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NURSES' ATTITUDES AND NURSE-PATIENT INTERACTIONS ON A PAEDIATRIC WARD

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NURSES' ATTITUDES AND NURSE-PATIENT INTERACTIONS ON A PAEDIATRIC WARD

by

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

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Department of Psychology
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NURSES' ATTITUDES AND NURSE-PATIENT INTERACTIONS ON A PAEDIATRIC WARD

Elizabeth Anne Curtis

ABSTRACT

Despite the potentially very significant role of nurses in mitigating against the negative effects of hospitalisation on children, the attitudes and behaviour of paediatric nurses towards patients have been largely ignored within the literature. This study, therefore, aimed to consider paediatric nurses' attitudes and their interactions with patients and, in particular, to investigate the relationship between these two variables. However, in contrast with similar studies in other specialties, nurses' attitudes and behaviour were considered at a general and individual patient level.

A general attitude measure, the Paediatric Attitude Scale (PAS), was developed during the first part of the study and indicated that nurses' attitudes towards patients as a whole tended to be tolerant and patient-centred. Nurses' interactions with patients were mainly positive and, in contrast with previous research, regularly occurred outside of the normal nursing routine. In addition, almost half of all nurse-patient interactions contained a social component.

As predicted, no significant association was evident between nurses' scores on the PAS and their general behaviour with patients. However, modest associations with correlation ratios of between 0.10 and 0.16 were found between nurses' attitudes towards individual patients (as measured by ranking scales) and the quality, duration and, to a lesser extent, the number of interactions with those particular patients. Indeed, the results suggested that patients who were liked more and who were considered easier to nurse tended to receive interactions which were more positive and longer than patients who were liked less and who were perceived to be more 'difficult'. However, the actual differences between interaction scores for particular patients were relatively small and their clinical significance in terms of the impact on children and the need to modify nursing practice is, therefore, debatable.
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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Clinical Psychology has the author been registered for any other University award.

The contents of this bound volume are identical to the volume submitted for examination in temporary binding except for the amendments requested at the examination.

This study was completed while the author was a Trainee Clinical Psychologist in the South West Region based in the Severn NHS Trust and the research was conducted in collaboration with Gloucestershire Royal Hospital NHS Trust.

Signed

Date

10/7/95

Elizabeth A. Curtis
Preface
The first part of the Introduction consists of a review of the literature relevant to the present study and is designed to introduce the reader to the concepts and arguments around which the study is based.

The review begins with a brief outline of research relating to the nature, characteristics and measurement of attitudes in general. There then follows a discussion of attitudes in nursing (focussing specifically on nurses' attitudes towards patients) and a review of the literature concerning the link between nurses' attitudes and their behaviour with patients. Attention is then turned to the effects of hospitalisation on children and the philosophy of paediatric nursing. Finally, research relating to the attitudes and behaviour of nurses working in a paediatric setting is considered.

1.1 ATTITUDES

The concept of attitude is one of the cornerstones of social psychology and remains a focus of research in many different fields. The popularity of such research seems to spring from the potential value of attitudes as a means of understanding and predicting behaviour. However, as Oppenheim (1992) comments, the study of attitude has, 'a long and complex history' (p.174) and its usefulness as a psychological concept has been questioned by many theorists.
1.1.1 Definitions and functions of attitudes

Developing a simple understanding of attitude is a difficult task as many different definitions have been proposed. Nevertheless, at a rather basic level, the proposed definitions can be divided into two 'camps' based on underlying theories about the nature of attitudes.

The first set of definitions are based on a three-component model of attitude which assumes that attitudes are comprised of three basic elements; affect, cognition and behaviour. Within this model an attitude is regarded as, 'a hypothetical construct that intervenes between observable, antecedent stimuli and subsequent behaviour' (Stahlberg & Frey, 1988, p.143), and associated definitions, therefore, include;

a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (Allport, 1935; cited in Corner, 1988, p.641)

[a predisposition] to respond to some class of stimuli with certain classes of response (Rosenberg & Hovland, 1960, p.3)

In contrast, some theorists have proposed a unidimensional conceptualisation of attitude which focuses purely on the evaluative or affective component. Within this model the word 'attitude' is used to refer to the emotions connected with the attitude object and not to the opinions or beliefs held about that object or behavioural intentions towards it. Proponents of this model, therefore, define attitude as a;

general, enduring positive or negative feeling about some person, object or issue (Petty & Cacioppo, 1981, p.7)

The evidence in support of these two different models is somewhat contradictory
(Stahlberg & Frey, 1988). However, in practice, it is generally more easy to operationalise and measure attitudes on the basis of the unidimensional model. Furthermore, methods of attitude measurement which involve scaling require unidimensionality to ensure internal consistency (Oppenheim, 1992).

In terms of the functions of attitudes, Stahlberg & Frey (1988) discuss a number of theories relating to their possible purpose. These include ego-defence (e.g. allowing projection of negative feelings onto others), the reaching of desired goals and self expression. However, one of the most important proposed functions is the structuring and simplification of information about the world, a process which, it is argued, helps us to make sense of and understand our experiences and interactions with others (Stahlberg & Frey, 1988).

1.1.2 Attitudes and behaviour

The question of whether attitudes guide behaviour is one which has been much debated in the attitude literature. As mentioned, the utility of the concept of attitude and of attitude measurement rests on the assumption that behaviour can be predicted from such attitudes and, thus, that behaviour might be changed by corresponding changes in attitude. However, as Ajzen & Fishbein (1977) discuss, many studies researching the link between attitudes and behaviour have failed to find a strong relationship between these two variables. Possibly the best known of these studies was by La Piere (1934) who, on a journey around the USA with some Chinese friends, found a discrepancy between proportion of restaurants and hotels who actually refused to accept his friends as guests (0.5%) and those who later said, by letter, that they would not accept Chinese people into their establishments (92%).

