures of empathy confirm these findings and demonstrate significant differences in empathy between male and female physicians (Bertakis, 2009; Bylund & Makoul, 2002; Roter et al, 2002; Schmid Mast et al, 2007). This suggests that the professional's gender should be considered when reviewing data on empathy (Bylund & Makoul, 2002; Nicolai & Demmel, 2007).

During the consultation, the professional needs to identify significant clues to the patient's thoughts and feelings (verbal and/or non-verbal) and then make sense of these clues (Hampson et al, 1995; Zimmermann et al, 2007) in order to demonstrate empathy. As patients seldom verbalise emotions directly (Butow et al, 2002) but through indirect cues (Suchman et al, 1997), the challenge for the professional is to identify moments when an empathic response is required. It could be argued that the subtleties of empathy are difficult to assess for a number of reasons, including those of definition, but also the reliance on good communication skills that are needed to respond to both verbal and non-verbal clues from patients (Cant & Aroni, 2008).

3.3.2 Importance of Empathy

Patients are reported as wanting practitioners who are empathic as well as technically proficient (Spiro, 1992). The perception of physician empathy has also been noted to reduce time and expense in medical consultations (Bellet & Maloney, 1991; Levinson et al, 2000). Patient perception of physician empathy

has been shown to significantly influence patient satisfaction and compliance (Kim, Kaplowitz & Johnston, 2004). The engagement of patients through empathic listening may encourage them to contribute more to setting and developing their own goals resulting in a clear understanding on the course of action that the patient is planning to take (Ammerman et al, 2002; Bensing, 2000; Michie et al, 2003). Responding empathically to patient cues may help to reduce misperceptions of decisions taken and goals set in the consultation impacting on outcomes (Butow et al, 2002; Levinson et al, 2000; Salmon et al, 2004). Effective empathic communication may therefore result in self-management education that better meets the patient's needs, and as such lead to greater recall of information and decisions made (Norfolk et al, 2007). Perception of empathy in medical consultations has been shown to impact on consultation outcomes (Bertakis, 2009; Comstock et al, 1982; Larson & Yao, 2005; Levinson, et al, 2000; Ong et al, 2000). Whether empathy impacts on dietetic outcomes has yet to be fully established. Empathy has been linked to agreement on recall in one small study (Coughlan, 2005) and linked to patient enablement in another (Mercer et al, 2008). Patient enablement is a measure of the patient's perception of their ability to cope with life and their illness, to understand their illness, to keep healthy and to be confident in their ability to help themselves. Patient enablement may be an early indicator of potential health improvement (Mercer et al, 2008).

Empathy has also been linked to compliance to recommendations and improved patient satisfaction in medical consultations (Epstein et al, 2007; Kim et al, 2004; Stewart, 1984; Zachariae et al., 2003). Greater expressed empathy may result in patients feeling understood (Hall et al, 2002; Jackson et

al, 2001; Street et al, 2005) thereby increasing levels of patient satisfaction (Golin et al, 1996; Hall et al., 2002; Kim et al, 2004; Mora et al, 2008; Neumann et al, 2007). Having the opportunity to express difficulties and frustrations with care is a therapeutic exercise, particularly if these challenges are dealt with in a non- judgemental manner (Anderson & Zimmerman, 1993; Arborelius & Österberg, 1995). The greater satisfaction reported could be a result of the acknowledgement and exploration of issues raised, confirmation of the difficulties that patients were experiencing, and an illustration of the impact of good empathic listening skills on consultation outcomes (Bertakis, 2009). Studies with physicians suggest that being more empathic and responding appropriately to patient cues can increase patient satisfaction (Levinson & Roter, 1993). A large study involving 1520 patients was able to detect a small effect ($r = 0.28$) of patient perceived empathy with patient satisfaction (Fuentes et al, 2008). In addition, direct measures of empathy have been linked to satisfaction in a small number of dietetic consultations (Goodchild et al, 2005).

Bylund & Makoul (2002) have raised concerns that the questionnaires used to measure patient perception of empathy may in fact be measuring a much broader concept of empathy than those used to assess empathy directly through observation. Patient perception questionnaires assessing empathy may be influenced by additional factors such as the characteristics of the patients completing the questionnaires (Pedersen, 2009). These factors contribute to the potential difficulties encountered when trying to compare data from studies that utilise different measures (Pedersen, 2009). Careful consideration therefore needs to be taken when selecting methods for measuring empathy.

Hope-Stone & Mills (2001) cite lack of time, the environment, and communication difficulties as barriers to implementation of empathy in consultations. Evidence regarding these factors is conflicting. Some studies suggest that greater use of empathy will lengthen the consultation time (Marvel et al, 1999) others suggest that greater use of empathy will shorten the consultation time (Coughlan et al, 2006; Levinson et al, 2000), whereas one study suggests no effect on consultation length (Goodchild et al, 2005).

Lack of time may not therefore be the sole reason for the lack of empathy, it may relate to other communication difficulties. If professionals cannot articulate their empathic understanding to patients then the patient has no reason to believe they want to listen or understand (Egan, 2002). Good communication skills are therefore needed to demonstrate empathy (Egan, 2002; Ong et al, 2000).

3.3.3 Empathy and emotions

Discussing patient's fears and the emotional impact of their condition on their daily habits can help them to cope with their emotions (Ary et al, 1986; Weston et al, 1989). Facilitating this discussion through effective listening and use of empathy is therefore an essential part of the patient-centred communication process (Epstein et al, 2007). However, studies show that doctors and nurses are often unaware of patients needs and concerns (Barry et al, 2000; Street et al, 1993) with professionals missing empathic opportunities in up to 21% of primary care physician consultations and up to 38% of the time in surgical cases (Epstein et al, 2007; Levinson et al, 2000). In another smaller study, physicians missed 70% of the empathic opportunities presented in 16

consultations (Easter & Beach, 2004). Missing empathic opportunities has been shown to result in issues being raised a second or even third time during the consultation and may contribute to the longer consultations (Levinson et al, 2000). Emotional cues are reported as being the most missed (Butow et al, 2002; Zimmermann et al, 2007) and as occurring in the lowest frequency in medical consultations. In one study, surgeons and oncologists were found to respond empathically to only 10% of emotional opportunities raised, preferring to shift the conversation from an emotional to a biomedical context (Morse et al, 2008). This may reflect the difficulty that professionals have in responding to emotional issues (Eide et al, 2004; Epstein et al, 2007; Guimond et al, 2003; Salmon et al, 2004).

Emotional cues are said to elicit more distress in physicians than informational cues, and are often cited as a reason why these cues may be ignored more frequently (Barry et al, 2000; Butow et al, 2002; Kim et al, 2004; Zimmermann et al, 2007). Taped consultations for oncologists and surgeons revealed a lack of expression of empathy 37.5% of the time (Fallowfield et al, 2002). It is not clear whether this lack of expression of empathy holds true for dietitians. The one study that has looked at empathy found that dietitians missed only 4 empathic opportunities in 40 consultations (Goodchild et al, 2005). However, the small sample size in this study makes it difficult to draw strong conclusions about the representativeness of these findings for the dietetic profession as a whole. Morse et al (2008) also showed that surgeons tended to respond to factual terms rather than the abstract or negative concerns that patients may raise. This suggests problems with identifying empathic opportunities when emotions are not directly expressed (Suchman et al, 1997). Poor communication skills of

the professionals involved, and the lack of ability to judge patient emotions (Street et al, 2009) may therefore account for the high levels of missed cues in medical consultations (Butow et al, 2002; Easter & Beach, 2004; Street et al, 2009).

Whilst professionals may wish to shield themselves from patient emotions, these emotions are potentially a valuable therapeutic resource (Jarret & Payne, 1995; Williams et al, 1998). Developing skills to enable effective use of empathy in consultations would benefit practitioners and their patients (Eide et al, 2004; Ford et al, 2000; Hope-Stone & Mills, 2001). The failure to respond appropriately to patient emotions and pick up on cues may impact on the patient's ability to listen and respond appropriately to information given in the consultation (Hulsman, 2009; Neumann et al, 2007).

The low frequency of statements of emotion in consultations may be explained by the fact that emotions are hard for patients to express, and they may be embarrassed and/or frightened to fully verbalise their fears (Del Piccolo et al, 2008; Jarret & Payne, 1995; Little et al, 2001a). Qualitative interviews with patients following GP consultations highlight frequent concerns that are seldom raised directly or spontaneously in the consultation (Barry et al, 2000).

Professionals therefore need to prompt patients by asking about their feelings or concerns in order for these to be expressed (Barry et al, 2000; Butow et al, 2002; Jansen et al, 2010; Zimmermann et al, 2007). Once emotional issues have been raised, it is important for professionals to listen attentively to and validate any feelings expressed through appropriate empathic responses (Barry et al, 2000; Butow et al, 2002; Epstein et al, 2007; Suchman et al, 1997; Zachariae et al, 2003). Lack of listening and the resultant lack of demonstration

of empathy could create anxieties whereby patients feel that they are not being listened to and responded to adequately (Eide et al, 2004; Epstein et al, 2007; Poskiparta et al, 2001). Stress is known to narrow the attention span (Zachariae et al, 2003), stressed patients may therefore experience a reduced ability to process information and to pick up on cues and respond appropriately to information provided (Hulsman, 2009; Neumann et al, 2007). This factor may result in fewer decisions being recalled by the patient (Jansen et al., 2010). Furthermore Morse et al (2008) demonstrated that in surgical consultations empathic opportunities occurred at a higher frequency towards the end of the consultation. If patients are voicing unmet agendas towards the end of their session, then this leaves little time to address appropriately any issues raised and is likely to impact negatively on patient recall.

The use of empathy in the consultation allows the professional to demonstrate understanding of the uniqueness of the patient's situation, but requires good communication skills to support this process (Norfolk et al, 2007). Neumann et al (2009) have proposed a therapeutic model with a hypothetical link between empathic communication and suggested links to outcomes. This model suggests that the social-emotional aspects of communication may directly influence the informative, participative, and educative part of the dialogue. This provides further evidence for the need to focus on patient/professional communication during the consultation in an attempt to understand how empathy impacts on these communication processes and ultimately on consultation outcomes.

When exploring the role of empathy in the consultation it is important to remember that it may or may not have an emotional component. Empathy also encompasses an understanding of the patient's perceptions and opinions (Bylund & Makoul, 2002; Mead & Bower, 2000b; Norfolk et al, 2007).

Clarification of the empathic components that relate to recall is also required, as this may provide guidance for future developments in improving the communication skills of professionals (Kim et al, 2004).

3.4 Active-listening Skills

Employing active-listening skills can help professionals to develop an understanding and appreciation of the individual's viewpoint (Simpson et al, 1991) and this is acknowledged in the Toronto Consensus Statement (1991), which has been endorsed by an international panel of experts on patient–physician communication. The skills required for active listening are the same core skills used in counselling (Gable, 2007; Shillitoe, 1994). They consist of reflection, summarising, paraphrasing and appropriate exploratory questioning and are essential for developing an effective dialogue and for demonstrating empathy (Peel et al, 2005; Poskiparta et al, 2001; Rosal et al, 2001; Vickery & Hodges, 1986; Zimmermann et al, 2007).

Good use of these active-listening skills has been found to promote patient participation through encouraging patients to take part and express opinions and their concerns (Barry et al, 2000; Beck et al, 2002; Beisecker & Beisecker, 1990; Eide et al, 2004; Eldh, 2006; Epstein et al, 2007; Kaplan et al, 1989; Little et al, 2001a; Maguire et al, 1996; Michie, Miles & Weinman, 2003; Peyrot & Rubin, 1994; Poskiparta et al, 2001; Roter et al, 2008; Stetson et al, 1992;

Street, 1991; Street et al, 1993; Street et al, 2005; Weston et al, 1989; Williams et al, 1998; Zandbelt et al, 2007). Understanding patient's perceptions of their condition and how it can be managed (Bertakis et al, 1991; Miller & Rollnick, 2002; Rollnick et al, 1999) helps the professional in determining possible drivers for change (DiMatteo et al., 1980), as well as considering patient preferences (Epstein et al, 2004; Poskiparta et al, 2001; Stetson et al, 1992; Thorne et al, 2003). Summarising and paraphrasing are a small but important part of the active-listening skills employed in the consultation (Guimond et al, 2003) and are essential in helping to clarify patient and professional understanding of the issues being discussed.

Asking reflective questions helps the professional to further explore the understanding of the patient's perspective, ideas, and current self-care practices (Bertakis et al, 1991; Levinson & Roter, 1993; Poskiparta et al, 2000; Poskiparta et al, 2001). This process should enable the professional to provide information and explain ideas in a way that patients can understand and respond to, and is reported to translate into better outcomes (Ahlén et al, 2007). If patients are not asked they do not generally volunteer information (Barry et al, 2000; Greenfield & Kaplan, 1988). Questions are therefore an important part of the consultation process (Bensing, 2000) and used well they help to build rapport (Bertakis et al, 1991; Mead & Bower, 2000a; Poskiparta et al, 1998). Questions can be an excellent way to encourage patients to think and reflect, and can encourage patient involvement and develop problem-solving skills (Guimond et al, 2003; King et al, 2002; Kolb, 1984; Lang et al, 2000; Maguire et al, 1996; Toobert & Glasgow, 1991; Weston et al, 1989; Willems et al, 2005).

Patients feel involved when professionals attend to their experiences of living with the condition and attempt to understand their problems and priorities associated with their long-term, self-care management (D' Eramo-Melkus & Demas, 1989; Entwistle et al, 2008; Kravitz et al, 1994). In addition, this exploration of the patient's understanding allows personal models of diabetes to be examined in order to dispel any myths and misconceptions that patients may have (Gentili et al, 2001; Sherman et al, 2000) in order to provide reliable information to enable informed choice to occur (Anderson et al., 1995; Glasgow et al, 1997; Goodall & Halford, 1991). Lang et al, (2000) suggest three approaches to engaging patients in the consultation; firstly, through direct facilitation by using questions such as *"How do you feel about the amount you eat, how would you describe it?"*; secondly, through an indirect approach to facilitation using questions such as *"Ok, can you tell me more about that?"* or *"what else?"* and thirdly by engaging the individuals through questioning based on active listening to clues *"It sounds as if things have been difficult."*

3.4.1 Information

An understanding of how information is given during the consultation is essential to the process of patient understanding and engagement, as information provision on its own does not change behaviour (Arborelius, 1996; Cullen et al, 2001; Goodall & Halford, 1991; McClusky & Lovarini, 2005; Norris et al, 2001). How and why information is given, and the individual's response to and use of the information provided are important factors to consider when reviewing information exchange. Patients are reported as wanting understandable information (Beisecker & Beisecker, 1990; Cox et al, 2006) and it is recognised that delivery of too much complex information could leave

patients feeling overwhelmed (Entwistle et al, 2008). There is a need therefore to use active-listening techniques to reflect on information and its use (Rollnick et al, 1999). Checking with individuals that the information provided is understood by them will help to inform rather than overwhelm (Entwistle et al, 2008; Epstein et al, 2004).

Exploring how issues raised by individuals in the consultation impact on their lives will enable better provision of information to meet the individual's needs (Anderson, 1995; Bertakis et al, 1991; D' Eramo-Melkus & Demas, 1989; Epstein et al, 2004; Thorne et al, 2003; Wolpert & Anderson, 2001). It requires that the professional demonstrate an understanding of the patient's view of their condition and its treatment before information is delivered (Del Piccolo et al., 2005; D' Eramo-Melkus & Demas, 1989; Edwards et al, 2003; Epstein et al, 2004; Thorne et al, 2004; Wikblad, 1991). Exploratory questions such as *"How do you feel about the amount you eat?"* can result in greater sharing of ideas, concerns, and expectations on the part of the patient (Lang et al, 2000). Open questions should be encouraged as they facilitate patient participation, which is known to lead to improvements in outcomes (Bertakis et al, 1991; Harrington et al, 2004; Kaplan et al, 1989; Miller et al, 2002; Roter, 2000; Street et al, 1993; Willams, 1995; Willems et al, 2005). Patients report valuing opportunities to discuss their own ideas in the consultation and better outcomes have been observed as a result (Kaplan et al, 1989; Kravitz et al, 1994; Street et al, 1993; Wikblad, 1991; Williams et al, 1998). Active discussion allows the professional to match the content of the professional intervention to the patient's personal goal structure (Gable, 2007; Gebhardt, 2006) thereby improving outcomes and consultation effectiveness. Equally, active discussion can help to identify misconceptions, as patient understanding may differ considerably from the

professional (Chapelle et al,1997; Lang et al, 2000). Understanding the language that patients use to describe their diabetes provides further insight into the drivers for their behaviour (Freeman & Loewe, 2000). It is important therefore, to explore how individuals are currently using and interpreting the information that they possess (Eldh, 2006; Epstein et al, 2004).

Misinterpretations may account for lack of understanding, application, or retention of the provided information (Chapelle et al, 1997), further contributing to poor outcomes.

Patients may depend on past experiences when making decisions (Sherman et al., 2000). Using questioning to explore what went well and the barriers to achievement will help to build on past success and avoid potential pitfalls occurring again (Rosal et al, 2001; Senécal et al, 2000). Building on existing ideas to problem solve collaboratively with patients should help to guide patients in their focused reflections (Moran et al, 2008; Poskiparta et al, 2001; Skinner, 2004). This will result in more active participation, as patients are likely to seek information to clarify treatment goals (Heisler et al, 2002; Poskiparta et al, 2001; Street et al, 1993). In addition, building on patient success helps to increase their self-efficacy (Bandura, 1977), which is acknowledged as an important component of successful behaviour change (Egan, 2002; Gable, 2007; Rollnick et al, 1999). Exploratory questions will facilitate this process and may be a fourth domain of the patient-centred model of care (Little et al, 2001b). Facilitation of patient understanding may enhance patient trust (Moran et al, 2008), motivation, and sense of personal control - leading to change (Feste & Anderson, 1995; Keating et al, 2004; Najavits & Weiss, 1994; Thorn, 2000).

Within the consultation setting, the amount and type of information provision will vary (Rosal et al, 2001), as general advice will not suit all patients (Thorne, Paterson & Russell, 2003). Increasing the interactivity of the patient/professional exchange may enhance patient-centred care (Roter et al., 2008). When patients are able to express their views greater adherence has been reported (Rost, 1989), with patient participation increasing when information provided with explanations is based on individual needs (Eldh, 2006) and offered with support (Street et al, 1993). Engaging the patient in this way requires good communication skills (Little et al, 2001b), as effectively reflecting the needs of individuals will necessitate less talk from the professional and more from the patient (Davies et al, 2008; Roter et al, 2008). The Mead et al (2008) postal survey of patients showed that positive evaluation of the communication skills of GPs was strongly associated with patient enablement.

The literature clearly states that telling people what to do doesn't work (Arborelius, 1996; McClusky & Lovarini, 2005; Norris et al, 2001). To avoid this didactic approach, information should be presented in a neutral manner (Rollnick, 1996). There is some disagreement over whether information-giving is a patient-centred behaviour (Mead & Bower, 2000b). Some studies make distinctions between the provision of biomedical information and psychosocial information (Mead & Bower, 2000a; Roter et al, 1987; Street, 1992a). However, it is clear that patients cannot make choices or decisions without adequate information (Ogden et al, 2002). The patient's self-care skills and ability to understand and work with their condition is far more important than the possession of knowledge on its own (Goodall & Halford, 1991). It is important therefore, that any information provided is framed in a way that makes sense to

the patient (Huang et al, 2005; Michie et al, 2003; Thorne et al, 2003), is relevant to them (Anderson, 1995; Entwistle et al, 2008) focusing on their concerns (Donnelly & Anderson, 1990; Ockene et al, 1995; Shultz et al, 2001) and needs (Anderson, 1995; Gentili et al, 2001; Kravitz et al, 1993; Levy, 2009; Vijan et al, 2005; Watson & McKinstry, 2009; Wolpert & Anderson, 2001). This process of information sharing suggests a more collaborative approach to working with patients that involve them in the decision-making process.

The negotiation of decisions allows exploration and understanding of the patient's perspective, thereby ensuring that information is understood and used appropriately (Bertakis et al, 1991; Miller et al, 2002; Rollnick et al, 1999; Roter, 2000; Street et al, 2009; Street et al, 1993; Williams, 1995). This allows the professional to check the patient's level of understanding and self-care practice, and identify potential gaps in knowledge and misunderstandings before providing information that is personalised and tailored to the individual (Barry et al, 2000; Lang et al, 2000; Rosal et al, 2001; Thorne et al, 2003). This procedure thereby avoids the use of redundant information (Rollnick, 1996). Rollnick (1999) suggests that this exploratory approach allows motivation to change to be elicited from the patient, rather than imposed by the professional, further increasing the chances of success (Miller & Rollnick, 2002; Rollnick, 1996; Satia et al, 2001; Spahn et al, 2010).

3.4.2 Lack of involvement

Not all patients will want to be involved in their decision-making, and some may prefer a more directed approach to care (McKinstry, 2000). In a study of American high school graduates, Swenson et al (2004) found that older patients

and those with less formal education were more likely to prefer a professional-led consulting style. This preference may be partly explained by the complex needs associated with older patients, and may be related to the expectations of certain social groups (Little et al, 2001b). Asking reflective questions during information-giving sequences will enable the professional to make a judgement about how involved the patient wishes to be and will therefore help to facilitate the appropriate information-giving behaviour (Bertakis, Roter & Putnam, 1991; Levinson & Roter, 1993; Poskiparta et al, 2000; Poskiparta et al, 2001).

Furthermore, some patients may find it hard to engage in the self-care process and will therefore adopt a passive role (McKinstry, 2000). Although patients who are socially deprived and those with a lower level of education may adopt a more passive role (Greenfield & Kaplan, 1988), given the opportunity they can be encouraged to participate to a much greater extent in the consultation (Mercer et al, 2008). Patients are less motivated towards self-care when scolded (Wikblad, 1991) and when their cues, questions, or offered information are ignored (Anderson et al, 1991; McWilliam et al, 1994). Information exchanges that are controlling are potentially disempowering (Anderson, 1995; Beck, Daughtridge & Sloane, 2002; Hall et al, 1994), as few patients are motivated by pressure from others (Anderson et al, 1991; Bertakis et al, 1991; Carter et al, 1982; Satia et al, 2001). This type of approach may increase resistance to change (Hall et al, 1994; Miller & Rollnick, 2002) and may even result in patients doing the opposite of that proposed by the professional (Miller & Rollnick, 2002). Understanding patient resistance or lack of desire to change is important. Adopting empathic communication demonstrates respect through non-judgemental responses, and is more likely to lead to appropriate information delivery for the patient and an improved chance of long-term and

sustained change. Directive information to coerce behaviour change may result in decisions that do not meet the perceived needs of the patient.

3.4.3 Facilitation

Patient-centred communication therefore promotes interaction and collaboration, enabling the development of appropriate care plans (Ammerman et al, 2002; Michie et al, 2003; Poskiparta et al, 2001) and strategies for achieving dietary goals (Rosal et al, 2001; Street et al, 1993; Trudeau & Dubé, 1995). The respect developed through facilitative communication has been shown to yield strong results in terms of patient satisfaction and self-reported adherence in medical consultations (Fuertes et al, 2008; Hall et al, 2002; Theunissen et al, 2003).

Collaborative relationships are said to support adaptive learning in patients to help develop problem-solving skills (Health Development Agency, 2003), whereas problem-solving (Lorenz et al, 1996; Spahn et al, 2010) and decision-making abilities have been indicated as independent predictors of self-care practises (Clark & Hampson, 2001; Lorig et al, 2005; Toobert & Glasgow, 1991).

Collaborative working with patients is therefore proposed as a method to achieve better control in consultations (Aiken et al, 2005; Flocke & Stange, 2004; Greenfield & Kaplan, 1988; Spahn et al, 2010; Stewart, 2001; Street, 1992b; Trudeau & Dubé, 1995) and is a key feature of patient-centred counselling models (Anderson, 1995; Egan, 2002; Rosal et al, 2001).

Collaborative working requires professionals to be less domineering and

coercive and more patient-centred in their approach (Moran et al, 2008; Stewart, 2001; Street et al, 2005; Williams, 1995). Provision of advice without pressure or control supports intrinsic patient autonomy (Feste & Anderson, 1995; Rubin et al, 2002; Shultz et al, 2001; Stewart, 2001; Street et al, 2005; Williams, 1995). It has also been shown to improve glycaemic control (Williams et al, 1998). These greater facilitation skills are particularly important for complex areas of behavioural change such as diet (Heisler et al, 2007; Pearson & Rapoport, 2007) where they have been shown to improve dietary implementation (Trudeau & Dubé, 1995).

3.5 Conclusions

This chapter has provided an overview of the essential skills needed for effective patient-centred communication. Empathy is a crucial component in patient-centred communication. The ability to acknowledge and respond to patient empathic cues and accurately reflect back understanding requires good communication skills, particularly active-listening skills (Neumann et al, 2009; Norfolk et al, 2007). This suggests that in order to explore empathy appropriately and to provide meaningful data, information needs to be collected not only on the presence of potential empathic opportunities in the consultation, but also on the communication skills used to demonstrate empathy in response to these cues (Neumann et al, 2009; Norfolk et al, 2007). Lack of active listening skills may limit patient expressions of empathy and adversely impact on levels of recall.

These identified communication skills are essential for effective self-care management strategies that utilise a range of behavioural approaches (NICE,

2007). A number of behavioural approaches have been applied in dietetic and diabetic practice to support patient-centred care (Anderson et al, 1995; Bridle et al, 2005; Clark & Hampson, 2001; Deakin et al, 2006; Epstein et al, 2005; Feste & Anderson, 1995; Georgiadis et al, 2006; Jones et al, 2003; Povey et al, 1999; Rubak et al, 2005; Salmela et al, 2009; Schnoll & Zimmerman, 2001; Spahn et al, 2010; Williams et al, 1998; Williams et al, 2004). However, effective use of these patient-centred communication skills will dictate whether these models are applied effectively in practice (Brug et al, 2007; Michie et al, 2003). The lack of strong evidence to support the effectiveness of the application of models to patient-centred care in practice may reflect the lack of appropriate communication skills and behaviours of the professionals who use them (Hampson et al, 1995; Salmela et al, 2009). Furthermore, the NICE (2007) guidelines on behaviour change suggest that behaviour-change training should focus on key competencies and skills rather than particular behaviour-change theories and models.

These reports add to the need for research that reviews the specific patient-centred communication skills used in consultations and their impact on outcomes, before mapping identified skills to the relevant behaviour-change theories as suggested by Abrahams & Michie (2008).

The studies reviewed in this chapter are of mixed quality and include both quantitative and qualitative research. The majority are conducted on physician consultations and there is limited data available exploring dietetic consultations (Cant & Aroni, 2008; Whitehead et al, 2009). While these studies appear to suggest that skills such as empathy, active listening, information exchange and

patient involvement are important for patient-centred communication, care should be taken when extrapolating data from medical to dietetic consultations. Professional and patient expectations have been shown to differ and this may impact on the communication process that occurs within the different consultations (Kravitz et al, 1993; Zambelt et al, 2004). Female physicians demonstrate greater empathy and more supportive communication than their male colleagues (Roter et al, 2002) and as dietetics is predominately a female profession gender may be an additional factor influencing communication in dietetic consultations. There is variation in the definitions of patient centred communication and in the range of indirect and direct measures employed for assessing the communication skills/behaviours in studies reviewed. This adds to the lack of clarity on the specific skills being assessed and prevents direct comparison between studies (Epstein et al, 2005; Stewart, 1995). This chapter highlights the complex nature of patient-centred communication and the need therefore to explore the interrelationships of a number of clearly defined skills/behaviours to enable their interaction effects to be examined more fully. Linking identified skills and behaviours to a measurable outcome has the potential to provide feedback on skill use as well as providing a direct measure of the effectiveness of the dietitians' interaction on consultation outcomes.

3.6 Summary

This chapter has highlighted the need for a patient-centred approach when working with individuals with a chronic long-term condition. This approach requires the professional to engage with patients using a range of patient-centred communication skills. This skill set encompasses empathy, active-

listening skills (reflections, paraphrasing, summarising, exploratory questions, supportive and positive statements), and information exchange.

The overlapping nature of these patient-centred communication skills means that they cannot be studied in isolation, as meaning is derived from their combined use. In order to address the question of empathy and its effect on agreement on reported decisions made, active listening skills and information exchanges will need to be explored alongside empathy. This will enable the identification of their impact on each other and on patient/professional agreement on the reported decisions that are made.

CHAPTER 4: PATIENT SATISFACTION, PATIENT AUTONOMY AND PATIENT SELF-EFFICACY AND THEIR INFLUENCE ON EMPATHY AND AGREEMENT ON RECALL

This chapter provides information on the concepts of patient autonomy, self-efficacy, and patient satisfaction, and the rationale for including these measures in the study to explore patient-centred communication and its impact on agreement on reported decisions made.

4.0 Introduction

The previous chapter has highlighted the importance of patient-centred communication skills to engage in effective dialogue with the patients, to improve self-care management, leading to better health outcomes. In particular the importance of empathy and its impact on agreement on recall have been raised. However, the communication process that occurs in the consultation is complex and other factors may play a role in influencing behaviours and outcomes (Newman et al, 2004). To provide a clearer picture of this process, additional concepts that have been measured against empathy and recall need to be included in the design of the study. The concepts of patient satisfaction, patient autonomy, and patient self-efficacy have been measured and correlated with empathy and agreement on recall (Goodchild et al, 2005; Hurley & Shea, 1992; Parkin & Skinner, 2003; Zachariae et al, 2003). These concepts therefore need to be considered when designing a study to explore empathy and agreement on reported decisions made. The rationale for inclusion of these measures in the study design is provided below.

4.1 Patient Satisfaction

Patient satisfaction has been used widely to measure quality of services and delivery from professionals (Health Services Research Group, 1992), with studies focusing on assessment of satisfaction in relation to parameters measured in the consultation or resultant outcomes. Assessment of medical consultations has shown that when doctors have failed to provide a positive patient-centred approach, patients have reported less satisfaction with the consultation (Krupt et al, 2000; Roter, 2000). In contrast, greater patient satisfaction resulted when consultations included: sharing of understanding, greater involvement of the patient (including information-giving) and flexible discussion moving between relevant topics (Crow et al, 2002; Fossum & Arborelius, 2004). Encouraging patients to raise issues and discuss symptoms therefore not only increases patient satisfaction, it also has a positive impact on patient perception of communication and outcomes (Little et al, 2001a; Williams et al, 1998). In their qualitative analysis of 44 GP consultations, Moran, et al (2008) provided further insight into the dialogue process, suggesting that providing patient reassurance alone is not enough to increase patient satisfaction, but rather it is the partnership-building component of the interaction that increases patient satisfaction. This highlights the importance of the patient/professional interaction in the consultation and the engagement of patients in the consultation process. Although one study found that activating patients through engagement decreases satisfaction, as patients were more frustrated with the service as a result, other studies have not been able to replicate this (Greenfield & Kaplan, 1988; McCann & Weinman, 1996).

Rost & Roter (1987) found that patient adherence might be mediated by patient satisfaction. Other studies suggest that recall of advice as well as memory is influenced by patient satisfaction (Bartlett et al, 1984; McCann & Weinman, 1996). In their study of 840 renal patients, Coyne et al (1995) suggested that the extent of the dietary change recommended for the individual might be a factor to consider when assessing patient satisfaction. They demonstrated that the greater the impact of the dietary change the lower the level of patient satisfaction, participants whose prescribed protein intake more closely matched their usual intake were more satisfied and had better dietary adherence.

Content analysis involving people with diabetes and their perceptions of physician consultations has identified further factors that support satisfaction in the consultation. These included patient autonomy, empathy, feeling worthy, being attended to (Williams et al, 1998), reinforcement (Vickery & Hodges, 1986), feeling safe and confident, and being in agreement about goals (Hornsten et al, 2005). In the latter paper, the authors suggested that satisfaction and patient-centred care have many features in common; whereas Zachariae et al (2003) found that greater empathy in the consultation was associated with greater patient satisfaction and with higher frequency of patient-centred behaviours. However, these two studies used questionnaires, rather than direct measures of observed skills used by physicians and nurses. As perception of care has been shown to vary from practice the measures of perceptions of skills in these studies may not provide a reliable indicator of the actual skills used in practice (Latter et al, 2007; Parkin & Skinner, 2003; Pill et al, 1999). A study to quantify GP behaviours in the consultation with patient satisfaction further highlights the complexity of this type of assessment.

Rowland-Morin & Carroll (1990) quantified GP behaviours of silences, language reciprocity and reflective use of interruptions with patient satisfaction, and were able to contribute 27% of the variance in satisfaction to these communication behaviours. This study highlights further the need for good communication skills to support patient satisfaction.

Doctors have been shown to be poor at predicting patient satisfaction in the consultation (Hall et al, 1999; Mc Kinstry et al, 2006; Merkel, 1984; Zachariae et al, 2003). A small study of nurses and dietitians obtained a similar finding, where patient satisfaction and professional satisfaction as an outcome measure for the consultation were not found to correlate (Parkin & Skinner, 2003). This suggests that data collection that focuses solely on patient or professional perception may not provide a clear picture of the process that has occurred. Zachariae et al (2003) were able to show that more empathic physicians assessed patient satisfaction more accurately. To assess patient satisfaction accurately, prior knowledge of the empathic skills of the professionals involved is therefore needed before using the perception measure of satisfaction. This may not be a feasible option in a busy clinic setting, as it is adding an additional layer to the assessment of consultation skills and their effectiveness. However, it does highlight that patient satisfaction measures alone may not be adequate to assess the effectiveness of consultations due to the overlapping nature of the behaviours associated with satisfaction and patient-centred care (Sixma et al, 1998). One systematic review also suggested that age and health status might affect satisfaction, with satisfaction being reported as lower in sicker patients. The authors also suggested that improving patient satisfaction may be one way

to improve patient health, with the patient/professional relationship as the main route to achieving this (Crow et al, 2002).

Patient satisfaction data therefore needs to be collected in conjunction with other data in order for the findings to provide any useful meaning (Health Services Research Group, 1992). The studies reviewed appear to suggest that an improved relationship between the patient and the provider, as demonstrated through good rapport, may be one way to improve patient satisfaction. This will require good active listening skills on the part of the professional, as these are needed to demonstrate empathy and understanding (Egan, 2002). Greater empathy in the consultation might therefore be the mechanism by which greater levels of patient satisfaction occur.

4.2 Patient autonomy

Patient autonomy is the patient's perceived ability to make an informed choice. Perceived autonomy support is the measure of the patient's perception of support in making their choice, which is not coerced, but informed by the health care professional (Deci & Ryan, 1985). This concept is derived from Self-Determination Theory, which states that behaviour is autonomously motivated when willingly chosen and initiated by the individual (Deci & Ryan, 1985). Self-Determination Theory suggests that autonomous support is predictive of autonomous motivation.

The causal role of autonomy support in developing autonomous motivation and perceived competence has been demonstrated in smoking cessation studies, resulting in greater abstinence (Williams et al, 2006). Applying this model to

self-care management has resulted in significant improvements in glycaemic control up to 12 months after the intervention and weight loss (Williams et al, 1998). Greater perceived autonomy support resulted in greater autonomous motivation to manage diabetes, leading to greater self-care and improved metabolic control (Arborelius, 1996; Golin et al, 1996; Greenfield & Kaplan, 1988; Kaplan et al, 1989; Mead & Bower, 2000a; Skinner & Cradock, 2000; Street et al, 1993; Williams et al, 2000; Williams et al, 2004).

Computer-assisted interventions applying Self -Determination Theory have also resulted in changes in lipids, diabetes distress, and depressive symptoms (Williams et al, 2007). This theory illustrates the importance of perceived autonomy support in changing perceived competence, leading to changes in health outcomes. Training professionals to increase their support of patient autonomy may be an important route towards improving diabetes outcomes (Parkin & Skinner, 2003; Street et al, 1993; Williams et al, 2005). In addition, a small study of 40 dietitian consultations found that patients reported more autonomy support when they created more empathic opportunities during their consultation (Goodchild et al, 2005). This study further highlights the possible role of empathy and communication skills in promoting patient autonomy in the consultation.

A small study of 77 patients showed that when patients reported higher autonomous motivation they also reported higher maintenance of diet ($P < 0.0001$) (Shigaki et al, 2010). Longitudinal studies have shown that greater autonomous motivation was related to compliance of dietary self-care activities up to six months later (Williams et al, 2004). In their study of 365 patients with

type 2 diabetes, Julien et al (2009) demonstrated the ability of autonomous motivation to predict dietary compliance ($\beta = 0.22$) up to one year after the consultation. This study also suggested that active planning strategies might be another path by which people with diabetes can develop their autonomous motivation. Active planning is the process whereby patients have the ability to make informed choices about dietary behaviours with the encouragement of professionals who help them to identify, initiate and solve problems in order to implement their chosen solution (Williams et al, 2004).

Studies suggest that supporting patients through active listening and empathic understanding may help support patients sense of autonomy leading to agreement on recall.

4.3 Self-efficacy

Self-efficacy is a person's belief in their ability to succeed in a particular situation (Bandura, 1977). A patient's perceived level of self-efficacy has been demonstrated to be a powerful influencer of adherence in diabetes care (Glasgow & Osteen, 1992; McCaul et al, 1987; Nakahara et al, 2006; Rubin et al, 1993). Self-efficacy is an indicator that patients have the confidence to overcome barriers associated with self-care practices (Kingery & Glasgow, 1989; McCaul et al, 1987). In their study of 256 Japanese people with type 2 diabetes, Nakahara et al (2006) found that adherence to diet correlated significantly with diabetes self-efficacy ($r = 0.56$, $P < 0.01$) and was found to be positively correlated with future glycaemic control. However, these patients

were not typical of a UK population⁴, as average BMI for this group was 22 and there was a low presentation of diabetic complications, despite the long duration of diabetes. The study of 638 members of the Quebec Diabetes Association by Sénécal et al (2000) more typically reflects the UK population. The authors found that self-efficacy was significantly associated with self-reported adherence to diet ($\beta = 0.54$). Self-efficacy has been shown to account for 56% of the variation in studies looking at dietary changes and their effect on cholesterol levels (van Beurden et al, 1991), suggesting that self-efficacy is an important measure for assessing dietary change. Self-efficacy has also been shown to be powerful on specific behavioural tasks (Maibach & Murphy, 1995), such as modelling strategies to avoid overeating in stressful situations (Hinton & Olson, 2001), and on the use of goal setting and self-monitoring to increase dietary behaviour change (Schnoll & Zimmerman, 2001). Lack of promotion of self-efficacy in goal setting may contribute to poor goal agreement and recall (Cullen et al., 2001). Encouraging patients to set their own goals is therefore a vital step in increasing self-efficacy (Michie et al, 2003). Social support has also been shown to increase self-efficacy (Sousa et al, 2004). The daily difficulties of living with diabetes with limited social support may decrease self-efficacy (Nakahara et al, 2006). Self-efficacy and outcome measures are therefore important indicators for self-care and should be targeted for change by interventions from the professional (Miller et al, 2002). In young people with type 1 diabetes, self-efficacy has been shown to be a predictor of self-care behaviours (Johnston-Brooks et al, 2002), whereas other studies suggest that improving self-efficacy may lead to improved self-care management ability

⁴ 80% of people with type 2 diabetes in the UK are overweight at diagnosis presenting with a BMI > 25 (Astrup & Finer, 2000)

(Krichbaum et al, 2003). Patients who exhibit greater control over the decisions made in the consultation have greater agreement on the decisions made and higher levels of self-efficacy (Heisler et al, 2003). Self-efficacy is therefore an important factor to consider in dietetic consultations, as this may lead to improvements in self-care management (Hurley & Shea, 1992; Knight et al, 2006). Although self-efficacy is a necessary condition for behaviour change, one study suggests that perceived self-efficacy alone may not be enough to explain behaviour or motivate action (AbuSabha & Ahterberg, 1997). This concept therefore needs to be explored alongside other measures to assess its role in improving patient recall.

4.4 Relationship between empathy, patient satisfaction, patient autonomy and patient self-efficacy with agreement on reported decisions made

The hypothesis here is that greater levels of empathy in the consultation will result in greater agreement on reported decisions made in the consultation. Greater empathy will result in greater levels of patient's satisfaction, but the effect of the dietitian's empathy may be mediated differently by the patient's perception of autonomy support and patient self-efficacy.

The casual model in Figure 4.5 explains the postulated relationship between empathy and agreement on reported decisions made in the consultation.

It illustrates the cause and effect sequence between the independent variable of empathy and the identified mediating variables of self- efficacy and patient autonomy (Baranowski et al, 2003).