Although this apparent lack of association has inevitably led to considerable pessimism about the possibility of predicting behaviour from attitudes, a number of
studies have reported significant correlations between attitudes and behaviour (Ajzen & Fishbein, 1977). These inconsistent results have encouraged theorists to start asking a slightly different question about attitudes and to consider 'when' (i.e. under what conditions) rather than 'whether' attitudes and behaviour are correlated. As a result, a number of factors have been identified as being important in determining the extent to which behaviour is influenced by attitudes.

**Situational factors** : Fishbein & Ajzen (1975) have argued that the link between attitudes and behaviour will be weak in any situation where strong social constraints are acting. Within their model, Fishbein & Ajzen assume that any behaviour is determined by an intention to perform that behaviour. This intention is, in turn determined by the relative strength of (a) the attitude towards that behaviour, and (b) the subjective norm (i.e. a judgement of what is expected). When these two elements correspond, the behavioural intention is more likely to be carried out and behaviour can be predicted relatively easily from the relevant attitude. In contrast, when the attitude and subjective norm are in opposition, the attitude may be 'over-ruled', thereby reducing the association between attitude and overt behaviour.

**Formation factors** : It has also been suggested that the manner in which attitudes are formed can influence the consistency between attitudes and behaviour. Indeed, Regan & Fazio (1977) found that attitudes which had been formed as a result of direct behavioural experience were more stable and more confidently maintained than attitudes formed by some other means (e.g. persuasive communication from others). In addition, they found that people whose attitudes had been produced by direct experience demonstrated better attitude-behaviour consistency.

**Methodological factors** : Ajzen & Fishbein (1977) also argue that the inconsistencies between attitude and behaviour which have arisen in many studies
can be linked to methodological factors, the factor they identify as most important being the level of correspondence between the measures of attitude and behaviour in terms of specificity. As Ajzen & Fishbein point out, both attitudes and behaviour can be characterised in terms of four different elements (action, target, context and time) and, in order for any comparison between attitudes and behaviour to be meaningful, the specificity of the measures of both variables must correspond with reference to these elements. In other words, if the attitude measure is fairly global and only specifies the target element (e.g. Do you like jam?) it is very unlikely to correlate highly with a much more specific behavioural measure defined by all four elements (e.g. Whether you ate jam for tea at home yesterday). Significantly, in support of this argument, substantial correlations have been found between attitude and behaviour in studies where both measures show high specificity correspondence (Ajzen & Fishbein, 1977).

In summary, it now seems certain that the relationship between attitudes and behaviour is far from simple. However, the evidence described above seems to account for the discrepancies between attitudes and behaviour so frequently observed in the literature and suggests that a wide variety of factors may influence the extent to which an attitude is expressed behaviourally.

1.2 ATTITUDE MEASUREMENT

1.2.1 Methods

The abstract nature of attitude as a concept means that it is impossible to measure directly. Thus, methods have been developed which seek to infer attitudes from other indicators. Traditionally, attitudes have been measured by asking subjects to report on opinions and beliefs about the attitude object (so called 'direct measurement'), usually via some form of attitude scale. However, recently there has been increased interest in more indirect methods of measurement where an attempt
is made to ensure that subjects are unaware that their attitudes are being investigated. In both cases, measurement is based on the unidimensional model described above.

**Direct measurement**: Classically, attitudes have been measured using attitude scales. While varying in precise format and design, such scales usually consist of a number of items (usually attitude statements) which subjects are asked to rate or respond to in terms of their level of agreement/disagreement. The most commonly used scales are those developed by Thurstone (1928) and Likert (1932) although a range of other scales also exist (e.g. Bogardus' social-distance scale (1933), the semantic differential developed by Osgood, Suci & Tannenbaum, 1957).

Both the Thurstone and the Likert scales involve the collation of a large number of attitudes statements and piloting to ensure that various requirements are met. The first of these requirements, that of uni-dimensionality (i.e. that the scale is concerned with one attitude dimension only) is essential to maintain the internal validity of the scale. The other requirements - reliability, validity and linearity - are equally important and ensure that the scale is consistent in its measurement, that it measures what it purports to and that it can be scored quantitatively. In reality, the practicalities of research mean that the Thurstone and Likert scales fulfil each of these requirements to a greater or lesser extent (Oppenheim, 1992) and, as such, choice of scale is often based on more pragmatic concerns such as time constraints and cost. On this basis, the Likert scale has tended to be the more popular form of attitude measure because it is less complicated and, therefore, less time consuming and expensive to develop (Oppenheim, 1992; Stahlberg & Frey, 1988).

**Indirect measurement**: One of the disadvantages of traditional attitude scales is that the purpose of measurement is more obvious. As such, scales rely on frank and open responding by subjects if they are to be accurate. In view of this difficulty, a
number of researchers have sought alternative methods of measuring attitudes which are less direct and, therefore, less obvious. For example, Oppenheim (1992) discusses the use of 'projective' techniques such as sentence completion, picture interpretation and drawing to elicit ideas, stereotypes and opinions which might otherwise be 'kept out' of conscious awareness. In addition, some researchers have used physiological measures such as the galvanic skin response to give indicators of attitude (Porier & Lott, 1967). Finally, behavioural observation has also been used to derive measures of attitude. In some studies this has been done with the full knowledge of the subjects being observed although, in others, the subjects have been unaware of the observation to minimise reactivity (Stahlberg & Frey, 1988).