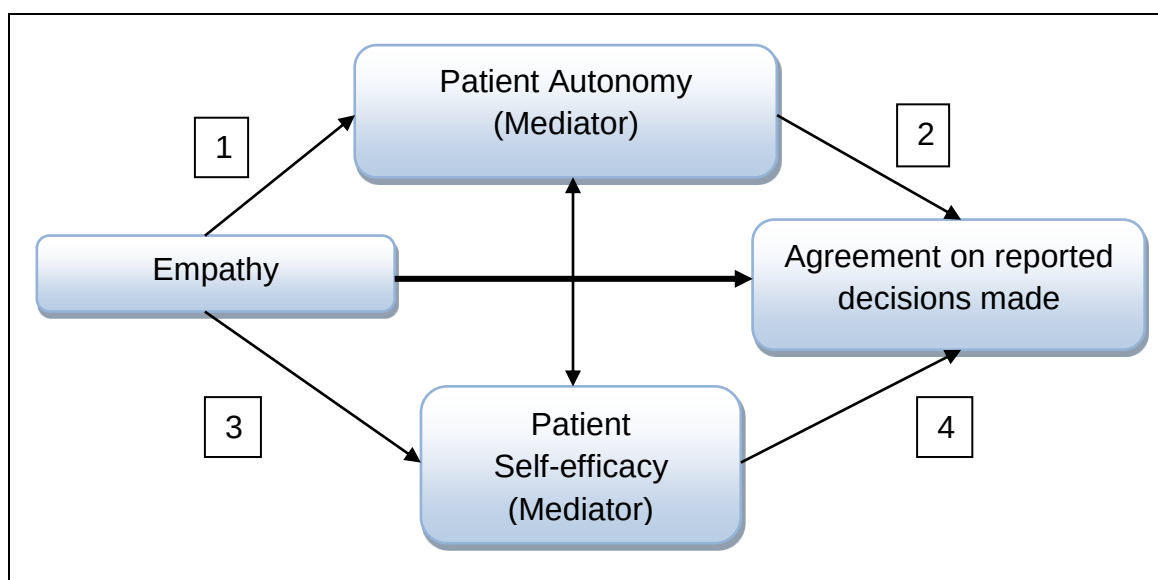


Figure 4.5: Causal relationship between empathy and agreement on reported decisions made in the consultation

The presence of professional empathy helps to build a good therapeutic relationship through active listening (Norfolk et al, 2007). When patients feel understood and listened to, this may help to increase their perception of autonomy support provided by the professional (arrow 1). As patient autonomy increases, levels of patient and professional agreement on reported decisions may increase (arrow 2) (Parkin & Skinner, 2003). Active listening, as evidenced through empathy skills, may help to develop self-efficacy in patients (arrow 3). Increased self-efficacy results in increased self-reported adherence to dietary self-care activities (Senécal et al, 2000). This may result from the increased agreement on dietary self-care decisions made in the consultation (arrow 4).

This relationship needs to be explored through statistical analysis. Moderating factors such as age, gender, and duration of diabetes and presence of complications need to be considered when analysing data as these factors may impact on outcomes (Baron & Kenny, 1986; Kenny, 2008).

4.5 Conclusion

The complex inter-relationships between empathy, self-efficacy, patient autonomy and agreement on reported decisions made have yet to be fully explored, as does the understanding of how these factors relate to information-giving and the subsequent impact on agreement on reported decisions made. The complex nature of dietary behaviour-change and relationship to outcome measures requires a number of predictors to be addressed to try and explain and expand on this area (AbuSabha & Ahterberg, 1997; Epstein et al, 2005; Newman et al, 2004).

The model proposed in Figure 4.5 provides some indicative measures of communication behaviours tested through concepts of self-efficacy and patient autonomy. In addition, patient satisfaction will be measured to assess its impact on empathy. Validated measures are available for assessing patient satisfaction, patient self-efficacy, and patient autonomy. The measurement of the presence of specific communication skills of empathy, active listening, and information giving in the consultation will be addressed in the next chapter.

CHAPTER FIVE: EXPLORING TOOLS SUITABLE FOR ANALYSING DIETETIC CONSULTATIONS

The patient-centred communication skills identified previously in Chapter Three are: empathy, active listening skills, shared decision-making, and information exchange. This chapter describes the exploratory study set up to identify suitable tools for analysing patient-centred communication skills in dietetic consultations. It includes tool selection and application thereof, and the resultant findings in terms of tool-suitability for analysing patient-centred communication behaviours.

5.0 Introduction

The majority of studies exploring communication skills in medical consultations have been conducted using a variety of interactive coding tools, which explore in detail the dialogue between doctor/physician and patients (Cegala, 1997; Dent et al, 2005; Ford et al, 2000; Ram et al, 1999; Roter, 2003). There is limited reported use of these coding tools for exploring consultations with other professionals (Eide et al, 2011; Goodchild et al, 2005; Roter, 2003). This raises the question of how effective these tools will be for identifying patient-centred communication skills in dietetic consultations, not only in terms of content, but also in the light of differing patient/professional expectations (Anderson, 1981; Hampson & McKay, 1996; Kravitz et al, 1993; Levy, 2009; Schrimmer et al, 2005; Street et al, 1993; Zandbelt et al, 2004). The emotional, social and psychological impact of dietary changes will result in different issues being addressed, which in turn may require a different set of skills and or behaviours to be utilised by dietitians and other professionals in order to improve outcomes (Anderson, 1981). There is some evidence to suggest that patients are more

expressive when interacting with nurses than physicians (Campbell et al, 1990). Whether this is true for dietitian/patient interaction has yet to be established. The question remains of how best to assess the presence of patient-centred behaviours used by dietitians in dietetic consultations.

5.1 Selection of a Tool

A pilot study was designed to explore the use of a number of coding tools and identify those tools suitable for exploring patient-centred communication skills in dietetic consultations. Patient-centred communication skills have been identified as empathy and active listening skills (which include reflections, paraphrasing, summarising, exploratory questions, positive statements and information-giving). Fifteen patients with diabetes consented to have the dietitian make an audio-recording of their consultations. Only 12 of these recordings were of a suitable quality to be transcribed. The following results describe the process of coding the 12 transcribed tapes with the interactive coding tools highlighting issues that arose with the use of these tools (See Appendix 1.1 for details of study recruitment, participants, and design).

Tools based on verbal behaviour coding scales are considered to be more reliable than broadly-defined behaviours for communication analysis, as they are less subjective in observer interpretation (Mead & Bower, 2000a). Consequently, verbal behaviour coding tools were selected for exploratory analysis.

The first section of this chapter explores the measurement of empathy using the Empathic Communication Coding System (ECCS) (Bylund & Makoul, 2005).

The remaining section explores the measurement of patient-centred communication skills (active listening) using the Roter Interactive Analysis System (RIAS) (Roter, 2005), the Verona medical interview Classification system – Doctor VR-MICS/D (Del Piccolo et al, 2005) and the Reflective Practice Coding System (Anderson et al, 1995). This includes: reflecting, summarising, paraphrasing, exploratory questions, and information exchange.

5.2 Coding for Empathy

5. 2.1 Empathic Communication Coding System (ECCS)

The empathic communication coding system (ECCS) was chosen, as this tool focuses on behavioural empathy by exploring the professional's verbal response to direct empathic opportunities raised by the patient (Bylund & Makoul, 2002). This measure has previously been used to explore dietetic consultations (Goodchild et al, 2005). Although the ECCS appeared to have potential for measuring empathy in dietetic consultations, a number of problems were identified with the coding system and changes were recommended. The original ECCS coding system used (*ibid*) has since been amended by Bylund & Makoul (2005), whereby a further coding level for empathic responses by professionals has been added which is similar to the one proposed by Goodchild et al (2005). A sample of 100 consultations showed the inter-coder reliability of this additional coding level to be acceptable (Cohen's kappa = 0.74).

The exploratory analysis seeks to assess the usefulness of the 2005 version of the ECCS for coding dietetic consultations. The additional coding level should provide greater differentiation of skills used to demonstrate behavioural

empathy. In addition, the ECCS codes from video recordings this exploratory analysis will assess the feasibility of using the coding system on audio recordings.

The ECCS coding involves listening to the recordings while coding to allow for tonal qualities of voice to aide interpretation and codes empathy in two stages. The first stage involves coding the empathic opportunities presented by the patient (Table 5.6).

Statement of Emotion: Emotion is defined as “an affective statement of consciousness in which joy, sorrow, fear or the like is experienced.”

Statement of Progress: the patient states or describes a positive development in physical condition that has improved quality of life, a positive development in the psychosocial aspect of the patient’s life, or a recent, very positive, life-changing event.

Statement of Challenge: the patient states or describes a negative effect a physical or psychosocial problem is having on the patients’ quality of life, or a recent devastating, life-changing event.

Table 5.6: Identification of empathic opportunities (ECCS) adapted from Bylund & Makoul, 2002⁵

The second stage involves coding the dietitian's response to the empathic opportunities presented. These are scored on a scale of 0 – 6 (Table 5.7). Full coding tables are presented in Appendix I.2.

⁵ Reprinted from Bylund, C. L. & Makoul, G. (2002) ‘Empathic communication and gender in the physician-patient encounter’, *Patient Education & Counseling*, 48(3), pp. 207-216 with permission from Elsevier

Level 6: Statement of shared feeling or experience
Level 5: Confirmation
Level 4: Acknowledgement with pursuit
Level 3: Acknowledgement
Level 2: Implicit recognition of patient perspective
Level 1: Perfunctory recognition of patient perspective
Level 0: Denial of patient perspective

Table 5.7: Coding system for empathic responses made to patient empathic opportunities (ECCS) adapted from Bylund & Makoul 2005⁶

If the dietitian's response to an empathic statement fell into more than one of the coding levels of the ECCS, the highest level was taken as the coded response. Codes between levels 3 and 6 illustrate that the dietitian had conveyed explicit recognition of the patient's perspective and demonstrated some form of empathy (Bylund & Makoul, 2002). All codes allocated were entered onto an Excel spreadsheet. The mean level of empathy for each consultation was computed by taking the sum of the empathic responses and dividing by the total number of empathic opportunities made in the consultation (Bylund & Makoul, 2002). The same method was used to compute the mean level of empathy for each empathic component (statement of emotion, statement of progress and statement of challenge).

5.2.2 Analysis using Empathy Coding System

Dietitians in this sample did not miss any of the empathic opportunities raised by the patient. The mean number of empathic opportunities per consultation was 16 (range 3-29), with a mean level of empathy of 2.99 (SD 0.52). A

⁶ Reprinted from Bylund, C. & Makoul, G. (2005) 'Examining empathy in medical encounters an observational study using the empathic communication coding system' *Health Communication*, 18(2), pp123-140 with permission from Elsevier

summary of the number of empathic opportunities provided and the dietitian's response to these is provided in Table 5.8.

Empathic statements made by patient	Number of empathic statements made	Mean empathic response to empathic statements (SD)
Statement of Emotion (SE)	28	2.56 (1.67)
Statement of Progress (SP)	60	2.68 (1.36)
Statement of Challenge (SC)	106	2.73 (1.08)
Total empathic opportunities presented (EOP)	194	

Table 5.8: Empathic opportunities and dietetic response to these for the 12 dietetic consultations analysed

This data shows that patients are presenting with more statements of challenge in the consultation, than statements of progress or statements of emotion. The empathic response to statements of challenge is also greater than the empathic response to statements of progress and to statements of emotion.

Table 5.9 provides more detailed information on the different coding levels applied to the empathic responses made by dietitians to the patient empathic opportunities presented in the consultations.

Level	Empathy description	<i>n</i> (N=194)	Percentage
6	Shared feeling and experience	0	0
5	Confirmation	25	13%
4	Acknowledgement with pursuit	29	15%
3	Acknowledgement	119	61%
2	Implicit recognition	19	10%
1	Perfunctory responses	0	0
0	Denial	2	1%

Table 5.9: The responses of dietitians to empathic opportunities

A full summary of the codes obtained using the ECCS can be found in Appendix 1.3.

Dietitians did not share feelings or experiences with patients; therefore codes were not allocated to the empathic level 6 “statement of shared feeling and experience.” It is questionable whether this code fits into these coding criteria as provision of own experiences and feelings may override or belittle the patient's experience (Gable, 2007). Previous studies with dietitians have also noted the lack of use of this code in consultation analysis (Goodchild et al, 2005). Codes were also not allocated to level 1 “*perfunctory recognition of patient perspective*” as coding was from audio recordings rather than video and so this coding was unable to pick up on non-verbal behaviour. Previous studies using the ECCS have noted minimal responses to this coding level (Goodchild et al, 2005) with a reported response of 1.6% (Bylund & Makoul, 2002) to 4.6% (Bylund & Makoul, 2005). Given its limited use and the fact that level 1 does not have a positive impact on the measure of empathy, this coding level will be removed for the analysis of the audio recordings. *Implicit recognition* will then move from a level 2 to a level 1 position. *Minimal encouragers* are found in the ECCS coding under acknowledgement level 3 (Bylund & Makoul, 2002; Bylund & Makoul, 2005), and these will be moved down to a level 2 response. Goodchild et al (2005) have suggested the splitting of *minimal encouragers* from level 3. Coding for *minimal encouragers* at level 2 takes into consideration that acknowledgment through empathy is more than a “yes,” “no” or “mmm” response. Behavioural empathy is about demonstrating listening through verbal responses, which illustrate the listener's attempts at understanding what has been said, eg “*It sounds as if things have been tough over the last few weeks*”

or “when you say it was hard to manage, could you explain that a bit more”.

Thus, *acknowledgement with pursuit* and *confirmation* demonstrate through reflection and questioning that one is hearing what the patient has said and is trying to understand (Gable, 2007; Goodchild et al, 2005; Shillitoe, 1994). The coded responses for empathy that reflect positive engagement should be the ones that are coded at levels 3-6, as suggested by Bylund & Makoul (2005). The revised coding level definitions are outlined in Table 5.10 below.

Level	Empathic description of category
6	Shared feeling or experience
5	Confirmation (let me check I heard you correctly and I understand)
4	Acknowledgement with pursuit (I hear you - help me understand)
3	Acknowledgement reflective listening (I hear you) active
2	Heard non-active minimal encouragers (mm..., yes.)
1	Implicit recognition (hearing but not listening)
0	Denial not listening

Table 5.10: Revised coding levels for empathy adapted from Empathic Communication Coding System (ECCS) Bylund & Makoul 2005

5.3 Coding for patient-centred communication skills

The RIAS, Verona, and reflective-practice coding tool were selected for exploratory analysis of patient-centred communication skills. The RIAS and the Verona are comprehensive tools that enable coding of all patient and physician dialogue in the consultation and are therefore expected to capture all aspects of patient-centred communication skills highlighted. The reflective-practice coding tool focuses on specific verbal responses of the professional that illustrate patient-centred working as shown by: reflections on patient’s feelings or goals,

exploration of issues raised by patients and problem-solving alongside non-judgemental responses. These tools may provide a detailed picture of the patient-centred communication skills used by dietitians in consultations.

5.3.1 Roter Interactive Analysis System (RIAS)

The RIAS was chosen as this has been used widely in doctor/patient communication, and therefore is considered to be a reliable tool for looking at content analysis of the consultation (Roter, 2005; Roter, 2009; Roter et al, 1997). It looks at both patient and doctor dialogue in detail. The coding frame employed allows exploration of empathy, information -giving, and listening skills.

A manual copy of the coding analysis system by Debra Roter (Roter, 2005) was used for analysis. Although a CD-ROM for analysis does exist, it was not felt to be necessary for the purpose of this exploratory study. The RIAS codes both patient and professional dialogue and focuses heavily on task-focused categories, of which there are 29 that ask questions and give information and 14 that are socio-emotional. A section of the coding categories is shown in Table 5.11 (Full coding categories are provided in Appendix 1.4).

Socio-emotional Exchange	Task-Focused Exchange
Personal remarks, social conversation	Transition words
Laughs, tells jokes	Gives orientation, instructions
Shows approval – direct	Paraphrase/Checks for understanding
Gives compliment – general	Bid for repetition
Shows agreement or understanding	Asks for understanding
Back-channel responses	Asks for opinion
Empathy	Asks Questions (closed-ended) – medical condition
Shows concern or worry	Asks Questions (closed-ended) – Therapeutic regimen
Reassures, encourages or shows	Asks Questions (closed-ended) – lifestyle

Table 5.11: Coding categories for RIAS (Roter, 2005)

Consultations were coded directly from the audio recordings, allowing tone of voice to help in defining the meaning of the words and utterances. For example,

“the word OK, could be coded as agreement, asking for understanding, indicating transition or coded as a back-channelling response” (Roter, 2005).

The transcript was also marked for the number of utterances that would require coding. A gap of more than one second was coded as a separate utterance with this system. All codes allocated were entered onto an Excel spreadsheet. Any issues relating to the use of RIAS for coding the dietetic consultations were noted for discussion later. There are no reports in the literature of the RIAS being used to code dietetic consultations.

5.3.2 Verona Medical Interview Classification System – Doctor VR-MICS/D

The Verona Medical Interview Classification System has been developed to look at interviewing skills of doctors and in particular to measure responses to emotional issues that patients raise. It looks in detail at both patient and doctor responses, focusing on the emotional content of speech (Del Piccolo *et al*, 2005). This system has two separate coding systems: one for coding patient speech and one for coding doctor speech. The inter-rater and intra-rater reliability of the English translation of the Verona has shown to be good for both patient and doctor coding systems, eg a doctor agreement of coding categories of 88-91% and a Cohen kappa value of 0.86-0.91 (*ibid*). For this analysis, the doctor coding system was chosen to enable the dietitian's speech to be explored in detail. There are no reports in the literature of the VR-MICS/D being used to review dietetic consultations.

The identification and classification of verbal events were coded directly onto the transcripts after the transcripts had been divided into units of speech. A unit of speech was defined as an utterance with a start and an ending. The utterance could end because the speaker chose to stop of his or her own volition or because of an interruption. However, when the utterance changed content or process category, this too counted as a unit of speech (Del Piccolo *et al*, 2005). According to the Verona classification, a unit of speech may be as short as one word or as long as several sentences (Del Piccolo *et al*, 2005). Units of speech were coded and assigned to one of 22 mutually exclusive categories. These were then assigned under the following six headings: patient facilitating, patient supporting, patient education, negative talk, information gathering, and patient involving (see Table 5.12). The recordings were played

while the coding of the transcripts took place, as tone of voice might have added additional meaning to the words uttered. Categories classified as patient-centred are printed in italics.

Patient facilitating	Patient supporting
Conversation Welcome, taking leave, small talk, jokes Facilitations Neutral <i>Affirmative</i> reflecting Transitions Orienting expressions Orienting explanations	Agreement Reassurance Appraisal Respect, empathy, legitimating, participation
Patient education	Negative talk
Giving information Illness management Psychological/psychosocial Giving instruction Illness management Psychological/psychosocial Brief answers	Disapproval
Questions	
Information gathering	Patient involving
Closed ended and open ended directive Illness management Psychological/psychosocial Non-directive Questions/completing patient agenda	Asking for repetition Asking for understanding Check Clarifying, summarising, checking (interrogative reflecting) Asks for opinion <i>Illness management</i> Psychosocial topics

Table 5.12: Coding categories VERONA Doctor VR-MICS/D⁷

⁷ Permission to use VR-MICS/D granted by Professor L Del Piccolo

All codes allocated were entered onto an Excel spreadsheet. Any issues relating to the use of the VERONA Doctor VR-MICS/D for coding the dietetic consultations were noted for discussion later.

5.3.3 Reflective-Practice Coding Tool

The reflective-practice coding tool was chosen as this focuses heavily on patient-centred care by looking at responses to patient's dialogue that support patient-centred working (Anderson et al, 1995). It has been used in professional training sessions on empowerment to provide participants with a marker of how, as a result of training, their responses have changed to become more empowering and less didactic and directive in the consultation (Anderson et al, 1995; Anderson et al, 1991). The empowerment model explores patient involvement, ownership, and sense of control (Anderson, 1995; Funnell & Anderson, 2004; Funnell et al, 2005). Essentially, this coding tool reflects on how empowering a consultation is, by coding verbal responses to patient dialogue that allow reflection, exploration and problem solving. A greater number of positive responses reflect greater patient-centred working (Anderson & Funnell, 2005a).

The reflective-practice coding system codes responses to patient's verbal expressions as outlined in Table 5.13. The recordings were listened to whilst coding responses. Examples of responses obtained from transcripts are in the right-hand column.

	Codes	Responses
+ 2	Focusing on feelings or goals	<i>“So was that worrying you then?”</i> <i>“So how do you feel you’re coping at the moment then?”</i>
+ 1	Problem exploration	<i>Ok, so what affect does it have on your diabetes? You mentioned twice that it’s not good for your diabetes.”</i> <i>“So what were your thoughts on that?”</i>
0	Miscellaneous	
- 1	Solving problems for the patient	<i>“Well you could still put it in a book”</i>
- 2	Judging the patient	<i>“Well at least its healthy and not many calories in it.”</i>

Table 5.13: Reflective Practice Coding System (Anderson & Funnell 2005)⁸

The scores for each professional response to statements made by the patient were added together and then divided by the total number of responses per consultation. All codes allocated were entered onto an Excel spreadsheet. Any issues relating to the use of the reflective-practice coding tool for coding the dietetic consultations were noted for discussion later.

5.4 Comparison of the RIAS/Verona and Reflective-practice Coding Systems

The following results describe the process of coding the 12 transcribed recordings with the interactive coding tools, highlighting any issues that arose with the use of these coding tools.

⁸ Copyright 2000, The Art of Empowerment. Modified with permission from the *American Diabetes Association*

5.4.1 Analysis Using RIAS Coding System

The RIAS system codes diet as a lifestyle issue, but as diet forms a major part of the treatment for diabetes; it could be argued that this should fall into the therapy category. The coding system states that when the doctor specifically mentions diet in relation to the patient's medical condition, ie losing weight, then it is coded under the therapy category. As diet is a major part of the ongoing and immediate treatment of diabetes, the decision was made to code diet as follows. When discussing therapeutic effects of food, ie those foods with a low glycaemic index (that slow down the release of blood sugar) or foods to treat hypoglycaemia, a therapy code was assigned. When particular foods or meals were being discussed in terms of personal preferences, a lifestyle code was assigned.

The coding criteria for counselling-type statements (reflections, paraphrasing, summarising) and empathy statements were very narrow, for example the following reflective question. *"When you say let yourself go a bit?"* demonstrates active listening. The dietitian is attempting to understand and clarify the patient's perspective by reflecting back the patient's words and phrasing them as a question. This response, however, was coded as a closed question, as per the manual. Patient-centred communication techniques such as these were not coded, resulting therefore in a loss of richness in the exchange.

The coding criteria for questions provided guidance on the use of closed and open questions and whether the questions were focused on lifestyle, therapy, or medical aspects of care. However, despite this level of detail, the subtleties of

the phrasing of the questions were not captured with the coding criteria, as illustrated above with reflective questioning. Overall the socio-emotional categories were either too broad or not clear enough to give full interpretation: an issue that has also been noted by others (Eide et al, 2004; Sandvik et al, 2002). Nearly half of the socio-emotional exchanges (49%) in dietetic consultations were positive. This category included dietitian approvals, agreement, or reassurance of something that the patient had said. Approximately a third (29%) of the task-focused exchanges were information-giving. A full summary of codes obtained using the RIAS can be found in Appendix 1.5. Where data has been coded for empathy and information-giving it has lacked depth and direction. Although this tool was able to indicate the amount of dialogue that was concerned with information giving, there is no clear indication of how and why information exchanges occurred within the dietetic consultation. In addition some of the active listening skills were not being captured and coded adequately, resulting in a loss of data on effective patient-centred communication skills.

The multiple questions used in consultations are also slightly leading as they are giving the patient a number of options to choose from, which again may constrain or alter the flow of the conversation. Discrepancies in coding questions have also been highlighted by others (Sandvik et al, 2002). Patient responses of “*mms...*” were coded as agree, as there is no specific code for this type of response. It is also unclear from listening to the recordings whether the patient is agreeing with the dietitian or whether these are automatic responses. Silences and pauses are also not coded, despite the fact that these are known

to play a major role in counselling to elicit responses (Anderson et al, 1991; Eide et al, 2004; Gable, 2007; Sandvik et al, 2002).

5.4.2 Analysis Using Verona Doctor VR-MICS/D Coding

As with the RIAS coding system, the Verona system also posed questions on how to code diet-related questions. Some questions required yes and no answers so were coded under closed-ended illness management and therapy. Other diet-related questions were coded under open-ended directive illness management, and psychosocial. This was especially true for food questions, which allowed for more than a yes or no response and where the patient also provided information around lifestyle. Multiple questions were coded twice, as per the coding schedule. This raises similar issues to the RIAS coding as to which question is answered first and how this subsequently impacts on the flow of the consultation. Statements were made during the consultations that were not questions or information, or direct answers to patients' questions. However, there is no discrete category code for these statements; so a best-fit category was chosen. Leading questions also lacked a coding category.

There was some ambiguity on how to code responses that confirmed that someone was working or applying information in the right way. Would that be an empathy code or an agreement code, as illustrated below?

“Ahh right OK. So it sounds as if some of the things on here have been ongoing, but actually from what you’re saying are slightly improving and moving forward.”

It was difficult to code information giving, as the coding system only looks at content to place information into a category. It does not allow coding that

differentiates between information givers (the patient or the professional) and whether the information giving follows the flow of the conversation.

Interruptions were also difficult to code effectively, although they were coded for in terms of units of speech, but this does not allow any interpretation of the effect of the interruption on the subsequent direction of the consultation.

When the dietitian ignored statements that patients made and moved on to another topic, this was coded as a transition statement. However, this isn't really a transition statement as the patient has been ignored. Failure to listen to what the patient wants to say could alter the flow of the conversation and alter the final outcome (Anderson et al, 1991; McWilliam et al, 1994). Multiple repetitions could not be coded as such. Instead, they were identified and coded as individual utterances, losing the richness of this data in the final analysis.

The Verona did provide clear data on specific questions, such as asking for patient understanding, asking for patient opinion, and checking patient understanding. It provided an overview of the communication that occurred in the dietetic consultations as follows. The largest percentage of codes for the Verona fell in the category of patient education 592/1744 (34%), with patient facilitating 470/1744 (27%) and information gathering 370/1744 (21%) following behind. As with the RIAS, this tool was able to indicate that a substantial amount of the dialogue was concerned with information exchange. A full summary of the codes for the analysis using Verona Doctor VR-MICS/D can be found in Appendix 1.6.

5.4.3 Analysis Using Reflective-Practice Coding

Responses were only coded for issues that the patient had raised in the conversation. *Minimal encouragers* such as “*mmmh*”, and “*ahhh*” were not coded. Although it could be argued that *minimal encouragers* helped keep patients talking, they were not providing any assistance in reflecting on where the patient was, or how the patient had got to a certain point, as per the coding system. All food questions relating to collection of information around a 24-hour diet history were coded as 0. It could be argued that some of the responses were reflective, but the main purpose was obtaining information on what the patient was eating. Although reflection was employed, it was used to check that dietary information was correct, rather than how the patient thought or felt about their diet. If the patient had described their diet in terms of how they wanted it to be different or how they felt about it, and this was reflected back to the patient, a score would have been allocated as per the coding system. If a discussion occurred around potential solutions this was given a score of 0, but if the dietitian was telling the patient what to do then a score of –1 was given.

Large chunks of the conversation were coded as 0 and therefore ignored. This may be irrelevant, as these areas did not engage the patient in self-reflection and problem solving. This tool was very good at identifying facilitative responses from the dietitian in terms of problem exploration and exploration of patient’s feelings and goals. It therefore provides clear guidance and coding on supportive interactive dialogue in consultations. However, a constructive patient-centred dialogue would be expected to contain more elements than just self-reflection and problem solving. This un-coded dialogue may impact on conversation flow and information exchange. Overall the reflective statements

of dietitians were positive. Dietitians scored twice as many positive reflective statements (212) compared to negative reflective statements (97) in the consultations (See summary in Table 5.14; full details in Appendix 1.7).

	Total	Mean per consultation
Total responses coded	1844	154 (SD 41.28)
Positive responses	212	17.67(SD 10.87)
Negative responses	97	8.08 (SD 6.84)

Table 5.14: Summary of scores obtained with reflective-practice coding tool

5.5 Discussion

The RIAS, Verona and reflective-practice coding tool all failed to adequately identify or code multiple questions, information-giving, and interruptions; features that occurred consistently in the dietetic consultations explored. Information giving is an important aspect of a patient-centred consultation and a major part of a dietetic consultation. Interruptions and multiple questions may be factors that impact on information giving within the consultation. These factors may alter the consultation outcomes and therefore warrant further investigation.

Patient-centred communication skills such as active listening are essential for an empathic dialogue to occur and are likely to impact on conversation flow (Norfolk et al, 2007). However patient-centred communication behaviours such as reflections, paraphrasing and reflective exploratory questions and positive statements were difficult to code with the RIAS and the Verona coding systems. This is an important omission, as positive reflections may influence patient's

thoughts and feelings and so affect the way that the consultation proceeds, and the way that information is delivered and received (Holmström et al, 2003; Sandvik et al, 2002). Understanding the impact that patient-centred communication behaviours have on information flow and the subsequent impact on consultation outcomes is essential (Pedersen, 2009). This understanding will allow professionals to improve their interactions with patients, resulting in more productive outcomes.

5.5.1 Information-giving

This study highlighted discrepancies over coding of information-giving and information exchanges using the RIAS. This is an issue that has been identified by others (Mead & Bower, 2000a), who have suggested that information exchange and information-giving by physicians should be treated as patient-centred communication; as information around disease, treatment, side-effects and symptoms are all needed to inform choices. The RIAS still fails to address the question of who raises the information in the consultation, the level of patient engagement, and the subsequent impact of these factors on conversation flow and outcomes.

The Verona also identified a large proportion of the consultation as being focused around information exchange. However, like the RIAS, the Verona is unable to provide a clear understanding of the process of information exchange that occurred in the dietetic consultation. They both fail to explain whether the information was provided unsolicited by the dietitian. In addition, questions on how the information was delivered (as part of a collaborative exchange or a set of instructions) and how the patient received the information remain

unanswered. These factors may impact on subsequent conversation flow. Information itself is crucial for patient evaluation of care (Hall & Dornan, 1988). When delivered appropriately, information can empower patients to make informed decision about their care (Anderson et al, 1991; Epstein et al, 2004; Loewe & Freeman, 2000; Thorne et al, 2003). How information is given and received may serve to encourage personal reflection enhancing self-care practices and improving outcomes (Marilynn et al, 1995).

The reflective-practice coding tool was found to be a useful measure in this respect as the positive measures coded illustrated engagement in reflection and self-discovery. These responses encouraged patients to develop their own solutions to issues raised (Anderson et al, 1995; Anderson et al, 1991; Vickery & Hodges, 1986) and are said to improve outcomes (Clark & Hampson, 2001; Rollnick et al, 1999). However, the reflective practice tool failed to identify who asked for the information, so raising the question: was it a professional-led information-giving exchange or a patient-led exchange? Questions concerning the intent of the advice provided and subsequent impact on conversation flow also remain unanswered. In addition there were large chunks of the dialogue that were coded as 0. This dialogue may provide additional insight into the process of information exchange within the consultation, particularly around food and dietary issues, which were not coded specifically with this tool.

Patients are reported to prefer the presentation of information to be made frequently as a continuous process, rather than as a single chunk of information (Wikblad, 1991). This suggests that to achieve more meaningful data on information-giving exchanges that occur in the consultation, there is a need to

review the flow of information-exchange that occurs. The patient and provider contributions to these information-giving exchanges will provide a more meaningful interpretation of the process of information-giving that occurs in dietetic consultations and its subsequent impact on consultation outcomes (Goss et al, 2004; Sandvik et al, 2002). The lack of detail around information giving in the consultation has been identified by others who also suggest a sequential approach is taken to analysis (Eide et al, 2004; Sandvik et al, 2002). A sequential approach will provide further insight into the effect of information-giving sequences within the consultation and their subsequent impact on outcomes.

5.5.2 Interruptions

Interruptions occurred in all 12 of the analysed recordings, however, none of the coding tools explored coded interruptions. Studies have noted that interruptions may act as indicators of patient wishes to contribute information, resulting in new information being delivered 70% of the time (Realini et al, 1995).

Activating patients by engaging them in the consultation has been shown to improve outcomes (Harrington et al, 2004). Interruptions may be one method used by patients to gain control and pursue their own agenda (Sandvik et al, 2002). Alternatively, professionals may use interruptions to take back control of the conversation. Patients report being more satisfied when they interrupt the doctor but less satisfied when the doctor interrupts them (Rost, 1989). The presence of interruptions and the potential impact this has on information flow and outcomes requires further consideration.

5.5.3 Empathy

The RIAS and Verona had narrow criteria for coding empathy, making it difficult to assign speech to this category. Between 1 and 3 empathic opportunities per consultation were identified with these tools. Sandvik et al (2002) have also highlighted the narrow definitions for empathy when coding with the RIAS. The RIAS codes statements that paraphrase, interpret name or recognise the emotional state of the person (Roter, 2005). The Verona codes expressions that interrupt emotion expressed by the patient (Del Piccolo et al, 2005). Both of these tools focus on coding emotional content. However, the concept of empathy also encompasses an understanding of the patient's perceptions and opinions (Bylund & Makoul, 2002; Mead & Bower, 2000b; Norfolk et al, 2007).

In contrast, the empathy-communication coding system (ECCS) was able to detect between 3 and 29 empathy statements per consultation, highlighting the suitability of the choice of this tool for coding empathy. The ECCS records different empathic responses to the different empathic statements made by patients, allowing the interaction between patient and dietitian to be analysed in more depth. The use of the ECCS with minor amendments made to the coding levels should provide a detailed picture of behavioural empathy in dietetic consultations. In addition, the varied responses obtained to empathic opportunities may shape the way that information is exchanged within the consultation and warrants further investigation.

5.6 Summary

Exploratory analysis aimed to clarify suitability of the ECCS for measuring empathy from audio recordings and to identify a suitable tool to use alongside

this for measuring other patient-centred communication skills in the dietetic consultation. This analysis has confirmed that the ECCS would be a suitable tool for exploring empathy in the dietetic consultation. It provides a more detailed exploration of empathy than the RIAS and Verona. In addition, information is provided on how professionals responded to the empathic issues raised. A minor change to the coding levels has been suggested and will be considered when the ECCS is used for the main data analysis in order to explore empathy in the dietetic consultations.

Although the RIAS, VERONA and reflective-practice coding tool provided some information on patient-centred communication skills, they did not adequately identify and code patient-centred communication skills such as positive reflections, probing questions, paraphrasing, reflective exploratory questions and positive supportive statements. This lack of identification of specific patient-centred skills could result in the richness of the patient-centred exchange being lost. In addition, these tools were unable to provide adequate detail on information giving in the consultation, in particular, how the information was provided: was it requested by patients or provided unsolicited by the dietitian? In exploring the use of a different interactive coding tool, Zandbelt et al, (2005) have raised this issue of lack of detail on information giving. This suggests that a different approach to measuring and analysing information giving within the consultation is required in order to explore how information-giving impacts on conversation flow and outcomes.

The process of empathic listening and patient-centred communication is likely to impact on both the flow of information and the way that information is delivered

in the consultation (Norfolk et al, 2007). Far from answering questions, this exploratory analysis has raised further important questions that need to be considered, as follows: How do patient-centred communication skills impact on the information-giving process in the consultation? What effect does empathy have on information giving within the consultation?

Further, clarification is required on the relationship between empathy, information-giving and active-listening skills, and their subsequent impact on agreement on reported decisions made in the consultation.

The design and implementation of a study to address these questions appropriately are detailed in the following chapter.

CHAPTER SIX: RATIONALE FOR USING MIXED METHODOLOGY

This chapter explores the issues that need to be considered when designing and setting up a study using mixed methodology. It illustrates how the study to explore empathy, information giving, and agreement on recall in dietetic consultations was designed, explaining the reasons for the two separate phases of data collection and analysis.

6.0 Overview of Mixed-Methods Research

Mixed-methods research combines qualitative and quantitative methodological approaches in the same study. It seeks to consider the central research question before deciding which qualitative or quantitative method is best suited to examine this (Creswell, 2009; Teddlie & Tashakkori, 2003). It is, however, more than just collecting and analysing quantitative and qualitative data in the same study. Philosophical considerations as to how and when the data will be collected, analysed and mixed are also required (Teddlie & Tashakkori, 2003). Both qualitative and quantitative approaches are used in tandem so that the overall strengths of the study are greater than when the approaches are used independently (Creswell, 2009; Creswell & Plano Clark, 2007). Specifically, combining approaches allows a more expanded and deeper understanding of complex issues than can be obtained from the use of qualitative or quantitative research alone (Creswell, 2009). Furthermore, it allows the strengths of both qualitative and quantitative approaches to be utilised in addressing the research question (Johnson & Onwuegbuzie, 2004). Combining both approaches is often referred to as the 'third wave' or 'third research movement' as it looks beyond the paradigm wars of qualitative versus quantitative research (Creswell

& Plano Clark, 2007; Johnson & Onwuegbuzie, 2004) and focuses on their combined strengths.

6.01 Issues in Mixed-Methods Research

Mixed methods research presents the researcher with a number of challenges. Firstly, those adopting this approach need to be familiar with both quantitative and qualitative data analysis (Creswell, 2009), as care is needed in the interpretation of the data and of the transferability of any findings to the wider community (Tashakkori & Teddlie, 1998).

Secondly, the timing of the data collection and interpretation of data is influenced by decisions regarding the weighting of the qualitative and quantitative aspects of the research, as well as the intended mixing that will be applied to the data (Creswell, 2009). Failure to adequately consider the weighting and intended mixing of data can result in a study that is not true mixed methodology (Creswell & Plano Clark, 2007).

6.02 Rationale for Using Mixed-Methods Research

Quantitative studies are used when identifying factors that influence outcomes, to gain insight into the best predictors of these outcomes or the usefulness of an intervention (Creswell, 2009). Conversely where a concept or phenomenon requires further exploration (as there is little published research in that area) then qualitative approaches are employed (Creswell, 2009). A mixed methods design is therefore appropriate when either qualitative or quantitative approaches in isolation are inadequate in addressing the research question (Creswell, 2009). However mixed-methods researchers need to clearly

establish their rationale for mixing the qualitative and quantitative methods in their study. Five main reasons for the use of mixed methods research have been advanced (Johnson & Onwuegbuzie, 2004) and outlined in Table 6.15.

1. Triangulation	Data sets from qualitative and quantitative approaches seek convergence to provide corroboration and understanding
2. Complementary	Clarification of the results from one method is used with results from another
3. Initiation	Data is used to discover paradoxes or contradictions and so used to reframe research questions
4. Development	Using the findings from one method to inform another method
5. Expansion	Broadening the range of research and understanding by using different measures for different components of the issue

Table 6.15: Reasons for mixed-methods research (adapted from Johnson & Onwuegbuzie, 2004)

6.1 Designing a Mixed-Methodology Study

Once the rationale for the mixed methodology has been established, there is a further need to consider the type of quantitative and qualitative approaches to be taken. The design of the mixed methodology should then be considered by attending to four key design tenets (Creswell, 2009).

6.1.1 Theorising

Theorising is an important aspect of mixed methods research, as theory provides an overarching “lens’ that shapes the types of questions asked, the types of participants enrolled in the study, the data-collection methods used and the implications of findings from the study” (Creswell, 2009, p 208). Theory may

provide a framework that guides the entire study design. Theory may also include a “broad explanation of behaviour and attitudes complete with variables, constructs and hypotheses” (*ibid* p 61). Starting with a theoretical model may be one way of developing themes within qualitative research; hence the theorising provides a framework for both qualitative and quantitative research to occur (Creswell, 1998; Creswell, 2009).

6.1.2 Weighting

This refers to the priority given to qualitative and quantitative methods in the study and establishes the context for the treatment of the data (Creswell, 2009). These methods can have equal importance in a study, or one method may take precedence over the other (Creswell, 2009). The questions that are being examined influences the ordering of the chosen methods. If the predominant research questions are about concepts or phenomena, then qualitative methods may take priority, whereas quantitative methods are used to clarify aspects of the findings obtained (Creswell, 2009). Alternatively, quantitative methods may be given priority where clarification is needed as to which factors influence outcomes, whereas qualitative methods are used to explore possible reasons for observed outcomes (Creswell, 2009).

6.1.3 Mixing

Mixing relates to how and when the data from the quantitative and qualitative methods are brought together in the study (Creswell, 2009). It is an important consideration, as unequal priority attached to methods may result in unequal evidence within the same study, with a subsequent unintended impact on interpretation of results (Tashakkori & Teddlie, 1998). This issue can be

addressed by taking care with the design, conduct, and interpretation of data from each method (*ibid*). Creswell (2009) describes how the mixing of the quantitative and qualitative research can occur at any of one of three points: data collection, data analysis or data interpretation. Creswell describes the way that the data is mixed as either: *connected*, *integrating* or *embedding* and these different approaches to mixing are described as follows. '*Connected*' refers to the analysis of data and results from one study in order to identify participants for the follow-up study. '*Integrating*' refers to the merging of the qualitative and quantitative data sets whilst '*embedding*' refers to the use of secondary data to support findings from the primary data set (Creswell, 2009).

6.1.4 Timing

Data collection for mixed methods research can occur sequentially or concurrently. If data is collected sequentially it is collected in discrete phases so that one method follows the other. The ordering of the phases is dependent on the aims of the study. If quantitative and qualitative data are collected concurrently then data for both methods is collected at the same time. On a practical level, the concurrent method reduces the time needed for data collection (Creswell, 2009).

6. 2 Consideration of the four tenets for designing the mixed methodology

In the set-up of this two-phase study, the rationale for the use of mixed methodology and the design tenets employed are explored below.

6.2.1 Theorising

This study is observational in design, in that data is collected through audio recording patient and professional consultations in the real world, ie the usual clinic setting. This allows the usual consulting behaviour of the dietitians to be assessed. The study has a defined outcome measure of agreement on reported decisions made in the consultation, which is supported by the theoretical framework outlined in Chapter Three. The relationship between the presence of empathy in the consultation and agreement on reported decisions can be tested with validated quantitative measures. However, there is a need to explore this process further, to better understand the effect that empathy has on information-giving and the subsequent effect that it has on agreement on reported decisions made in the dietetic consultation (Connor et al, 2009; O'Brien & Petrie, 1996; Pedersen, 2009; Watson & McKinstry, 2009). Although there is theoretical support for this relationship, the empirical evidence to support the arguments and the detailed understanding of the relationship between empathy, conversation flow and outcomes is lacking. Qualitative analysis is therefore needed to explore differences in information-giving behaviours that occur in consultations (Teddle & Tashakkori, 2003). To allow detailed exploration of the interaction between empathy, communication skills, and the subsequent flow of information giving that occurs in the consultation (Pedersen, 2009; Schrimmer et al, 2005). The outcome marker of agreement on reported decisions made will allow further differentiation by exploring how information-giving behaviours and empathy vary between consultations with agreement and those with disagreement on decisions made. This will provide a unique insight into the consultation process and its effect on the outcome measure of agreement on decisions made. This study uses the results from the

qualitative analysis to explore and expand on findings from the data collected by observation of the consultation (the quantitative data set). It therefore complies with the development rationale listed in Table 1 (Johnson & Onwuegbuzie, 2004).

6.2.2 Weighting

This study's primary focus is to explore empathy in the consultation and its impact on patient and professional agreement on reported decisions made. The relationship that empathy may have with self-efficacy, patient autonomy and patient satisfaction and the subsequent effect this may have on agreement on reported decisions made in the consultation are also examined. To test these relationships, a quantitative approach is required and this forms Phase I of the study. Consequently, quantitative methods of data collection are given precedence over qualitative methods in this study.

The qualitative method adds a secondary dimension by helping to explore further the process by which empathy impacts on agreement on reported decisions made in the consultation and forms Phase II of the study. This process is said to be analogous to hierarchical analysis in quantitative research, which attempts to explain predictors of observations obtained from quantitative analysis (Tashakkori & Teddlie, 1998).

6.2.3 Mixing

The embedded nature of the qualitative data means that quantitative analysis must occur first in order to identify data samples suitable for qualitative analysis. A sequential approach to analysis of data was therefore adopted (Figure 6.6).

The data from the qualitative analysis is secondary to the quantitative data and was used to build on and expand on this data (Creswell, 2009; Johnson & Onwuegbuzie, 2004). The two data sets are brought together in the discussion of the results, providing a detailed explanation of the research questions. Figure 6.6 illustrates the sequential explanatory design employed for this mixed method study, using the mixed methods notation described by Creswell (2009).

Figure has been removed due to Copyright restrictions

Figure 6.6: Sequential Explanatory Design adapted from Creswell (2009)

In addition, this study also incorporates a within-stage mixed-model design (Johnson & Onwuegbuzie, 2004). This arises as a result of an open question presented on the quantitative questionnaire, which explores decisions made in the consultation. The decisions were converted into numerical codes that were then subjected to statistical analysis (Johnson & Onwuegbuzie, 2004). This data will be presented alongside the quantitative data set in Chapter Eight.

6.2.4 Timing

This study employed a concurrent embedded strategy. Qualitative and quantitative data were collected simultaneously, with the qualitative data embedded in the quantitative data set (Creswell, 2009; Johnson & Onwuegbuzie, 2004).

6.3 Study design

This mixed methods study was conducted in two phases (Figure 6.6). Phase I is a quantitative study that aims to identify the presence of empathy in the consultation and establish its relationship to agreement on reported decisions made. In addition, patient satisfaction, autonomy, and self-efficacy were measured with validated questionnaires providing quantitative measures. These measures may have a mediating effect on empathy and the statistical relationship between these measures was explored.

Following this statistical analysis, Phase II of the study takes a qualitative approach to explore the presence of information-giving exchanges and patient-centred communication skills within consultations, to better understand their relationship to empathy. Consultations with complete agreement and complete disagreement on reported decisions made were selected from the Phase I data, to provide contrasting data sets for the qualitative analysis. This allowed the presence or absence of patient-centred communication skills and information-giving exchanges to be explored when they occurred in consultations that featured contrasting agreements on reported decisions made.

6.4 Observational method for data collection

This study uses audio recordings in order to collect information on current practice and behaviours in the consultation. Making audio and video recordings of consultations is a well-established method for exploring communication between professionals and patients in the usual clinic setting (Glasgow et al, 2006). This method helps to develop an understanding of the structure and patterns of patient and clinician communication, and is more objective than self-reported data (Cant & Aroni, 2008; Lu & Dollahite, 2010). It does not rely on retrospective accounts from the individuals (which could be misleading or inaccurate due to imprecise recall) but allows the interaction dynamics of the consultation to be viewed objectively (Field & Hole, 2003; Lu & Dollahite, 2010).

Discrepancies in patient and professional perceptions of care and the perceived practice of professionals have been highlighted (Latter et al, 2007; Makoul et al, 1995; Parkin & Skinner, 2003; Pill et al, 1999; Watson & McKinstry, 2009).

Training interventions that have used direct observation methods and videos have further highlighted discrepancies between professional's perception of care delivery and the reality of care that is delivered (Brug et al, 2007; Latter et al, 2007; Pill et al, 1999). These studies suggest that data on an individual's perception of their practice in the consultation is an unreliable method for reviewing current practice. The professional's perception of care delivery varies considerably from that of patients (Anderson et al, 1991; Makoul et al, 1995) and self-assessment of their skill level by professionals is often over-inflated (Kruger & Dunning, 1999) and does not correlate with patient perception of care delivery (Brug et al, 2007; Parkin & Skinner, 2003). These studies strengthen the need for observational data collection to provide insight into usual practice.

It has been suggested that professionals and patients may modify behaviours in the consultation as a result of being observed (Swift, 1996), with some behaviours being more sensitive to this than others (Coleman, 2000). It is further suggested that this 'reactivity' or observer effect may be increased when the event is being video recorded (Swift, 1996). Therefore, to minimise the observer effect and to remove a potential barrier to participation in this study, it was decided to use audio recordings of the consultations. In order to limit obtrusiveness, a small recording device was placed just behind the patient, out of their line of vision, thus increasing the likelihood that the patient would behave naturally throughout the consultation. A review of audio and visual recordings suggests that 97% of patients who had their consultations audio recorded did not feel that the recording device influenced their behaviour in the consultation or impacted on the level of care that they received from the professional (Themessl-Huber et al, 2008). Participants also reported forgetting about the presence of the recording device as the consultation proceeded, with some patients stating that they eventually forgot about the recording process completely.

Awareness of the recording device is likely to be accentuated at the start of data collection. The first recording from each dietitian was therefore discarded to allow for this effect. This procedure was successfully employed in a number of earlier studies exploring communication skills in nurses and dietitians (Goodchild et al, 2005; Parkin et al, 2006; Parkin & Skinner, 2003).

Observational data collection has been shown to be feasible, acceptable, and practical (Themessl-Huber et al, 2008). The disadvantage of observational methodology is that it is costly and time-consuming in terms of data collection

and processing and does not allow for the measurement of cause and effect (Creswell, 2009).

6.5 Summary

This chapter has described the rationale for the mixed methodology approach used for this study. It has provided an overview of the structure of the study, which aims to explore empathy and its effect on information giving using a sequential explanatory design. Phase I was undertaken to collect observational data from dietetic consultations and to analyse it to provide a quantitative data set. Phase II used a qualitative approach to better understand the findings in Phase I, by exploring a selection of consultations identified in Phase I as having contrasting agreement on reported decisions made. The methods and materials used for each of the phases will be explored in the following chapters. The combined discussion of the findings from Phase I and Phase II of this study will occur in Chapter Twelve.

PHASE I

Quantitative Methods and Analysis

CHAPTER SEVEN: METHODOLOGY FOR PHASE I (Quantitative)

This chapter discusses the data collection process for Phase I of the study, including access to clinics, recruitment, ethical considerations, and methods used in the interpretation of the quantitative data collected.

Phase I focuses on the quantitative measurement of empathy, patient and professional autonomy, patient satisfaction, patient self-efficacy and agreement on reported decisions made in the consultation. The relationship between these factors has been explored in Chapter Four.

7.0 Phase I: Research Questions and Hypotheses

The data resulting from the analysis in Phase I attempts to answer the following research questions and test the hypotheses:

Research Question 1

What is the relationship between empathy and agreement on reported decisions made in the consultation?

Research Question 2

To what extent do the various components of empathy (statements of challenge, statements of progress and statements of emotion) impact on agreement on reported decisions made in the consultation?

Research Question 3

What is the relationship between patient satisfaction and empathy?

Hypothesis 1

Higher levels of empathy will result in greater agreement on reported decisions made in the consultation.

Hypothesis 2

Higher levels of empathy will result in greater levels of patient satisfaction.

7.1 Recruitment

7.1.1 Dietitians

Permission to access nine specialist dietitians was sought from the heads of service in five diabetes centres across the South West of England. Once permission was granted, visits were then arranged with the dietitians working in the diabetes centres to provide further information about the study.

Three dietitians from one Trust felt that the study would take up too much of their time and therefore declined to take part, and another two dietitians from a different Trust had numerous staffing issues that impacted on their work load preventing them from committing to the study. Four dietitians in the remaining three Trusts agreed to take part.

The number of dietitians agreeing to participate in the study represented 44% (4/9) of those approached and is similar to the median participation rate of 41% for GPs consenting to have consultations audio-recorded (Themessl-Huber et al, 2008).

7.1.2 Patients

Individuals with diabetes who were attending scheduled out-patient appointments with the diabetes dietitians who were participating in the study were eligible to take part. These routine out-patient clinics consisted of new and follow-up appointments for people with either type 1 or type 2 diabetes.

Patients who had scheduled out-patient appointments with the participating dietitians were contacted via letter. Information sheets explaining the study

were also provided (Appendix 2.1). Patients were asked if they would consider taking part when they next attended the clinic. Figure 7.7 illustrates the number of patients who were initially contacted with information on the study and the number of patients who consented to take part.

7.2.2.1 Inclusion and exclusion criteria

Patients were excluded from taking part if they were in any of the following categories: not fluent in English; under the age of 16; with learning difficulties, currently experiencing mental health issues; abusing drugs or alcohol.

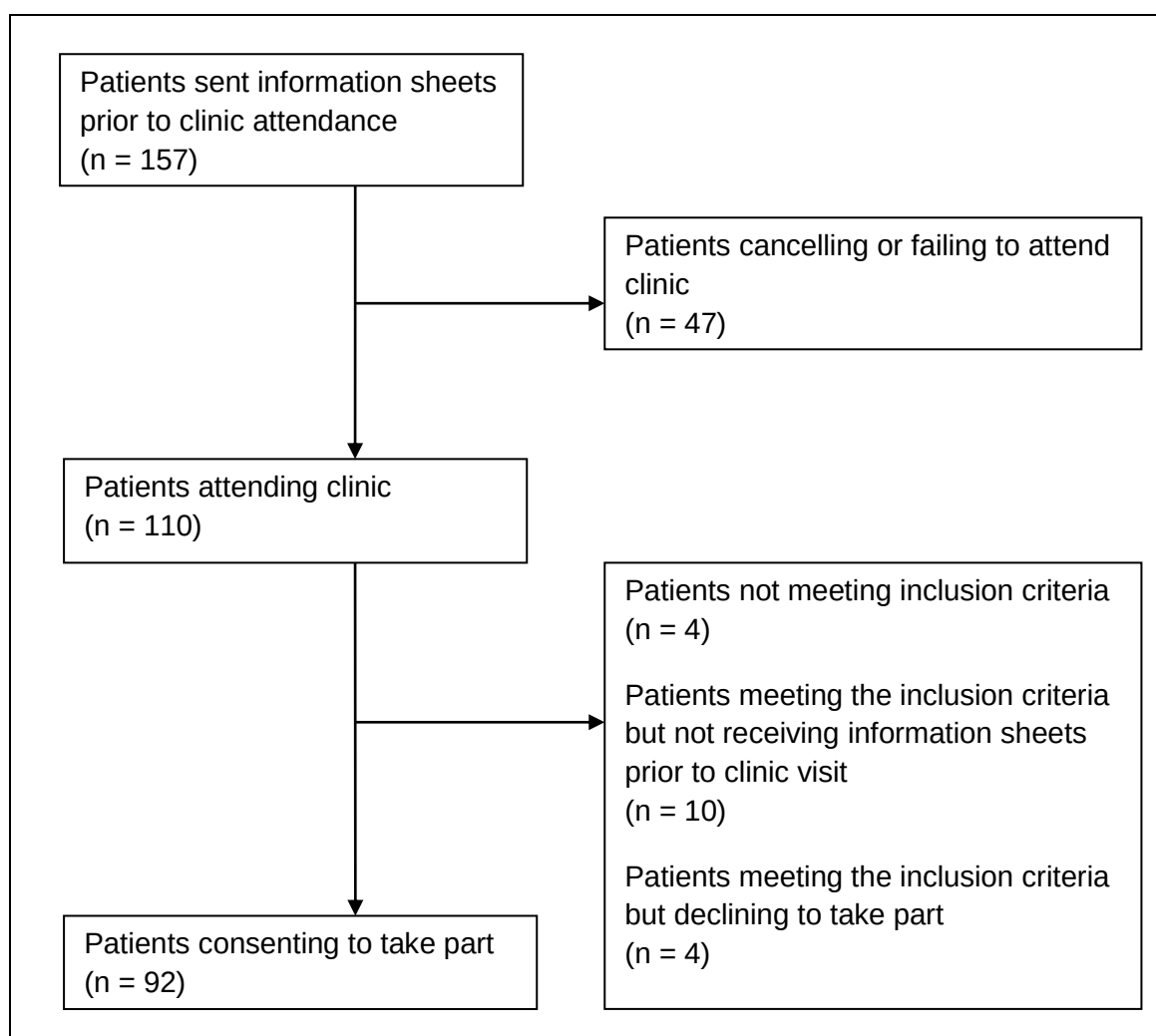


Figure 7.7: Flow diagram illustrating number of patients contacted and the final number of patients consenting to take part in the study

The recruitment rate for this study was 92/110 (84%), which is similar to the recruitment rate of 83% reported in other studies using audio recordings of patient consultations (Themessl-Huber et al, 2008).

The average rate of non-attendance at clinics in this study was 47/157 (30%), which is comparable to figures obtained for dietetic obesity clinics 103/313 (33%) in Hickson et al (2009) and dietetic diabetic clinics: 127/293 (43%) in Spikmans et al (2003). It is unlikely therefore that patient attendance at these clinics was adversely affected by the provision of written study information prior to the clinic visit.

Demographic data was collected on all patients scheduled to attend the dietetic clinic. Information on whether the appointment with the dietitian was a first visit or a follow-up visit was also recorded.

7.2 Participants

7.2.1 Dietitians

The following data was collected on participating dietitians: gender, number of years in practice and prior attendance on training courses covering communication and behaviour change.

The diabetes dietitians taking part in this study were all female and had specialised in diabetes for 10-11 years after qualifying. The number of training courses covering behaviour change and communication skills that participating dietitians had attended since qualifying is shown in Table 7.16.

	Years qualified	Number of training courses attended since qualifying
Dietitian 1	23	1
Dietitian 2	25	5
Dietitian 3	13	6
Dietitian 4	24	3

Table 7.16: Number of training courses in behaviour change and communication skills attended by dietitians in this study since qualifying

The earliest training course attended was a teaching skills course in 1985 and the most recent attendance on a course was in 2007. Courses included counselling skills, motivational interviewing, empowerment courses, and cognitive behavioural therapy for obesity and weight management. Data on training of dietitians in behaviour change skills is not held centrally, so it is difficult therefore to know whether the level of training presented in Table 7.16 is a typical reflection of the level of training in this area for the dietetic profession as whole.

7.2.2 Patients

A total of 92 patients were successfully recruited for the study. However, three recordings were discarded due to poor recording quality and a further three recordings were not included in the data analysis as patients failed to complete the questionnaires adequately. This left 86 patients with completed questionnaires and audio recordings available for analysis. Demographic data of the 86 patients who took part in the study was compared to the 67 who were not included, to ensure that the group that agreed to take part were representative of the population being studied (see Table 7.17).

	Patients taking part (N = 86)	Patients not taking part (N = 67)	<i>p</i> value
Female gender % (<i>n</i>)	35% (30)	34% (23)	.815
Median age (years)	54	49	.114 ^a
Range	21-85 years	19-89 years	
Type 2 diabetes % (<i>n</i>)	66% (57)	58% (39)	.184
Duration of diabetes (years) SEM	10.87 (1.31)	10.45 (1.40)	.414
Range	1month to 59 years	6 months to 50 years	
Complications present % (yes)	42% (36)	37% (25)	.782
Follow up appointment % (<i>n</i>)	34% (29)	46% (31)	.243
^a Due to significant Levene's test with independent t-test, this was recalculated using Mann-Whitney			

Table 7.17: Demographic data for patients with complete data set included in the study, compared to patients who did not participate

Patients taking part in this study did not differ significantly from those not taking part across any of the characteristics considered.

7.3 Method

Once ethical and Trust approval had been granted, written consent was obtained from the dietitians participating in the study (Appendix 2.2). In each Trust, a process was established for distributing information sheets and covering letters to patients one week prior to clinic attendance.

Data collection at clinics was co-ordinated with the dietitians in each Trust and this involved checking clinic dates and times as well as periods of annual leave to ensure that the researcher could attend the scheduled dietetic clinics. Data collection for the three Trusts took place over a 12-month period.

Patients who were willing to take part in the study signed a consent form (Appendix 2.3) before entering the clinic room. The whole consultation was audio-recorded, but patients were reminded that they could withdraw their consent at any time during the consultation and the recording would be erased. The dietitian undertook the consultation following their usual procedures and at the end of the consultation the patient and dietitian were asked to complete a brief questionnaire.

The questionnaire booklet contained a set of validated questionnaires, all of which had the term *professional* changed to *dietitian* for the purpose of this study. The dietitian completed the questionnaire independently; in the clinic room after the patient had left the room. The patient completed the questionnaire booklet in an available side room before leaving the clinic. During this process, the researcher stayed with the patient to ensure that questionnaires were completed and to provide a reading service for those who had difficulty reading. This did not involve interpreting the meaning of the questions. The researcher administered all of the questionnaire booklets and gained the consent of all the patients, thus ensuring that a consistent approach was taken and thereby reducing the possibility of bias in the data collection caused by different researchers doing the work (Silverman, 2006).

Questionnaires were collected at the end of the clinic session and securely filed. All questionnaire booklets and audio recordings were dated and assigned ID codes to enable patient and dietitian questionnaire booklets and audio recordings to be matched.

7.4 Measures

7.4.1 Questionnaires

Questionnaire booklets were designed specifically for either the dietitian or the patient. The dietitian booklet (Appendix 2.4) contained an open question about decisions and the Health Care Climate questionnaire (HCC) (Williams et al, 1998). It also contained a section to record patient demographic data: age, gender, type of diabetes (Type 1 or Type 2), duration of diabetes, presence or absence of complications, whether the appointment with the dietitian was a first visit or a follow-up visit.

The patient booklet (Appendix 2.5) contained an open question about decisions, the Health Care Climate questionnaire (HCC), the Medical Interview Satisfaction Scale (MISS) (Kinnersley et al, 1996) and a self-efficacy questionnaire (SE) (Lorig et al, 2009).

Details of the open question and the validated questionnaires used in the questionnaire booklets are provided below:

7.4.1.1 Open Question

The first page of the questionnaire booklet for both patients and dietitians asked the same open question.

“Please could you write down any decisions that were made in the consultation today?”

This study design was influenced by the results from a previous study, which asked patients to list goals and decisions set in the consultation (Parkin & Skinner, 2003). This noted that either the listed goals were the same as the

decisions or that the goal section was left completely blank, while the decisions section was completed (Parkin & Skinner, 2003). Other studies have also recorded difficulties with patients interpreting the term goals (Bradley et al, 1999). Consequentially the word *decisions* was chosen for this open question, to help ensure that patients provided an answer to the question.

7.4.1.2 The Health Care Climate Questionnaire (HCC)

The Health Care Climate questionnaire (HCC:Williams et al,1998) assesses the degree of autonomy support in the consultation as perceived by the patient. Autonomy support examines the extent to which providers are perceived by patients to elicit and acknowledge their perspectives, support their initiatives, offer choice about treatment options and provide relevant information while minimizing pressure and control. For example '*I feel that my dietitian has provided me with choices and options.*'⁹ Respondents answer each of the 15 questions using a 7-item response option (strongly agree to strongly disagree). The HCC has been used in a number of studies (Williams et al, 1996; Williams et al, 2004) with alphas ranging from 0.92 to 0.96, demonstrating high internal consistency of the questionnaire.

Shortened versions of the HCC have been developed by selecting items that most represent autonomy support from the 15-item questionnaire. These range from a 4-item scale, which produced an alpha of 0.75 (Williams et al, 1999), to a 7-item HCC giving an alpha of 0.85 (Kasser & Ryan, 1999). A 6-item version of the HCC was selected for use in this study, with an alpha of 0.82 (Williams et al, 2004), which is freely available (University of Rochester, 2008). The

⁹ The wording in the questionnaire was changed from "*doctor*" to "*dietitian*" for this study

questionnaire is scored by summing the scores and dividing by the total number of questions in the HCC questionnaire. High average scores represent high levels of patient-perceived autonomy support.

7.4.1.3 The Medical Interview Satisfaction Questionnaire (MISS)

The Medical Interview Satisfaction Scale (MISS; Rose et al 2002; Wolf et al 1978) is a 29 item questionnaire, using a 7 item response option (strongly disagree to strongly agree), which assesses the degree to which the individual was satisfied with the consultation. For example, '*I felt that the dietitian didn't take my problem seriously.*'¹⁰ The 9-item subscale of the MISS, which focuses on the patient/provider relationship, was chosen for this study. This measures satisfaction with the patient/provider relationship, by focusing on perceived professional warmth and patients feelings of trust, confidence, and freedom to express themselves in the consultation setting. As such, it is a more refined marker of the process of patient satisfaction as it relates specifically to the patient provider relationship (Crow et al, 2002). This 9-item subscale of the MISS has a Cronbach alpha of .93 showing good reliability which is similar to the .96 Cronbach alpha for the complete 29-item MISS questionnaire (Kinnersley et al, 1996). The questionnaire is scored by summing the scores and dividing by the total number of questions. High average scores represent high levels of patient satisfaction.

¹⁰ The wording in the questionnaire was changed from "*doctor*" to "*dietitian*" the 9-item subscale of the MISS was obtained from Kinnersley et al, "A comparison of methods for measuring patient satisfaction with consultations in primary care" *Family Practice*, 1999, 41-51 by permission of Oxford University Press

7.4.1.4 Diabetes Self-efficacy Questionnaire (SE)

The diabetes self-efficacy questionnaire measures the patient's belief in their ability to manage their diabetes, and consisted of 8 items using a 10 point scale from not at all confident to totally confident, eg *"How confident do you feel that you can choose the appropriate foods to eat when you are hungry (for example snacks)?"* This scale has been developed by the Stanford Patient Education Research Centre and has an internal consistency reliability of 0.83 (Lorig et al, 2009; Stanford Patient Education Research Centre, 2009). The questionnaire is scored by summing the scores for each question and then dividing by the total number of questions. High average scores represent high levels of patient self-efficacy.

7.4.2 Ordering of Questionnaires in Patient Booklet

To reduce any potential bias that may arise from the order in which the questionnaires are presented in the patient booklet, a Latin square was employed (Field & Hole, 2003). This resulted in the three sets of questionnaires being ordered in six different ways (Table 7.18).

	Satisfaction (MISS)	Self-efficacy (SE)	Patient autonomy (HCC)
Questionnaire 1	1	2	3
Questionnaire 2	2	3	1
Questionnaire 3	3	1	2
Questionnaire 4	1	3	2
Questionnaire 5	3	2	1
Questionnaire 6	2	1	3

Table 7.18: Latin square used for ordering of questionnaires in patient booklet

Equal quantities of the six patient questionnaire booklets identified in Table 7.18 were taken to the three Trusts. The booklets were shuffled to ensure random selection of a questionnaire booklet for completion at the end of each clinic. This method helped to reduce bias from the questionnaire order and from the questionnaire layout. An example of a patient questionnaire booklet used in this study is provided in Appendix 2.5.

7.5 Power Calculation

There is little data on the relationship between empathy and agreement on reported decisions made in the literature. One small study of 30 medical consultations suggested a moderate correlation ($r = 0.486$) between empathy and agreement on reported decisions (Coughlan, 2005). The hypothesis for this study is directional in that higher levels of empathy are expected to result in greater agreement on reported decisions made in the consultation, suggesting the need for a one-tailed power calculation. Using the correlation coefficient from Coughlan and a one-tailed test, the sample size for 90% power was calculated as 37. This suggests that a sample size of 37 patients would be needed to detect a significant difference between agreement on reported decisions made and empathy in the consultation. However, data on drop-out rates from the Coughlan study were not reported and it is difficult to know therefore how many additional patients may be needed to ensure that an adequate sample size is obtained. Studies using a similar methodology have also failed to report drop-out rates, but do report variable recruitment rates of 55% to 80% (Parkin et al, 2006; Skinner et al, 2007). Given the range of uncertainty over drop-out rates, recruitment rates, quality of audio recordings and completed questionnaires, a larger sample size of between 80-100

participants was aimed for to ensure that an adequate sample size would be obtained.

7.6 Analysis of Questionnaires

The following section explores the analysis used for the questionnaires that were collected at the end of the consultation.

7.6.1 Quantitative Analysis of Questionnaires

The questionnaires used to measure patient autonomy, self-efficacy and satisfaction were scored and the scores for these measures were entered into SPSS v.17.0 for Windows (SPSS Inc., Chicago, IL, USA). Demographic data and information on consultation type (follow-up/new) for each consultation was also entered. Identification codes on the questionnaire booklets enabled patient and dietitian responses for each consultation to be matched prior to analysis using SPSS.

7.6.2 Transforming the Qualitative Open Question into a Quantitative Measure

The open question in the questionnaire booklet resulted in lists of decisions being reported by both dietitians and patients. The following section explains the process by which these decisions were converted into numerical codes to allow statistical analysis to be undertaken.

7.6.2.1 Decisions Reported on Questionnaires

To compare reported decisions made, each decision recorded on the questionnaires was coded into a topic area using a coding frame (Swift, 1996). This produced a list of 37 topic areas for reported decisions (Appendix 2.6).

Related topics were then grouped together under a themed heading. For example, decisions relating to sorting out tablets, insulin dose, injection sites, and insulin pumps were all placed under the heading 'Medication'. By grouping common themes together, the initial 37 topic headings were reduced to 13 key areas (Table 7.19)

Final coding themes for decisions	
1	Food
2	Weight management
3	Exercise/activity
4	Continue with diet no change
5	Administration
6	Food and drink monitoring diary
7	Education/support groups
8	Psychosocial
9	Alcohol
10	Medication
11	Hypoglycaemia treatment/management
12	Blood glucose management
13	Other problems

Table 7.19: Final coding themes used for identified decisions

Reported decisions relating to food were numerous and contributed to the bulk of the decisions made. To provide further insight into this large topic area, and to capture the richness of this data, the food theme was broken down into ten distinct sub-categories (see Table 7.20, full description in Appendix 2.7).

Food sub-category	
1	Portion sizes
2	Fruit and vegetables
3	Fat
4	Carbohydrate counting/Glycaemic index (GI)
5	Snacks
6	Eating out
7	Sugar free drinks
8	Food labels
9	Salt
10	Drink water with meals

Table 7.20: Ten sub-categories identified for food theme

Initial coding identified 463 decisions from the patient and dietitian questionnaires. Codes were assigned to each and a second round of coding was conducted to check consistency of allocated codes to the reported decisions. This second round of coding identified the following discrepancies: Eleven decisions were coded that were subsequently felt to be statements of facts or descriptions of issues discussed rather than decisions made. For example, the following statement was originally coded as weight management *“having weighed myself my weight had gone up about 3lbs since my last weigh in”*. However, this was judged to be a statement and not a decision. All statements of facts or descriptions of issues were removed from the list of decisions.

Thirteen additional decisions were coded, having been missed in the first round of coding. These decisions were reported in long sentences that contained one

or more specific codes, eg “*I need to start reducing snacks or crisps in the evening and to eat a banana or apple instead.*” This would be coded twice in the food category as two specific decisions around food have been made: a reduction in snacks and an increase in fruit intake. These were coded according to the themes identified in Table 7.19 and Table 7.20 and added to the data set. The decision coding was then re-checked for a third time on the 465 decisions reported, to ensure consistent application of the themed headings to all reported decisions on the questionnaires. No further discrepancies were found.

The numerical codes for patient and dietitian-reported decisions were entered onto an Excel spreadsheet for each consultation. This allowed the total number of decisions reported under the themes to be collated. In addition, coding by numbers allowed direct comparison of reported decision topics for patients and dietitians. The total number of patient and dietitian-reported decisions for each consultation was entered into SPSS for analysis.

Agreement on reported decisions was calculated using the formula shown in Table 7.21

$\frac{\text{patient and dietitian agreement on reported decisions (PD)}}{(\text{patient reported decisions} - \text{PD}) + \text{PD} + (\text{dietitian reported decisions} - \text{PD})} \times 100$ = % agreement on reported decisions

Table 7.21: Formula for calculating agreement on reported decisions made in the consultation

Table 7.22 shows that two categories were created to record decision agreement for patient and dietitian: complete agreement on decisions made and partial agreement on decisions made (Goodchild et al, 2005; Parkin et al, 2006; Parkin & Skinner, 2003).

Complete agreement	Patient-reported decision	Dietitian-reported decision
Topics and specific content of decisions are the same	<i>Putting spreading fat on only 1 slice of bread</i> <i>Trying to avoid any fat on meats</i>	<i>Reduce spreading fat, spread one side only of bread</i> <i>Cut off visible fat on meat</i>
Partial agreement	Patient-reported decision	Dietitian-reported decision
Topics the same but the specifics differed or there was overlap between topics reported by patient and dietitian	<i>More exercise</i> <i>Fewer snacks</i>	<i>½ hour walk 5 days a week</i> <i>To reduce biscuits</i>

Table 7.22: Coding categories for complete agreement on decisions made and partial agreement on decisions made

This method was applied to all decisions obtained to provide additional differentiation of agreement categories and also entered onto SPSS.

7.7 Analysis of Audio Recordings

7.7.1 Extraction of Decisions and Generation of Quantitative Data Set

Consultations were digitally recorded with an Olympus VN-2100PC model voice recorder and downloaded onto a PC using Olympus Digital Wave Player v2.1.4

software. The researcher listened to the audio files and identified any decisions made during the consultations and then entered them onto a spreadsheet.

Decisions needed to include an action that either the patient or dietitian was to undertake. *“Maybe we should think about increasing your fibre intake”* was not considered a decision, as it did not provide a clear action of how this was to be achieved. However, the following examples would have been recorded as decisions as clear actions were provided; *“make ½ lb of butter last 2 weeks”*, *“reduce semi-skimmed milk from 1½ pints to ¾ pint a day”* or *“include a bedtime snack after gin and tonic.”*

To ensure reliability, a second coder independently extracted decisions from 9 (10%) of the audio recordings. There were no discrepancies in extracted decisions between the researcher and the second coder and it was therefore assumed that the decisions extracted by the researcher from the remaining audio recordings were accurate.

The coding themes identified in Tables 7.19 and 7.20 were then applied to all extracted decisions from the audio recordings. The final codes allocated to the extracted decisions were entered onto an Excel spreadsheet to allow comparison between decision topics reported on questionnaires and decision topics recorded in the consultations. Data on number of decisions recorded per consultation were also entered onto SPSS.

7.7.2 Coding for Empathy Using the Empathic Communication Coding System (ECCS)

Following completion of the questionnaire analysis, the audio recordings were analysed for empathy. All recordings were coded for empathy using the Empathic Communication Coding System (ECCS) (Bylund & Makoul, 2005) incorporating the minor changes suggested in Chapter Five. This system provides a quantitative measure of behavioural empathy in the consultation. The ECCS codes the type of empathic statement made by patients and the dietitian's response to these statements. The first part of the coding measures the presence of three types of empathic statements (statement of emotion, statement of progress, statement of challenge) provided by the patient in the consultation (see Appendix 1.2). Each recording was examined to determine the timing of occurrence and type of empathic statement made by patients. This process was then repeated to allow coding of the dietitian's response to the empathic statements into one of six hierarchical categories, as illustrated in table 7.23. (Full ECCS coding definitions and examples are in Appendix 2.8.)

Description of category	
6	Statement of shared feeling or experience
5	Confirmation
4	Acknowledgement with pursuit
3	Acknowledgement
2	Minimal encouragers
1	Implicit recognition of patient perspective
0	Denial of patient perspective

Table 7.23: Coding system for empathic responses made to patient empathic statements (ECCS)

7.7.2.1 Reliability of application of the Empathic Communication Coding System (ECCS)

Fifteen (17%) of the audio recordings were randomly selected to check the reliability of the application of the ECCS coding. The researcher coded the first 5 minutes of these audio recordings using the ECCS and then a second coder repeated the coding independently. Cohen's kappa was used to test for agreement between coders, as this method corrects for chance and reduces bias involved when looking at agreement and disagreement scores alone (Bakeman & Gottman, 1997). The time intervals of occurrence and non-occurrence of empathic statements over the first 5 minutes were compared for agreement. The time segments were broken into seconds (300 seconds) to aid correct identification of occurrence of empathic statements. This check gave a Cohen kappa of 0.75 for agreement of occurrence of empathic statements made in the consultations.

Once the coding for occurrence of empathic statements had been checked, Cohen's Kappa was used again to check for agreement on the codes assigned to the empathic statements by the two coders. This gave a Cohen kappa of 0.76 for agreement on assigned codes to empathic statements.

Following these reliability checks, the remaining audio recordings were coded with the amended version of the ECCS (Appendix 2.8). Data was collected on the total number and type of empathic statements made in the consultations and entered onto SPSS. The mean level of empathy for each consultation was calculated by dividing the sum of the empathic responses by the total number of empathic opportunities made in the consultation (Bylund & Makoul, 2002). This method was also used to compute the mean level of empathy for each empathic

component (statement of emotion, statement of progress and statement of challenge) per consultation. The mean level of empathy for each empathic statement made, as well as the mean level of empathy for the consultation as a whole was also entered onto SPSS.

7.7.3 Screening for Interference in the Interpretation of Empathy

There was a concern that other factors may interfere with the interpretation of the correlation data between empathy and agreement on reported decisions made (Silverman, 2006). Immediacy of information is known to affect recall (Watson & McKinstry, 2009). Greater levels of agreement on reported decisions made may be influenced by the provision of action plans or repetition of decisions at the end of the consultation, rather than indicating the presence of empathy. To test for this effect, all consultations that recapped decisions and/or set action plans in the last 5 minutes of the consultation were identified. These consultations were compared to the remaining consultations where these behaviours did not occur. This process highlighted differences in the presence of empathy and the level of agreement on reported decisions made in the two data sets allowing interpretation of level of interference to be made. These findings are presented alongside the Phase I data on empathy in Chapter Eight.

7.8 Ethics

Ethical guidance for this study was obtained via the National Research Ethics Service (NRES) (2007) and granted by the Gloucester Ethics Committee. The research and development departments within the three Trusts provided final approval for the study to be undertaken within their hospitals. Ethical approval was required as the study was based within the National Health Service and

patient interactions with dietitians were to be explored. This research raised potential issues with regard to patient confidentiality and in order to comply with such issues all audio recordings and questionnaires were coded to ensure anonymity. Although dietitians collected data on patient gender, age, duration of diabetes and presence of complications the data collected did not contain any personal identifiable information such as names, addresses, or hospital numbers thereby ensuring anonymity and confidentiality. All digital audio recordings were downloaded onto a password-protected PC immediately after the consultation, conforming to the Data Protection Act (1998) applying to the storage of personal information.

7.9 Summary

This chapter has identified the methods used for recruiting dietitians and patients into the study and the methods of data collection employed. The measures for patient satisfaction, patient and professional autonomy and patient self-efficacy and empathy have been detailed. The retrieval of decisions from the questionnaires and audio recordings have also been described, including the processes put in place to check the reliability of the methods used for identifying and coding decisions made.

The method used for coding empathy from the consultation recordings has been described, as has the process used to check the reliability of the coding system employed. Additional checks were also carried out on the data collected, to screen for possible interference when exploring empathy and agreement on reported decisions made. The results obtained from the quantitative analysis of the data are presented in Chapter Eight.

CHAPTER EIGHT: RESULTS FOR PHASE I

Phase I of this study relates to the quantitative analysis of the data collected and explores the level of patient and dietitian agreement on reported decisions made in the consultation, noting the key topic areas in which decisions were made. Decisions extracted from the recorded consultations are compared to decision topics reported by patients and dietitians on questionnaires.

The relationship between agreement on reported decisions made and empathy, patient satisfaction, patient self-efficacy and patient autonomy is explored, along with the effect that the empathic statements of emotion, progress and challenge have on these factors. Patient and dietitian perception of autonomy support provided in the consultation is compared.

The effect of patient demographic data on agreement is also discussed. These include the impact on levels of recall of: age (Jansen et al, 2008a; McDonald-Miszczak, 2005), gender, and health status (Kiviniemi & Rothman, 2006) and duration of diabetes (Rost et al, 1990). Gender status is also reported to impact on empathy measures (Coughlan, 2005; Roter et al, 2002) as have the presence of complications, duration of diabetes and length of consultation (Heisler et al, 2002). The impact of these additional factors also needs to be assessed when undertaking the quantitative analysis of the data.

8.0 Statistical Analysis

The statistical tests used in this study are detailed in the appropriate sections of the following analysis. Data that reports mean values will include the standard error of the mean as per the American Psychological Association guidance (Field & Hole, 2003). All tests performed will report results calculated for two-tailed tests (unless stated otherwise) and the level of probability of significance used will be set at $p < .05$.

8.1 Results

The following section presents the descriptive statistics generated on reported and recorded decisions from consultations.

8.1.2 Decision Topics

Table 8.24 lists decision topics obtained from patient and dietitian questionnaires and audio recordings of consultations. The top three decision topics identified by patients and dietitians were the same: food, administration (eg appointments, letters etc) and exercise. A full description of decision topics is provided in Appendix 2.6.

Decision Topics	Patient-reported decisions	Dietitian-reported decisions	Decisions from audio recordings
Food	79	122	157
Administration (appointments etc)	25	39	43
Exercise	24	27	27
Weight	4	8	6
Continue / no change	18	19	18
Medication	11	12	14
Monitoring of food and drink intake	8	11	13
Education	9	13	10
Hypoglycaemia	6	4	9
Blood glucose monitoring	2	3	8
Psychosocial	3	6	5
Alcohol	4	4	6
Other	3	1	5
Total	196	269	321

Table 8.24: Summary of decision topics reported on patient and dietitian questionnaires and decision topics taken from audio recordings

Food decisions accounted for (157/321) 49% of the total decisions made in the consultations, and in order to provide further refinement to the analysis, this group was broken down into the sub-categories identified in Table 8.25.