1.2.2 Difficulties in measurement of attitudes

Inevitably the measurement of attitudes by whatever means presents some difficulties, both practical and methodological. In terms of attitude scales, perhaps the most significant problem is that of attitude misrepresentation. Indeed, as mentioned above, because attitude scales require self-disclosure and evaluation, it is very difficult to assess the accuracy of responses as it is possible that subjects may be influenced by social desirability. Furthermore, attitude scales assume that people are prepared to self-disclose and also force respondents to express opinions about subjects which they may have no clearly formulated attitude. These more 'spontaneous' attitudes are likely to be less stable. Finally, as Ingham & Fielding (1985) comment, responses to attitude statements are often difficult to interpret. For example, rejection of a statement which expresses a stereotyped view (e.g. 'most old people are grumpy') may indicate that the respondent does not hold this view or, alternatively, may simply reflect the respondent's belief that one should not generalise about such things.

Despite being the most popular form of scaling procedure, Likert scales in particular can be criticised in terms of ease of interpretation. As Oppenheim (1992) discusses,
the most serious of these criticisms relates to the fact that, because of the method of scoring Likert scales, the same score can be obtained in very different ways and with a very different pattern of responses to individual items. Similarly, scoring is such that it is impossible to distinguish where mildly positive answers begin to change to mildly negative responses or to identify the 'neutral point' of the scale. Interpretation of scores in the middle region is further complicated by the many possible scenarios resulting in mid-point scores (e.g. lack of attitude, lack of knowledge). Nevertheless, if these potential difficulties are kept in mind, Oppenheim argues that Likert scales can give, 'a reliable, rough ordering of people with regard to a particular attitude' (p.200).

Although indirect measures of attitude suffer less from the interpretational difficulties associated with self-disclosure, they are subject to their own particular problems. For example, the physiological measures described above can be difficult to interpret as they often give information about the intensity of a response without giving an indication of its direction or quality. In addition, at a more theoretical level, the link between physiological or behavioural measures and verbal attitudes is more difficult to assess, especially given the evidence discussed in section 1.1.2 concerning the number of factors (other than attitudes) which can determine behavioural responses. Finally, these methods are often obtrusive and, because of their indirect nature, can be ethically questionable.

1.3 ATTITUDES IN NURSING - PATIENT EVALUATION

In a hospital setting, nursing staff are generally the group of health care professionals who have most contact with patients. As such, the nurse-patient relationship is very important and nurses inevitably have a great impact on patients' experience of hospitalisation. However, despite the theoretical shift during the 1960's from the traditional, task-oriented model of nursing to a more patient-centred
approach (May, 1993), there is evidence that nurses actually spend limited amounts of time interacting with patients and also actively avoid contact with some individuals (Macleod Clark, 1983). This is significant as it has been suggested that such differential interpersonal treatment may account, in part, for differential rates of patient recovery (Stockwell, 1972).

Some theorists have accounted for this differential treatment by nurses in terms of patient popularity, assuming that nurses' behaviour on the ward is determined by their attitudes towards and perceptions of patients (Stockwell, 1972). Indeed, Moss (1988) has argued that, 'nursing is a profession which readily lends itself to the rapid formation of attitudes towards those who come into contact with it' (p.616), mainly because nurses operate within the context of the medical model which automatically seeks to diagnose and label patients. Many studies have, therefore, investigated nurses' attitudes towards patients and have attempted to identify what factors cause people to be evaluated as 'good'/"easy" or 'bad'/"difficult" patients. Although there is considerable variability in the findings of such studies, most seem to suggest that nursing staff do have strong attitudes towards the people that they care for, and a number of general themes have emerged (Kelly & May, 1982).

1.3.1 Factors affecting attitudes towards patients

A number of studies have suggested that the nature of a patient's illness is crucial in determining nurses' attitudes. A wide range of clinical conditions and symptoms have been associated with negative attitudes towards patients, including serious or terminal illness, self-harm, confusion and mental health problems (Corner, 1988; Knight & Field, 1981; Stockwell, 1972), and long stays in hospital have also been reported as contributing to patient unpopularity (Altschul, 1972, Stockwell, 1972). In contrast, people whose complaints are considered 'interesting' and who recover quickly are often rated as 'good' patients by nursing staff and other health care professionals (Berkowitz & Berkowitz, 1960; Jeffery, 1979).
In addition to factors associated with a patient's illness or symptoms, a variety of non-clinical and social factors have been identified as influencing nurses' attitudes. Not surprisingly, health care personnel are just as susceptible to stereotypes as the rest of the population, and a number of studies have indicated that nursing and medical staff tend to make assumptions about patients on the basis of their age, sex, religion, ethnicity, occupation, physical appearance and socioeconomic status (Altschul, 1972; Damrosch, 1982; Jeffery, 1979; Papper, 1970). A fairly recent study by Siebert, Ganong, Hagemann & Coleman (1986) also suggested that family background and structure may be significant, as they found that patients believed to be from a two-parent family tended to be perceived more positively by nursing students than patients from a one-parent family.

Patient behaviour in hospital has also been suggested as an important factor in the formation of nurses' attitudes, with 'rule' breaking and non-compliant or uncooperative behaviour being particularly significant in the evaluation of a patient as 'bad' or 'difficult' (Jeffery, 1979; Stockwell, 1972). Furthermore, many authors have linked stubborn, aggressive, violent, bizarre, complaining, drunken and overly independent behaviour with patient unpopularity (Jeffery, 1979; Rosenthal, Marshall, Macphearson & French, 1980; Stockwell, 1972). It is also argued that some patient moods or affective states (e.g. depression, anxiety, apathy, indifference or withdrawal) and certain attitudes (e.g. unappreciativeness, unresponsiveness) may provoke negative responses from nurses (Gallop & Wynn, 1987; Stockwell, 1972). Conversely, patients who appear grateful, optimistic and cheerful are generally perceived much more favourably.