Patient-reported decisions	Dietitian-reported decisions	Decisions from audio recordings
Portions	Portions	Portions
Fat/snacks	Fat/Fruit and vegetables	Fat
Eating out	Snacks	Fruit and Vegetables
Fruit and Vegetables	Eating out	Snacks
Carbohydrate/glycaemic index	Carbohydrate/glycaemic index	Eating out
Drink water with meals	Drink water with meals	Carbohydrate/glycaemic index
Salt	Salt/sugar free drinks	Drink water with meals
	Food labels	Sugar-free drinks
		Salt/food labels

Table 8.25: Food sub-categories ranked in order of occurrence

Food portion sizes were the most frequent food decision reported in the consultations, and Table 8.25 highlights differences in patient and dietitian reporting of food decisions made. To test for significance in the variation seen in reported and recorded food decisions, one-way ANOVA was conducted.

The differences seen in fruit and vegetable decisions were found to be significant, with dietitians reporting significantly more fruit and vegetable decisions than were reported by patients or extracted from the recorded consultations, $F(2, 251) = 5.190, p = .006$.

8.1.3 Level of agreement on reported decisions made in the consultation

The 86 questionnaires analysed recorded 196 decisions by patients and 269 decisions by dietitians. Of these, 142 were reported by both parties (72% were patient-reported decisions, 53% were dietitian-reported decisions). Overall

agreement between patients and dietitians on reported decisions made was assessed to give an overall patient/dietitian agreement rate on reported decisions made of 44% (see Table 7.21, Chapter Seven for the full explanation).

Complete disagreement on all decisions reported by patients and dietitians occurred in 10 of the 86 consultations (12%). '*Complete disagreement*' meant that none of the topics or details of decisions reported by patient or dietitian on the questionnaires matched.

The 142 decisions reported by patients and dietitians were examined further to explore the level of agreement. The agreement code was broken into two categories; complete agreement (where the topic and detail reported by both parties was the same), and partial agreement (where the topics were the same but the specifics reported differed between parties). 31% of the reported decisions achieved partial agreement and results are presented in table 8.26

	Decisions reported by patients and dietitians	Percentage Agreement
Complete agreement on reported decisions	98/142	69%
Partial agreement on reported decisions	44/142	31%

Table 8.26: Patient and dietitian agreement on decisions reported by both parties

Decisions reported on questionnaires and on audio recordings were compared for each consultation. This analysis highlighted a number of decisions that were

not made in the consultation: 37 (11.5%) for patients and 50 (15.5%) for dietitians.

Differences in the mean number of reported decisions made in the consultations were also analysed (Table 8.27), with dietitians reporting more decisions (3.13) being made in the consultations than patients (2.28). Wilcoxon signed rank test was used to explore this difference and found it to be significant ($z = -4.42$, $p < .05$).

	Mean number of decisions per consultation (SEM)
Decisions made per consultation (extracted from recordings)	3.73 (0.19), range 0-8
Patient-report of decisions	2.28 (1.57), range 0-5
Dietitian-report of decisions	3.13 (0.17), range 1-12
Patient and dietitian agreement on reported decisions	1.65 (0.11), range 0-5

Table 8.27: Mean number of reported decisions per consultation

The findings highlighted above indicate that patients and dietitians report few of the decisions made in the consultation, with patients reporting fewer decisions than dietitians. Patient and dietitian agreement on reported decisions accounts for less than half of the decisions made in the consultation. There are also differences in the reported decision topics, which may reflect the differing agendas of patients and dietitians. Patients and dietitians reported decisions that were not made in the consultation, and this may be further evidence of their differing agendas.

8.2 Empathy

The following section presents the descriptive statistics generated for the measure of empathy.

A total of 857 empathic opportunities occurred in the 86 consultations recorded. Dietitians missed only four of these empathic opportunities during delivery, and these were three statements of emotion and one statement of progress. The mean number of empathic opportunities provided by patients was 9.97 (SEM 0.57) with a range of 0-32 empathic statements per consultation. The level of empathic response to these by dietitians is illustrated in table 8.28.

Level	Empathy description	<i>n</i> (N=853)	Percentage
6	Shared feeling or experience	0	0
5	Confirmation	53	6.2%
4	Acknowledgement with pursuit	195	22.9%
3	Acknowledgement	235	27.5%
2	Minimal encouragers	252	29.5%
1	Implicit	96	11.3%
0	Denial	22	2.6%

Table 8.28: Dietitian responses to patients' empathic opportunities

The most frequent response to patients' empathic opportunities were *acknowledgement* and *minimal encouragers*. The response by dietitians to empathic opportunities raised by patients did not include *sharing feelings* or *experiences*; therefore no codes were allocated to level six.

The mean level of empathy was calculated for each empathic statement by taking the sum of empathic responses and dividing by the number of empathic

statements per consultation (Bylund & Makoul, 2002). The level of empathy was found to vary according to the type of empathic statement that patients made. The highest level of empathy was recorded for statements of challenge (2.84), with a mean level of empathy of 2.77, as shown in Table 8.29.

Empathic opportunities	Number of empathic statements made	Range of empathic statements made per consultation	Mean empathic response provided by dietitian
Statement of Emotion (SE)	147	0-12	1.33 (SEM 0.15)
Statement of Progress (SP)	249	0-10	2.33 (SEM 0.12)
Statement of Challenge (SC)	457	0-22	2.84 (SEM 0.10)
Total number of empathic opportunities presented (EOP)	853	0-32	2.77 (SEM 0.06)

Table 8.29: Mean level of response by dietitians to empathic statements made by patients

These findings demonstrate that patients present a varied number of empathic opportunities in the consultation. Dietitians mainly respond to these empathic opportunities with *minimal encouragers*, *acknowledgement*, and *acknowledgement with pursuit*. Dietitians are more empathic when responding to statements of challenge then statements of emotion.

8.2.1 Impact of Empathy on Consultation Outcomes

The following section provides the data on the inferential statistics used to explore empathy. All correlations were conducted using Kendall's τ coefficient,

independent t-test was performed on the continuous variables for the demographic data set. Independent t-test was adjusted for equal or unequal variances based on Levene's test. If Levene's test was significant then values were recalculated using Mann-Whitney *U*-test.

8.2.2 Does Greater Empathy Result in Greater Agreement?

Correlations were undertaken using a one-tailed test to explore the relationship between empathy and agreement on reported decisions made. There was a significant correlation between empathy and patient and dietitian agreement on reported decisions made in the consultation ($\tau = .283, p = .0005$).

When dietitians are more empathic, greater levels of agreement on reported decisions occur as a result, and this finding supports the first hypothesis.

8.2.3 The effect of decision recapping / action planning at the end of the consultation

It was important to check that the correlation seen between empathy and agreement did not occur as a result of the dietitian using decision recapping or action planning in the consultation.

The last 5 minutes of the audio recordings were reviewed, and this resulted in the identification of 45 consultations where decision recapping and action planning occurred. These were compared to the remaining 41 consultations, where this process was absent. Independent t-test showed significant differences between the two groups for agreement on reported decisions made, $t(84), = 2.74, p = .007$. Consultations that used action planning or decision recapping at the end of the consultation achieved significantly greater levels of

agreement on reported decisions made. Also, the level of empathy demonstrated was significantly greater $U = 530.500$, $N_1 = 1$, $N_2 = 45$, $p = .001$, see Table 8.30.

	Mean agreement on reported decisions	Median value for empathy
Action plan/decision recap	1.93 (SEM .157)	2.92 (range 1.9)
No action plan/ decision recap	1.34 (SEM .147)	2.60 (range 3.5)

Table 8.30: Mean and median values for empathy and agreement on reported decisions made in consultations with and without action planning/decision recapping

These findings suggest that dietitians who are more empathic are also using decision recapping and/or action planning in their consultations, which is associated with greater levels of agreement on reported decisions made.

8.2.4 Impact of the Various Components of Empathy on Agreement

Correlations were conducted to explore the relationship between empathic components and agreement on reported decisions and number of decisions made.

High levels of empathy to statements of challenge were found to correlate significantly with agreement on reported decisions made ($\tau = .221$, $p = .008$).

The number of patient decisions reported correlated with the dietitian's level of empathy ($\tau = .216$, $p = .008$), and in particular the dietitian's empathic response to statements of challenge ($\tau = .210$, $p = .011$).

The number of decisions reported by the dietitian was correlated to the dietitian's level of empathy ($\tau = .228, p = .005$), and in particular to statements of emotion ($\tau = .231, p = .008$) and statements of challenge ($\tau = .180, p = .028$).

These findings suggest that responding to empathic statements resulted in dietitians reporting that more decisions were being made. When dietitians respond empathically to statements of challenge, patients and dietitians report a greater number of decisions being made and achieve greater agreement on reported decisions made in the consultation.

8. 2.5 Can the relationship between empathy and agreement be explained by differences within the consultations?

Due to the small number of dietitians used in this study, it was important to check that the correlations seen between empathy and agreement on reported decisions made did not occur as a result of a cluster effect from one individual - resulting in skewed data. Multiple regression analysis was therefore conducted to determine the differences within each of the dietitian's consultations for empathic responses and agreement on reported decisions. The first step was to create dummy variables for dietitian 1, 2 and 3, allowing the independent variable of dietitian to be entered as a dichotomous variable in the regression equation (Calder & Sapsford, 1996). Product variables (dietitian x empathy) were incorporated into the model to allow for the possibility of slope differences between the dietitians (Calder & Sapsford, 1996). A hierarchical method was used as follows: Block 1 dummy variables for dietitians were entered, followed by Block 2 - the mean empathic response to statements of challenge (as this had a significant correlation with agreement on reported decisions), followed by

Block 3 product variables (dietitian x empathy). The dependent variable used for this regression was patient and dietitian agreement on reported decisions made. A significant model emerged: $F(4, 81) = 6.902, p < .0005$. This model explains 21.7% of the variance (Adjusted $R^2 = .217$). Table 8.31 gives information for the predictor variables that were included in the final model.

Variables	Patient and dietitian agreement on reported decisions made in the consultation			
	B	SE B	β	<i>p</i> value
Block 1 Dietitian 1	-0.87	-0.31	-0.37	$p = .006^{**}$
Dietitian 2	-0.12	0.30	-0.05	$p = .691$
Dietitian 3	0.04	0.31	0.02	$p = .902$
Block 2 Mean empathic response to statements of challenge	0.37	0.12	0.32	$p = .002^{**}$
SE indicates standard error		Adjusted R^2 for block 1 = 0.132		
* $p < .05$		Adjusted R^2 for block 2 = 0.217		
** $p < .01$		Adjusted R^2 for block 3 = 0.208		

Table 8.31: Influence of individual dietitians on level of empathic response to statements of challenge and impact on level of agreement on reported decisions made

The hierarchical model shows that Block 3, which contained the product variables (dietitian x empathy), did not lead to a significant improvement in R square ($R^2 = .208$). This was not therefore included in the final model (see Table 8.31), since the relationship between empathy and agreement on reported decisions did not vary across dietitians. Within each dietetic consultation where there was greater empathy, there was greater agreement on reported decisions made.

8.2.5.1 Differences Between Dietitians

Further analysis was conducted using one-way ANOVA to explore the differences identified between dietitians on levels of agreement on reported decisions made. The difference was significant, $F(3,82) = 5.310$, $p = .002$, as was the difference between dietitians for the level of empathy, $F(3,82) = 4.351$, $p = .007$. Error bar charts illustrate the variability of the means for level of agreement (Figure 8.8) and level of empathy (Figure 8.9) for each dietitian.

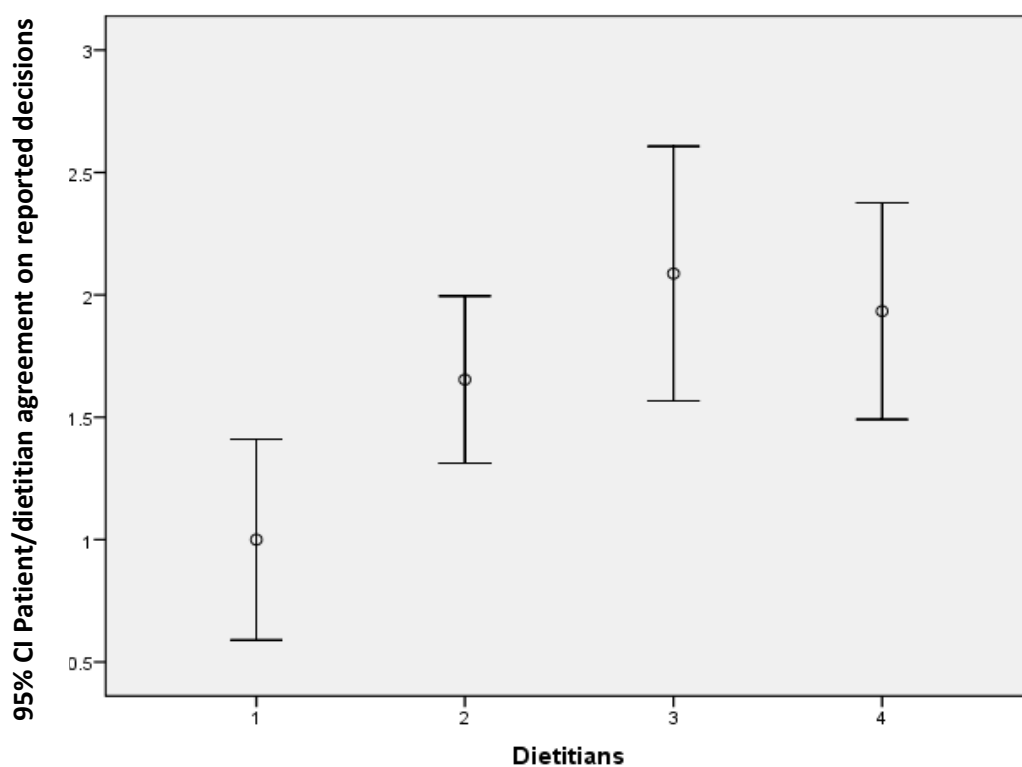


Figure 8.8: Agreement on reported decisions for individual dietitians

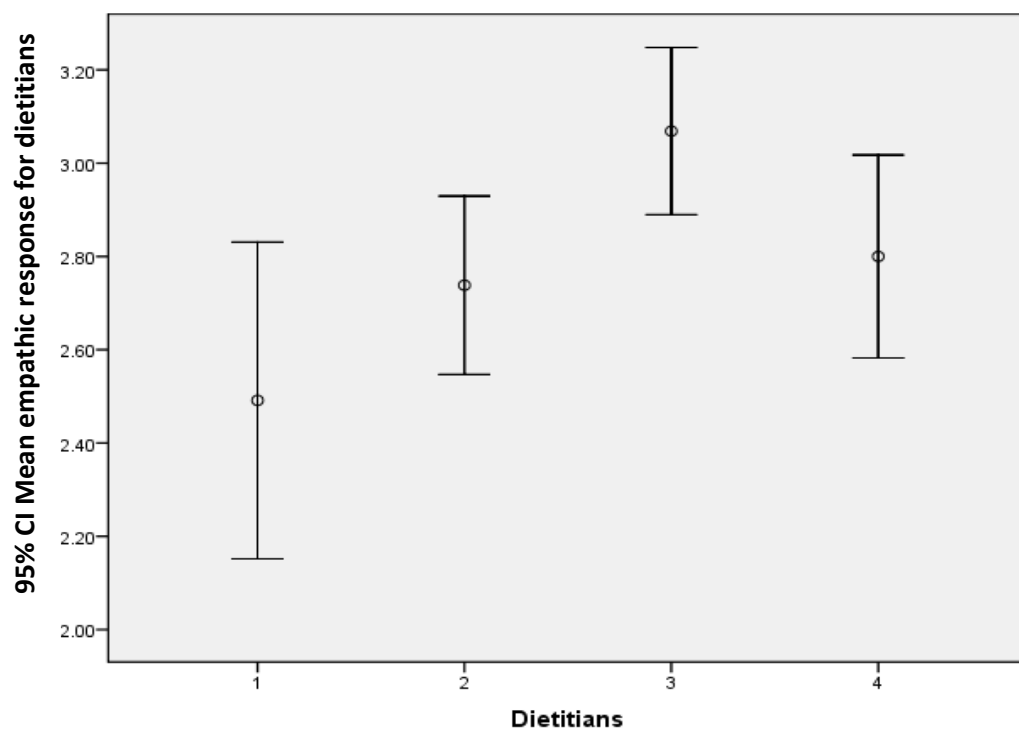


Figure 8.9: Mean level of empathy for individual dietitians

These findings suggest significant differences in the practice of dietitians in consultations. Independent t-test confirmed that the differences between dietitian 1 and dietitian 3 were significant for agreement on reported decisions made ($t = -3.386(df43)$, $p = .002$) and for differences in expressed empathy ($t = -3.16(df43)$, $p = .003$).

In comparison to dietitian 1, Dietitian 3 expressed significantly more empathy in her consultations and achieved significantly greater levels of agreement on reported decisions made.

The differences in practice were explored further to identify the different responses provided by each dietitian to empathic opportunities offered by patients in the consultation. The results are presented in Table 8.32.

Level	Empathy description	Dietitian 1	Dietitian 2	Dietitian 3	Dietitian 4
6	Shared	0	0	0	0
5	Confirmation	16	10	13	12
4	Acknowledgement with pursuit	32	49	63	49
3	Acknowledgement	57	67	59	50
2	Minimal encouragers	74	65	58	61
1	Implicit recognition	40	28	7	20
0	Denial	10	6	2	5
	Total	229	225	202	197

Table 8.32: Frequency of ECCS codes used for responses by dietitians to patient empathic opportunities

Dietitian 3 used more *acknowledgement with pursuit* in response to empathic opportunities, whereas in contrast dietitian 1 used more *minimal encouragers*. Compared to the other dietitians, dietitian 1 used a greater number of *implicit recognition* to patients' empathic opportunities.

One-way ANOVA was conducted to examine these differences in empathic responses. There were significant differences in level 1 responses (*implicit recognition*), $F(3,82) = 5.651$, $p = .001$, and level 4 responses (*acknowledgement with pursuit*), $F(3,82) = 4.826$, $p = .004$. Differences between dietitians for the remaining levels (0, 2, 3 and 5) were not significant: $p > .05$.

These findings highlight significant differences in the way that the dietitians in this study respond to empathic opportunities, suggesting differences in the way that dietitians practice.

Differences were also found in the average number of decisions reported by the dietitians (Table 8.33). The mean scores for agreement on reported decisions, empathy, level of empathy for different empathic statements and number of decisions for each dietitian are presented below.

	Dietitian 1	Dietitian 2	Dietitian 3	Dietitian 4
	(n = 22)	(n = 26)	(n = 23)	(n = 15)
Number of decisions recorded in consultation	2.95 (0.42)	3.62 (0.31)	4.43 (0.35)	4.00 (0.39)
Patient-reported decisions	1.86 (0.24)	2.19 (0.22)	2.65 (0.21)	2.47 (0.24)
Dietitian-reported decisions	2.36 (0.29)	2.92 (0.18)	3.57 (0.23)	3.93 (0.64)
Agreement on reported decisions	1.00 (0.20)	1.65 (0.17)	2.09 (0.25)	1.93 (0.21)
Level of empathy	2.49 (0.16)	2.74 (0.09)	3.07 (0.09)	2.80 (0.10)
Empathic response to statements of emotion	1.48 (0.27)	1.77 (0.29)	0.65 (0.23)	1.40 (0.40)
Empathic response to statements of challenge	2.75 (0.22)	2.50 (0.96)	3.24 (0.14)	2.93 (0.17)

Table 8.33: Mean scores (SEM) for agreement on reported decisions, empathy, level of empathy for different empathic statements and number of decisions recorded for individual dietitians

Dietitian 1 set the fewest number of decisions per consultation (2.95 decisions) and had the lowest agreement on reported decisions made (31%). Dietitian 3 set the highest number of decisions per consultation (4.43 decisions) and had the highest level of agreement on reported decisions made (51%). This

difference in agreement on reported decisions (Figure 8.8) is therefore not a result of the number of decisions set in the consultation.

These findings suggest that higher levels of empathy in the consultation, particularly in response to statements of challenge, result in more decisions being made and recalled by patients. There are significant differences in the way that dietitians practice resulting in differences in expressed empathy, recall, and agreement on reported decisions made. These differences may reflect different communication skill sets used by the dietitians. Qualitative analysis will allow expansion of these results to provide insight into the communication processes that occur in consultations that may account for these differences.

8.2.6 Empathy and patient satisfaction

Correlations were conducted to explore the relationship between empathy and satisfaction using a 1-tailed test to test the hypothesis that higher levels of empathy would result in greater levels of patient satisfaction. In this study, empathy did not correlate to satisfaction ($\tau = -.032$, $p = .340$). However, a correlation was found between the total number of empathic statements of challenge made by the patient and patient satisfaction ($\tau = .246$, $p = .023$).

8.3 Mediating Variables (patient autonomy and self-efficacy)

The following section describes the correlations conducted to explore the relationship between patient perception of autonomy and self-efficacy with agreement on reported decisions made. The relationship between autonomy and self-efficacy with empathy was also explored.

Patient autonomy ($\tau = -.070, p = .417$) and self-efficacy ($\tau = -.144, p = .081$) did not correlate with patient and dietitian agreement on reported decisions made. In addition, patient autonomy ($\tau = .019, p = .806$) and self-efficacy ($\tau = .012, p = .875$) did not correlate with empathy.

In this study, patient autonomy and self-efficacy did not correlate with empathy or with agreement on reported decisions.

Correlations were also conducted to explore patient and dietitian perception of autonomy support. There was no correlation between dietitian autonomy and patient autonomy ($\tau = 0.014, p = .858$). Patient and dietitian perception of autonomy support in the consultation differed and this further highlights the importance of observational data to examine communication skills used in consultations.

8.4 Moderating variables (demographic data and length of consultation)

The following section explores the data on patient demographics and situational variables (length of consultation) as these may influence the levels of empathy and agreement on reported decisions made. Data is only presented for findings that were found to be significant ($p < .05$).

8.4.1 Presence of complications and duration of diabetes on agreement

Patients with complications reported significantly more decisions being made in the consultation $t(84) = 2.199, p = .031$. The final level of agreement on reported decisions made was also significantly greater, $t(84) = 2.509, p = .014$ (Table 8.34).

	Presence of Complications <i>n</i> = 36 Mean (SEM)	No complications <i>n</i> = 50 Mean (SEM)
Patient-reported decisions	2.58 (0.19)	2.06 (0.15)
Patient/dietitian agreement on reported decisions	1.97 (0.19)	1.42 (0.13)

Table 8.34: Mean number of decisions and complications

Duration of diabetes correlated significantly to levels of complete agreement on reported decisions made ($\tau = 0.251$, $p = .003$).

These findings suggest that the duration of diabetes and the presence of complications resulting from diabetes are additional factors that need to be considered when reviewing consultation outcomes. These factors significantly influenced the level of agreement on reported decisions made.

8.4.2 Length of consultation

Length of consultation was explored to ascertain what impact this had on the level of agreement on reported decisions made. Consultation length was found to correlate to agreement on reported decisions made ($\tau = .206$, $p = .012$).

Consultation length also correlated to the number of decisions made in the consultation ($\tau = .312$, $p < .0005$) both for patient-reported decisions ($\tau = .182$, $p = .026$) and dietitian-reported decisions ($\tau = .245$, $p = 0.02$).

Consultation length is pre-determined by appointment type, as new patients are usually allocated longer consultation times than for follow-up appointments. In this study, new patient consultations were generally twice as long as those for follow up. Figure 8.10 illustrates the relationship between mean consultation

time for new/follow-up appointments and the level of agreement on reported decisions made.

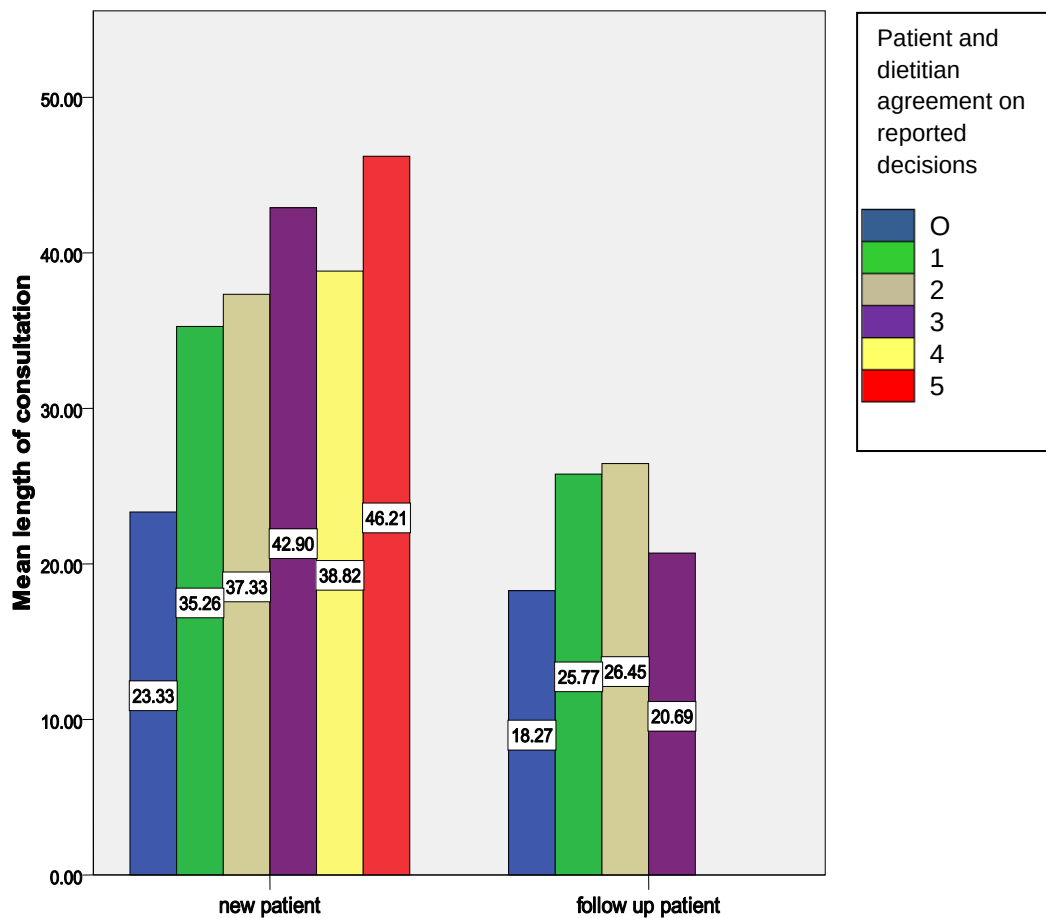


Figure 8.10: Mean length of consultation for new and follow-up appointments and level of agreement on reported decisions.

Figure 8.10 indicates that new and follow-up appointments require a minimum length of time before decisions are made and therefore before agreement on reported decisions can occur.

New patient appointments show an increasing number of decisions as consultation length increases. Although agreement on four reported decisions was achieved in less time (38.82 minutes) than that needed to achieve agreement on three reported decisions (42.90 minutes), this only occurred in two consultations and therefore cannot be considered as a normal occurrence.

The same is true for agreement on five decisions found in only one consultation. Interestingly, in follow-up appointments, agreement on three reported decisions was achieved in less time (20.69 minutes) than that needed to achieve agreement on two reported decisions (26.45 minutes). Again this was seen in only a small number 5/29 (17%) of the follow-up appointments. A larger patient sample with a greater number of professionals would allow this pattern in agreement and consultation length to be explored more fully.

Length of consultation was correlated with the total number of statements of challenge ($\tau = .380, p < .0005$) as well as the total number of empathic opportunities provided by the patient ($\tau = .306, p < .0005$). There was no significant difference in the number of empathic opportunities presented in new appointments compared to follow-up appointments $p > .05$.

Longer consultations for both new and follow-up appointments were associated with more empathic statements from the patient, particularly statements of challenge. Longer consultations also resulted in greater agreement on reported decisions made, with duration of diabetes and/or the presence of complications significantly impacting on agreement. This suggests that patients with a longer duration of diabetes and complications are presenting more statements of challenge, resulting in longer consultations, which lead to greater agreement on reported decisions made.

8.4 Conclusion

The quantitative analysis resulted in findings that support the first hypothesis, which states that higher empathy is associated with greater levels of agreement on reported decisions made in the consultation.

The second hypothesis tested stated that higher empathy is associated with greater levels of patient satisfaction. Unfortunately, the data does not support this hypothesis.

Patient autonomy and self-efficacy did not correlate with empathy and agreement on reported decisions made in the consultation. However, the following variables: presence of complications, duration of diabetes and length of consultation were found to significantly impact on the level of agreement on reported decisions made.

The consultation length was also found to correlate with the number of empathic opportunities presented by the patient.

Significant differences were found between dietitians regarding the level of expressed empathy and the resulting level of agreement on reported decisions made, suggesting significant differences in the way that dietitians practise.

Full discussion of the data collected in this chapter will occur in Chapter Twelve.

PHASE II

Qualitative Methods and Analysis

CHAPTER NINE: INTRODUCTION TO PHASE II

Phase II is a qualitative exploration of a sub-sample of the embedded data collected in Phase I. Analysis of Phase I data enabled identification and selection of consultations where complete agreement and complete disagreement on reported decisions made between patients and dietitians occurred. This selection enabled an exploratory comparison of the communication skills and information-giving exchanges within the consultations and their subsequent impact on the level of agreement on reported decisions made. This chapter describes the qualitative method chosen for Phase II of this study.

9.0 Qualitative analysis

The qualitative analysis involves exploration of consultations to identify specific communication skills and behaviours that occurred in the consultations. Firstly, this identification allows comparison of these behaviours to be made between those consultations with agreement on reported decisions made and those with disagreement. To enable this comparison to occur, the data is presented as frequencies to illustrate occurrence within the consultations (Boeije, 2010; Boyatzis, 1998; Hancock, Windridge & Ockleford, 2007; Street et al, 1993). Secondly, although this data is presented quantitatively to allow comparison, it is also explored qualitatively to support the development of themes for the information-giving exchanges that occurred in the consultations (Joffe & Yardley, 2004).

Patient-centred communication skills are crucial for the expression of empathy (Egan, 2002; Neumann et al, 2009; Ong et al, 1995) and may influence the way in which that information is delivered in the consultation (Neumann et al, 2009). In addition, lack of active-listening skills may limit expressions of empathy, thereby impacting on patient recall as discussed in Chapter Three. Figure 9.11 illustrates a small part of the proposed model of interaction between empathy, communication skills, and information exchange, with outcomes as suggested by Neumann et al (2009). The links between both short-term and long-term outcomes are hypothesised links in this model.

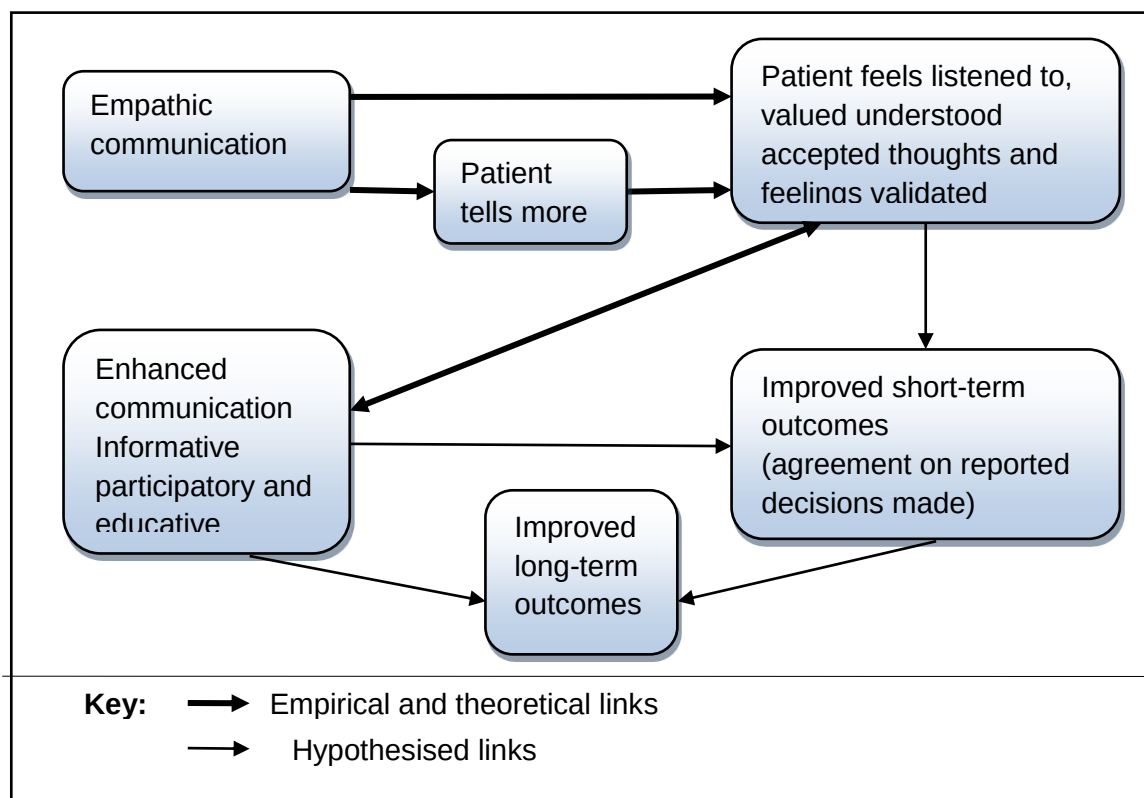


Figure 9.11: Model illustrating the interaction between empathy, communication skills and information exchange (adapted from Neumann et al, 2009)⁸

¹¹ Reprinted from Neumann et al (2009) 'Analysing the "nature" and "specific effectiveness" of clinical empathy: A theoretical overview and contribution towards a theory-based research agenda', *Patient Education & Counseling*, 74 pp.339-346 with permission from Elsevier

9.1 Thematic analysis

A thematic approach will be employed to explore the information-giving exchanges that occurred in the consultations. This method was chosen as it provides a flexible approach to data analysis resulting in a summary of key features from the data set (Boyatzis, 1998; Braun & Clarke, 2006; Jupp, 2006). The flexible approach to analysis allows attention to be paid to the qualitative aspects of the material as it is analysed (Joffe & Yardley, 2004).

Theoretical thematic analysis uses a directed approach to data analysis, which means that theory is used to guide the selection of initial codes applied in analysis (Braun & Clarke, 2006; Corbin & Strauss, 2008; Creswell, 2009; Tuckett, 2005). For this study, the patient-centred communication skills identified in Chapter Three were coded to provide direction for the development of information-giving themes. The interpretative analysis of the coded data collected on communication skills and behaviours was used to guide the development of these information-giving themes (Braun & Clarke, 2006; Joffe & Yardley, 2004). Codes selected for initial theme development included: open and closed questions, professional requests for information from the patient, patient provision of unsolicited information, patient questions, statements and requests for information, patient concerns and queries.

In addition the dietitian's use of reflections, clarifications, paraphrasing and summarising were coded as well as supportive and confirming statements. The provisional coding scheme employed and the final coding scheme used to develop the themes for information-giving exchanges will be explored fully in Chapter Ten.

9.1.1 Approach taken to thematic analysis

A five-phase thematic approach was applied to develop the themes for information-giving exchanges (Braun & Clarke, 2006), as outlined in Table 9.35.

Phase	
1.	Familiarisation with the data
2.	Generating initial codes (informed from initial pilot work and literature review)
3.	Searching for themes
4.	Reviewing themes
5.	Defining and naming themes

Table 9.35: Phases of thematic analysis (adapted from Braun & Clarke, 2006)

Application of these phases is not linear and involves movement backwards and forwards through the sequence of phases. This done in order to check reasoning, application, and relevance of the codes applied as analysis evolves and is further developed over time (Ryan & Bernard, 2003; Silverman, 2006). This movement backwards and forwards through the phases is called a ‘recursive’ process (Braun & Clarke, 2006).

The application of codes will enable the development of information-giving themes within the process of information-giving exchange that occurs in the consultations. The ‘recursive’ process allows the coder to check, search and recheck allocated codes and development of themes. Rigorous checking ensures consistency in the application of codes and themes in the data set.

The reliability of themes applied to the information-giving exchanges was assisted by the development of clear definitions, documented in a coding manual (Appendix 3.1). Validity of coding of themes was checked through a

process of peer debriefing (Creswell, 2009). A second coder was used to review the qualitative study data and theme development and then to check the themes allocated to the information-giving exchanges.

9.1.2 Sequential map

To further understand the relationship between empathy and information-giving exchanges, a sequential map was employed (Chapter Eleven, Figure 11.18).

The map illustrates the flow of information-giving themes and empathic statements made in those consultations with agreement on reported decisions and those with disagreement. This provides additional insight into the possible mechanisms by which these variables interact with each other and their subsequent impact on the consultation outcome of agreement on reported decisions made.

9.2 Summary

The literature reviewed in Chapter Three suggests that the presence of active listening skills will support the professional's expressions of empathy because it demonstrates understanding of the patient's situation. Greater understanding of the patient's perspective through the use of active listening skills and empathy leads to information exchange that is more relevant and personal. The use of theoretical thematic analysis allows theory to inform the selection of codes chosen for analysis. The presence of active-listening skills and empathic opportunities in the consultations are used to guide the theme development (phase 3) for the information-giving exchanges, using the five-phase approach illustrated in Table 9.35. To reduce the risk of researcher bias in coding and interpretation of themes, data on agreement on reported decisions made was

kept separate during the coding process. Agreement coding was added back into the data set on completion of qualitative analysis, to allow comparison to occur.

The detailed methodology used for the qualitative analysis of Phase II applying this thematic approach is provided in the next chapter.

CHAPTER TEN: QUALITATIVE METHOD PHASE II

This chapter describes the qualitative analysis employed for Phase II of the study and explains the identification and selection of data from Phase I for this purpose. The application of thematic analysis to this data set as outlined in Chapter Nine is explored, detailing the steps taken to identify codes from the transcripts and the process of development of the information-giving themes.

The aim of the qualitative analysis is to identify how information is delivered in the consultation and to explore how this relates to empathy and agreement on reported decisions made in the consultation. The qualitative analysis attempts to answer the following questions:

Research Questions:

1. What are the components of information giving in the consultation?
2. How do the components of information giving relate to empathy?
3. How does information giving relate to agreement on reported decisions made in the consultation?
4. How do the components of information giving differ between consultations with agreement on reported decisions made and those with disagreement?

10.0 Data collection

The following section describes how the data for Phase II analysis was extracted from the Phase I data set.

10.1 Identification of qualitative data embedded in Phase 1

Ten of the 86 consultations analysed in Phase I were identified as having complete disagreement on reported decisions made between patient and dietitian. Complete disagreement is defined as being when the content and detail of all decisions reported by patient and dietitian for a consultation do not match (Goodchild, Skinner & Parkin, 2005; Parkin et al, 2006; Parkin & Skinner, 2003).

Forty-three consultations were identified in Phase I as having complete agreement on all reported decisions made. (The method for selection of decisions with complete agreement was outlined in Chapter Seven.) Ten of these consultations were randomly selected to provide a contrasting data set for analysis. Analysis of the two data sets enables comparison between information processes that occur in consultations and their subsequent impact on level of agreement on reported decisions made by patients and dietitians.

As a result, 20 audio recordings were selected from the Phase I data. The size of the sample chosen for qualitative analysis was determined in part by the limited number of audio recordings obtained that featured complete disagreement on reported decisions. However, 20 is considered to be an adequate sample size on which to undertake qualitative analysis (Green & Thorogood, 2009).

The 20 recordings selected for analysis included consultations from all four of the participating dietitians. The majority of recordings identified with disagreement on reported decisions came from dietitian 1, whereas recordings

with disagreement were not identified for dietitian 4, which suggests differences in the practice of the participating dietitians.

A summary of the number of recordings selected from participating dietitians is provided in Table 10.36, and this will be explored further in the discussion.

Dietitian	Number of recordings with complete agreement on reported decisions	Number of recordings with complete disagreement on reported decisions
1	2	7
2	3	2
3	4	1
4	1	0

Table 10.36: Summary of recordings selected for analysis from participating dietitians where there was complete agreement and complete disagreement on reported decisions made

Selecting audio-recordings to represent the extremes of the consultation outcome (complete agreement versus complete disagreement) enables the relationship between the presence and /or absence of identified skills/behaviours and subsequent impact on agreement on reported decisions made to be examined. Clear evidence based guidance on the specific skills/behaviours needed to improve levels of agreement on reported decisions made can therefore be provided.

Approximately a third of patients 25/86 (29%) attended dietetic consultations with a partner and this had no significant effect on empathy or level of agreement on reported decisions made ($p > .05$). Consequently consultations which included a third party were not excluded from the qualitative analysis.

10.2. Statistical analysis of sample

Situational variables were compared between the two data sets and included: consultation length, whether new or follow-up appointments, gender, age, type of diabetes, duration of diabetes.

Statistical tests were conducted to check for differences in the measured variables between the data sets as follows:

A chi-square test was conducted on the nominal and ordinal data (gender, new/follow-up appointments, presence of complications, type of diabetes). An independent t-test was performed on the continuous variables (age, duration of diabetes, empathy and length of consultation). Independent t-test was adjusted for equal or unequal variances based on Levene's test. If Levene's test was significant, then values were recalculated using the Mann-Whitney *U*-test. All tests produced report results calculated for two-tailed tests and the level of probability of significance used was $p < .05$. The results of the statistical analysis are presented in Table 10.37.

	Recordings with complete agreement on reported decisions (<i>n</i> = 10)	Recordings with complete disagreement on reported decisions (<i>n</i> = 10)	<i>p</i> values
Appointment type (New)	9	6	.12
Gender (female)	5	2	.16
Mean age (years)	60	55.2	.34
Type of diabetes (type1)	7	4	.17
Duration of diabetes (years)	Median 25 (2months-48years)	Median 7 (1month-17 years)	** .01
Complications	6	3	.17
Length of Consultation (SEM)	32.24 (4.7)	21.31(2.64)	^a .058
Mean empathic response (SEM)	3.00 (0.12)	2.13 (0.31)	** .02
Statements of challenge	5.4	2.1	^a .055
Statements of emotion	2.1	1.2	.34
Statements of progress	1.8	2.8	.22
** significant at $p < .05$			
^a almost significant reflecting trend in main data set			

Table 10.37: Demographic data, appointment type, consultation length and empathy scores for consultations selected for qualitative analysis

As can be seen from Table 10.37, consultations with agreement on reported decisions had significantly higher levels of empathy, $p = .02$.

Trends were seen towards significance on the number of statements of challenge and the length of the consultation. The failure to reach significance with these measures suggests that the differences measured were not very large and this is a consequence of the small sample size used for the qualitative analysis (Brace et al, 2006). However, the trends towards significance that are

highlighted reflect the significant findings detailed in Chapter Eight for the full data set of consultations.

In addition, this analysis identified significant differences between the data sets on duration of diabetes $p = .01$. Patients showing disagreement on reported decisions made in consultations had a diabetes duration of 7 years (or less). Patients showing agreement on reported decisions had a diabetes duration of 25 years (or more). The median duration of diabetes varies considerably from the 10.87 years seen in the full data set, and these extreme differences in duration will therefore need to be considered when interpreting the findings from the qualitative data analysis.

10.3 Method for thematic analysis

The 20 audio recordings were transcribed and the thematic analysis was conducted using a five-phase approach as outlined in Chapter Nine (Table 9.35) (Braun & Clarke, 2006). The application of this approach is detailed below:-

10.3.1 Familiarisation with data

The recordings were listened to while coding to help clarify tonal qualities and the interpretation of identified themes (Creswell, 1998). Tonal qualities of patient's voices can provide additional information with regard to their emotional state, thus adding a different emphasis to the words and phrases used by the individual (Del Piccolo et al, 2005; Gable, 2007). It was essential, therefore, that recordings were listened to alongside the transcripts to check the transcripts for accuracy (Braun & Clarke, 2006). Notes were made in the margins of the hard copies of the transcripts highlighting interesting issues as they arose. A separate list of these issues was made to help direct later analysis.

Before coding began each transcript was numbered sequentially for units of speech, a unit of speech is defined as an uninterrupted episode of speech by either the dietitian or the patient, and may be one word long or may comprise of several sentences. It begins when a person starts speaking and ends when they have finished speaking (Del Piccolo et al, 2005). The numbering of these speech units enabled tracking and retrieval of identified features in the transcripts.

10.3.2 Coding for communication skills

Coding of distinct communication behaviours was conducted on all transcripts and was informed by the literature reviewed in Chapter Three and the process of initial listening to and familiarisation with the recordings. The transcripts were read and assigned preliminary communication codes. This process involved movement backwards and forwards during the coding process to ensure that

codes were allocated consistently on all transcripts. In order to check code assignment and to amend codes where necessary, the audio recordings were listened to again whilst simultaneously following the transcripts.

The following communication behaviours were coded; active listening skills, (reflection, clarification, summarising and paraphrasing, confirming statements and supportive statements). The dietitian's questions were coded if they specifically asked about patient's perceptions, thoughts, ideas, opinions, and feelings or explored the patient's self-care management practices. All of these skills have been identified in Chapter Three as important for developing effective dialogue with patients (Gable, 2007; Peel et al, 2005; Poskiparta et al, 2001; Rosal et al, 2001; Vickery & Hodges, 1986; Zimmermann, Del Piccolo & Finset, 2007). In addition, empathic opportunities were marked on the transcripts as per the ECCS discussed in Chapter Five (Bylund & Makoul, 2005).

10.3.3 Identification of information-giving themes

Once transcripts had been coded for communication behaviours, they were marked to indicate episodes of information-giving exchanges that focused on patients' health behaviour. The length of these information-giving exchanges varied and depended on the topic being discussed. They consisted of sequential utterances from either the patient or the dietitian about the same topic and finished when the topic under discussion was changed (Kiuru et al, 2004).

These episodes of information-giving exchange were then reviewed to identify potential themes. The communication skills that had been coded onto the hard copy of the transcripts helped this process, by providing markers around the information-giving exchange. This guided the development of potential themes for these information-giving exchanges (Braun & Clarke, 2006). Themes were initially identified by exploring whether the patient or the dietitian led the information-giving exchanges. The patient-initiated episodes of information exchange were defined in terms of how the patient may have triggered the need for information, either directly, by requesting information, or indirectly through statements and cues and by offering information. The dietitian defined the dietitian-led episodes, and offered information that was either not requested by the patient, or occurred as a result of questioning. The initial coding map used to identify information-giving episodes is provided in Figure 10.12.

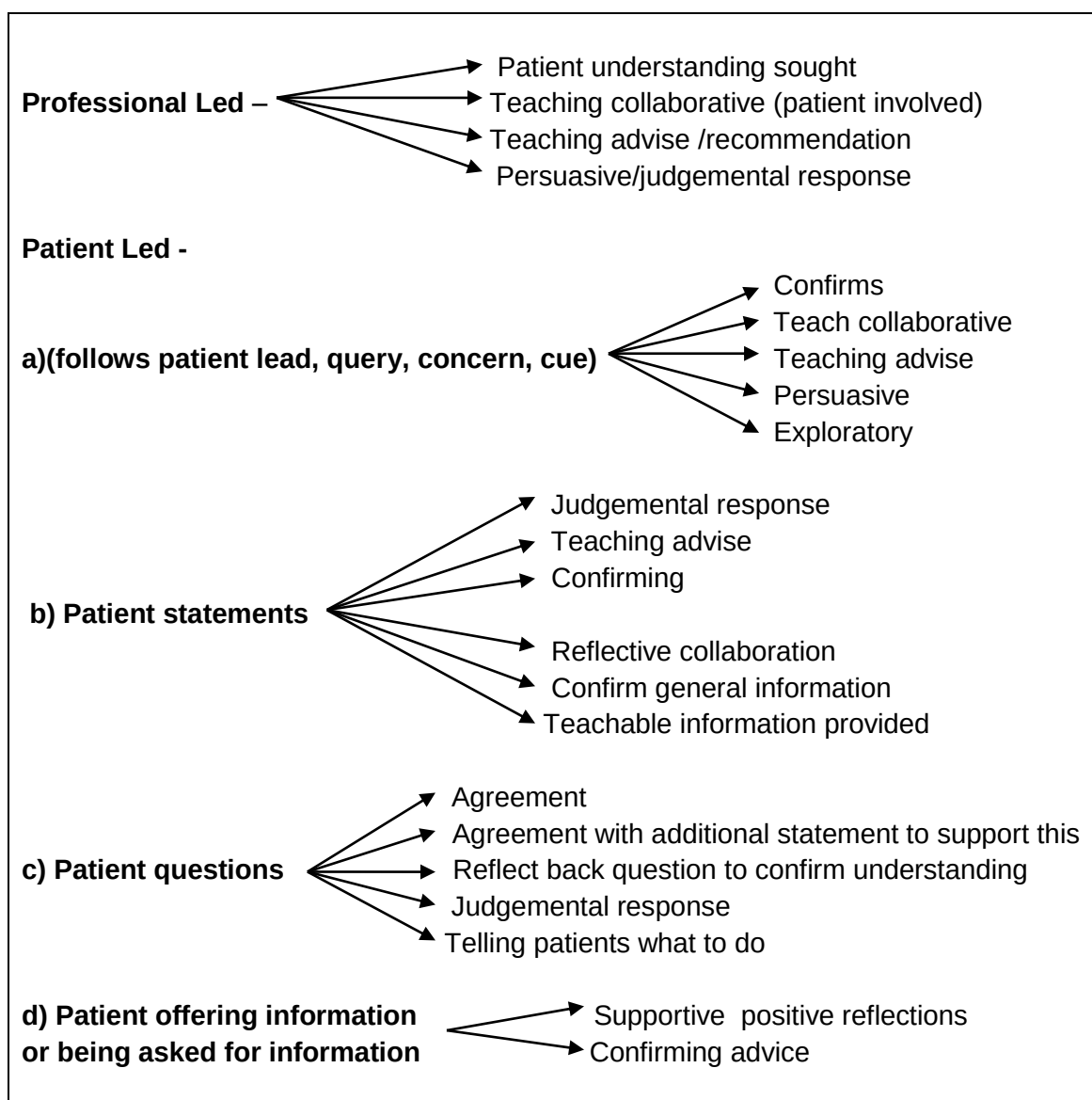


Figure 10.12: Initial coding map used to identify information-giving exchanges within the consultations

The process of initial coding with this scheme highlighted difficulties as it was found to be too simplistic. The themes used for the information-giving exchanges lacked context as prior questions or responses may have facilitated the subsequent flow of information (Anderson, 1981). For example the professional may be facilitating the discussion by exploring the patient's understanding, and consequently will be using questions to enable this information exchange to occur (Holli et al, 2003). Using open and exploratory questions encourages information giving from the patient and in this case the

dietitian initiates the information exchange. This type of exchange differs from a professional-led, advice-giving episode, because the patient is supported and encouraged in the exchange of information; whereas professional-led exchanges are more likely to contain episodes of one-directional communication with limited patient input. Although the professional instigates both episodes of information exchange, the intent of the information provided is different. Patients have been reported to be reluctant to offer information or request help, unless prompted to do so (Barry et al, 2000). This supports the potentially facilitating nature of questions for information provision. The coding process is not simply a matter of recording who asks the questions, but must also consider the intention of the questions and how the information is handled once requested, or how the need for information is identified. Information-giving exchanges therefore need to be explored in terms of how the dietitian delivers the information and how the patient received it. This is further influenced by the potential reason for the information exchange, the level of involvement of the patient in the subsequent dialogue, as well as the dietitian's role within this information exchange.

To aid the development and identification of themes for the information-giving exchanges, four transcribed scripts were selected for provisional coding: two transcripts that had complete agreement on reported decisions made and two that had disagreement. These transcripts were reviewed to see how the provisional coding themes for information-giving exchanges worked in practice and to help identify additional codes or sub-themes that would allow a more thorough view of the allocated themes. This also enabled the flow of the conversation to be assessed, adding further meaning to the selected themes

(Silverman, 1985). The information-giving exchanges identified were collected together within a framework. This highlighted how information was provided, received, the impact on conversation flow and the intent of advice in order to help with identification and naming of themes (Bryman, 2008).

Once these coding themes had been established, the remaining 16 transcripts were reviewed and coded. In order to ensure that coding bias did not occur, data for these remaining transcripts was kept separate from data used to identify the agreement on reported decisions made.

As all 20 recordings were worked through, provisional themes were built up around the information-giving exchanges, final codes developed and concepts explored more fully. The identified information-giving exchanges were colour-coded on the electronic copies of the transcripts, according to the theme allocated. These helped to visualise the data and enabled quick identification and retrieval of coded themes for further analysis (Creswell, 1998).

10.3.4 Reviewing identified themes

Information-giving exchanges were collated on spreadsheets according to their assigned colour codes to allow further analysis and refinement of provisional coded themes. It was important to ensure that a little of the surrounding data was collected with the information-giving exchanges to help contextualise the identified themes (Braun & Clarke, 2006). This process of reviewing provisional identified themes helped to ensure consistency and clarity within the identified themes (Braun & Clarke, 2006).

Initially seven themes for the information-giving exchanges were identified within the consultations. These were given provisional names of confirming (permitting), persuading, supporting, teaching advice, teaching collaborative, teaching information general and provision of instructions. However, by exploring common features and areas of overlap, these seven themes were condensed down to four key themes. These four key themes are similar to the dietary advice giving styles identified in a study of Finnish nurses (Kiuru et al, 2004). Table 10.38 has been adapted from Kiuru et al (2004) to illustrate the key constructs used for the themes allocated to the information-giving exchanges.

	Persuasive Information	Supportive / collaborative	Confirming / permitting	Recommending / teaching / instructions
How information is provided	Little or no understanding of patient's perspective could be judgemental	Patient's understanding and views sought before information given Supportive feedback provided	Response to patient's queries or statements checking information	Information, suggestions, recommendations provided by dietitian
How information is received	Met with resistance /Justification	Met with further collaborative exchange	Patient confirms information received	Minimal response from patient
Patient participation	Minimal input from the patient, or patient justifies actions, defends course of action taken	Generally patient talks more in these exchanges, active engagement Patient provides additional personal/ relevant information	Met with minimal input from patient, or patient confirms that they have understood the information received	Minimal input from the patient, clarifying questions occasionally used, passive response from patient
Dietitians role in information exchange (Intent of information)	Aimed at getting patient to follow advice persuasive	Aimed at facilitating patient understanding and ability to change, personalised advice provided	Aimed at confirming, permitting patient's thoughts, actions, general information.	Aimed at informing patient of correct course of action to take Specific advice or instruction given encourage patient to consider recommendations or suggestions offered.
Outcome	No clear decision or course of action made	Collaborative decision more likely	Confirmation of behaviour/ information	Clear instructions provided by dietitian

Table 10.38: Key features of the four identified themes for coding information-giving exchanges adapted from Kiuru et al (2004) ¹²

¹² Reprinted from Kiuru et al (2004) 'Advice-giving Styles by Finish Nurses in Dietary Counseling Concerning Type 2 Diabetes Care' *Journal of Health Communication*, 9 pp. 337-354 with permission from Elsevier

10.3.5 Defining and naming themes

To improve the rigour in the qualitative analysis, a second coder checked the four provisional coding themes. Where discrepancies arose, the two coders went back to the original transcript to discuss the rationale for inclusion of the information-giving exchange within the stated theme. These discussions helped to clarify the distinctions between the themes identified for the information-giving exchanges and to ensure that rationale used for coding was consistently applied.

A coding manual was developed to define and illustrate codes used in developing the themes and to clarify the final definitions of themes used for the information-giving exchanges. The manual featured examples selected from the transcripts to serve as reference points for coding (Braun & Clarke, 2006). The coding manual can be found in Appendix 3.1. The final themes for the information-giving exchanges were named according to their dominant conversational characteristic (Kiuru et al, 2004). These were *persuasive*, *supportive/collaborative*, *recommending/teaching*, and *permission/confirming*.

Following discussions between the two coders, a number of revisions were subsequently made to the coding manual. All codes allocated to the identified information-giving exchanges in the 20 transcripts were then rechecked in order to ensure that the final criteria for themes defined in the coding manual were consistently applied to all the information-giving exchanges.

A total of 282 information-giving exchanges were identified from the transcripts. The four themes identified for the information-giving exchanges were seen to

alternate in the consultations. Others have noted this effect (Kiuru et al, 2004). All of the consultations analysed contained at least three of the four themes identified for the information-giving exchanges.

10.4 Comparison of data from consultations with agreement on reported decisions made and those with disagreement

The frequency of coded communication behaviours and information-exchange themes in consultations were summarised and data on agreement and disagreement on reported decisions made was applied to this data set. This will allow direct comparison of similarities and differences between those consultations with agreement on reported decisions made and those without.

Frequencies were chosen as a measure of the communicative behaviours and information exchanges in the consultations, this allows the differences in presence of skills and information-giving exchanges in the data sets to be compared. In addition, as there are two people in the consultation, the rapport established between the patient and the professional may determine the length of the consultation (Street et al, 1993). The measurement of the frequency of skills and information exchanges used thus provides more meaningful data on the skill set used in the consultation, as suggested by Street et al (1993).

10.5 Sequencing of information-giving exchanges and empathic opportunities in consultations

The colour-coded information-giving exchanges were entered onto an Excel spreadsheet for each consultation in order of occurrence within the consultation. This provided an overview of the flow of information-giving exchanges within the consultations. Data on the occurrence of empathic opportunities within the

consultations was added to this sequential map (Bylund & Makoul, 2002; Bylund & Makoul, 2005). In addition, consultations with agreement on reported decisions made and those with disagreement are highlighted.

This thematic map provides a visual display of the sequence of information-giving exchanges and occurrence of empathic statements within the consultations. It does not provide information on timing or length of the individual information exchanges. It allows the relationship between the different information-giving exchanges and empathic opportunities to be explored, as well as their impact on agreement on reported decisions made (Braun & Clarke, 2006).

10.4 Summary

This chapter has described the coding process used for the qualitative analysis. It explains how the embedded data for the qualitative analysis was extracted from the Phase I data and the process of coding of communication behaviours that occurred in the 20 selected transcripts. The identification of these communication behaviours provided additional markers to assist the development of themes around information-giving exchanges in the consultations. The process of theme identification and development has been described. Four key themes around information-giving exchanges were finally defined in relation to how information was provided and received, the level of patient participation and the overall intent of the advice that was provided. The presence of empathic statements made by patients was explored alongside the information-giving exchanges and communication behaviours. The findings from this analysis are presented in the next chapter, along with excerpts from

the consultations that serve to illustrate the identified themes for the information-giving exchanges that occurred within the consultations.

CHAPTER ELEVEN: RESULTS FROM PHASE II QUALITATIVE ANALYSIS

This chapter presents the data from the qualitative analysis of the 20 selected consultations, as described in Chapter Ten. It is usual to start to critique and interpret qualitative analysis as findings are presented (Creswell, 1998) and this can involve some discussion occurring in the results section. However, to ensure that this write-up conforms to the mixed method approach (Creswell, 2009) outlined in Chapter Six, the qualitative data will be explored and analysed alongside the quantitative data set. The analytical discussion of the qualitative and quantitative data sets will occur in Chapter Twelve.

The communication skills identified in the analysed consultations are not exhaustive, but have been chosen as key skills (highlighted from the literature reviewed in Chapter Three) that are important for patient-centred communication and for the development of the themes for information-giving exchanges. These communication skills have been quantified to illustrate the frequency of occurrence in consultations with agreement on decisions made and those with disagreement.

There follows a qualitative description of the identified themes for the information-giving exchanges. After this, there is a quantitative summary of the frequency of occurrence of identified themes in consultations, which differentiates between those with agreement on decisions made and those with disagreement.

Information on the sequencing of information-giving exchanges, alongside the presence of empathic statements, provides further unique insight into the

relationship between information-giving exchange and empathy in the consultation. This is the first study to undertake this type of analysis in order to explore dietetic consultations.

The exploration of this data set provides answers to the research questions outlined in the methods section in Chapter Ten.

11.0 Exploration of Key Communication Skills

The key communication behaviours identified have been quantified in terms of frequency of occurrence within the consultations. Full examples of the communication skills coded from the qualitative data are provided in the coding manual in Appendix 3.1. The coding of communication behaviours in this way allows comparison between those consultations with agreement on reported decisions made, and those with disagreement.

11.1 Is there a difference in the use of active listening skills in consultations with agreement on reported decisions made and those with disagreement?

Active-listening skills are essential for an empathic dialogue to occur (Egan, 2002), and Table 11.39 shows the active-listening skills that were identified and coded from the consultations.

	Consultations with agreement on reported decisions made	Consultations with disagreement on reported decisions made
Reflections and clarifications	133	91
Summarising and paraphrasing	39	18
Supportive statements	35	29
Confirming statements	22	8
Total frequency	229	146

Table 11.39: Frequency of occurrence of active listening skills used in consultations

Reflections and clarifications occurred mainly in the information-gathering phase of the consultation. They appeared frequently and accounted for 224/375 (60%) of the total active-listening skills recorded. Summarising and paraphrasing were less evident, but were twice as likely to occur in those consultations where agreement on reported decisions occurred 57/375 (15%). Summarising and paraphrasing are used when reflecting large chunks of the dialogue back in order to check patient understanding. In consultations where this skill was absent, the patients generally talked very little, so the dietitian did not need to paraphrase chunks of the conversation. There were nearly three times as many confirming statements in consultations where there was agreement on reported decisions made.

Although there were differences seen in the frequency of active-listening skills used in consultations with agreement and those with disagreement, the Mann-Whitney test found these differences to be non-significant $p > .05$.

Overall, in consultations where there was complete agreement on reported decisions made, there was a greater use of active-listening skills, as indicated by the presence of paraphrasing, summarising, and confirming statements.

11.1.2 Is there a difference in the use of exploratory questions in consultations with agreement on reported decisions made and those with disagreement?

Patients with a chronic disease rely heavily on their own knowledge, skill base, and experience of living with the disease, which is a unique personal experience rather than a standardised experience (Thorne, Paterson & Russell, 2003). Consequently, when working with individuals with a chronic illness, it is important to gauge their perspective and understanding (Anderson & Funnell, 2005b; Epstein et al, 2005; Kinnersley et al, 1996; Lewin et al, 2001). This may give additional clues as to how patients use information to manage their condition on a daily basis (Lang, Floyd & Beine, 2000; Shillitoe, 1994). The dietitian would therefore be expected to gather information on the patient's perspectives, thoughts, and feelings in relation to issues raised during the consultation, in order to personalise and shape decisions made. Questions that specifically asked how patients thought or felt, or queried their current management practices were recorded from the consultations and these are summarised in Table 11.40

	Consultations with agreement on reported decisions made	Consultations with disagreement on reported decisions made
Number of consultations where these questions were asked	10	4
Exploratory Questions		
Questions that explored patient's thoughts, feelings, ideas, opinions	29	8
Questions that explored patient's self-care management	11	1
Total questions	40	9

Table 11.40: Frequency of patient-specific questions used in consultations

The Mann-Whitney test was conducted to test for significance. A significantly greater number of questions were asked about self-care management practices in consultations where there was agreement on reported decisions made. ($U = 18.500$, $p = .007$) However, the difference seen in the number of questions that explored the patient's thoughts, feelings ideas and opinions was non-significant $p > .05$.

11.1.3 Is there a difference in agenda setting in consultations with agreement on reported decisions made and those with disagreement?

Agenda setting helps to provide context and direction for the consultation. It is a facilitative process that suggests greater patient involvement, as patient views are sought at the beginning of the consultation (Berg-Smith et al, 1999; Feste & Anderson, 1995; Gable, 2007; Glasgow, Emont & Miller, 2006; Holli, Calabrese et al, 2003; Parkin, 2003; Rollnick et al, 1999). It may be an additional factor that influences patient and dietitian dialogue during the consultation. Table

11.41 illustrates the number of consultations where an agenda was set with patients during the opening stages of the consultation.

	Consultations with agreement on reported decisions made	Consultations with disagreement on reported decisions made
Number of consultations where an agenda was set.	8	1

Table 11.41: Number of consultations that set an agenda with the patient

In consultations where disagreement on reported decisions occurred, there was either a lack of a clear agenda at the start of the consultation or a lack of patient involvement in the setting of the agenda.

In summary, consultations with agreement on reported decisions made had a greater use of active listening skills, supportive and confirming statements and significantly more exploratory questions that explored patient self-care management practice. In addition, these consultations were more likely to set an agenda with input from the patient at the start of the consultation. Full examples of active-listening skills and questions coded can be found in the coding manual in the appendix (Appendix 3.1).

11.2 Exploration of the four identified information-giving themes in the consultations

The following section provides a detailed description of the four information-giving themes identified from the 20 transcribed consultations. Excerpts from the coded transcripts are provided to illustrate key points.

11.2.1 *Persuasive* information-giving exchanges

Persuasive information-giving exchanges were clearly identified as advice-giving episodes led by the professionals, with the dietitian often offering information to the patient that was not requested. Before providing this information, the dietitian does not question the patient to explore how they think or feel about the situation under discussion or inquire as to their self-care management practices. There was little or no understanding therefore of the patient's point of view or perspective of the issue being discussed. The information provided by the dietitian was aimed at getting the patient to follow the advice, even though in some cases the patient had made it very clear that they did not wish to follow the advice provided. In an attempt to get the patient to take on board the advice, there were a few occasions where the *persuasive* information contained threats as to the long-term consequences of not changing. For example:

"It would help that, wouldn't it? Obviously you've had this by-pass so obviously you want to try and keep the blood vessels as clear as possible, don't you, so the walking would help that."

In this example, the dietitian is using health risks to try and coerce the patient to change rather than presenting the information in a more neutral manner (Rollnick, 1996).

Sometimes the dietitian's response was judgemental, in that it informed the patient of "what they should do". For example, the patient in the following instance has volunteered information about a dietary indiscretion and explained that this indiscretion did not impact on their blood glucose levels. Rather than exploring this situation with the patient to see what they have learnt from the

experience (Kolbe, 2002) in order to help the patient develop their problem-solving and self-management skills (King et al, 2002), the dietitian continues with a judgemental response:

“It’s not going to be your best choice though because there will be quite a lot of sugar.”

Provision of information in a persuasive manner was met by a number of responses. Either the patient responded by justifying the action they were taking; *“I only had one, not every day, just every now and then”* or they would present further resistance to the information provided, as shown by the following example:

Dietitian: *“No but a couple of prunes would be good...”*

Patient: *“But they don’t make no difference to my bowels.”*

In this case, the dietitian did not enquire as to how the patient currently manages the situation before providing this information. This may explain why the information is met with resistance by the patient, as the information did not fit with their understanding or previous experience of the situation.

Persuasive information-giving exchanges were more likely to follow on from recommending information-giving exchanges and previous *persuasive* information-giving exchanges. This suggests that when the patient’s prior response to a recommendation from the dietitian is met with resistance, the dietitian may then attempt to persuade the patient that this recommendation is the right thing to do (Kiuru et al, 2004). In Figure 11.13 (Excerpt 1) the patient’s partner is resisting attempts to change, and it is the patient that terminates this information exchange by focusing on something that the dietitian has said. By

questioning the advice provided, the patient successfully moves the topic away from the area being covered and this information-giving exchange is terminated.

Excerpt 1:

Dietitian: *"What about, have you tried any of the drinks like peppermint tea which is good for your digestion?"*

Patient's partner: *"He doesn't drink tea."*

Dietitian: *"No. It's not normal tea..."*

Patient's partner: *"I still don't think he'd drink it."*

Dietitian: *"I just wondered if it might be worth a try, it's just that it's quite good for your digestion, so it might help with feeling – peppermint is very good."*

Patient's partner: *"Peppermint tea."*

Dietitian: *"It's just like herbal tea but just with peppermint leaves. You put a little bag in a cup and pour hot water in – it's just a hot drink with a peppermint flavour. You don't add milk, it's like a thin drink and it's quite good for your digestion. It's the sort of thing you might not have tried or ever thought about trying. Have you ever tried it?"*

Patient's partner: *"No, he doesn't like anything like that so we wouldn't have tried it."*

Dietitian: *"No, if I had a bag I could have given you one to try. It might be worth trying and it's only a suggestion, you don't have to try it, it's entirely up to you. I'm just thinking in terms of helping with the digestion as well and something that wouldn't be sugary and whether that would help at night time particularly. Coffee's fine, you can have as much as you like but I was trying to think if there was an alternative..."*

Patient: *"I thought too much coffee wasn't good for you?"*

Excerpt 2:

Dietitian: *"So, I think my only concern would be the amount of chocolate that you're eating, I know you're giving extra insulin for it but there's still quite a lot of fat and things in that."*

Patient: *"Yes I suppose so."*

Dietitian: *"Do you think one Snickers would be reasonable?"*

Patient: *"No, 2 I need because I need the physical food."*

Dietitian: "Yes."
Patient: "Yes, <i>they're OK I only normally have it in the morning or in the afternoon, sometimes...</i> "
Dietitian: "Sometimes in the evening you might..."
Patient: "Yes but if you think about it I don't have a pudding do I, so?"
Dietitian: "No, you're not having a pudding are you."
Patient: "No and so it's a substitute as a pudding."
Dietitian: "Yes, OK, right."

Figure 11.13: Examples of *persuasive* information-giving exchanges

In Excerpt 2 (Figure 11.13) the dietitian is raising the issue of a reduction in chocolate consumption. This issue has already been raised earlier in the consultation where it was met with resistance by the patient. The patient justifies why it is ok to eat chocolate, and the exchange ends with the dietitian agreeing with the patient's point of view and moving on to another topic. Even though the dietitian agreed at that point, they brought the topic up again later in the consultation. This topic was raised on four separate occasions in the consultation and each time the patient clearly indicated no interest or willingness to change their consumption of chocolate. In fact, the patient was so adamant that this was not a change that they wish to make that they responded by writing on the questionnaire booklet "*I do not want to give up chocolate!!!!*"

These episodes of persuasion and resistance are terminated by either the dietitian or the patient changing the topic and are characterised by the lack of clear agreement at the end of the exchange (Kiuru et al, 2004). Lack of

understanding of the patient's perspective and current behaviour may be impacting on the dietitian's ability to engage effectively with the patient in these instances. This lack of insight may explain the reluctance and resistance with which the information is received (Rollnick et al,1999). In attempting to get the patient to change, the resulting lack of choices and the persuasive nature adopted in these exchanges suggests low provision of autonomy support from the dietitian.

The distinctive feature of *persuasive* information-giving exchange in the qualitative analysis was that information was offered with little or no understanding of the patient's perspective. This was characterised by lack of questioning by the dietitian to explore patient's perspective. Alternatively, the patient may have provided information that the dietitian failed to follow through as in the following example:

Patient: *"I cringe and I don't like needles"*.

Dietitian: *"No, OK. If we just run through a typical day, what do you have for your breakfast?"*

In *persuasive* exchanges, the information received was generally met with resistance by the patient and justification offered for continuation of the behaviour. The dietitian would then terminate *persuasive* exchanges and move on to another topic of conversation, or minimal responses from the patient would lead to the patient changing the topic.

11.2.2 Supportive/collaborative information-giving exchanges

This type of information-giving exchange engaged the patient through facilitated discussion (Entwistle et al, 2008; Ong et al, 1995). These exchanges may have

occurred as a result of the patient asking a question, raising a query, or making a statement. They can, in the first instance, be followed by a simple reflection from the dietitian and would have been coded and picked up in the section looking at counselling skills. These simple reflections would be supportive and involve some form of praise, *“Well done, you’ve obviously worked hard on that...”* In a supportive way, the dietitian also handled relapses and difficulties encountered by patients. For example, a patient has explained a number of issues that have got in the way of their day-to-day management and may have impacted on blood glucose control. The dietitian summarised this by acknowledging what they have heard *“It sounds like you’ve had a lot to cope with...”* *“I noted 4 or 5 times you mentioned ...”* before going on to explore these issues and possible management solutions with the patient. Reflection and summarising were therefore key communication skills used in *supportive/collaborative* information-giving exchanges.

These exchanges may also have occurred as a result of a question that the dietitian had asked which seeks to explore the patient's understanding, thoughts, and feelings around a particular issue. For example; *“Do you feel that you could eat more? ”* or *“OK. So having told me about your eating habits, do you feel thinking about it in more detail that there’s any particular things that might need changing?”*

These open questions are facilitative in that they encourage patient participation and help to clarify information. The questions are used to support patient understanding and may result in provision of additional information to help guide choices made. Inevitably, these collaborative exchanges involved the patient

talking more and providing information that was personally relevant. This wasn't necessarily demonstrated with long monologues from the patient, but could be illustrated through continuous exchange between the patient and the dietitian, thus illustrating a more fluid discourse. Information exchange was seen to be supportive as it followed the patient's agenda and supported their actions, ideas, and perception of control. This collaborative nature is illustrated in the guided reflection and questioning used by the dietitian. Supportive exchanges were distinct from other exchanges, in that they provided supportive feedback (either directly as reflection) or in the supportive nature of the response, which would be incorporated into the feedback to the patient (Kiuru et al, 2004).

In Excerpt 3 (Figure 11.14) the patient raises the issue of being hungry in the evening. The dietitian follows this through by exploring the patient's management of the issue of hunger in the evening. In this way, the dietitian ascertains how the patient is currently handling the situation, before providing further information. In this case, the dietitian ends the exchange with a summary of the patient's management, the supportive elements of which are wound into the feedback acknowledging and, at the same time, supporting the patient's actions.

Excerpt 3:

Patient: *"I feel quite hungry at night."*

Dietitian: *"OK and that's sometimes when you have your biscuits?"*

Patient: *"Yes, I feel like I need a bit more but not..."*

Dietitian: *"OK and do you find that you're OK when you say no or does it still niggle the hunger or does it go away?"*

Patient: *"Whenever I feel hungry at night when I'm at college I go for a walk or a run or something."*

Dietitian: *"And when you come back?"*

Patient: *"I'm too knackered so I go to bed!"*

Dietitian: *"OK and that's good because sometimes when we're really, really hungry that hunger doesn't go away and at that point you really need to eat something. If you're feeling like you might want to eat something and you go and do something else instead like a walk or the things you were talking about and you're not that bothered when you get back then that's a good sign that you probably weren't that hungry or in need of food in the first instance. So it's good that you use what we would call a distraction technique to sort of do something else instead to sort of test the water but if you really are feeling hungry then there's no reason why you shouldn't have something to eat."*

Figure 11.14: Examples of *supportive/collaborative* information-giving exchanges

In Excerpt 4 (Figure 11.15), through a facilitative discussion, the dietitian is trying to help the patient to clarify areas in their diet that require more attention.

By encouraging the patient to be specific about the identified problem, the dietitian has helped the patient to focus and in doing so the patient has provided additional information to clarify why certain behaviours occur.

Excerpt 4:

Dietitian: *"OK, so thinking about your diet in a little bit more detail, if you were to summarise how you think your diet is generally..."*

Patient: *"Rubbish."*

Dietitian: *"OK and are there particular parts of that which are worse than others or particular problem areas that you think you have identified – there might not be..."*

Patient: *"Gosh, I'm not a great breakfast eater..."*

Dietitian: *"So you don't always have breakfast..."*

Patient: *"Of course that advert that says people who eat a proper breakfast maintain a proper kind of weight (laughing), I do believe it, I'm not saying it's not true..."*

Dietitian: *"So you don't always have breakfast or you don't ever have breakfast?"*

Patient: *"I probably, I'd say 4 to 5 mornings a week I would have breakfast..."*

Dietitian: *"OK."*

Patient: *"It varies from a bowl of cereal to probably a couple of biscuits dunked in my tea."*

Dietitian: *"OK."*

Patient: *"It depends how I am in the morning because I, for some reason over the last couple of years, I produce a lot of acid or something. I get indigestion and in the morning I have got bile that's coming up, my heads in the sink nearly every morning and the last thing I want to do is eat something."*

Figure 11.15: Examples of supportive/collaborative information-giving exchanges

Consultations that had agreement on reported decisions were more likely to have longer exchanges attached to the supportive statements. These statements tended to elaborate on issues raised by patients by providing additional information that supported the patient's choices, opinion, or actions.

11.2.3 *Confirming/permitting* information-giving exchanges

Confirming/permitting information-giving exchanges were always patient-led and would arise as a result of a patient query or patient statement. For example:

Patient: *"I'm not worried about that because sometimes I think it should be left to 7."*

Dietitian: *"Yes. It's not too late, some people leave it a lot later than that..."*

As can be seen in the above example, the confirming response is a simple confirmation that does not go on to clarify or explore further the issue raised by the patient. In some ways, these exchanges can be considered as asking the dietitian for permission to continue a particular behaviour (Kiuru et al, 2004).

The majority of these exchanges resulted in minimal responses from the patients, as they were confirming thoughts, behaviours, or actions presented to the dietitian. Included in this theme are exchanges that give the patient permission to behave in a certain way.

For example, in Excerpt 5 (Figure 11.16) the patient has asked whether it is ok to eat cream cakes. Having clarified that it is fine to eat cream cakes occasionally, the dietitian proceeds to clarify the permission given with the statement, *"your scones and things are best..."* As can be seen from this example, these information-giving exchanges end with a clear confirming or permissive response as to what can or cannot be done.

In Excerpt 6 (Figure 11.16), the dietitian confirms what the patient has said but does not go on to explore why the patient only has two meals per day. The

permitting tone is seen in the response *“obviously it is healthy for all of us to ...”*

So although at first glance this may be seen as supportive, the lack of exploration and clarification and the suggestion that “it would be better for you” clearly defines this as a permitting information exchange.

Excerpt 5:

Patient: *“But nothing like cream cakes that I can have, you know some of its got cream in the middle, but I couldn’t eat that, could I?”*

Dietitian: *“That would just be a real treat, it’s alright to have something now and again as long as it’s not forming the basis of your diet.”*

Patient: *“Like for someone’s birthday or something?”*

Dietitian: *“Exactly, exactly.”*

Patient: *“But not every week, right, that’s alright.”*

Dietitian: *“I mean your scones and things are the best for regular things.”*

Patient: *“Yes, yes.”*

Dietitian: *“Cream cakes for treats.”*

Patient: *“That’s alright, as long as I know.”*

Excerpt 6:

Patient: *“Yes, when I’m at University I tend to, well for the last year I’ve been dieting so I’ve only been on 2 meals a day. Should I be eating 3? I’ve been avoiding one or skipping one...”*

Dietitian: *“Erm, the benefit of the sort of insulin that you’re on, the Humalog, that you have with meals is that if you choose not to have a meal then you don’t take that. Obviously it is healthy for all of us to have 3 meals or 5 small, moderate meals per day rather than if we miss a meal we then tend to have a big evening meal or something, you know. So you do have that flexibility...”*

Figure 11.16: Examples of *confirming/permitting* information-giving exchanges

Confirming/permitting information-giving exchanges generally result in little response from the patients, particularly when it follows a question that they have raised. However, when these responses are linked with additional information provision, resistant statements may arise. For example, the dietitian has summarised key areas of diet that the patient has changed, confirming that the changes are appropriate. At the end of the summary they add:

“as lean as possible, any meat really, cut off any visible fat – I think that’s key really. Visible fat – get rid of it and don’t even contemplate it.” The patient’s response to this is resistant *“You don’t even see any fat in tongue.”* This resistance may indicate the patient’s perceived ability to manage this aspect of their diet (Kiuru et al, 2004).

This theme also included general information provision in response to a patient query or statement, for example:

Patient: *“Can you use a sunflower butter or something?”*

Dietitian: *“You can get these olive oil type margarines which have got around 60% fat and you can still use them in baking...”*

In summary, episodes of *confirmation/permitting* occur as a result of patient queries or statements. The information provided by the dietitian confirms the patient's observations, thoughts, behaviours, or actions or provides permission to act in a certain way. These episodes of information-giving are likely to arise as a result of a *supportive/collaborative* information-giving exchange, suggesting that the patient is feeling comfortable and able to ask for specific information from the dietitian. Alternatively, they may occur as a result of a

previous *recommending* information-giving exchange and may have been used as a way of changing the topic within that exchange.

11.2.4 *Recommending/teaching/instruction* information-giving exchanges

Recommending or *teaching information-giving* exchanges occurred when the dietitian provided a clear set of instructions as to what the patient should do in terms of action or behaviour. These sequences were characterised by minimal input from the patient. They could be dietitian-led advice-giving episodes, advice giving as a more direct response to a patient query or as a result of patients offering information that required elaboration.