A further theme within the literature emphasises the significance of staff judgements about patients. In fact, while much of the research outlined above focuses on 'objective' patient characteristics, many of the factors identified as influencing staff attitudes are actually concerned more with staff opinions and
perceptions about patients (which may or may not be accurate) than with features inherent in patients. Judgments which are argued to have a bearing on nurses' attitudes include the extent to which a patient is perceived as 'attention-seeking', 'demanding', 'manipulative' or 'unmotivated' etc. (Gallop & Wynn, 1987; Jeffery, 1979; May & Kelly, 1982). However, there is also evidence that the causal attributions made by nursing staff can affect their attitude towards patients. For example, both May and Kelly (1982) and Marteau & Riordan (1992) found that nursing staff held more negative attitudes towards patients who they perceived to be responsible for or to have exacerbated their own condition.

It has also been noted that factors external to the nurse-patient relationship itself (e.g. hospital environment, problems with management, prevailing attitudes of the staff group, etc) and nurse-related factors (e.g. level of training, age, sex, race, social class, etc) may have an impact on nurses' judgements about patients (Altschul, 1972; Nievaard, 1987; Snape, 1986). For example, a number of studies have suggested that nurses who are qualified and have a higher degree of professional training tend to show more positive attitudes towards patients (Altschul, 1972; Gething, 1992; Salmon, 1993; Snape, 1986). In addition, research in some specialties has indicated that nurses' attitudes seem to change with increased experience of caring for patients, although the direction of this change is somewhat controversial (Penner, Ludenia & Mead, 1984; Wright, 1988).

While it would seem, from the discussion thus far, that this particular area of nursing has been thoroughly researched, much of the reported data in this field can be criticised. Firstly, from an empirical perspective, the results of some studies are unreliable and contradictory. For example, while Stockwell (1972) found that patients with mental health problems or psychiatric diagnoses tended to be unpopular on general medical wards, Towell (1975) established that such patients could be positively evaluated in psychiatric settings. Although these contradictory
results might be explained in terms of differences in the training of nurses in these contrasting settings or by the fact that individual nurses may have different perceptions of what makes a 'good' or 'bad' patient (Marshall, 1985), such inconsistencies obviously pose serious interpretational problems and threaten the external validity of the findings.

A number of methodological criticisms can also be levelled at much of this attitude research. Firstly, varying definitions of 'attitude' have been used in the studies described, and many researchers have failed to adequately define the concepts or labels (e.g. 'dirty', 'good', 'unco-operative') which they have investigated, assuming that others will share their perception of these labels when applied to patients. Similarly, it is noticeable that researchers have used a variety of labels interchangeably to describe 'problem' patients (e.g. 'difficult', 'bad', 'unpopular'), presuming them to be synonymous when it is not at all clear that this is the case. Thus, as Kelly & May (1982) point out, much of the research lacks internal validity because researchers have measured subjective phenomena and then treated them as if they were objective and factual.

In addition, most research in this field has involved the use of scales, questionnaires or interviews to measure nurses' attitudes and, while these instruments allow the cognitive and affective elements of attitudes to be inferred, they are necessarily quite abstract and give no indication of whether these elements match up with observable behaviour (see section 1.1.2).

1.3.2 Models of nursing attitudes

At a more theoretical level, much of the literature on nurses' attitudes towards patients is also guilty of what has been called 'neo-behaviourism' (Kelly & May, 1982). Kelly and May use this term to refer to a lack of analysis or discussion of the dynamics and relationships between variables which often characterises studies in
this field. Indeed, it appears that many theorists have adopted a rather simplistic and unidirectional approach to nurses' attitudes (e.g. where patient behaviour x always leads to nurse attitude y and behaviour z) which does not take into account individual differences, the complexities of attitudes and behaviour, or the way in which these two variables relate to each other. In this sense, many studies reduce what are extremely complex social situations and interactions to a level which is almost meaningless.

This so called 'structuralist' model of attitudes has also been criticised in terms of the inferences which it makes about nurse and patient roles. In sociological theory, a role is considered to be the behaviour which is prescribed for and expected of people who perform a defined function, e.g. mother, nurse, patient, etc (J.P. Smith, 1976). This concept of role has been very influential in nursing research but generally from a rather static perspective where patient and nurse roles are rigidly defined and adhered to deterministically. On the basis of this model it is, therefore, assumed that the 'unpopular' or 'difficult' patient is simply one who does not conform to the patient' role prescribed for them.

However, Kelly and May (1982) argue that an alternative perspective, the 'interactionist' model, is more appropriate in terms of defining nurse and patient roles, and in understanding the process by which patients are evaluated. This model emphasises the importance of individual nurse-patient relationships and interactions in the evaluation process, and suggests that nurse and patient roles can only be understood in relation to each other. Thus, roles are merely seen as a framework within which individual nurses and patients can modify their behaviour and adapt to different situations. Kelly & May go on to suggest that, 'nurses symbolically take the role of the patient both to make, and to make sense of, their own role, and it is in so doing that labelling of patients inevitably takes place' (p.154). Thus a 'caring nurse' can only exist with reference to a 'good' and
'appreciative' patient and, conversely, a 'bad' or difficult' patient is one who chooses not to confirm or legitimate the nurse's role.

Kelly & May, therefore, conceptualise nurses' attitudes towards patients as being moulded by their interactions and relationships with them, and by the extent to which each patient is perceived as legitimating the role and competence of nurses. Although they do not elaborate on this theory it, therefore, seems reasonable to assume that the factors identified within the literature as being associated with nurses' attitudes might represent variables which influence this nurse-patient relationship. For example, a patient who is violent or aggressive to staff may prevent nurses from fulfilling their role and professional goals and, as such, may be perceived as 'difficult' and 'unco-operative'.