Recommending exchanges can also include general advice giving that the dietitian believes is appropriate for the patient but without first checking what the patient is currently doing and therefore not knowing whether this information is needed. In Excerpt 7 (Figure 11.17) the patient is clarifying whether it's all right to eat cornflakes. The dietitian fails to use an open question to explore which breakfast cereals the patient usually eats before giving advice. Consequently, the dietitian examines a list of breakfast cereals that the patient may eat, until one of the cereals fits with the advice given. Thus, by a process of elimination, the general advice concerning increasing fibre from breakfast cereals has become more specific as the dietitian finally hits an acceptable choice of breakfast cereal.

Excerpt 7:

Patient: *"And cornflakes."*

Dietitian: *"Yes, cornflakes but we try to encourage more fibre and roughage and there's not much in cornflakes, they're not sugar coated, so you can eat cornflakes but Weetabix and porridge are a better choice. Fruit and fibre?"*

Patient: *"I don't like that one."*

Dietitian: *"No, bran flakes?"*

Patient: *"No."*

Dietitian: *"Shreddies?"*

Patient: *"Yes, I'll eat Shreddies."*

Excerpt 8:

Patient: *"I've gone back to having porridge and I have it just as it is, with a bit of salt in it but no milk."*

Dietitian: *"Watch the old salt."*

Patient: *"Yes, I do put a tiny bit in."*

Dietitian: *"Because it doesn't do the blood pressure much good. It would be better to put a bit of sweetener or fruit on it."*

Partner: *"I've tried it and it tastes very salty to me. I think you're probably not quite aware of how much salt when you turn the salt pot and it puts quite a lot on."*

Patient: *"I'll watch it."*

Dietitian: *"Yes, I'd watch it or try not to add salt as an added thing. A little bit in cooking is OK because you lose a certain amount in the water when you cook but when we add it at the last minute, at the table, you get 100% of whatever you put on."*

Partner: *"Porridge you do of course because it's absorbed."*

Dietitian: *"Yes, so I would just watch that, bearing in mind that Dr [x] been treating your blood pressure because you don't want to exacerbate what is helping. So it's a balancing act really. Porridge is good, salt's not so good."*

Figure 11.17: Examples of recommending/teaching/instructing information-giving exchanges

Recommending episodes of advice are generally informative, and by their nature, the advice tells the patient what to do and provides some information as to why the recommendation is being made, as shown in Excerpt 8 (Figure 11.17).

Instructing information-giving exchanges were also included in this theme, as they require minimal response from patients and were generally not collaborative, principally serving to confirm patient's actions prior to the next visit. They usually covered issues such as completing food, insulin, and blood glucose diaries prior to the next clinic visit, and were used to help patients explore the relationship between insulin dose and carbohydrate intake and the subsequent effect on blood glucose levels. These diaries are a learning tool and, as such, patients have usually agreed to complete these forms, as the next stage of care is dependent on this information being available. *Instruction* exchanges therefore similar to *recommending* exchanges as patients are being told what to do in terms of collecting information and recording it appropriately prior to the next visit. For example:

Dietitian: *"There are things on here that, there are household measures, but for most of them there's a weight by them as well to give you a guide. So you could start to build up your own reference library, I suppose, of what your typical portions are for boiled potatoes versus jacket potatoes versus rice and although they might vary a little bit from meal to the next in that if you had rice one day with a meal and rice the next day and it may not be the exact same amount another day but it's going to be fairly similar. So you've got an idea of what's typical for you in terms of the quantities that you eat and your portion sizes, so maybe weigh a few of those and get an accurate picture of that..."*

Patient: *"So just jot down for each meal..."*

11.3 Is there a difference in the type of information-giving exchanges used in consultations with agreement on reported decisions made and those with disagreement?

The number of information-giving exchanges coded per theme and the percentage use of the identified information-giving exchange themes within the two data sets is recorded in Table 11.42.

	Agreement on reported decisions		Disagreement on reported decisions	
	Frequency of occurrence	%	Frequency of occurrence	%
Persuasive	3	1.9	18	14.2
Supportive/ collaborative	78	50.3	22	17.3
Confirming/permitting	28	18.1	35	27.6
Recommending/ teaching/instructions	46	29.7	52	40.9
Total frequency of information-giving episodes	155		127	

Table 11.42: Summary of occurrence of information-giving exchange themes in consultations with agreement on reported decisions made and those with disagreement

A greater number of information-giving exchanges occurred in consultations with agreement on reported decisions made. *Supportive/collaborative* information-giving exchanges were three times more likely to occur in consultations with agreement on reported decisions made. The Mann-Whitney was conducted to test for significance and the difference in occurrence was found to be significant ($U= 11, p = .003$).

Persuasive information-giving exchanges were six times more likely to occur in consultations with disagreement. The Mann-Whitney test was conducted to test

for significance of this finding and the difference in occurrence was found to be significant. ($U = 17, p = .007$).

This data highlights significant differences in the way that information-giving exchange occurs in consultations. Those with agreement use significantly more *supportive/collaborative* information-giving exchanges, whereas those with disagreement use significantly more *persuasive* information-giving exchanges, and a greater number of *recommending* information-giving exchanges. This suggests that there are significant differences in the way that dietitians practise in this study.

11.4 What is the relationship between information-giving exchanges and empathy in the consultations reviewed?

Information-giving exchanges and empathic statements made by patients were placed on an Excel spreadsheet in order of occurrence for each consultation. The information-giving exchanges were colour-coded to provide a visual map of the flow of information-giving exchanges that occurred in consultations with agreement on reported decisions made and those with disagreement. The thematic map is shown in Figure 11.18.

11-20 represents consultations with complete agreement on reported decisions made

		Colour Codes for Information-giving Themes	Codes for Empathic Statements
Agenda set with patient at start of consultation		Recommending / Teaching	SE = Statement of Emotion
		Confirming / Permitting	SP = Statement of Progress
		Persuasive	SC = Statement of Challenge
		Supportive /Collaborative	

Although the total length of the consultation was noted, the length of each, individual information-giving exchange was not recorded as discussed in Chapter Ten. Consultations that set agendas with patients were also highlighted. The thematic map therefore provides a visual guide as to the differences in the sequence of information-giving exchanges in consultations. It highlights consultations where agendas were set, and illustrates the relationship between empathic statements and information-giving exchanges within the consultations.

The thematic map allows the pattern of information-giving exchange to be explored between the two data sets. *Persuasive* information-giving exchanges are more likely to be followed by *recommending* information-giving exchanges and further episodes of *persuasive* information-giving exchange. In two of the consultations with disagreement on reported decisions made, *persuasive* information-giving exchanges were the last episodes to occur in the consultation.

11.4.1 Pattern of *supportive/collaborative* information-giving exchanges

The data showing the pattern of *supportive collaborative* information-giving exchanges found in consultations with agreement and those with disagreement is summarised in Table 11.43. This table illustrates how often the consultation starts and ends with *supportive/collaborative* information-giving exchanges and the frequency with which these exchanges occur before and after a patient's expression of an empathic opportunity.

	Consultations with agreement on reported decisions made	Consultations with disagreement on reported decisions made
% of consultations starting with supportive/collaborative exchanges	60%	20%
% of consultations ending with supportive/collaborative exchanges	60%	10%
% of information-giving exchanges that preceded empathic statements	50%	29%
% of information-giving exchanges that followed empathic statements	73%	24%

Table 11.43: Summary of the pattern of occurrence of *supportive/collaborative* information-giving exchanges in consultations

The data in Table 11.43 appears to suggest that the *supportive/collaborative* information-giving exchanges may help to facilitate patients' expression of empathic opportunities and in turn facilitate more *supportive/collaborative* information-giving exchanges.

11.5 Exploring the communication skills that precede empathic statements in consultations

The presence of empathy has already been shown to be greater in those consultations where there is agreement on reported decisions made, as summarised in Chapter Eight. In light of the associations suggested between empathic statements and information-giving exchanges outlined in Table 11.43, further analysis was conducted to explore the potential verbal triggers that would encourage empathic statements from patients. Table 11.44 provides a summary of the frequency of occurrence of identified behaviours by the dietitian prior to an empathic statement from the patient.

	Empathic statements made in consultations with agreement on reported decisions			Empathic statements made in consultations with disagreement on reported decisions		
Behaviours that precede empathic statements	SP	SC	SE	SP	SC	SE
Asks about progress	2	6	3	4	6	1
Supportive/positive statement	3	7	8	3	2	2
Discuss, explores issue raised by patient	6	16	5	6	1	2
Reflection/summarises	1	7	1	2	2	2
Confirms patient statement	3	12	4	4	1	1
Offers information	1	4	0	3	4	0
Ignores patient question	0	0	0	1	0	0
Total	20	49	23	27	21	10

Table 11.44: Frequency of behaviours preceding empathic statements of emotion (SE), progress (SP), and challenge (SC) in consultations

Consultations with agreement on reported decisions made had a greater use of active-listening skills, supportive and confirming statements, and exploratory questions. This appeared to encourage a greater number of empathic statements from patients. In the consultations that had complete agreement on reported decisions made, the greater use of active-listening skills resulted in the occurrence of twice as many statements of emotion and statements of challenge. Full examples of active listening skills and questions coded can be found in the coding manual in the appendix (Appendix 3.1).

11.6 Conclusion

Thematic analysis resulted in the identification of four distinct types of information-giving exchanges in dietetic consultations. These occurred in some but not all of the consultations analysed. *Supportive/collaborative* information-

giving exchanges occurred at a significantly greater frequency in consultations with agreement on decisions made, whereas *persuasive* information-giving exchanges were significantly more frequent in consultations with disagreement.

In consultations with agreement on reported decisions made there were more frequent empathic statements made by patients. Dietitians expressed greater empathy and used more active-listening skills and exploratory questions on self-care practices. A greater number of *supportive/collaborative* information-giving exchanges occurred and dietitians in these consultations were also more likely to set agendas with the patient at the start of the consultation.

In contrast, consultations with disagreement had a lower frequency of empathic statements made by patients. Dietitians expressed lower levels of empathy, and used fewer active-listening skills and few questions that explored self-care practices. A greater number of *persuasive* and *recommending* information-giving exchanges occurred and dietitians in these consultations did not generally set agendas with the patient at the start of the consultation.

The analysis has provided valuable insight into the process by which empathy, communication skills and information-giving exchanges interact with each other in the consultation; thus identifying a mechanism by which these behaviours and skills impact on the consultation process and result in agreement on reported decisions made.

In addition, agreement on reported decisions made appears to be a reliable marker of the presence of patient-centred communication skills and behaviours in the dietetic consultation.

Full interpretative analysis of these findings will occur alongside the interpretation of the quantitative findings from Chapter Eight and is presented in the next chapter.

CHAPTER TWELVE: DISCUSSION

“Good communication skills are crucial for optimising a care planning discussion and supporting individuals to self-care. It is vital that healthcare professionals have the right skills, approaches and behaviours to deliver high quality personalised services for individuals with long term conditions”

(Department of Health, 2010a).

This quote is taken from a pamphlet produced by the Department of Health aimed at professionals working with long-term conditions. The rhetoric is justified in that professionals need approaches and behaviours to improve patient experiences and outcomes, especially productive communication skills (Zandbelt et al, 2007). Street (1991) and Street et al (1993) in their studies exploring the communication styles of nurses and physicians demonstrated that the more patient-centred the professional, the more communicatively active the patient. It has been shown that increasing patient-participation behaviour also encourages professionals to be more patient-centred and collaborative (Moran, 2008; Street & Millay, 2001). A key factor in improving behaviours and self-care management is patient participation (Street et al, 1993).

When reviewing non-adherence to medication therapy, Epstein & Cluss (1982) found that physicians believed that it was others who had the poor consultations not themselves, despite the fact that 40% of the patients seeing these physicians did not follow the recommendations provided. This distorted perception means that professionals may be unaware of the deficit in their own skills. The present study confirmed that patient and dietitian perception of the consultations did not correlate, a finding supported by others exploring nurse, dietitian and physician perceptions of consultations (Brug et al, 2007; Latter et al, 2007; Parkin & Skinner, 2003; Pill et al, 1999).

A distorted perception demonstrated across different healthcare professional groups suggests that in order to engage professionals in reviewing and assessing the effectiveness of their practice, a simple but effective method for feedback needs to be implemented. For example, Parkin et al (2006) showed that the use of video feedback provided some insight, but these methods were cumbersome, required elaborate permissions and technology. A simple, effective and above all, low-cost, easily-administrated method needs to be developed and evaluated. This will allow professionals to reflect on skill use in their current practice (Entwistle & Watt, 2006) and identify potential training needs and areas for further skill development (Guimond et al, 2003; Parkin et al, 2006; Schön, 1983). However, awareness of the application of skills may not be enough to lead to the changes in the practitioner behaviour (Anderson & Funnell, 2005b; Brug et al, 2007; Pill et al, 1999; Skinner et al, 2008). Brug et al (2007) suggest that the level of competence and proficiency of the practitioner may impact on their ability to effectively apply new skills in the consultation. New skill acquisition may also be a problem (Rollnick, 1996). Frequency of use of new skills and the perceived importance and adequacy of training will all impact on ability to actually deliver the desired change (Delahanty & Halford, 1993). Poor acceptance may provide some explanation as to the difficulties seen in maintaining skills once trained (Doherty et al, 2000; Guimond et al, 2003; Latter et al, 2007; Lorenz et al, 1996; Pignone et al, 2003; Pill et al, 1998; Rollnick, 1996; Rollnick, Mason & Butler, 1999) and highlights the need for regular review to ensure that skills become embedded in habitual practice. There is a recognition that the skills and behaviours used while communicating with patients are just as important as the message being delivered (Bertakis, Roter & Putnam, 1991; Hall et al, 1994). There are problems with assessing

communication skills and behaviours because of the range of outcome measures employed to assess effectiveness in practice. Stewart's (1995) review highlights the need for clarity in terms of components of skills used and impact on specific measures, using a clear theory base to explain findings. When exploring whether communication skills are a primary source of improvement in outcome, a confounding factor is the multiple effects that medication and others therapies may have on the long-term markers for health outcomes, particularly medical markers (as outlined in Chapter One). If professionals are to assess the impact of their communication on outcomes, they need a specific marker that relates directly to their input. The measure of agreement on reported decisions made is potentially a clinically relevant marker for professional consultations.

This study chose to examine a method that can be easily adapted for day-to-day use in any health professional clinic or interview situation, yet provide valid and reliable feedback. Further, during the course of the work on demonstrating the tool and its fitness for purpose, this study also provided insight into the behaviours, skills, and patterns of consultations that promote interaction between the healthcare professional and the patient. It also shows how active *"care planning discussion and supporting individuals to self-care"* (Dept Health 2010) occurs within the consultation.

There are a few studies that have used this simple pen and paper technique of recording decisions reached by both the dietitian and the patient immediately after the consultation, in order to reflect on consultation outcomes. However, these studies have merely measured concepts such as patient satisfaction and

patient autonomy. Information on the specific communication skills and behaviours needed to achieve higher agreement rates on reported decisions made was not provided (Barnard et al, 2006; Goodchild et al, 2005; Parkin et al, 2006; Parkin & Skinner, 2003).

Low levels of patient/dietitian agreement on reported decisions could highlight the absence of patient-centred communication skills and behaviours used by the healthcare professional. Parkin & Skinner (2003) provided some evidence for this proposition, as they found that more controlling behaviours and low autonomy support were associated with disagreement on reported decisions made. Although the Parkin & Skinner study was conducted on small numbers of nurses and dietitians, it does suggest a role for agreement on recall as a marker of consultation behaviours. Parkin et al (2006) provide further evidence to support this view, as improvements in the level of agreement on decisions made were obtained following training in communication skills. Failure to measure how the training changed the communication skills used in the consultations meant that even though training resulted in improvement, the usefulness of these findings for identifying specific skills needed was lacking (Parkin et al, 2006). Nevertheless, it does suggest that recall may be a useful marker of communication skills in the consultation. The pen and paper method (*recall*) therefore has the potential to be a cheap easy and rapid tool to indicate effective use of communication skills in the consultation. By exploring the actual communication skills and behaviours used that resulted in higher levels of agreement, it would also be possible to identify how consultations can be made more effective in order to improve outcomes.

Satisfaction ratings immediately after a consultation are known to be affected, albeit in doctor/patient communication (Jackson et al, 2001; Jensen et al, 2010). Therefore, in this study, a patient-satisfaction questionnaire was tested as it has been shown to provide an independent method for examining communication skills. However, a lack of variation in response to the satisfaction questionnaire was seen in the current study, despite significant variations in agreement on reported decisions made between consultations. This is similar to findings from Trudeau & Dubé (1995) when exploring satisfaction with the counselling skills of dietitians. There is a suggestion by Latter et al (2002) and Latter et al (2007) when exploring nurse/patient concordance, that previous experience of consultations established certain expectations in the patient; a view also put forward by others (Epstein et al, 2005; Trudeau & Dubé, 1995). In this study, the satisfaction scores were consistently high. One possibility is that these high scores were because the cohort of patients chosen, were new to the dietetic service. (66% of the patients were registered as new visits to the dietitian. The classification of *new* for dietetic appointment systems was defined as those patients who had not been seen by the dietitian in the last year). However, this may not be the case, as there is another possibility. The mean duration of diabetes was 10.87 years with a range of 1-59 years; patients may therefore have had previous encounters with dietitians in the past and yet were still being recorded as *new*. Jensen et al, (2010) have shown that immediacy of data collection resulted in higher levels of satisfaction compared to data collected some 3-6 weeks later; a finding supported by others (Kinnersley et al, 1996). This may also have contributed to the higher satisfaction scores seen. Other possible explanations for these higher scores might include: the patient's previous experiences with dietitians (Jackson et al, 2001), alteration in patient

perception of the level of care to expect (Crow et al, 2002; Latter et al, 2007; Latter et al, 2002), patient modification of their reported satisfaction with the dietitian (Epstein et al, 2007; Hall et al, 2002; Latter et al, 2007; Sixma et al, 1998; Stiles et al, 1979; Zandbelt et al, 2004). Alternatively, patients may not have felt strongly enough about their encounter with the dietitian to make a judgement on their level of satisfaction with the consultation (Trudeau & Dubé, 1995).

Although the satisfaction questionnaire used in this study focused on the patient/dietitian relationship, high levels of reported satisfaction did not correlate with empathy or agreement on reported decisions made, as suggested in other studies (Crow et al, 2002; Goodchild et al, 2005; Kim, Kaplowitz & Johnston, 2004; Roter, 2000; Street et al, 2005). Kinmonth et al (1998) have identified problems with measuring satisfaction in GP/nurse consultations and found that greater satisfaction often masked deficiencies in other domains of practice, particularly negotiation skills. This resulted in patients reporting greater satisfaction, even though self-care management practices had not improved and health risks remained high (Kinmonth et al, 1998). Patients may therefore report being satisfied with behaviours that they find familiar, rather than behaviours that improve care (de Haes & Bensing, 2009; Epstein et al, 2005; Michie et al, 2003).

Patient-satisfaction questionnaires are affected by many factors beyond the actual consultation (Sixma et al, 1998). It can be concluded that a patient-satisfaction questionnaire does not provide reliable feedback to the healthcare

professional about the quality of their behaviour and the communication skills used in their consultations. An alternative method needs to be evaluated.

12.1 Level of agreement on reported decisions made in the consultation

Satisfaction questionnaires were seen to be affected by many factors and it may be that a number of factors will also influence agreement on decisions taken during the consultation, independent of the communication skills used. These may, for example, relate to the patient group being studied.

The chronic disease explored in this study was diabetes, and it has been suggested that poor disease control may affect recall ability in people with diabetes (Rost et al, 1990). Poor control may be indicated by the presence of complications. In this study, the presence of complications increased levels of agreement on reported decisions made, not decreased, as was expected.

There are at least three possible reasons for this: Patients attending the dietetic clinic may be more motivated to deal with issues concerning food, in an attempt to cope with the complications that they are experiencing (Flocke & Stange, 2004). These food issues may be more pertinent to the individual as the presence of complications may assist recall (Bogardus et al, 2001; Kravitz et al, 1993). Patients who have had diabetes for longer may be more familiar with the self-care management messages, as they will have heard them before in previous consultations (Jansen *et al*, 2008b). These findings suggest that patients with complications appear to be more likely to be engaged in dietetic consultations. Sharing responsibility for decision-making has been shown to lead to agreement on recall in physicians' consultations (Heisler et al, 2003).

There are a limited number of studies that measure agreement on reported decisions made in the consultation. However, the few studies that have used this measure report similar agreement rates to those found in the present study (Flocke & Stange, 2004; Madan & Tichansky, 2005; Parkin & Skinner, 2003; Pesudovs, Luscombe & Coster, 2006; Roach et al, 1992). These findings (including the current study) all suggest that agreement on reported decisions made in the consultation between patients and nurses, dietitians and doctors, are fairly consistent, falling between 40-47.1% or 1-1.65 decisions per consultation. This raises the question of how much can be reliably recalled in any consultation. It would imply that between 53 and 60% of decisions made in the consultation cannot be recalled.

Furthermore, in the current study, the mean agreement rate for reported decisions was 1.65 decisions per consultation; better than the 1 decision per consultation reported by others exploring physician/nurse and dietitian consultations (Page et al, 1981; Skinner et al, 2007). These decisions account for just a small number of the total decisions made in the consultation. It raises the question as to how many decisions should be made in the consultation if patients are to recall and then implement them.

One study of GP consultations suggests that recall is greatest when 1-2 recommendations are set, with recall declining as the number of recommendations increases (Bravo et al, 2010). However, in this present study, differences were seen for each dietitian in the number of decisions set and the number of decisions reported by patients. Dietitian 1 made few decisions per consultation (2.95) and had the lowest patient report of decisions

and agreement on decisions made (31%). Dietitian 3 made more decisions per consultation (4.43) and had the highest patient report of decisions and agreement on decisions made (51%). These figures suggest that in a dietetic consultation, the total number of decisions set is not the only factor that needs to be considered when reviewing agreement on reported decisions made. The process that occurs in the consultation, in terms of patient engagement, is likely to impact on recall as well as on the level of accuracy of decisions reported (Watson & McKinstry, 2009).

It has been shown that patients who report that they have followed specific dietary behaviours have been shown to have better HbA1c measurements than those who do not follow these behaviours (Delahanty & Halford, 1993). However, if patients cannot recall decisions made, or recall of decisions made is inaccurate, this is likely to impact on outcomes. Inaccurate recall may result in implementation of behaviours that do not lead to expected outcomes. One third of the decisions reported in this present study lacked clarity and this is similar to earlier findings in nurse/dietitian consultations (Parkin & Skinner, 2003). This highlights the need for good communication skills to ensure that decisions made are clear, specific, and relevant to the individual, thus increasing the chances of recall and implementation (Heisler et al, 2007; Miller et al, 2002; Skinner et al, 2007). Following professional training on agenda setting and goal setting with nurses and dietitians, Parkin et al (2006) were able to demonstrate a reduction from 17% to 11% on complete disagreement on decisions made. This highlights the potential of skills training to enhance clarity of communication and improve agreement on recall.

The point at which information is placed within the consultation also impacts on recall, in that retrieval of information improves when it is received at the very beginning or the very end of the consultation (Kravitz et al, 1993; Watson & McKinstry, 2009). Furthermore, the process of recapping (Bravoa et al, 2010; Poskiparta et al, 2001; Watson & McKinstry, 2009) and action planning (the *how* and *when* a decision will be applied; Bradley et al, 1999; Stadtlander & Coyne, 1990) enhances recall and increases the chances of implementation of the agreed decision/behaviour (Schnoll & Zimmerman, 2001; Schüz et al, 2006; Webb & Sheeran, 2008). Active planning therefore is a strategy that can increase recall and help patients develop autonomous motivation towards their dietary plan (Julien et al, 2009). Lack of action planning and exploration of strategies to address planned decision-implementation may therefore contribute to poor outcomes (Stetson et al, 1992). Action planning alongside decision recapping was found to be a significant contributor to the level of agreement on reported decisions made in this study.

The mixed method approach used in this study provides additional insight into the possible explanations for the varying levels of agreement on reported decisions made in the consultation. Themed analysis of the recordings of the consultations identified distinct differences in the type of information-giving exchanges used in consultations. *Supportive/collaborative* information exchanges accounted for 35.5% of the information exchanges used in dietetic consultations. Qualitative studies of Finnish nurse consultations suggest that 13.3% of the dietary information exchanges were *supportive* (Kiuru et al, 2004). This lower frequency is not surprising considering the cultural and professional differences between Finnish nurses and UK dietitians. In addition, Moran &

Latchford (2008) found that active involvement accounted for less than a quarter of GP consultations and is similar to findings from Goss et al (2004). Goss et al (2004) explored information-giving sequences in GP consultations and found a limited degree of patient involvement either before or after information exchange. Campbell et al (1990) suggested that patients were more expressive when interacting with nurses than with physicians; this may also be true for dietitians. Street et al's (2005) review of physician consultations highlighted that female physicians were more likely to use supportive talk than male physicians. The fact that all the dietitians used in this present study were female may be a further reason for the higher frequency of supportive information-giving exchanges seen. The findings from this present study appear to suggest that patients are more expressive when interacting with dietitians, and that dietitians enable that interaction to occur through *supportive/collaborative* information-giving exchanges. Although direct comparisons are hard to draw, due to the different methodologies used to assess collaborative interactions, these studies appear to suggest that dietitians may be more *supportive/collaborative* in their approach to working with patients than are physicians. However, further work is needed, using similar methods with larger groups of professionals, which may support this view.

The need to switch from a proscriptive to a more collaborative style of working with patients was one of the key recommendations from the Diabetes Control and Complications Trial (DCCT) (Lorenz et al, 1996). Collaborative working with patients is a method reported to achieve better control in diabetes (Aiken, Bingham & Piette, 2005; Flocke & Stange, 2004; Greenfield & Kaplan, 1988; Spahn et al, 2010; Stewart, 2001; Street, 1992b; Trudeau & Dubé, 1995). This

present study supports these findings, as the presence of *supportive/collaborative* information-giving exchanges was significantly greater in consultations with agreement on reported decisions made, and accounted for up to 50.3% of the total information-giving exchanges. This provides further evidence of the ability of the outcome measure of agreement on reported decisions made to act as a marker of effective patient-centred communication.

However, consultations with disagreement on reported decisions made were unsuccessful in achieving *supportive/collaborative* information-giving exchanges. Instead, these consultations favoured more professional-led information exchanges, which were identified as *persuasive and recommending*. The greater presence of directive behaviours in consultations has been related to poor metabolic control in other studies (Greenfield & Kaplan, 1988; Kaplan, Greenfield & Ware, 1989). Wolpert & Anderson (2001) suggest that these attempts at persuading and recommending the individual to change are well intentioned, as they are aimed at improving health outcomes. This has been referred to as the *theory of miscarried helping*, a process by which ‘*a helper’s well intentioned efforts to help motivate a person paradoxically leads to interactions over time that are constraining and detrimental to the recipient*’ (*ibid* p 995). Although well intended, the *persuasive and recommending* information-giving exchanges fail to engage the patient perspective and discourage a sense of autonomy (Anderson, 1995; Carter et al, 1982; Parkin & Skinner, 2003; Street et al, 1993; Wolpert & Anderson, 2001). In this present study, this category of information-giving exchange resulted in a higher level of disagreement on reported decisions made.

Lack of engagement is likely to close down the relationship between the patient and the professional (Anderson et al, 1991; Gable, 2007; Suchman et al, 1997; Wolpert & Anderson, 2001). This was illustrated in this present study, where lack of exploratory questions prior to *recommending and persuasive* information-giving exchanges resulted in failure to engage patients, leading to disagreement on reported decisions made. Burley-Allen (1995) suggests that patients may be resistant to hearing advice that does not reflect their needs, and this lack of engagement therefore may discourage personal reflection (Marilynn et al, 1995). This may explain the disagreement on reported decisions made in consultations that used more *persuasive and recommending* information-giving exchanges.

Skilful questioning is therefore required to support active listening, as this helps the listener to develop an understanding of the patients' needs and engage them in the consultation process. It has been demonstrated as a useful means of establishing rapport with patients in nursing consultations (Poskiparta et al, 1998) and been found to encourage patients to think, reflect, and facilitate involvement in medical consultations (Guimond et al, 2003; Lang et al, 2000; Maguire et al, 1996). In this present study, a greater number of exploratory questions were used in consultations with agreement on reported decisions made, with significantly more questions being used that explored self-care management practices ($p = .007$). These types of questions will provide the dietitian with insight into patients' perceptions of their conditions (Bertakis et al, 1991) and its management (Miller & Rollnick, 2002; Rollnick et al, 1999). This helps in determining possible drivers for change as well as the individual preferences of the patient (Epstein et al, 2004; Stetson et al, 1992). This results

in greater agreement on reported decisions made, as decisions are more likely to reflect the patient's needs. The greater use of open questions in chronic disease consultations is related to positive reports of patients' perception of facilitation (Martin et al, 1999) and satisfaction with decisions (Guimond et al, 2003). Exploratory questions are therefore an important part of patient-centred communication, as they enable understanding and engagement with the individual to occur (Lang et al, 2000; Little et al, 2001b; Willems et al, 2005) and result in greater agreement on reported decisions made.

Although exploratory questions were used in some consultations that reported disagreement on decisions made, the resulting dialogue suggests that the professional needed to do more than ask the right type of question. How the question is asked (Paterson, 2001) and the ability to listen to, and respond appropriately to the answers provided by the patient is just as important (Egan, 2002; Guimond et al, 2003; Zachariae et al, 2003). The facilitation of patient participation in consultations, through skilful questioning is particularly important for influencing complex areas of behavioural change (Heisler et al, 2007; Pearson & Rapoport, 2007; Street, 1991). In particular, patient facilitation has been shown to improve dietary implementation (Trudeau & Dubé, 1995) and impact on blood sugar control and quality of life in people with diabetes (Greenfield & Kaplan, 1988). Improving communication skills to enable patient participation in consultations may help to reduce the discrepancy seen in agreement on reported decisions made (Jackson et al, 2005; Mead et al, 2008). In this present study, agreement on reported decisions made was more evident where patient participation was enhanced.

12.2 Level of patient engagement and consulting time

Beisecker & Beisecker (1990) suggest that situational variables such as length of consultation, diagnosis, and reason for visit may have more of an effect on the interaction in the consultation than the doctor-patient relationship. Some patients may not want to share in decision-making (McKinstry et al, 2004; O'Brien & Petrie, 1996). The resulting shorter duration of consultations may therefore reflect the patient's agenda and the lack of desire to be involved (Street et al, 1993). However, other studies suggest that longer consultation length is a result of concerns not being responded to adequately (Levinson et al, 2000). A review in 2004 stated that the evidence relating consultation length to level of patient involvement in the consultation was inconclusive (Griffin et al, 2004).

The use of a mixed-methods approach in this present study has provided some insights into this complex issue. Consultations with disagreement on reported decisions made were shorter, and contained younger patients with a shorter duration of diabetes. Duration of diabetes has been linked with poor dietary compliance (Shah et al, 2003), as has younger age of patients (Beisecker & Beisecker, 1990). Lack of agreement on reported decisions made may therefore be an indicator of lack of future compliance. Dietitians in this study used more controlling behaviours in consultations where disagreement occurred. It may be that dietitians were more controlling in an attempt to raise the importance of dietary change with patients. Who, because of their current age and health profile may not be interested or engaged in changing their diets. This contrasts with Street et al (2009), who found nurses were more controlling with less cooperative and adherent patients (ie, patients at higher risk of poor

control). The findings in this study appear to suggest that dietitians were more controlling in an attempt to raise awareness in those who are fit and well and presenting with no complications. This may account for the lower frequency of empathic opportunities recorded in consultations with patients who had a shorter duration of diabetes, reflecting the lack of engagement and subsequent disagreement on reported decisions made.

Conversely patients with a long duration of diabetes are more likely to have complications as a result of the diabetes and may be struggling with the uncertainties of the day-to-day management of the condition. It is likely that they will have more issues to discuss potentially creating longer consultations (Albright et al, 2001; Shah et al, 2003). When more time is provided in the consultation, patients with a long duration of diabetes may ask more questions (Beisecker & Beisecker, 1990) and receive more information (Street et al, 1993). Encouraging patients to take part in the conversation results in more interactive dialogue and is correlated with the length of the consultation (Roter et al, 2008). The present study supports this finding in that longer consultations were associated with greater use of patient-centred communication skills, empathy and active listening skills, and a greater number of *supportive / collaborative* information-giving exchanges.

The mixed-methods approach taken in this present study provides a unique and valuable insight into the sequential effect of information-giving exchanges and empathy in dietetic consultations (Pedersen, 2009). *Supportive/collaborative* information-giving exchanges are associated with greater empathy. In turn, more collaborative information-giving exchanges reflect greater patient

engagement, resulting in increased agreement on reported decisions made. The extent of patient engagement in the dietetic consultation resulted in longer consulting times, as suggested by Street et al (2009). Zimmermann et al (2007) suggest that the longer consultation is due to the greater number of empathic opportunities that patients present. In this present study, it appears that the extra time in the consultation arising from the *supportive/collaborative* information-giving exchanges and greater patient engagement results in the greater number of empathic opportunities presented by patients (Zimmermann et al, 2007).

Studies that have reviewed GP consultations have highlighted a minimum time of 19-20 minutes before patients were able to fully engage in a dialogue about their condition (Beisecker & Beisecker, 1990; Martin et al, 1999). This process is referred to as *patient enablement* whereby sufficient time is needed to provide opportunities to raise concerns and issues (Martin et al, 1999) and explore options for self-care decision-making (Beisecker & Beisecker, 1990). These studies also noted that short interactions could minimise: the level of question-asking by patients, the expression of patient attitudes (Beisecker & Beisecker, 1990; Moran et al, 2008) and expression of empathic opportunities.

These effects result in low rates of patient participation (O'Brien & Petrie, 1996). These studies reflect the low rate of empathic opportunities and low patient engagement that was seen in this present study, in the *supportive/collaborative* information-giving exchanges within those consultations that had disagreement on decisions made. In addition, in this present study, a minimum time of 18.27 and 23.33 minutes for follow-up and new patient appointments respectively was

found to be needed, before agreement on decisions made could occur. This finding suggests that even when there is an established relationship with the patient, time is still required in the consultation to enable the patient to actively participate (Marvel et al, 1999).

Using the measure of *number of agreements on decisions made* acts as a marker for the presence of patient-centred communication skills. The findings above also suggest that dietetic services wishing to improve their delivery of effective patient-centred consultations will need to consider the potential implications of longer consultation times on resource planning.

12.3 The focus of the consultation and its relevance to immediate need

The varying agendas (Heisler et al, 2003; Julien et al, 2009; Vijan et al, 2005) and priorities of both patients and professionals (Kravitz et al, 1993; Levy, 2009) may be reflected in the type of dietary decisions recalled and reported (Heisler et al, 2003; Jansen et al, 2008a; Michie et al, 1997; Skinner et al, 2007; Wolpert & Anderson, 2001).

Patients attending consultations with professionals are more likely to focus on immediate life concerns, such as integrating the demands of diabetes into their day-to-day lives (Anderson, 1995; Vijan et al, 2005; Watson & McKinstry, 2009; Wolpert & Anderson, 2001). This finding is reflected in this present study, with patients reporting a high number of decisions on snacking and eating out, thus illustrating the immediate personal and social context of their eating (Gentili et al, 2001).

Conversely, dietitians reported more decisions being made that related to increasing fruit and vegetable intake, reflecting their desire to improve the quality of the patient's diet in order to improve overall health (Diabetes and Nutrition Study Group of the European Association for The Study of Diabetes, 2000; England et al, 2009). The lower frequency of decisions relating to fruit and vegetable intake, reported by patients in this present study, may reflect the lower importance attached by them to this area of dietary change.

Agreeing an agenda at the start of the consultation is recognised as an important part of the consultation process for all professionals (Berg-Smith et al, 1999; Feste & Anderson, 1995; Gable, 2007; Glasgow et al, 2006; Holli et al, 2003; Parkin, 2003; Rollnick et al, 1999). Agenda agreement is a key feature in patient-centred counselling approaches such as empowerment (Anderson, 1995) and educational strategies that use motivational interviewing (Berg-Smith et al, 1999; Rollnick et al, 1999). Agenda agreement has been shown to be one of several strategies used in dietary motivational counselling that can lead to significant reductions in energy and fat intakes (Berg-Smith et al, 1999). In this present study, agendas were more likely to be set with patients in those consultations where there was agreement on reported decisions made and less likely in consultations where there was disagreement.

In order to establish and therefore address patients' needs, it is essential to focus on those needs through the process of agenda setting and the use of *supportive/collaborative* working by employing active listening skills and exploratory questions. The resultant information provided and the decisions made are likely to be more relevant to the individual, thereby assisting recall

and leading to greater agreement on reported decisions made (as seen in this present study).

12.4 Reporting of decisions that were not made in the consultation

Working collaboratively with patients may be one way of enhancing patient and dietitian agreement on reported decisions made and as a way to improve patient outcomes (Heisler et al, 2003). Lack of collaborative working would therefore be expected to result in disagreement on reported decisions made. Patients are more likely to recall information that supports their own opinions, attitudes and beliefs (Kiviniemi & Rothman, 2006) indicating the operation of a selective memory bias for recall (Skinner et al, 2007; Watson & McKinstry, 2009). Lack of engagement may be one way that this process is accentuated, contributing to low levels of agreement on reported decisions made and leading to the reporting of decisions that were not made in the consultation, as highlighted in this present study.

There is limited data on the reporting of unmade decisions in consultations; the few studies that have been conducted focus on physician/GP and nurse consultations (Makoul et al, 1995; Page et al, 1981; Skinner et al, 2007). They report unmade decisions figures of 24.3% in GP consultations and up to 40% in medical consultations. The latter higher reading is likely to result from the data being collected three months after the event, as recall is known to drop over time (Campos & Alonso-Quecuty, 2006; Pesudovs et al, 2006). In this present study a much lower figure of 11.5% was obtained for patient recall of decisions that were not made in the consultation. Skinner et al (2007) focused on nurse and dietitian consultations. However, data presented was for nurses and

dietitians, rather than for the individual professions involved, preventing comparison between nurses and dietitians to occur. The difference between professional groups is an important consideration, as patient expectations of care will differ in relation to the professionals involved in their care (Collins, 2005; Hampson & McKay, 1996; Zandbelt et al, 2004). Consultations with dietitians have by definition a narrower focus; this narrower focus in the consultation may help to reduce the reported number of unmade decisions seen in this present study. In addition, these findings suggest that dietitians had better patient-centred communication skills than the nurses and physicians studied so far. This resulted in greater patient engagement, leading to few decisions being reported that did not occur in the consultation.

The discrepancies highlighted in this study between patients and dietitians in reported decisions made, underlines the importance of engaging patients through setting agreed agendas and using *supportive/collaborative* dialogue to assist both patient and professional understanding. This process will lead to discussions that are personally meaningful and relevant to the individual, resulting in decisions that support patient needs (Thorne et al, 2003). This relevance may assist recall, with greater agreement on reported decisions being suggested as a mechanism by which improvement in long-term health outcomes may occur (Heisler et al, 2003).

12.5 Presence of Empathy in the Consultation

A crucial part of the consultation process is how issues raised by patients during consultations are recognised, as these are likely to reflect matters of great importance. Empathy demonstrated during the consultation is required to elicit

patient engagement and will impact on the subsequent interaction between the patient and the dietitian. Indeed, in this study, empathy was correlated with patient and dietitian agreement on reported decisions made during the consultation ($\tau = .283$, $p = .0005$). This confirmed the hypothesis that greater empathy would result in greater agreement on reported decisions made. Recording agreement on decisions made provides a tangible marker of the presence of empathy in the consultation, which is quick and easy to assess. In addition, the mixed-methods approach provides a unique insight into how empathy interlinks with other communication skills and information giving in the consultation to influence the agreement level obtained.

Reviews by Stewart (2001) and Mead & Bower (2000) have contributed significantly to the understanding of concepts around patient-centred care and patient-centred communication. Additional studies support the growing evidence base for patient-centred care in order to communicate effectively with patients and improve health outcomes (Del Piccolo et al, 2008; Little et al, 2001a; Mead & Bower, 2000b; Stewart, 2001). An important construct in patient-centred care is the ability of the professional to express empathy (Neumann et al, 2009). Although empathy is highlighted as important, it is reported as occurring in low frequencies in medical consultations (Del Piccolo et al, 2008; Little et al, 2001a). Despite this low occurrence, when empathy is present in medical consultations, it has been linked to improvements in outcomes (Bertakis, 2009; Comstock et al, 1982; Larson & Yao, 2005; Levinson et al, 2000; Ong et al, 2000). These improvements include: better HbA1c measures in patients with diabetes (Hojat et al, 2011) and compliance to recommendations and improved patient satisfaction (Epstein et al, 2007;

Fuertes et al, 2008; Kim et al, 2004; Levinson & Roter, 1993; Stewart, 1984; Zachariae et al, 2003). A more recent study exploring GP counselling demonstrated that patients who perceived their GP as more empathic improved their weight-related attitudes and dietary behaviours (Cox et al, 2011). This present study was able to confirm these finding in as much as measured empathy in the dietetic consultation significantly improved agreement between patient and dietitians on reported decisions made in the consultation ($p = .0005$).

There were significant differences in the level of empathy demonstrated between dietitians participating in this study ($p = .003$) with the mean empathy level ranging from 2.49 to 3.07. Empathy correlated with significant differences on level of agreement on reported decisions made ($p = .002$) ranging from 1 to 2.09 decisions. This finding demonstrates the robustness with which the paper-based tool was able to reflect the presence of empathy within the consultation.

There are few studies comparing empathy in the different professions (Hojat et al, 2002), the difficulty being the range of tools and scoring systems that are used to assess empathy as outlined in Chapter Three. In addition, female physicians have been noted to have higher levels of empathy than male physicians (Bertakis, 2009; Bylund & Makoul, 2002; Nicolai & Demmel, 2007; Schmid Mast et al, 2007). This may further contribute to the differences seen in data largely drawn from studies using male physicians, which makes it harder to draw direct comparisons. The empathy score achieved in this present study was lower than that recorded in a previous study of female dietitians using the ECCS to measure empathy (Goodchild et al, 2005). The changes made to the

ECCS coding discussed in Chapter Four could have provided these lower than expected scores for empathy and may account for this difference. However, when compared to data on male consultants (Coughlan, 2005) and male / female physicians (Bylund & Makoul, 2002) using the unaltered ECCS, the level of empathy in this present study was comparable. The altered ECCS used in this present study provides lower scores for empathy than the original ECCS. Taking this factor into account, it seems that female dietitians in this study are demonstrating higher levels of empathy in their consultations than male/female physicians and male consultants.

Dietitians are key members of the diabetes team in their facilitation of patient self-care management and in the provision of good models to other members of the team. Parkin et al (2006) demonstrated that training the diabetes team in agenda setting and goal setting could improve agreement on reported decisions made. The data from this present study provides a clear indication of the significance of the level of empathy for improving agreement on reported decisions made. It also indicates that when the skills or behaviours that demonstrate empathy are absent (or occur infrequently) then patient and dietitians are likely to disagree on their reporting of decisions made in the consultation.

12.6 Relationship Between Patient-centred Communication Skills and Empathy

The varying levels of empathy demonstrated in this study may reflect the different skill sets employed by the dietitians. The mixed-methods approach to the analysis was critical in exploring this interplay between skill set and empathy, as well as the subsequent impact of empathy on the type and flow of

information-giving exchanges that occurred within the consultation (Pedersen, 2009).

When dietitians in this present study explored the empathic opportunities raised by patients, this led to more statements of challenge being raised by the patients in the consultation. In addition, when dietitians reflected, summarised, and confirmed issues raised by patients, further statements of challenge were presented. Active-listening skills included specific exploratory questions that explored how patients felt, their ideas, views and opinions as well as current self-care management practices. The use of active-listening skills by dietitians promoted a greater number of empathic opportunities from patients in the consultation and supported the dietitian's expressions of empathy. This finding is consistent with Eide et al (2011) recent finding in nurse consultations: that patient-centred communication is needed to support patient's expressions of concern. The greater levels of expressed empathy to statements of challenge in this present study resulted in greater patient recall ($p = .011$) and greater agreement on reported decisions made ($p = .008$).

Active-listening skills were also employed in the *supportive/collaborative* information-giving exchanges and these skills helped in engaging the patient in dialogue. These exchanges were commonly seen to precede empathic opportunities and were followed by further expressions of empathy and *supportive/collaborative* information-giving exchanges. The success of the collaborative approach is said to rely on the effect created by the communication (Finset & Mjaaland, 2009; Norfolk et al, 2007). Indeed in this present study, the effect of these patient-centred communication skills was most

pronounced in productive consultations (those that achieved agreement on reported decisions made) with half of the information-giving exchanges in these consultations being identified as *supportive/collaborative*. Active-listening skills were therefore seen to support expressions of empathic opportunities, allowing a more productive dialogue to occur, as patients were listened to and supported in a non-judgemental manner (Del Piccolo et al, 2007; Entwistle & Watt, 2006; Poskiparta et al, 2001; Zimmermann et al, 2007). This resulted in further empathic opportunities and *supportive/collaborative* information-giving exchanges that enhanced recall as they focused on issues with personal relevance to the patient. Indeed, in this study the greater use of active-listening skills and collaborative working resulted in a greater number of decisions being reported by patients and dietitians, and greater agreement on reported decisions made. This data is of interest, as previous studies exploring supportive dialogue and empathy have focused on nurse/physician consultations and only one of these studies matched these measures to an outcome, which was a broad general health questionnaire and a measure of emotional distress (Del Piccolo et al, 2007; Entwistle & Watt, 2006; Poskiparta et al, 2001; Zimmermann et al, 2007). Validation of patient experience and greater empathy may result in fewer negative emotions and more positive ones, which in turn may impact on outcomes (Fogarty et al, 1999; Ong et al, 2000). This present study therefore provides explicit data on dietetic consulting skills and (further to previous studies) links the presence of these skills with an outcome measure. It seems that as agreement reflects patient engagement and skilful communication on behalf of the professional, then this greater patient engagement may lead to significant improvement in patient behaviour change and improved health outcomes (Eide et al, 2011; Street et al, 2005).

This mixed-methods approach has provided valuable insight into the patient-centred behaviours and communication skills and patterns of occurrence in consultations that promote patient interaction and agreement on reported decisions made. In addition, this data highlights the usefulness of the measure of agreement on decisions made in detecting the presence of patient-centred communication skills and behaviours. It has also highlighted differences in the level of empathy provided by the different empathic statements made by patients.

Dietetic consultations focus predominately on food and this is reflected in the high percentage of food decisions reported by patients and dietitians. This is an area known to be difficult for patients to implement in the long term (Peyrot et al, 2005; Travis, 1997; Van Dulmen et al, 1997; Webb et al, 1984; Williamson et al, 2000). The high frequency of statements of challenge in dietetic consultations reflects the difficulties that patients experience in the daily management of their condition, particularly with regard to food. Dietitians responded to these statements of challenge with high levels of empathy, which suggests that they are attuned to the daily difficulties that patients may be facing in managing their diet. Responding empathically to statements of challenge resulted in more focused and collaborative information-giving exchanges that explored the patient's perspective (Heisler et al, 2003; Wolpert & Anderson, 2001). This collaborative working helps to facilitate problem solving (Lorenz et al, 1996; Spahn et al, 2010) and has been shown to lead to greater levels of engagement and improved dietary self-care and glycaemic control (Glasgow et al, 1992; Rubin et al, 1989). This may explain the high number of reported decisions, as well as the high level of agreement on reported decisions, made in

consultations where significant levels of *supportive/collaborative* information-giving exchanges were found. Unlike others (Kiuru et al, 2004), this present study provides insight into the differences that occur in communication skills and information-giving exchanges in relation to a defined outcome: agreement on reported decisions made. It provides further evidence for the usefulness of these patient-centred communication skills in practice, and illustrates how these skills interact with each other. When patients feel listened to and understood they report greater levels of satisfaction (Golin et al, 1996; Jackson et al, 2001). Although patient satisfaction did not correlate with empathy in this present study, patient satisfaction was found to correlate significantly with high numbers of statements of challenge made by patients ($p = .023$). A supportive environment where patients feel respected and empowered (Stewart, 1995) is more likely to encourage patients to verbalise their concerns (Jansen et al, 2010; Ong et al, 2000). In addition, the statements of challenge raised require a more probing response from the professional to allow difficulties and challenges to be explored in more depth (Rollnick, 1996; Stetson et al, 1992). This level of exploration and focus on immediate difficulties that patients are addressing may explain the high reporting of satisfaction associated with statements of challenge.

However, it is interesting to note that statements of emotion did not appear to need a high empathic response. The act of being listened to is reported as being therapeutic in itself (Ong et al, 2000). An acknowledgement that validates feelings expressed appears to be an appropriate response to emotions raised in this present study (Lang et al, 2000; Suchman et al, 1997; Zachariae et al, 2003). Too much focus on emotions may accentuate the daily difficulties

associated with living with diabetes and thereby increase diabetes-related distress (Nakahara et al, 2006) and anxiety (Eide et al, 2004; Rost & Roter, 1987). It may also displace time for information giving and could impact negatively on patient recall (Neumann et al, 2007). This was reflected here when dietitian 2 demonstrated high levels of empathy to statements of emotion and achieved low agreement rate on reported decisions made. In contrast, dietitian 3 achieved the highest rate of agreement on reported decisions made and demonstrated low levels of empathy to statements of emotion. These findings are consistent with earlier studies, which found that the acknowledgment of feelings allowed patients to focus more clearly on their agenda (Lang et al, 2000; Morse et al, 2008; Neumann et al, 2007; Suchman et al, 1997; Zachariae et al, 2003).

Different empathic opportunities may therefore require different levels of empathic response, suggesting the need for flexibility and very careful active-listening skills in the way that dietitians communicate and respond to patients. The different number of empathic opportunities observed reflects both the level of expressed empathy and the level of patient involvement, as demonstrated through the different types of information-giving exchanges used in the consultation.

Where empathy was reported as being low, there were fewer empathic opportunities (Davenport et al, 1987; Goss et al, 2004; Street et al, 1993). In addition, the use of active-listening skills was much lower, suggesting low patient engagement, which may result in patients remembering less (Jansen et al, 2010). This effect is reflected in this present study, where the greater use of

controlling information exchanges was associated with fewer empathic opportunities, lower use of patient-centred communication skills and low agreement rates on reported decisions made.

12.7 Does patient autonomy or self-efficacy affect successful consultation outcomes?

The different tools employed to measure and assess empathy may also explain why some studies have been able to link empathy with patient autonomy and self-efficacy (Fuentes et al, 2008; Levinson & Roter, 1993) and why this present study was unable to make these associations. In two studies that both used indirect measures to assess empathy, the questionnaires that were used explored professional perception of empathy (Fuentes et al, 2008) and patient perception of empathy (Levinson & Roter, 1993). Bylund & Makoul (2002) have suggested that questionnaires that measure perception of empathy may be measuring a much broader concept of empathy compared to the direct measures as employed in this present study. Pedersen (2009) also raised this issue in his review of empirical research into empathy in medicine. The more conservative measures used for coding empathy directly from recordings using the ECCS, rather than using perception questionnaires that rely on recall, may therefore have resulted in smaller variations in identified practice. Brace et al (2006) cite small variations in practice as possible reasons for lack of significant correlation data. These small variations may be a possible reason for the lack of correlation seen in this study.

However, a trend towards significance was noted for patient autonomy and empathic opportunities and this picks up a trend noted in an earlier study using the ECCS to measure empathy (Goodchild et al, 2005). Even allowing for a

larger sample size, this trend did not reach significance. In this present study, lack of significance may have resulted from the changes that were made to the ECCS coding level, leading to the lower measured empathy scores.

12.8 Does training influence the levels of empathy seen and the application of patient-centred communication skills needed to support this?

Additional postgraduate training in education, communication skills, and behaviour change skills has long been recommended for dietitians (King et al, 2002; Larme & Pugh, 1998; Rosal et al, 2001; Stetson et al, 1992). Recent NICE guidance has highlighted the need for advanced communication skills training in order to effectively implement a behavioural approach (NICE, 2007). In this study the uptake of postgraduate training for participating dietitians was variable. Data on dietetic postgraduate training in behaviour change and communication skills is not routinely collected, so it is difficult to estimate these training needs in the profession as a whole.

As issues that will impact on delivery, Doherty et al (2000) highlight the frequency of use of new skills and their perceived importance, as well as adequacy of training. In addition, skills needed for effective communication and behaviour change have been shown to be hard to utilise consistently in that they require ongoing reflection in order to ensure application (Doherty et al, 2000; Pill et al, 1999). This is further highlighted in this present study. Here, in comparison to the dietitian who had received the least training in this area, the dietitian with the fewest years of clinical experience, but the most frequent and recent training in behaviour change and communication skills, demonstrated

significantly greater levels of empathy in the consultation and the greatest agreement on reported decisions made compared.

These findings reflect the difficulties that professionals have in maintaining skills once trained and provide further compelling evidence for regular review and training to ensure that patient-centred communication skills are embedded in practice.

12.9 Limitations and future research directions

This study reviewed patients from a limited number of dietitians. It therefore cannot be considered to be a true representation of dietetic practice in the UK. The study was located in the South West and may illustrate cluster effects, rather than a pattern of practice across the UK profession as a whole. In addition, this study is an observational cross-sectional design and therefore conclusions around causality cannot be drawn from the correlations obtained (Field & Hole, 2003; Ong et al, 1995). The qualitative findings presented here on communication skills and information giving are consistent with other findings and support other research in this area (Goss et al, 2004; Neumann et al, 2009; Norfolk et al, 2007; Rubin et al, 2002). The findings here also support Neumann et al's (2009) model of empathic communication, which proposed a pathway between empathy, enhanced communication, and improvement in short-term outcomes. Longitudinal studies are now required to find whether agreement on reported decisions made does in fact translate into improved health outcomes and long-term dietary change as suggested (Kravitz et al, 1993).

The small sample size here may also have hampered the detection of correlations between patient autonomy and self-efficacy. Larger sample sizes of professionals and patients would allow the application of structured equational modelling to data analysis, and this would enable the causal pathways between empathy, patient autonomy and self-efficacy to be explored in more depth (Burke et al, 2003; Senécal et al, 2000). This present study highlights the complex nature of patient-centred communication and it is therefore important to consider a range of concepts when exploring communication effectiveness (Newman et al, 2004). These include the interactive nature of the identified skills, and the essential need to view these skills collectively in order to understand their impact more fully on communication effectiveness and outcomes. The use of larger populations could strengthen correlations between empathy and agreement. Techniques such as mixed methods are essential to improving understanding because outcomes are influenced by: low frequency of occurrence of empathy in consultations, multiple communication behaviours, patient and professional factors.

Although mixed methodology provides some challenges to the researcher, larger and more detailed studies of this nature are required. This will help to improve understanding of the interplay that the communication skills and behaviours may have with the models, theories, and concepts that are applied to the delivery of patient-centred care.

In addition, further studies will help to clarify the usefulness of measuring agreement on reported decisions made in the consultation, in highlighting lack

of patient-centred communication skills in other professional consultations. Further training in patient-centred communication skills may result in greater levels of agreement on reported decisions made in the consultation (Parkin et al, 2006). Further work is also required to test the validity of the changes made to the ECCS coding system and its application to consultations by other professionals.

Qualitative analysis is reported to have a research bias and care needs to be taken in interpretation of data to ensure that this does not occur (Creswell, 2009). Although the researcher was careful to limit bias by keeping outcome data separate from the qualitative data during analysis, it would be useful to explore the identified information-giving themes in a larger set of data with more researchers to increase the validity of the application of this process further. This is particularly important as the identified themes for information-giving exchanges provide clear direction on the communication behaviours within the consultations.

There is little evidence to show that recording consultations influences the behaviour of the patients or the professionals involved (Coleman, 2000). However, it could be argued that it introduces bias in those patients and professionals who agree to take part (Zandbelt et al, 2006). Despite this potential for bias, exceptional practice did not occur and significant variations in practice were observed including consultations where complete disagreement on reported decisions occurred. This appears to suggest that the audio recording of consultations had little impact on the usual care delivery of the

dietitians taking part. Themessl-Huber et al (2008) reached a similar conclusion.

12.10 Conclusions

There is a dearth of published data on the communication skills used or the effectiveness of dietetic consultations (Cant & Aroni, 2008; Whitehead et al, 2009). This study therefore provides a unique insight into the communication process that occurs in dietetic consultations and provides strong evidence to support the use of patient-centred communication. The mixed-methods approach taken provided valuable insight into the mechanisms by which empathy, active-listening skills and information giving interact with each other in the consultation. Highlighting the importance of these skills for effective patient-centred communication, as well as identifying the process by which these communication skills lead to agreement on reported decisions made in the consultation, add meaning to the data set observed (Epstein et al, 2007). The range of skills needed in the process of effective patient-centred consultation reflect its complex nature. In addition, specific behaviours such as agenda setting, decision recall towards the end of the consultation and action planning were all associated with greater agreement on reported decisions made. Although these findings are tentative, due to the small numbers used in the qualitative analysis, they provide support for the growing evidence base around patient-centred communication for effective consultations (Epstein et al, 2005). They also provide much needed evidence to support effective communication in dietetic consultations.

In addition the simple pen and paper measure of agreement on reported decisions made has been shown to be a reliable indicator of patient-centred communication. When key patient-centred communication skills of empathy, active listening, and *supportive/collaborative* information-giving exchanges were present, greater levels of agreement on reported decisions were made. Conversely, when these skills were lacking or absent, disagreement on reported decisions occurred.

It has been suggested that greater agreement on reported decisions made in the consultation may be a marker for success of the consultation leading to improved patient outcomes (Heisler et al, 2003; Kravitz et al, 1993). The level of agreement on reported decisions is therefore a viable method of engaging professionals in reflection on their patient-centred communication skills. These findings add support to the concept of the *therapeutic alliance* (Norfolk et al, 2007) and the *comprehensive model of empathic communication* (Neumann et al, 2009). Longitudinal studies are needed to substantiate the links seen between empathy, communication behaviours, and information-giving exchanges where there is agreement on reported decisions made. Such studies may confirm that agreement on reported decisions made translates into long-term improvement in health outcomes (Kravitz et al, 1993).

Professionals are increasingly expected to demonstrate their impact on patient care through improvements in health outcomes (BDA, 2009; BDA, 2011; Lacey & Pritchett, 2003; NHS, 2011). The outcome measure of agreement on reported decisions made is significant in that it provides a measure that relates directly to the dietitians interaction with the patient. Although guidance is

provided to dietitians on care delivery through the nutrition and dietetic care process (BDA, 2009; Lacey & Pritchett, 2003), this only provides information on each of the stages; assessment, nutritional diagnosis, intervention, evaluation and monitoring. This study is therefore significant as it examines the communication process that supports movement through the nutrition and dietetic care process, for chronic disease management, leading to improvement in the outcome measure of agreement on decisions made.

In addition, the data from this study suggests a need to consider post registration training in communication skills/behaviours for practicing dietitians. Although dietitians are required to engage in continued professional practice (CPD) this does not involve a compulsory update in communication skills or behaviours. Data from this study suggests that regular communication skills/behaviour training as part of a compulsory requirement for dietetic CPD is needed. Diabetes educators in Australia are required to register every 3 years, and in the United States every 5 years, with evidence to support continuing professional practice (ADEA, 2011; AADE, 2011). Based on the findings from this study it would not be unreasonable therefore, for dietitians working with chronic disease management to provide evidence of training in communication skills/behaviour every 3 years as part of their ongoing CPD and professional registration requirement.

In summary this study provides evidence for the specific skills/ behaviours needed for an effective patient-centred consultation for chronic disease management, and the rationale for regular review and development of

communication skills/behaviour training for dietitians to maintain competence and improve patient outcomes.

CHAPTER THIRTEEN: IMPLICATIONS FOR PRACTICE AND FUTURE RESEARCH

The differences highlighted in the dietetic consultations reflect significant differences in the practice of the dietitians taking part in this study. This appears to be related to the amount of training received in communication and behaviour change, rather than years in practice or years working in the specialist area. The dietitian with the least experience in diabetes and the fewest number of years in practice had the highest level of empathy and agreement on reported decisions made. The same dietitian also had the most frequent and recent training in behaviour change and communication skills. This resulted in a greater demonstration of empathy in her consultations and higher levels of agreement on reported decisions made when compared to the dietitian with the least training in this area. This finding suggests that to remain competent in the delivery of patient-centred communication, professionals need to receive ongoing training and review to ensure application of the appropriate skill set.

Although this study involved a small number of dietitians, others have highlighted the need for regular training and assessment of skills in practice (Lorenz et al, 1996). Patient-centred communication skills and behaviours have been shown to be difficult to utilise consistently, requiring ongoing reflection to ensure application (Doherty et al, 2000; Pill et al, 1999) and embedding of these skills in practice (Hauenstein et al, 1987; Roach et al, 1992). The acquisition of new communication skills involves behaviour change in practitioners (Rollnick, Mason & Butler, 1999) and may present challenges if professionals are to shift away from their own well practised consulting styles (Moran et al, 2008;

Resnicow et al, 2001). Habit is therefore an issue (Rollnick, 1996) and this may prove resistant to change (Hulsman et al, 1999). The practitioner may also perceive these skills as too time consuming (Doherty et al, 2000; Lorenz et al, 1989) and therefore revert back to old methods before new skills have had a chance to become embedded (Hulsman et al, 1999). The following will impact on delivery (Delahanty & Halford, 1993): frequency of the use of new skills, perceived importance of new skills, monitoring of the use of the skills and adequacy of training.

Challenges over the perceptions of the professional's role and responsibilities (Francis et al, 2008) may also impact on effective skill utilisation (Pill et al, 1999; Resnicow et al, 2001), as will competing perceptions of real work and the importance attached to psychosocial aspects of care (Hauenstein et al, 1987; Jarret & Payne, 1995). The attitudes of professionals may therefore need to change in order to improve consultation effectiveness (Levinson & Roter, 1995). The extent to which dietitians feel supported in the workplace may also reflect their ability to take on board and use psychosocial skills in their practice (Francis et al, 2008).

Effectiveness in the delivery of patient-centred communication requires regular practice and review of skills used in order to ensure successful application to the complex area of dietary behaviour change (Forsetlund et al, 2009). This review of practice needs to focus on the reality of practice, not the perception, as the two may differ (Parkin & Skinner, 2003). Peer support will also assist in the embedding of skills in practice. The findings from this study are unique in that it is the first of its kind to use mixed methodology to explore the

communication skills used by dietitians in practice. In addition, the outcome measure of agreement on reported decisions made in the consultation was found to be consistently associated with the presence of empathy and patient-centred communication behaviours. Furthermore, when these skills were lacking, or absent, low levels of agreement on reported decisions made occurred.

The pen and paper method of checking patient and professional agreement on reported decisions made, through the use of simple written records, has the potential therefore to be a cheap, quick and easy marker of the presence or absence of patient-centred communication skills and behaviours in consultations. It requires no skill or special equipment and would be easily applied by any professional in a range of different settings. Agreement on reported decisions made is a more reliable marker than perception of practice and provides a quick method of assessment of the need to review skills used in the consultation. In addition, this study provides a clear indication of the patient-centred communication skills needed to support agreement on reported decisions made, providing direction for the necessary skills training to support professional's delivery of patient-centred care.

However, the frequency with which the communication process is reviewed is debatable. Roach et al (1992) noticed that overall improvement in teaching skills following training declined after three months, and whether this is true for consulting skills has yet to be established. Regular review and training may help to improve skills used (thereby reducing the level of discrepancy) by increasing agreement and reducing the reporting of unmade decisions in

consultations (Parkin et al, 2006). This would result in more accurate documentation in patient notes, providing a clear measure of the outcome effectiveness of the professional's consultation. In addition, improved recall may improve long-term health outcomes, thus increasing the clinical importance of the outcome measure of agreement on reported decisions made.

This study suggests that a minimum amount of time is needed in the consultation before patients become actively engaged. Dietetic services wishing to improve their delivery of effective patient-centred communication in order to improve health outcomes will, need to consider the potential implications of longer consultation times on resource planning.

Further research is needed, with dietitians and other professionals, to determine whether the relationship between agreement on reported decisions and patient-centred communication skills is consistent for larger populations of patients and for the variety of professionals involved. Additional training to improve patient-centred communication will result in more efficient use of patient-centred communication skills, with the potential for more skilled communicators delivering patient-centred communication in a shorter time frame. Studies that have explored GP consultations have looked at the impact of longer consultations times (Beisecker & Beisecker, 1990; Moran, et al, 2008) to see whether this reduces overall health cost and improves patient care as suggested (Wilson & Childs, 2006). Equally, there is no published work on ideal length of time for a dietetic consultation. Longitudinal studies are needed to ascertain whether agreement on reported decisions does in fact result in improved outcomes.

Successful patient-centred communication is achieved through the constant review of the skills and strategies needed to support this, alongside a structure that involves the patient as an active participant in this dialogue (Rollnick, 1996). The patient-centred communication skills employed in listening to patients will help to determine how active patients wish to be in this process and will result in a course of action that reflects their needs (de Haes & Bensing, 2009). The NICE (2007) guidelines on behaviour change at population and community levels state that advanced communication skills are needed for professionals to implement behavioural approaches effectively. These behavioural approaches will only be successful if the professionals employing them have the necessary communication skills to implement them appropriately. Lack of patient-centred communication skills may therefore explain the varied levels of success seen with the application of behaviour change theories and strategies in practice (Abraham & Michie, 2008).

The marker of agreement on reported decision made in the consultation provides a quick and simple tool that can highlight the need for communication-skill review. In addition, this study has identified key patient-centred communication skills that are needed to support agreement on reported decisions made. These are empathy, active-listening skills, exploratory questions, and *supportive/collaborative* information-giving exchanges. Patient self-care management can be improved through the regular review of the patient-centred communication skills employed by health care professionals. This study provides evidence for a simple and quick method that will assist professionals in achieving this aim.

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APPENDIX 1.1

RECRUITMENT, PARTICIPANTS AND METHOD FOR STUDY EXPLORING TOOLS SUITABLE FOR ANALYSING DIETETIC CONSULTATIONS **Exploring tools suitable for analysing dietetic consultations**

In the recruitment of patients and dietitians to the exploratory study, the following outlines the process that was used to identify tools suitable for analysing patient-centred communication skills in dietetic consultations.

Recruitment

Two specialist diabetes dietitians working in a diabetes centre agreed to have their consultations used for exploratory analysis. Recruitment of participants took place over a two-week period. Portsmouth & Isle of Wight Research Ethics Committee provided ethical and clinical governance approval. Individuals attending for a scheduled out-patient appointment at a specialist diabetes centre were invited to participate in the study. Posters were displayed around the out-patient waiting area to inform patients that the study was taking place. On arrival, prospective participants were provided with an information sheet outlining the purpose of the research and how the data was to be used. Fifteen patients with diabetes who were attending the dietetic clinic agreed to participate. Participants were made aware that refusal to take part would not impact on their usual care delivery.

Participants

The following Inclusion and exclusion criteria were used in the selection of participants (patients and dietitians). Patients with diabetes who were attending scheduled out-patient appointments with the diabetes dietitians were eligible to take part. These routine out-patient clinics would have consisted of new and

follow-up patients with either type 1 or type 2 diabetes. Patients were excluded from taking part if they did not have fluency in English, were under the age of 16, had learning difficulties, mental health issues or a history of drug/alcohol abuse. Two female dietitians who provided out-patient diabetes care for between 5-15 years agreed to take part in this exploratory study. Each dietitian signed a consent form (see below).

Method

Posters displayed around the waiting area informed patients of the study and information sheets that were handed out on arrival at the clinic. I was on hand to answer any additional questions that the patients may have had about the study. If individuals agreed to take part in the study, they signed a consent form before they entered the clinic room and the whole consultation was audio-recorded (see below for consent form). The participants were reminded that the recording could be erased at any time during the consultation if they changed their mind and wished to withdraw from the study. The dietitian then undertook the consultation following usual procedures. At the end of the consultation, the audio recordings were collected and stored in a locked filing cabinet in accordance with the Data Protection Act 1998 on storage of personal information. Audio recordings were then transcribed and coded using the selected coding tools. Consent forms for dietitians and patients are below.

**PATIENT CONSENT FORM TO ALLOW CONSULTATION TO BE AUDIO
RECORDED FOR RESEARCH AND DEVELOPMENT PURPOSES**

Date..... Identification Number.....

Patients sexM/F Diabetes.... type 1/ type 2

Age..... Presence of complications...yes/no

BMI..... HbA1c.....

The dietitian who is seeing you today is hoping to have their communication skills reviewed. To do this we would like your help by giving your permission to audio-record today's session with the dietitian. The audio recordings will form part of a research project looking at how dietitians communicate with patients.

The recorder will be switched off at any time you wish.

Only the people directly involved in the research and the dietitian you are seeing today, will listen to the recording. It will only be used to evaluate the dietitian's communication skills. The recording will be securely stored and is subject to the same degree of confidentiality as your medical records.

The security and responsibility of the audio recording is the responsibility of the research team to whose care it is entrusted.

You do not have to agree to your session being recorded. If you do not want your session to be recorded, please tell the dietitian. This is not a problem and will not affect your session today with the dietitian. But if you do not mind your session being recorded, we are grateful to you. If you wish you may listen to the audio recording before confirming your consent.

If you consent to this session being recorded please sign below.

Thank you very much for your help.

If at the end of the consultation you wish to have the recording erased, please let us know.

TO BE COMPLETED BY PATIENT

I have read and understand the above information and give my permission for the session to be audio recorded.

Date Signature of patient

Date Signature of researcher

Consent form for Dietitians taking part in the audio recording of consultations for research and development purposes.

Identification number.....

Study aim:-

This study is designed to look at the communication skills used by dietitians in consultations with people who have diabetes.

To do this I would like your help by giving your permission to audio record consultations with people who have diabetes. The audio recordings will form part of a research project looking at how dietitians communicate with people who have diabetes.

The audio recording can be listened to by you at your request and will only be listened to by the people directly involved in the research. The recording will be securely stored and is subject to the same degree of confidentiality as medical records.

The security and responsibility of the audio recording is the responsibility of the named researcher to whose care it is entrusted.

If you consent to your sessions being recorded, please sign below.

Thank you very much for your help.

TO BE COMPLETED BY DIETITIAN

I have read and understand the above information. I agree to take part in the above study and I am aware that the results of this study are for research purposes only. The outcomes of this study can therefore not be used by anyone in a senior position to criticise my performance or be used as part of my individual performance review. Agreement to take part or not to take part in this study is down to the individual, and will not and cannot be used as a marker of commitment to research in the Nutrition and Dietetic department.

Date

Signature of dietitian

.....

Date

Signature of researcher

.....

APPENDIX 1.2

CODING FOR EMPATHY USING THE EMPATHIC COMMUNICATION CODING SYSTEM (ECCS)

Coding for empathic opportunities using the ECCS, examples in bold text have been taken from the coded transcripts, italics are examples used in the original ECCS coding manual (Bylund & Makoul, 2002).

Statement of Emotion: Emotion is defined as “an affective statement of consciousness in which joy, sorrow, fear or the like is experienced.”

“I’m just scared because I never went through nothing – I’ve never had nothing wrong with me”

“Yeah I definitely eat, my emotions, to help. I tend to eat when I’m upset.”

Statement of Progress: the patient states or describes a positive development in physical condition that has improved quality of life, a positive development in the psychosocial aspect of the patient’s life, or a recent, very positive life changing event.

“I’ve been exercising more than the last time I saw you”

“Didn’t go yesterday, no. I am missing it, it’s obviously part of the routine that really works”

Statement of Challenge: the patient states or describes a negative effect a physical or psychosocial problem is having on the patients’ quality of life, or a recent devastating, life-changing event.

“But sometimes it’s just hard eating three pounds of meat you know what I mean?”

“At the weekends sometimes I have gluten-free porridge because I have time to make it, but during the week I pretty much end up eating Rice Crispies which isn’t much good from the point of the view of my diabetes.”

Table A. 45 Codes for empathic opportunities

Coding system for empathic responses made to patient empathic opportunities (ECCS), examples in bold text have been taken from the coded transcripts, italics are examples used in the original coding manual (Bylund & Makoul 2002).

Level 6: Statement of shared feeling or experience

Where the health professional makes an explicit statement that they either share the patients emotion or have had a similar experience.

"I understand how scary this must be for you. My husband recently had a biopsy and we were really scared"

There were no level 6 codes in the consultation recordings

Level 5: Confirmation

Where the health professional conveys to the patient that what they are feeling and describing is legitimate ie, congratulatory remarks, or acknowledging the difficulties the patient is having.

"You sound like you are very busy, I can see why it would be tough for you to find time to exercise"

"Yes, it sounds like you're trying very, very hard and you're very conscientious."

Level 4: Acknowledgement with pursuit

This is a response that explicitly acknowledges the central issues in the empathetic opportunity and conveys that the physician has "heard" the patient. Level 4 responses convey this by pursuing the topic, asking a question, elaborating on the point raised by the patient.

"You mention you've been feeling sad. Would you tell me more about that?"

"OK, what affect does it have on your diabetes? You mentioned twice that it's not good for your diabetes"

Level 3: Acknowledgement

This response also explicitly acknowledges the central issue in the empathic opportunity. Acknowledgement includes restatements of what patients have said. Information, advice, or offers help.

"Ok, so you've been cutting back on fats".

“So your key emotions throughout your eating, is boredom or tiredness?”

Acknowledgment should also be coded when the professional response to the empathic opportunity and provides verbal back-channeling cues such as “mm-hmm” “yes,” whilst patient is talking about the empathic opportunity. It should be clear that the professional is actively listening to the patient.

“Yes, yes, ok”.

Level 2: Implicit recognition of patient perspective

These responses concentrate on peripheral aspects of the empathic opportunity. These statements tend to be more content-base, not dealing directly with the patients concerns. These responses may also include questions or advice.

Patient: “this headache makes it difficult for me to work”

Professional: “yes, how is the insurance business lately?”

Patient: “Didn’t go yesterday, no. I am missing it, it’s obviously part of the routine that really works.”

Dietitian: “Yeah. So was that because your brother wasn’t around?”

Level 1: Perfunctory recognition of patient perspective

A professional's automatic, script-type response (eg “uh-huh”) to an empathic opportunity while the physician is doing something else, often with the health professional having their body orientated away from the patient.

There were no level 1 codes in the consultation recordings

Level 0: Denial of patient perspective

The professional either ignores the patient’s empathic opportunity or makes a disconfirming statement. Such responses also include an immediate topic change, or not responding but focusing on a physician task.

Patient: “So I downed the morning one to 26, so I’m doing 26 in the morning and 26 at night and I’m fine at the moment, I haven’t had that feeling.”

Dietitian: “OK. OK. We’ve got about 40 minutes today to discuss whatever you want to discuss about your diabetes.”

Table A.46 Coding levels for empathic responses ECCS

APPENDIX 1.3

SUMMARY OF CODES OBTAINED USING ECCS

Recordings	Total empathic opportunities	Statement of challenge (SC)	Statement of progress (SP)	Statement of emotion (SE)	Mean response to SC	Mean response to SP	Mean response to SE	Mean empathic response
1	24	7	12	5	3.58	4.17	3.2	3.65
2	29	6	16	7	3.33	3.3	2.89	3.17
3	11	9	2	0	3.2	3	0	3.11
4	20	10	6	4	3.2	2.83	4.4	3.51
5	7	6	0	1	3	0	1	2
6	12	3	7	2	1	3	3	2.33
7	19	16	0	3	3.25	0	3.67	3.46
8	15	5	9	1	3.2	3.11	1	2.44
9	19	17	2	0	3.10	3.5	0	3.30
10	3	0	1	2	0	3	2.5	2.75
11	16	14	1	1	3.07	4	3	3.36
12	19	13	4	2	2.77	2.25	3.5	2.84

Table A.47 Summary of codes obtained using the ECCS

APPENDIX 1.4

OVERVIEW OF CODING CATEGORIES FOR RIAS

Socio-emotional Exchange	Task-Focused Exchange
Personal remarks, social conversation	Transition words
Laughs, tells jokes	Gives orientation, instructions
Shows approval – direct	Paraphrase/Checks for understanding
Gives compliment – general	Bid for repetition
Shows agreement or understanding	Asks for understanding
Back-channel responses	Asks for opinion
Empathy	Asks Questions (closed-ended) – medical condition
Shows concern or worry	Asks Questions (closed-ended) – therapeutic regimen
Reassures, encourages or shows optimism	Asks Questions (closed-ended) – lifestyle
Legitimises	Asks Questions (closed-ended) – psychosocial- feelings
Partnership	Asks Questions (closed-ended) – other
Self-disclosure	Asks questions (open- ended) – medical condition
Shows disapproval – direct	Asks questions (open- ended) – therapeutic regimen
Shows criticism – general	Asks questions (open- ended) – lifestyle
Asks for reassurance	Asks questions (open- ended) – psychosocial- feelings
	Asks questions (open- ended) – other
	Gives information – medical condition
	Gives information - therapeutic regimen
	Gives information - lifestyle
	Gives information - psychosocial
	Gives information - other
	Counsels or directs behaviour – medical condition/therapeutic regimen
	Counsels or directs behaviour - lifestyle/Psychosocial
	Requests for services or medication

Table A.48 Overview of coding categories for RIAS (Roter, 2005)

APPENDIX 1.5

SUMMARY OF CODES USING RIAS

Socio-emotional exchanges	Dietitian	Patient	Task-focused exchanges	Dietitian	Patient
Personal	35	0	Trans	262	333
Laughs	26	50	Orient	23	0
Approval	55	24	Check	3	24
Agreement	110	613	Bid	1	1
Back-channeling	196	0	Asks understanding	39	18
Empathy	9	0	Asks opinion	52	2
Concerns	11	110	Medical	25	0
Reassurances	94	27	Therapy	194	8
Legitimises	3	0	Lifestyle	99	1
Partnership	2	0	Psychosocial	2	0
Self-disclosure	2	0	Other	6	0
Disapproval	10	5	Open med	20	0
Criticism	0	5	Open therapy	68	8
Asks reassurance	0	6	Open lifestyle	94	17
			Open psychosocial	13	2
			Open other	25	2
			Gives med	87	155
			Gives psychosocial	0	174
			Gives other	149	102
			Direct med therapy	132	0
			Direct lifestyle	13	0
			Asks service	0	5

Table A. 49 Summary of codes obtained using RIAS

APPENDIX 1.6

SUMMARY OF CODES USING VERONA

Recordings	Code categories					
	Information gathering	Patient involving	Patient facilitating	Patient supporting	Patient education	Negative talk
1	58	23	48	11	25	0
2	11	14	28	10	21	3
3	59	17	43	12	26	0
4	29	4	49	16	15	1
5	54	11	39	13	66	13
6	18	6	37	8	11	2
7	16	14	34	13	84	4
8	16	7	31	15	30	2
9	24	9	34	7	42	0
10	19	14	40	12	117	5
11	26	20	28	10	88	0
12	40	12	59	4	68	0
Total	370	151	470	131	592	30

Table A.50 Summary of codes obtained using Verona

APPENDIX 1.7

SUMMARY OF CODES OBTAINED USING THE REFLECTIVE PRACTICE CODING SYSTEM

Recordings	Total number of responses	Total +ve scores	Total -ve scores
1	169	47	3
2	96	22	7
3	154	18	23
4	121	17	13
5	197	13	18
6	113	17	2
7	177	12	7
8	117	5	1
9	107	16	9
10	219	5	2
11	191	16	8
12	183	24	4

Table A.51 Summary of codes obtained using reflective practice coding system

APPENDIX 2.1

PATIENT LETTER AND INFORMATION SHEET



Faculty of Health and Social Work
School of Health Professions
University of Plymouth

Dear Sir/Madam

I am writing to notify you of some research that is being conducted in the dietetic clinic and to ask you whether you would be interested in taking part.

My name is Tracey Parkin and I work at the University of Plymouth, I am conducting research into how dietitians communicate with patients. The research is called

Improving Healthcare Professionals' Consultation skills to people with Diabetes

In order to do this I need to audio-record consultations between dietitians and patients so that I can listen to how the dietitians speak to patients.

I would also like to find out how patients feel about the consultation and so will be asking patients to fill in a short questionnaire at the end of the visit with the dietitian. This questionnaire should take no more than 10- 15 minutes to complete.

I am hoping that this information will help our understanding of how dietitians communicate to patients and provide information on ways to improve dietitians' communication skills.

Further details are provided on the patient information sheet (enclosed).

At your clinic visit you will be asked whether you would like to take part in this study.

If you agree a consent form asking for your permission to audio-record the consultation will be available at the clinic visit for you to sign.

I will also be available to answer any further queries that you may have.

Thank you very much for your help.