The interactionist model proposed by Kelly & May is particularly important as it begins to consider the mechanism by which nurses might come to hold different attitudes towards patients. As Johnson & Webb (1995) comment in their recent reappraisal of the notion of 'unpopular' patients, much of the literature on nurses' attitudes suggests that the labelling of patients by nurses is very predictable and makes no allowance for the fact that individual patients are often perceived quite differently by individual nurses (Marshall, 1985). However, such differences can be explained relatively easily on the basis of an interactionist model as one might predict that patients will behave quite differently, and perhaps adopt quite different roles, with individual nurses. Similarly, one might assume that individual nurses will have varying needs in terms of role legitimation (depending on their personality, level of experience, training etc) and may, therefore, interpret patients' behaviour, symptoms or attitudes in very different ways. As such, the interactionist model goes much further than the traditional structuralist approach in explaining how nurses evaluate patients and in accounting for the various phenomena observed.
Given the results of the research into nurses' attitudes which indicate that nurses may evaluate some patients negatively, it is obviously important to establish whether these attitudes are translated into nursing practice and can account for the differential patient treatment described by Macloed Clark (1983) and others. Indeed, while it is interesting to know what nurses think about patients, clinically this may be rather irrelevant if it has no bearing on the quality of patient care. In fact, although many studies infer and assume that nurses' perceptions of patients will inevitably result in differential treatment (which, as discussed in section 1.1.2, is an assumption also made in other areas of attitude research), very few studies have actually attempted to investigate the relationship between nurses' verbal attitudes and their actual behaviour with patients. Thus the link between these two variables has yet to be clearly defined, and the question remains; does it really make a difference if you are a 'problem' patient?

One possible reason for this lack of research is the influence of the idea of the 'professional' nurse. The concept of 'professionalism' is discussed by a number of authors (e.g. Hyland & Donaldson, 1989; Johnson & Webb, 1995) who suggest that the object of 'professional nursing' is to manage relationships with patients in such a way that personal feelings do not affect the care provided. As such, although there is also a recognition within nursing that it is impossible to like and get on well with all patients, the profession may have shied away from research which could potentially reveal that nurses' perceptions and attitudes do affect their behaviour with patients. However, as May (1991) points out, the changing philosophy of nursing means that there are increasing demands for, 'a more personal encounter between nurse and patient' (p.553). It, therefore, seems appropriate to begin researching the issue of the link between nurses' attitudes and behaviour with patients in more depth, and to allow nurses the opportunity to discuss this and
also the implications of the move towards patient-centred care more fully.

1.4.1 Research to date

Despite the limited literature in this field, a number of theorists have claimed that there is a strong link between nurses' attitudes and their behaviour. For example, Moss (in his 1988 review article) argues that research does reveal that nurses' perceptions of patients influence the way in which they behave towards them. Furthermore, Stockwell (1972) - in her extensive study of 'unpopular' patients on general medical wards - described, 'observable differences in the ways in which nurses interacted with the most and the least popular patients' (p.11), a finding also noted by Fielding (1986) who reported that the least popular patients in her study, 'received little attention' (p.49) from nurses. Similarly, Jeffery (1977) reported that 'bad' patients in the casualty department he studied were 'punished' by staff who made them wait longer for treatment, restrained them more vigorously and were sometimes verbally hostile towards them.

However, consistent with the more general research concerning the link between attitudes and behaviour described in section 1.1.2, most recent studies in this area have failed to demonstrate a significant correlation between nurses' attitudes and behaviour in terms of their interactions with patients (Salmon, 1993; Sanson-Fisher & Poole, 1980; Tucker, Desmond, Cohen, Mars, Coons & St John, 1991). These studies have been conducted in a number of settings with different patient groups (e.g. the elderly, psychiatric in-patients, dialysis patients) and would seem to indicate that there is no simple, predictive relationship between nurses attitudes and behaviour towards patients. Such findings, therefore, suggest that the nursing profession may need not be unduly concerned about the negative attitudes towards patients reported in the studies described above as they do not appear to directly determine nurses' behaviour. However, it is important to note that these results also imply that the holding of more positive attitudes does not necessarily
mean that the quality of care provided is increased.

Indeed, the results of these studies imply that differential patient treatment is associated with factors other than nurses' evaluations of patients, and a number of researchers have suggested what these factors might be. One theory is that nurses' behaviour is predominantly under the control of environmental contingencies (e.g. hospital routine, management structure, staff ratios, etc) and may also be influenced by the implementation of organised patient programmes, such as reality orientation or token economies (Hodges, Sandford & Elzinger, 1986; Woods & Cullen, 1983). However, this still does not address the observation that time is often disproportionately divided between patients and that there are frequently differences in the quality of care provided to particular individuals (Macleod Clark, 1983). An alternative explanation offered by Macleod Clark (1983) is, therefore, that nurses do control and limit their contact with patients, but as a defensive strategy against the stress and anxiety of working with pain and illness rather than because of negative attitudes towards patients. Furthermore, it is possible that the factors identified as influencing nurses' perceptions of patients may affect behaviour directly, without first being 'processed' by a particular attitude.

However, it is also important to bear in mind the general difficulties of attitude research discussed in section 1.1.2 and to note that the failure of studies to establish a link between nurse attitudes and behaviour may reflect weaknesses in the research, rather than a lack of association between these two variables. For example, at a methodological level, most of the recent studies quoted above involved the use of quite general and abstract questionnaires or scales to measure verbal attitudes while behaviour was measured much more specifically. This low correspondence between the specificity of the attitudinal and behavioural measures may account for the negative findings of some studies. Indeed, Ajzen & Fishbein (1977) would argue that, in order to analyse the relationship between
attitudes and behaviour when nurses' attitudes are measured at such a general level, the behavioural measures employed would also have to be very general in nature, representing a variety of different behaviours in different contexts.

Furthermore, the interactionist model of attitudes proposed by Kelly & May (1982) seems to suggest that such general attitude measures are unhelpful if we are concerned with establishing whether nurses' attitudes are involved in the differential treatment of patients. As described, the interactionist model emphasises that patient evaluation occurs at a very individual level and would, therefore, seem to imply that nurse behaviour on the ward may be influenced to a greater extent by attitudes towards individual patients (based on direct experience of interactions with those patients) than by attitudes towards or stereotypes of a patient group as a whole (see Figure 1 next page). Clearly, if this model is correct, it is not surprising that a number of previous studies have failed to find a correlation between nurses' attitudes and their behaviour, as researchers have often paid little attention to the interactionist perspective and have tended to consider these variables (especially attitudes) at too general a level. Indeed, it would seem more meaningful to investigate the link between nurses' attitudes and behaviour at an individual patient level as it is here that an association is far more likely to be found.

In conclusion, despite conflicting findings, it is possible that nurses' attitudes are significant in directing their behaviour towards patients and that this has not been consistently picked up in studies to date because of the research instruments and theoretical models employed. It is clear that more investigation is necessary if the nature of relationship between nurses' attitudes and nurse-patient interactions is to be clarified. However, bearing in mind the criticisms of previous studies outlined above, it seems important that further research is based on an interactionist model, as this appears to be a more appropriate approach for analysing the very complex and individual relationship between nurse and patient.
Figure 1. Model of the process of attitude formation and links between nurses' attitudes and behaviour measured at different levels -based on ideas of Ajzen & Fishbein (1977) and Kelly & May (1982).
1.5 CHILDREN IN HOSPITAL

1.5.1 The effects of hospitalisation on children

Over the last 30 years there has been considerable concern about the effect of hospitalisation and medical treatment on children and their families. A great deal of research has focussed on this issue and many studies have concluded that being admitted to hospital is potentially a very difficult and 'damaging emotional experience' for children (Klinzing & Klinzing, 1987, p.119). Indeed, many theorists argue that, because of their limited understanding and immature coping skills, children are particularly vulnerable to the stresses of hospitalisation (Pederson, 1993; Yap, 1988).

The most common method used by researchers to measure emotional or psychological upset in children has been behavioural observation. Using such measures, substantial evidence has been found to suggest that hospitalisation and other health care procedures tend to precipitate at least brief changes in children's behaviour (Thompson, 1986). Indeed, it has been reported that up to 92% of children admitted to hospital show some level emotional/behavioural disturbance (Prugh, Staub, Sands, Kischbaum & Lenihan, 1953) with between 20 & 36% of patients suffering severe emotional problems which may continue well after discharge (Yap, 1988).

Of the behavioural and emotional changes noted during hospitalisation, the most commonly cited are increased anxiety, difficulties in sleeping and feeding, enuresis, encopresis, withdrawal, hyperactivity, aggression and temper tantrums (Klinzing & Klinzing, 1987; Yap, 1988). In addition, a number of 'habit disturbances' such as rocking, nail biting, thumb sucking and tics have been observed. In most cases, these disturbances become less common and severe following discharge, but a small proportion of children continue to have serious difficulties (often manifested in
sleep related problems, separation anxiety or aggression) when they return home (Prugh et al, 1953; Vernon, Schulman & Foley 1967). Those children who continue to have problems are often younger (e.g. under the age of 5) and tend to have poor relationships with their parents (Prugh et al, 1953).

1.5.2 Reasons for distress and variables affecting children's reactions to hospitalisation

A number of theories have been proposed to explain the distress and upset so commonly experienced by children who are hospitalised. The first of these is based on the work of Bowlby (1960) and the idea of separation anxiety. Indeed, there is now widespread acceptance that separation from parents or caregivers during hospitalisation and the stress and anxiety this creates are major contributory factors to the distress of children in hospital (Thompson, 1986). However, Hall (1987) also discusses the importance of more general stresses (such as discontinuity of routines between home and hospital) and of the child's potential for coping with difficult situations in precipitation of distress. In addition, Vernon, Foley, Sipowicz & Schulman (1965) argue that children's distress and upset is often associated with a lack of understanding about hospital procedures and ill-formed concepts about why they are in hospital. Clearly, such theories are not mutually exclusive and it seems likely that all of the factors mentioned have a significant part to play in the distress of hospitalised children.

The importance of theories about distress is that they give an indication of the factors which may influence a child's reaction to hospitalisation and thereby help to identify those children most at risk of serious emotional disturbance. As described above, there is evidence that younger children are particularly affected by admission to hospital which suggests that age is one such factor. This is perhaps not surprising, as younger children are inevitably more vulnerable to the anxiety associated with separation from parents and will tend to have less understanding of
illness and hospitalisation. In addition, their coping skills are likely to be less mature which again puts them at a disadvantage by preventing them from adapting to the hospital setting (Klinzing & Klinzing, 1987). However, it is important to recognise that any child that is particularly vulnerable to the stresses described above may experience severe distress. Such vulnerability is not only associated with age but may also be apparent in children with particular disabilities (e.g. learning difficulties) or poor quality relationships in his/her existing social life (Hall, 1987).