Yours Sincerely

Tracey Parkin BSc (Hons) RD, FETC, AdDP
Lecturer in Dietetic Practice

PATIENT INFORMATION SHEET



Faculty of Health and Social Work
School of Health Professions
University of Plymouth

Patient Information Sheet

Improving Healthcare Professionals Consultations

My name is Tracey Parkin and I work at the University of Plymouth I am conducting research into how dietitians communicate with patients. I am hoping to use this information long-term to try and improve the communication skills of healthcare professionals.'

In order to do this I need to audio-record consultations between dietitians and patients so that I can listen to how dietitians speak to patients.

As well as listening to how dietitians speak to patients I would like to ask patients about their experience of the consultation.

I will therefore be asking patients to complete a short questionnaire at the end of the visit with the dietitian. This questionnaire should take no more than 5 minutes to complete.

All information collected is assigned a code to ensure that audio recordings and questionnaires remain anonymous so that no one taking part in the study can be identified.

This information will only be used to evaluate the dietitian's communication skills.

The recording will be securely stored and is subject to the same degree of confidentiality as your medical records.

If you change your mind and wish to withdraw your consent during the consultation please inform the dietitian and the audio-recording will be erased immediately.

You do not have to agree to your session being recorded and you do not have to complete a questionnaire. Deciding not to take part in this research will not impact on your level of care or alter the session that you have with the dietitian.

If you decide to take part by allowing your consultation to be audio-recorded and by completing a short questionnaire at the end of the session we would be grateful.

APPENDIX 2.2

PATIENT CONSENT FORM



Faculty of Health and Social Work
School of Health Professions
University of Plymouth

Date

Centre Number

Identification number

Improving healthcare Professionals' Consultation Skills to People with Diabetes

Patient Consent form to allow consultation to be audio-recorded for research	Please tick to confirm
I confirm that I have read and understand the information sheet dated January 2008 for the above study	
I have had the opportunity to consider the information, ask questions and had these answered satisfactorily	
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	
Agreement to take part or not to take part in this study is down to me, and will not and cannot be used as a marker of my commitment to research in the Nutrition and Dietetic department	
I understand that if I decide to withdraw from the study the audio recordings and questionnaires will be destroyed.	
I understand that only the people directly involved in the research will listen to the recording.	
I understand that the information collected will only be used to evaluate the communication skills of dietitians. The recording will be securely stored and is subject to the same degree of confidentiality as medical records.	
I am aware that the results of this study are for research purposes only. The outcomes of this study can therefore not be used by anyone in a senior position to criticise my performance or be used as part of my individual performance review.	
I agree to take part in this study	
I agree to be audio-recorded	

Name of dietitian

date

signature

Name of researcher

date

signature

APPENDIX 2.3

DIETITIAN CONSENT FORM



Faculty of Health and Social Work
School of Health Professions
University of Plymouth

Date

Centre Number

Patient Identification number

Improving Healthcare Professionals' Consultation Skills to patients with diabetes

Patient Consent form to allow consultation to be audio-recorded for research

	Please tick to confirm
I confirm that I have read and understand the information sheet dated January 2008 for the above study	
I have had the opportunity to consider the information, ask questions and had these answered satisfactorily	
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my dietetic care or legal rights being affected.	
I understand that if I decide to withdraw from the study the audio recording and questionnaire will be destroyed.	
I understand that only the people directly involved in the research will listen to the recording. It will only be used to evaluate the dietitian's communication skills. The recording will be securely stored and is subject to the same degree of confidentiality as my medical records.	
I agree to take part in the above research study	
I agree to be audio-recorded	

Name of patient

date

signature

Name of researcher

date

signature



Date

Patient ID Number

Dietitian Questionnaire booklet

The questions in this booklet are designed to help identify which aspects of the consultation with the dietitian enable the patient to manage their diabetes better.

Please answer **all** the questions in the booklet and only make **one** choice per item.

Please answer the questions as honestly as you can.

Please circle the number that best matches your response. All responses to the questions are confidential and will not be shown to patients or other members of staff.

Additional Patient details

Male / female

D.O.B.....

Type 1 diabetes / Type 2 diabetes

How long has the patient had diabetes.....

Does the patient have any diabetic complications.....

New appointment / follow up appointment

Please could you write down any decisions that were made in the consultation today

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These questions are related to how you felt during the consultation. We would like to know more about how you felt about your encounter with your patient. Your responses are confidential. Please circle the number that best represents your answer.

1. I feel that I provided my patient with choices and options.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

2. I feel that I understood my patient.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

3. I felt that I was able to convey confidence in my patient's ability to make changes.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

4. I encouraged my patient to ask me questions.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

5. I listened to how my patient would like to do things.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

6. I try to understand how my patient sees things before suggesting new ways to do things.

1	2	3	4	5	6	7
Strongly disagree		Neutral				Strongly agree

THANK YOU FOR COMPLETING THE QUESTIONNAIRE



Faculty of Health and Social Work
School of Health Professions
University of Plymouth

Date

Patient ID Number

Questionnaire booklet

The questions in this booklet are designed to help identify which aspects of the consultation with the dietitian enable you to manage your diabetes better.

Please answer all the questions in the booklet and only make one choice per item.

Please answer the questions as honestly as you can.

Please circle the number that best matches your response. All responses to the questions are confidential and will not be shown to your dietitian.

Please could you write down any decisions that were made in the consultation today.

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A) We would like to know how confident you are in doing certain activities. For each of the following questions, please choose the number that corresponds to your confidence in your ability to do the tasks regularly at the present time.

1. How confident do you feel that you can eat your meals every 4 to 5 hours every day, including breakfast?

Not at all confident 1 2 3 4 5 6 7 8 9 10 totally confident

2. How confident do you feel that you can follow your diet when you have to prepare or share food with other people who do not have diabetes?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

3. How confident do you feel that you can choose the appropriate foods to eat when you are hungry (for example, snacks)?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

4. How confident do you feel that you can exercise 15 to 30 minutes, 4 to 5 times a week?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

5. How confident do you feel that you can do something to prevent your blood sugar level from dropping when you exercise?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

6. How confident do you feel that you know what to do when your blood sugar level goes higher or lower than it should be?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

7. How confident do you feel that you can judge when the changes in your illness mean you should visit the doctor?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

8. How confident do you feel that you can control your diabetes so that it does not interfere with the things you want to do?

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

B) Dietitians have different styles in dealing with patients. We would like to know more about how you felt about your encounter with your dietitian. Your responses are confidential. Please circle the number that best represents your answer.

1. I feel that my dietitian has provided me with choices and options.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

2. I feel understood by my dietitian.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

3. My dietitian conveys confidence in my ability to make changes

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

4. My dietitian encourages me to ask questions.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

5. My dietitian listens to how I would like to do things.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

6. My dietitian tries to understand how I see things before suggesting a new way to do things.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

C) These statements are concerned with your view of the consultation today.
Please answer every question only make one choice per item.

1. The dietitian gave me a chance to say what was really on my mind

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

2. I really felt understood by the dietitian

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

3. After talking to the dietitian I feel much better about my problems

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

4. I felt free to talk to the dietitian about my thoughts

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

5. The dietitian seemed interested in me as a person

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

6. The dietitian seemed to take my problems seriously

1	2	3	4	5	6	7
Strongly disagree			Neutral		Strongly agree	

7. The dietitian seemed warm and friendly to me

1 2 3 4 5 6 7

Strongly
disagree

Neutral

Strongly
agree

8. I felt that the dietitian did not treat me as an equal

1 2 3 4 5 6 7

Strongly
disagree

Neutral

Strongly
agree

9. The dietitian seemed to know what they were doing

1 2 3 4 5 6 7

Strongly
disagree

Neutral

Strongly
agree

THANK YOU FOR COMPLETING THE QUESTIONNAIRE.

APPENDIX 2.6

INITIAL CODING FRAME FOR IDENTIFYING DECISIONS

	Initial topics coded
1.	Portion sizes/Smaller plate/Reduce meat portion/Increase vegetables to ½ plate
2.	Weight loss/Weight maintenance
3.	More exercise
4.	More fruit and vegetables/Include one fruit daily
5.	Continue current diet
6.	Cut out fat/Reduce high-fat food
7.	Change milk
8.	Change type of fat
9.	Eating out
10.	Reduce extras /Reduce snacks /Reduce evening high fat snacks
11.	Follow up visit
12.	Take a dietary supplement
13.	Food and drink monitoring diary
14.	Spread fruit out over the day
15.	DAFNE course/weight loss course/DESMOND
16.	Sugar free drinks
17.	Contact GP re depressed feelings
18.	Drink water with meals
19.	Moderate CHO/Decrease potatoes/CHO counting/Lower G.I.
20.	Include a bedtime snack
21.	Not ready to change
22.	Reduce alcohol
23.	DNS re travel
24.	Monitor BG levels
25.	Watch for hypo signs
26.	Sort out pills
27.	Insulin dose/Get injection sites checked/insulin pump
28.	Occasional treats
29.	No salt

30.	Food labels
31.	Calorie counting
32.	Hypoglycaemia treatment
33.	Comfort eating/Consider hunger when picking
34.	Meal variety
35.	Regular meals
36.	Social issues
37.	Readiness to change

Table A.52 Initial codes for decisions

APPENDIX 2.7

ILLUSTRATION OF THE TEN SUB-CATEGORIES FOR FOOD

Food subcategory	Examples of coded themes for this subcategory
Portion sizes	Smaller plate (7" plate)/Reduce meat portion on plate/ Increase vegetable portion to half the plate
Fruit and vegetables	spread fruit over the day/ include 1 piece of fruit daily/ advice on increasing fruit and vegetable intake
Fat	cut out fat/reduce high fat food/change type of fat/ change type of milk, reduce intake of high fat foods,, eg pastry
Carbohydrate counting/Glycaemic index (G.I).	Carbohydrate counting/carbohydrate portions/ reducing carbohydrate or increasing carbohydrate intake/matching carbohydrate to insulin dose/ choices of lower glycaemic index foods discussed
Snacks	Reduce snacks eaten/Eat snacks/Change type of snack eaten
Eating out	Occasional treats/healthier food choices when eating out/meal variety
Sugar-free drinks	Options discussed
Food labels	How to read and interpret nutritional content
Salt	Advice on reducing intake at table/reducing salt in cooking/reducing high salt foods
Drink water with meals	Drink water with meals

Table A.53 Illustration of the ten subcategories for food

APPENDIX 2.8

AMENDED EMPATHY CODING LEVELS FOR ECCS

Level 6: Statement of shared feeling or experience

Where the health professional makes an explicit statement that they either share the patients emotion or have had a similar experience.

“I understand how scary this must be for you. My husband recently had a biopsy and we were really scared”

There were no level 6 codes in the consultation recordings.

Level 5: Confirmation

Where the health professional conveys to the patient that what they are feeling and describing is legitimate, ie congratulatory remarks, or acknowledging the difficulties the patient is having.

“You sound like you are very busy, I can see why it would be tough for you to find time to exercise”

“Yes, it sounds like you’re trying very, very hard and you’re very conscientious.”

Level 4: Acknowledgement with pursuit

This is a response that explicitly acknowledges the central issues in the empathetic opportunity and conveys that the physician has “heard” the patient. Level 4 responses convey this by pursuing the topic, asking a question, elaborating on the point raised by the patient.

“You mention you’ve been feeling sad. Would you tell me more about that?”

“OK, what affect does it have on your diabetes? You mentioned twice that it’s not good for your diabetes”

Level 3: Acknowledgement

This response also explicitly acknowledges the central issue in the empathic opportunity. Acknowledgement includes restatements of what patients have said. Information, advice, or offers help.

“Ok, so you’ve been cutting back on fats”.

“So your key emotions throughout your eating, is boredom or tiredness?”

Level 2: Minimal encouragers

These responses occur when the professional provides verbal minimal encouragers such as *“Um-hmmm..”*, *“yes”* .”, *“Really?”* while the patient is talking about the empathic opportunity.

Level 1: Implicit recognition of patient perspective

These responses concentrate on peripheral aspects of the empathic opportunity. These statements tend to be more content-base, not dealing directly with the patients concerns. These responses may also include questions or advice.

Patient: *“this headache makes it difficult for me to work”*

Professional: *“yes, how is the insurance businesses lately?”*

Patient: *“Didn’t go yesterday, no. I am missing it, it’s obviously part of the routine that really works.”*

Dietitian: *“Yeah. So was that because your brother wasn’t around?”*

Level 0: Denial of patient perspective

The professional either ignores the patient’s empathic opportunity or makes a disconfirming statement. Such responses also include an immediate topic change, or not responding but focusing on a physician task.

Patient: *“So I downed the morning one to 26, so I’m doing 26 in the morning and 26 at night and I’m fine at the moment, I haven’t had that feeling.”*

Dietitian: *“OK. OK. We’ve got about 40 minutes today to discuss whatever you want to discuss about your diabetes.”*

Table A.54 Amended coding levels for the ECCS

APPENDIX 3.1

CODING MANUAL FOR QUALITATIVE ANALYSIS

All consultations to be coded require transcribing before analysis can begin.

The coder needs to become familiar with the data through listening to the recordings and reading through the transcripts. This allows the coder to check transcripts for inaccuracies before coding commences. It also helps to familiarise the coder to the material on the recordings before coding starts.

Once transcribed, each transcript needs to be numbered sequentially for units of speech. A unit of speech is defined as an episode of speech either by the dietitian or by the patient; this may be one word long or contain several sentences. It begins when a person starts speaking and ends when they have finished speaking (Del Piccolo et al, 2005). The numbering of these speech units enables tracking and retrieval of identified features in the analysis.

Recordings need to be listened to while coding to help clarify tonal qualities and interpretation of communication codes and themes as they are identified (Del Piccolo et al, 2005).

The coding occurs in two stages: Stage 1 is the coding of the communication behaviours needed to inform the identification of information-giving themes. Stage 2 is the identification and coding of themes for information-giving exchanges in the consultations.

Stage 1

Coding of communication behaviours

The following communication behaviours (counselling strategies that support active listening in the consultation) were coded on the transcripts: reflections, clarification, summarising and paraphrasing, confirming statements and supportive statements. Also coded were specific exploratory questions that asked patients about their thoughts, feelings, ideas, opinions and self-management practices. The total frequency of the communication behaviours that occurred in each of the consultations was entered onto an Excel spreadsheet, whilst coding. Examples of the communication behaviours coded are listed below:-

Reflections and Clarifications

Reflections demonstrate that you are listening and provide an opportunity to check that you have correctly understood what the individual is trying to say. Reflections can be used to reflect content, meaning, or feeling (Gable, 2007). An example of a simple content reflection would be:-

Patient: *"I take 8 or 9 units"*.

Dietitian: *"8 or 9 units"*.

In this example, the professional is simply reflecting back the insulin units that the patient reports using; this simple reflection acts as confirmation that the professional has heard this small piece of information correctly.

It is important to address feelings (Del Piccolo et al, 2008; Little et al, 2001); these feelings can also be reflected back to the individual, for example:

Professional: *"How do you feel about your weight?"*

Patient: *"I'm not bothered"*

Professional: *"You're not bothered....."*

Implied feelings from the words or behaviour described by patients need to be handled with care. These emotions should always be reflected back tentatively, as poor interpretation may result in the patient reacting defensively (Gable, 2007). The sensitive reflection of emotions demonstrates empathy and is a greater skill than simply reflecting content alone (Egan, 2002; Gable, 2007). It is also important to reflect feelings with the same intensity that they have been expressed (Gable, 2007; Reynolds & Scott, 1999) as illustrated in the example below:-

Patient: *"I said you'll have to report it because my fingers couldn't cope with that as I've pins and needles in my fingers, I couldn't even dress myself, couldn't feed myself..."*

Professional: *"It must have been horrible for you, horrible."*

Reflection with clarification:

Reflections can be used to clarify what has been heard by turning the simple reflection in to a reflective question, for example:

Patient: *"Hit and miss."*

Dietitian: *"Hit and miss, OK, what do you mean by that, can you explain a bit more?"*

Paraphrasing:

Paraphrasing is another counselling technique that helps to provide direction in the conversation. Paraphrasing is used to sum up the essence of the conversation and to check the accuracy of what has been heard. It should always be applied tentatively, as this process demonstrates that you are checking your understanding, rather than making definitive statements. It requires the professional to reflect back what they have heard using their own words (Gable, 2007); as illustrated below:-

Patient: *“Yes and their menus are the same as my menus. There were no new ideas.”*

Dietitian: *“So you didn’t learn anything from them?”* (paraphrase)

Patient: *“No, but then that’s fine because it says to me that my diet is OK”*

Another example of paraphrasing is illustrated below:

Patient: *“No, no, by the time I get home I’ll pick up the kids from the grandparents or great grandparents and get them home. We don’t live in the same town so by the time I get home, my shift finishes around 5, 6 o’clock sometimes, every other week I’m on lates until 10 o’clock at night and by the time you’ve got the tea and relaxed and by the time my wife gets home work...”*

Dietitian: *“There’s not much spare time...”*

Summarising

Summarising is a method of recapping a large chunk of the conversation in order to assist both parties in understanding where they have got to in the dialogue. It is another method of checking information and understanding and can be conducted at any stage during the consultation to recap and provide direction. Summarising is usually used when the speaker has been talking for sometime (Gable, 2007). In the example below, the professional is summarising the previous patient dialogue around weight management, lack of

activity and comfort eating and trying to provide some sense of where to go next with the information obtained.

Professional: *“For me listening to you just the last thing you were talking about in relation to the comfort eating kind of thing, sounds like an area that might be associated with the weight gain as well as the activity and therefore it might be a useful place to start, because, perhaps lots of the other things may influence it and it may need a bit more unravelling.”*

The example below illustrates the use of summarising to get the patients focused on the task in hand. (These are all issues that the patient has raised.)

Patient: *“I don’t think about, you know, I do snack in between but for some reason I’ve got a mental block thinking that’s what’s causing a good part of my weight gain. I don’t think if I eat this I’m going to put on weight, I just pick. I keep thinking it’s my meals because before I moved in with my wife – to cut a long story short I moved back home after a bad relationship, so I could go to work and have a meal, do my job, go home and have a blooming great plate full of food but it would always be a mixture of vegetables and what have you. Now I still go home, have a meal but the vegetables have gone down and it’s gone to processed but I still feel hungry or I still want to keep eating more.”*

Professional: *“Ok, so attacking the comfort eating or evening eating is perhaps a priority and then may be thinking about that other bit that has changed from what you were talking about which is the composition rather than the amount of the meal..”*

Supportive Statements

These are simple reflections that support the patient’s thoughts, feelings, or actions. For example, in the following excerpt the patient has been reporting on progress since the last visit and the dietitian has responded to this in a supportive way.

Dietitian: *“Well it certainly seems to be doing the trick, doesn’t it?”*

Confirming Statements

These are simple reflective statements that confirm the patient’s thoughts, feelings, or actions. In the following example, the dietitian has been exploring with the patient potential areas of change by getting the patient to identify those

areas of the diet that could be improved on. The next example illustrates that the dietitian has confirmed that they have heard what the patient has said about breakfast before questioning about further possible areas of change:

Patient: *“Not the best of breakfasts but something, yes.”*

Dietitian: *“OK, so that’s one area that you think possibly might need some attention. Any other...”*

Questions

Certain types of questions are important to consider when communicating in a patient-centred way. These are the open questions that specifically explore patient’s thoughts, feelings ideas and opinions. These were coded separately - some examples are illustrated below.

A question that explores patient’s opinions:

“OK so having told me about your eating habits, do you feel thinking about it in more detail that there’s any particular things that might need changing?”

A question that explores patient’s thoughts and feelings:

“How do you feel about that?” and another example: *“Sorry I interrupted you – you’re feeling good because?”*

Questions that specifically asked about patient’s self-care management were also coded. An example of this type of question would be:

“Yes, if you do wake up and you’re feeling hypo, how would you treat it initially?”
and *“What have you found works for you in that situation?”*

Agenda Setting

Following coding of the identified active-listening skills, the recordings were listened to, to establish whether an agenda was set and whether the patient was involved in this process. This outcome was marked onto the Excel spreadsheet alongside the consultation. For example, in the following exchange, having confirmed where the referral has come from, the dietitian then proceeds to check the patient's point of view regarding the referral and therefore the purpose of the session.

Dietitian: *“Yes and you’ve got Type 1 diabetes and she said on her summary here, she said impaired hypo awareness and you’re not as aware of your hypos happening as you used to be...”*

Patient: *“No and I discussed that the last time I was here and I’ve got some results which I’ll show as we move forward but that’s part of the...”*

Dietitian: *“She was saying you were trying to match your insulin to your food intake to a certain extent and I think that was the main thing she wanted us to kind of assess and see whether it had helped. I don’t know if that’s what you thought?”*

Patient: *“Yes, I’ve been a diabetic 10 years and I think I may have had the offer of a Dietician early on and didn’t take it. Whilst it’s easy to say I’ve controlled it reasonably well in the last 10 years I have suffered highs and lows and I’ve tried to get on the Daphne Course as well, which I’m still waiting for...”*

This example illustrates the collaborative approach, which establishes the viewpoints of both parties to the consultation.

In contrast, the example below illustrates a professional-led agenda. The dietitian has not clarified at the start of the consultation the purpose of the visit and launches straight into gathering information from the patient

Dietitian: *“OK so I don’t know if you’ve seen a Dietitian before?”*

Patient: *“Not for a few years, no.”*

Dietitian: *“So what can we help you with today, how are you getting on generally?”*

Patient: *“Emm, not too bad I don’t think.”*

Dietitian: *“Good, everything going alright with the diabetes?”*

Patient: *“Yes.”*

Dietitian: *“OK, and food wise?”*

Patient: *“I’m quite good, I do have my lapses but overall I’m quite good, I do try to be.”*

Dietitian: *“OK and the sort of insulin that you’re on?”*

This would therefore be coded as a professional led agenda.

Additional codes

The following codes were marked in the margins of the transcript to provide further guidance as to the intent of the information provision and to guide the theme development for information-giving exchanges. These are illustrated in tables A.55 and A.56 below:

Dietitian Codes

Dietitian questions the patient to gather additional information about an issue that the patient has raised

Dietitian requests new information

Dietitian offers new advice

Dietitian offers advice in response to patient request

Dietitian offers explanations

Dietitian offers advice but checks with patient first whether this is needed

Dietitian tells patient what to do

Dietitian asks patient opinion, ideas, preferences,

Dietitian checks information by reflecting back to patient

Dietitian confirms patient observation

Dietitian gives advice

Dietitian checks patient understanding

Table A.55 Additional codes used for dietitian talk

Patient Codes

Patient offers an explanation (makes a statement)

Patient offers new advice (not requested by the dietitian)

Patient offers information as was asked

Patient asks questions

Patient queries advice given

Patient concern

Patient confirms advice given

Table A.56 Additional codes used for patient talk

Stage 2

Following completion of coding for active-listening skills, the second stage of the analysis can begin. This is the exploration and development of themes for the identified information-giving exchanges that occurred in the consultations.

Coding of information-giving exchanges

The transcripts were marked for information-giving episodes that focused on patients' health behaviour. The length of these information exchanges varied and was dependent on the topic being discussed. It consisted of consecutive utterances from the patient and the dietitian about the same topic, and finished when the discussed topic changed (Kiuru et al, 2004).

Once identified, the information episodes can then be coded for how the information was provided and received, the level of patient participation and the overall intent of the information exchange. There are four identified themes for information-giving exchanges. Table A.55 is adapted from Kiuru et al (2004) and illustrates the key constructs of the identified themes for information-giving exchanges.

	Persuasive Information	Supportive/ collaborative	Confirming/ permitting	Recommending/ teaching/ instructions
How information is provided	Little or no understanding of patient's perspective could be judgemental	Patient's understanding and views sought before information given Supportive feedback provided	Response to patient's queries or statements checking information	Information, suggestions, recommendations provided by dietitian
How information is received	Met with resistance /Justification	Met with further collaborative exchange	Patient confirms information received	Minimal response from patient
Patients participation	Minimal input from the patient or patient justifies actions, defends course of action taken	Generally patient talks more in these exchanges, active engagement Patient provides additional personal/ relevant information	Met with minimal input from patient or patient confirms that they have understood the information received	Minimal input from the patient, clarifying questions occasionally used, passive response from patient
Dietitians role in information exchange (Intent of information)	Aimed at getting patient to follow advice persuasive	Aimed at facilitating patient's understanding and ability to change, personalised advice provided	Aimed at confirming, permitting patient's thoughts, actions, general information	Aimed at informing patient of correct course of action to take Specific advice or instruction given encourage patient to consider recommendations or suggestions offered.
Outcome	No clear decision or course of action made	Collaborative decision more likely	Confirmation of behaviour/ information	Clear instructions provided by dietitian

Table A.57 Key features of the four identified themes for information-giving exchanges adapted from (Kiuru et al, 2004)¹³

¹³ Reprinted from Kiuru et al (2004) 'Advice-giving Styles by Finish Nurses in Dietary Counseling Concerning Type 2 Diabetes Care' *Journal of Health Communication*, 9 pp. 337-354 with permission from Elsevier

Each episode of information-giving exchange on the transcripts was read through and coded according to the above framework and categorised into one of the four identified themes. Further details plus examples of each of the coding categories for the information-giving exchanges is provided below.

***Persuasive* information-giving exchange**

Persuasive information-giving exchanges were clearly identified as advice-giving episodes led by the dietitian, where often the information offered to the patient was not requested. Here the dietitian did not question the patient to explore how they think or feel about the situation under discussion or inquire as to their self-care management practices before providing this information.

There was little or no understanding of the issue being discussed, from the patient's viewpoint or perspective. The information provided by the dietitian was aimed at getting the patient to follow the advice, even though in some cases the patient had made it very clear that they did not wish to follow the advice provided.

These episodes of information-giving exchanges were characterised by lack of questioning by the dietitian to explore patient's perspective. Alternatively, the patient may have provided information that was missed or ignored by the dietitian. In *persuasive* exchanges the information received was generally met with resistance by the patient and justification offered for continuation of the behaviour. *Persuasive* exchanges would either be terminated by the dietitian (as they moved on to another topic of conversation) or would be met with minimal responses from the patient and then the patient would change the topic.

In the following excerpt the dietitian is trying to persuade the patient to eat dried fruit in order to manage their constipation. However, before providing advice on what to do, the dietitian failed to use open questions to explore how the patient has managed this in the past, or what they have tried. Consequently, the patient is a little resistant to the advice that is offered, especially as it is something that they are aware has little impact on their constipation. The patient terminates this line of questioning by laughing and saying that nothing makes a difference to their bowels; this response allows the conversation to move onto the next topic as illustrated in Figure A.19.

Excerpt 1

Dietitian: *"OK, do you ever use dried fruit because that's quite good for fibre and roughage?"*

Patient: *"Yes but then I find it's very sweet and it crystallises and that and I think no."*

Dietitian: *"So you think it's too sweet?"*

Patient: *"For me it is because as I say I've never been a person to eat sweets.."*

Dietitian: *"No but a couple of prunes would be good..."*

Patient: *"But they don't make no difference to my bowels."*

Figure A.19 Example of *persuasive* information-giving exchange

***Confirming/permitting* Information-giving exchange**

Confirming/permitting information-giving exchanges occur as a result of the patient's queries or statements. The information provided by the dietitian confirms the patients' observation, thoughts, behaviour, or actions or provides permission to act in a certain way. These episodes of information giving are likely to arise as a result of either a *supportive/collaborative* information-giving

exchange, suggesting that the patient is feeling comfortable and able to ask for specific information from the dietitian. Alternatively these episodes may occur as a result of a previous recommending information-giving exchange and may have been used as a way of changing the topic within that exchange.

The majority of these exchanges resulted in minimal responses from the patients, as they were confirming, thoughts, behaviours or actions presented to the dietitian. In the following excerpt, the patient seeks confirmation from the dietitian about the suitability of using milk to treat hypoglycaemia. This is general advice and we are not clear from the patient whether this something that she currently does, as illustrated in Figure A.20.

Patient: *"What would you suggest if it was low-ish, a biscuit or something like that? What do they feel about milk now?"*

Dietitian: *"Milk is fine but it's fairly slowly absorbed, it's fine to have as a carbohydrate source but it's no good for treating a hypo..."*

Patient: *"No, not like we used to."*

Dietitian: *"We used to put sugar in it."*

Figure A.20 Example of *confirming* information-giving exchange

Another example of *confirming* information exchange is provided below, the patient has offered some information to the dietitian that they have read in the paper and the dietitian confirms what they have read (Figure A.21)

Patient: *"In the paper I think I read, last week, week before, that one of the many experts said that when you take medicines you shouldn't have orange juice because it defeats the object of some of the medicines."*

Dietitian: *"The only one I know of that is very common isn't orange juice it's grapefruit juice. You can't have grapefruit with statins."*

Patient: *"One of the tablets that we take, it does say you mustn't take grapefruit."*

Dietitian: *"That's a very common one that people have to avoid."*

Figure A.21 Example of *confirming* information-giving exchange

***Recommending/Teaching* advice information-giving exchange**

Recommending or *teaching* information-giving exchanges occurred when the dietitian provided a clear set of instructions as to what the patient should do in terms of action or behaviour. These sequences were characterised by minimal input from the patient. They could be professional-led advice-giving episodes, as a more direct response to a patient query or as a result of the patient offering information that required elaboration. *Recommending* episodes of advice are generally informative, and by their nature the advice tells the patient what to do and provides some information as to why the recommendation is being made. For example, in Figure A.22 the patient is concerned that the sugar that they put into the bread they make is having an impact on their blood glucose levels.

Patient: *"I could put that stuff that I have, that sweetener, would that make any difference or not?"*

Dietitian: *"No because I think the yeast needs a little sugar."*

Patient: *"Oh right, but we're not..."*

Dietitian: *"We're not talking sugar free diet, we're talking low sugar. A little bit of sugar spread throughout a loaf of bread and you're having a couple of slices and sandwich which is fine, the sugar is negligible so that's fine."*

Patient: *"Good".*

Figure A.22 Example of *recommending* information-giving exchange

***Supportive/collaborative* information-giving exchange**

This type of information exchange engaged the patient through facilitated discussion. These exchanges may have occurred as a result of the patient asking a question, raising a query, or making a statement. This type of *supportive* exchange may involve further clarification and provision of additional information to support the patient's actions and or views. Inevitably, these collaborative exchanges usually involved the patient talking more and providing information that was personally relevant. Information exchange was therefore supportive, as it followed the patient's agenda and supported their actions, ideas, and perception of control. *Supportive* information-giving exchanges were distinct from other exchanges in that they provided supportive feedback. This feedback was either in the form of direct reflection or in the supportive nature of the response incorporated within the feedback to the patient (Kiuru et al, 2004).

The excerpt in Figure A.23 illustrates the supportive and collaborative way that the dietitian explores the issue of reducing blood glucose levels to improve HbA1c measurements with the patient. The patient has highlighted their

concerns with regards to increasing control, as this will result in a greater risk of hypoglycaemia. The supportive response of the dietitian is illustrated through their acknowledgement of the patient's concern, which is reflected back to the patient.

Patient:	<i>"Last time here they said to get to that it would be good but you can suffer a lot of lows in trying to achieve that."</i>
Dietitian:	<i>"Yes and that's where to a certain extent the Daphne principles and the course as a whole may be helpful in helping to get closer to that point without too many risks of the hypos and the consequence because that quite often happens. Like you say your HbA1c might come down but if you suffer more hypos as a consequence that's not going to help your hypo awareness, so, you know it's getting that balance right really. So overall that's your main..."</i>
Patient:	<i>"Yes to keep it on a level keel during the day, perhaps either Daphne or you can tell me if I'm testing at the right time..."</i>
Dietitian:	<i>"So when are you testing?"</i>
Patient:	<i>"Testing when I wake up in the morning before breakfast, lunch time, pm for tea and then evening meal."</i>
Dietitian:	<i>"So you're doing before breakfast, before lunch?"</i>
Patient:	<i>"Yes before lunch or slightly after, around 6 or 7 o'clock – 8 o'clock when we have tea and just before I go to bed."</i>
Dietitian:	<i>"OK so before tea and before bed. If we're talking Daphne we would be suggesting that you test at least before a meal and before bed, which is basically what you're doing."</i>
Patient:	<i>"So before a meal and before bed."</i>
Dietitian:	<i>"Daphne is focused very much with trying to get you within target by the time you get to your next mealtime, there isn't any focus on what is going on between times unless you're driving or you're not sure whether you're having a hypo or not or you're exercising or something and you need to know exactly what it's doing. So we discourage people from testing between meals because we're not actually teaching them to do anything about it, so it gives them information that we're not going to do anything with."</i>
Patient:	<i>"I think that's what I'm guilty of sometimes is testing between meals and finding myself at 8, 9 or 10 and perhaps putting a little bit of insulin in and then maybe doing some manual job around the house and then as you've seen quite frequently Jan will have spotted it before I know it in terms of just how I look."</i>
Dietitian:	<i>"So before each meal and before bed is a good basis to work from if you're thinking ahead to what we would teach you on Daphne."</i>

Figure A.23 Example of supportive/collaborative information-giving exchange

Once all the information-giving exchanges had been coded with the identified themes, and data entered onto an Excel spreadsheet, the data on level of agreement on reported decisions made was added to this information. This allowed comparison to be made on the presence of communication skills and information-giving exchanges in those consultations with agreement on decisions made and those with disagreement.

Empathic statements made by patients were identified using the ECCS (Bylund & Makoul, 2002) and marked onto the transcripts. The data on information-giving exchange themes and empathic statements made by patients were then placed in order of occurrence for each consultation on an Excel spreadsheet. The information-giving exchanges were colour-coded to provide a visual map of the flow of information-giving exchanges that occurred in consultations with either agreement or disagreement on reported decisions made. Consultations that had an agenda set were also marked to identify whether this altered the flow of information-giving exchange within the consultation. The colour-coded map provided a visual illustration of the sequences of information-giving themes within the consultations. It highlighted consultations where agendas were set, and illustrates the relationship between empathic statements and information-giving exchanges within the consultations.

GLOSSARY

Adherence the ability to adhere and carry out a set of recommendations

Agreement on reported decisions patient and professional agreement on independent reporting of decisions made in the consultation

Auditory recall is the ability to recall information that has been heard

Autonomy is the degree to which a person feels that they are in control

Autonomy support the degree to which the patient feels supported in making choices

Autonomous motivation relates to patients being willing to engage in a health-related behaviour because they have fully accepted its importance

Behaviour change relates to a change that a person makes to their behaviour in order to improve outcomes

Biomedical relates to medical aspects of care

Binge eating a pattern of disordered eating resulting in episodes of uncontrollable eating

Biopsychosocial an approach that considers emotions, thoughts and behaviours as well as social aspects of care

Blood glucose a measure of circulating dextrose (blood sugar) in the blood stream

Blood pressure tension of the blood within the arteries maintained by the contraction of the left ventricle of the heart usually noted as systolic pressure/ diastolic pressure

Body Mass Index (BMI) numerical indicator of health risk relates to height m^2 /weight kg

“Burnout” a concept that describes the unwillingness to change when there occurs previous lack of success, constant failure and general fatigue with trying to bring about change

Calorie modification alteration in calorie intake usually taken in an attempt to lose weight

Carbohydrate refers to simple sugars and complex starchy foods such as bread, potatoes, rice, and pasta

Cardiovascular disease relating to the heart and the circulation of blood through the blood vessels

Cholesterol a type of fat produced by the body, which is used as an emulsifying agent

Client-centred nutritional counselling relates to a process of counselling that puts the client/patient at the centre of the discussion to address their needs and concerns

Cognitive behavioural therapy relates to talking therapy that helps the individual to change their thoughts around behaviours in order to behave and respond differently to situations

Co-morbidities having more than one medical condition

Compliance the degree of adherence to a prescribed regimen

Concordance relates to the involvement of the patient in the decision-making process in order to increase compliance

Counselling skills refers to a set of skills used when using talk therapy includes; reflection, clarifying, paraphrasing and summarising

Chronic disease a long-term progressive condition for which there is no cure and which is managed through medication and/or lifestyle change

Chronic obstructive pulmonary disease relating to a long-term condition involving restriction of airflow to and from the lungs

Client-centred counselling relates to process of talk therapy where the patient's needs and values are of prime importance

Depression a sinking of spirits that constitutes a clinical diagnosed condition

Diabetes Mellitus is a chronic condition; a metabolic disorder resulting from the lack or insufficient production of a hormone called insulin, resulting in elevated circulating levels of glucose in the blood stream

Diastolic the lowest blood pressure reached during a ventricular cycle

Dietitian a registered professional who is trained to give dietary advice to manage, treat or prevent medical conditions

Dyspnoea relates to shortness of breath or difficulty in breathing

Eating disorders refers to a group of disordered behaviours around eating that may involve excessive intake of food or insufficient food intake, which impact on the individual's physical and mental health

Empathy the ability to demonstrate an understanding of another person's situation

Empathic clues these are clues presented by an individual in a dialogue that require an empathic response

Empathic opportunities these are clues that are presented by an individual in a dialogue that provide the listener with an opportunity to respond empathically

Empathic statements these are statements that an individual makes in a conversation that require an empathic response

Empirical refers to data produced by an experiment or through observation

Empowerment refers to the process by which people gain skills and knowledge to take control over the decisions and actions that impact on their health

Gangrene death of body tissue as a result of obstruction of the blood flow

Glucose a monosaccharide or simple sugar

Glycaemic control refers to the control of blood glucose levels

Glycosylated Haemoglobin (HbA1c) is a laboratory measure of the average amount of circulating glucose in the blood stream over the previous three months.

Health literacy refers to a patient's ability to access health information, either because they can't read it or because they cannot understand what they have read

Hypercholesterolemic elevated circulating levels of cholesterol in the blood

Hyperglycaemia elevated circulating levels of glucose in the blood

Hypertensive/Hypertension relates to a blood pressure measurement that exceeds the accepted level of normal

Hypoglycaemia low levels of circulating glucose in the blood

Insulin a hormone used in the uptake of glucose

Insulin resistance refers to the condition resulting from the body's lack of ability to respond to circulating insulin levels

Lipids refers to a range of fats in the blood stream

Meta-analysis combination of results from a number of studies that explore a similar research hypothesis

Motivation the driving force that helps us to achieve goals

Macrovascular disease damage occurring to the large blood vessels resulting in cardiovascular disease and stroke

Metabolic syndrome refers to a group of risk factors that occur together and increase the risk of type 2 diabetes, heart disease, and stroke

Microvascular disease damage occurring to the small blood vessels resulting in retinopathy, neuropathy, and nephropathy

Monotherapy single drug use

Morbidity disease state

Mortality death rate

Neuropathy a complication seen in diabetes resulting from small vessel damage resulting in damage to the nervous system

Nephropathy a complication seen in diabetes: kidney damage occurring as a result of small vessel damage

Non-verbal communication refers to the body language signals

Obese classification relating to an individual's height to weight ratio, indicating excessive amounts of body fat

Oral hypoglycaemics refers to a group of drugs used to lower blood glucose levels in people with diabetes

Orthotics manufacture and design of a device that supports or corrects the function of a limb

Patient autonomy refers to the patient's ability to make decisions as a result of information provision these choices are informed and not coerced by the professional

Patient enablement is a measure of the patient's perception of their ability to cope with life and their illness, to understand their illness, to keep healthy and to be confident in their ability to help themselves.

Peripheral vascular disease often referred to as arterial damage resulting from obstruction to the large arteries

Polydipsia excessive thirst, leading to drinking large volumes of water

Polyuria passing of large volumes of urea with increasing frequency

Psychosocial considers the psychological aspects in relation to social factors

Psychologist a specialist in psychology

Physiological refers to the mechanics, physical, and biochemical, of the human body

Recall to remember or to retrieve information

Respiratory disease refers to chronic diseases of the airways and other structures of the lungs

Retinopathy a complication seen in diabetes resulting from small vessel damage causing non-inflammatory degenerative disease of the retina

Self-care management refers to the daily activities that patients engage in to manage their condition

Self-efficacy is a person's belief in their ability to succeed in a particular situation

Self-esteem relates to an individual's favourable opinion of their character and abilities

Socio-economic relates to the social and economic position and work experience of individuals relative to others

Stroke loss of brain function as a result of lack of blood supply to the brain due to a blockage (blood clot or embolism) or a bleed

Sympathy participation in feeling/compassion

Type 1 diabetes a chronic condition where the body stops making the hormone insulin and blood glucose levels go very high

Type 2 diabetes a chronic condition where the body is either not making enough of the hormone insulin, or the body is failing to recognise and use the insulin that is being produced, resulting in very high blood glucose levels

Vascular team a group of artery and vein specialists

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