A strategy for minimising the distress of children in hospital is, therefore, to assess each child individually and devise ways of intervening to provide increased support for those identified as being especially vulnerable. One way of providing this support, if the admission to hospital is planned, is to spend time preparing the child for hospitalisation. In fact, as Thompson (1986) points out, preparation for hospital is probably the most commonly researched area in paediatrics and there is a vast literature on methods and techniques for preparing children for both hospitalisation and for specific health care procedures. Briefly, there seems to be overwhelming support for the value of preparation in reducing distress and a variety of techniques have been suggested (e.g. information giving, modelling, stress management and coping skills instruction) all of which appear to be of value (Hall, 1987; Klinzing & Klinzing, 1987; Thompson, 1986).

Although preparation for hospitalisation is obviously extremely valuable, it is not always possible as many children find themselves in hospital with little or no prior warning. However, there are other factors which can also influence children's reactions to hospitalisation and which can be used to minimise distress. For example, recent changes in the philosophy of nursing care on paediatric wards (see 1.5.3) have made it possible for parents and families to visit without restriction and to 'room-in' or stay with the child in hospital. Research suggests that such rooming-in is associated with better adjustment in hospital and reduced levels of post-
Many researchers have also emphasised the role of hospital personnel, particularly nursing staff, in mitigating the traumatic effects of hospitalisation by providing adequate 'emotional care'. In her discussion of the use of 'presence' as a nursing intervention, Pederson (1993) states that, 'a nurse's presence can help alleviate the negative effects of hospitalisation and empower children to grow through their experiences' (p.75). Similarly, Klinzing & Klinzing (1987) refer to studies which, 'suggest that staff members can effectively reduce the emotional upset which children frequently experience during hospitalisation and health care procedures by interacting with children in a warm, empathic manner' (p.123). Furthermore, there is evidence that support and preparation by a nurse prior to and following surgery can increase children's ability to cope and can significantly reduce behavioural disturbance in hospital and post-discharge (Wolfer & Visintainer, 1975). As such, nursing staff are clearly extremely important characters in children's experiences of hospitalisation.

1.5.3 Philosophy of nursing care in paediatrics

In view of the research outlined above and in line with the general move away from task-orientated nursing, the philosophy of paediatric nursing has gradually changed to become much more child focussed. This change seemed to begin with the publication of the Platt report in 1959, a document written by the Committee on the Welfare of Children in Hospital which was greatly influenced by the pioneering work of Bowlby and Robertson (1955, 1958). The report highlighted research findings concerning the emotional distress of many children in hospital and recommended unrestricted visiting for parents and rooming-in. Although these
recommendations were initially resisted by nursing and medical staff, the ideas contained within the report have had a significant impact on paediatric nursing to the extent that most children's wards now operate a philosophy of 'Family-centred care'.

Within this philosophy, the importance for children of the family context and the implications of separation from parents are fully recognised. Thus, family-centred care involves, 'focusing the child's care around the child and their family and including as much normal homelike activity as is possible in hospital' (Stower, 1992, p.68). However, it is also concerned with the negotiation of care between nurses, parents and children, and stresses the importance of parental participation in that care. This clearly takes time and involves discussion and planning around the individual needs of each child and their family. The 'primary nursing' and 'named nurse' philosophies - where a small team of nurses is allocated to each patient and over-sees their care while in hospital - facilitates this process and ensures that patients, their families and nursing staff are able to build good relationships and work in partnership. As such, family-centred care seems light years away from the nursing style reported by Stacey, Dearden, Pill & Robinson in their 1970 study of paediatric wards who described, 'little contact between nurses and parents' (p.126), 'little spontaneous contact with children outside specific nursing routine' (p.113) and children being, 'treated by the staff as a block rather than as unique individuals' (p.143).

Finally, it is also important to point out that many authors have stressed the importance of specialist paediatric training for nurses working with children. Thomas (1994) argues that, to meet the needs of child patients, health professionals must communicate effectively with children but also, 'collaborate with each other to understand the whole range of physical and emotional needs of sick and well children' (p.41). She goes on to state that the care of children must, 'take account of
differences in children's physical and emotional maturity to ensure that their special needs are understood as distinct from those of adults. Such understanding inevitably develops, in part, through experience of working with children. However, the value of specialist nurse qualifications in the form of Registered Sick Children's Nurse (RSCN) training cannot be disputed. As the Audit Commission stated in their 1993 report *Children First: A Study of Hospital Services*:

RSCNs are an essential component in matching the special skills of staff who care for children to the needs of those children (cited in Thomas, 1994, p.44).

### 1.6. Nurses' Attitudes and Behaviour in Paediatric Settings

It is evident when reviewing the literature in the field of nursing that there is a lack of research into the attitudes and behaviour of nurses working with children. Indeed, despite the evidence reviewed above which suggests that nurses have an very important role to play in children's experience of hospitalisation, the vast majority of studies in paediatrics seem to have focussed on patient distress and preparation, rather than considering the relationships between children and nurses and the factors which might affect these relationships. Given the lack of resources in the Health Service, this neglect seems extremely short sighted as research in this area has the potential to highlight where nursing practice might be changed or adapted to maximise patient care within current constraints.

**1.6.1 Paediatric nurses' attitudes towards patients**

In contrast with many other specialties, it proved very difficult to find any research concerning the attitudes of paediatric nurses towards patients. In fact, while some authors have considered nurses' attitudes towards parents (Brown & Richie, 1989)
or have made passing reference to nurses' attitudes towards other aspects of paediatric nursing (e.g. Stacey et al, 1970), the researcher was unable to locate any study which has looked specifically at paediatric nurses' attitudes towards patients or has attempted to measure such attitudes in any systematic way.

One possible explanation for this dearth of research may be that certain assumptions are made about paediatric patients and the nurses that care for them. Indeed, the nursing attitude research described in 1.3 has tended to focus on nurses working with patients who might be considered more difficult and challenging such as older adults, people with mental health problems or people with chronic/terminal illness. Inherent in this research bias, there seems to be a hidden assumption that nurses are more likely to hold less positive attitudes towards (and, therefore, potentially, interact in a less positive way with) these groups of patients and, as such, that research is necessary to establish whether or not this is the case. Equally, there is perhaps an assumption that nurses working with children are likely to hold more positive attitudes towards their patients (simply because children are generally considered a more appealing group to work with) and that research in this area is, therefore, less important.

It is then rather ironic that, in theory, children are the worse offenders in terms of breaking the unwritten 'rules' of behaviour which have been reported as leading to the labelling and stereotyping of adult patients by nursing staff. Indeed, as Dingwall and Murray (1983) point out, children are often unco-operative, they are frequently responsible for their own injuries and their responses are usually out of proportion to their condition, all of which have been identified by Jeffery (1979) as criteria which lead to adult patients being perceived as 'bad' or 'difficult'. However, in contrast with adult patients, there is evidence to suggest that these labels are not applied to children and that child patients are not dealt with in the same way as 'bad' adult patients. Thus, it seems that children are perceived by nurses to be an
entirely different population who are 'allowed' to exhibit the characteristics usually associated with 'bad' or 'difficult' patients.

This may be because children are generally not considered to be agents of their own behaviour (Dingwall & Murray, 1983) and are, therefore, not perceived to be responsible for their actions in the same way as adult patients are. Alternatively, as Seed (1994) suggests, it is possible that children are not labelled in the same way because they do not fit easily within the notion of 'patient'. Seed argues that, unlike adults, children tend to be unaware of the demands upon them in terms of the role and behaviour they are expected to adopt in new situations such as being in hospital. Thus, they are likely to behave simply as 'children', rather than adopting a 'patient' role, making it difficult for nursing staff to interpret their behaviour in the same way as they would for adult patients.

However, it is important to note that the Jeffery and Dingwall & Murray studies discussed above were conducted in Accident and Emergency wards and that the attitudes expressed by nursing staff in this setting may be very different from those of nurses in other specialities, particularly paediatrics. Indeed, it is possible that paediatric nurses have their own culture of categorising patients and do distinguish in some way between children who are 'good' and 'bad' patients. In fact, this would be consistent with anecdotal evidence from Pill's (1970) sociological study of two paediatric wards where she described that, 'the child who persistently cries or does not co-operate' (p.109) is likely to be defined as a 'bad' patient. In addition, individual wards may have their own 'rules' and myths which determine how (or if) patients are labelled by staff, a possibility which illustrates one of the general difficulties of attitude research; attitudes are inevitably influenced by many factors and, as such, there may be vast differences between the attitudes of people working in apparently very similar situations. Thus, it is clearly dangerous to generalise about the attitudes of all members of a particular group on the basis of a
1.6.2 Interactions between paediatric nurses and patients

Although very few studies have focussed on the attitudes of paediatric nursing staff, the behaviour of nurses and the interactions between nurses and patients on paediatric wards has been the subject of rather more research. However, many of these studies date from the 1970's and, therefore, describe wards and nursing practices which may now be very different. For example, two of the most detailed studies of paediatric nursing care and the experiences of children in hospital by Hawthorn (1974) and Stacey et al (1970) described wards where very few nurses had any specialist paediatric training, a situation which has changed dramatically as a result of the change in the philosophy of paediatric nursing (see 1.5.3 above). Similarly, Pill (1970) reported that nurses' conception of their role did not include talking to or playing with children on the ward, something which is also likely to have changed. Nevertheless, it seems important to review these and the other studies relating to this area.

In fact, in line with the research in other specialities, there is considerable evidence to suggest that paediatric nurses have relatively little contact with their patients. Indeed, Stacey et al (1970) found that only 2-6% of patients' total stay was spent interacting with nurses, with most of this contact occurring during routine nursing care. This latter finding was also reported by Cleary (1977) and J.C. Smith (1976). The Hawthorn (1974) study reported slightly higher levels of nurse-patient contact, with each child receiving nurse attention for approximately 11% of the time observed each day. However, Hawthorn also noted that children were alone and awake for much of the time and were often upset or miserable. In addition, Smith (1976) found that nursing contacts with patients tended to be brief with the average length being less than 1.5 minutes.
As Macleod Clark (1983) comments, in many ways this evidence serves to emphasise the apparent lack of interactions and spontaneous contact between paediatric nurses and their patients but says very little about the quality of the interactions that do occur. This is obviously an important aspect of the relationship between nurse and patient as the experience of a child who has relatively few high quality interactions and a child who has the same number of interactions of a reduced quality is likely to be very different. In addition, the researcher was unable to find any studies which systematically investigated the relationship between paediatric nurses' attitudes towards patients and their interactions with them. Indeed, although Pill (1970) noted in her study that the children who did not conform to the 'required' patterns of behaviour seemed to have most interactions with nurses (usually consisting of reprimands), this was one of very few references to the potential link between nurses perceptions of patients and their behaviour towards them in the literature reviewed.
2.1 DESCRIPTION OF STUDY

Given the limited nature of research to date concerning the attitudes and behaviour of paediatric nurses, the present study aimed to investigate these two variables and to consider the relationship between them. However, it is important to stress that the main focus of the study was the possible link between nurses' attitudes towards patients and their behaviour in terms of nurse-patient interactions. Indeed, while it was obviously essential to measure attitudes and various qualities of the interactions between nurses and patients during the research, the study was not designed to produce a definitive or complete analysis of paediatric nurses' attitudes or behaviour; far more investigation including very extensive interviewing and observation (as in the Stacey et al. (1970) and Hawthorn (1974) studies) would be required for this.

However, given that an attitude scale was designed for use in the study, the nature of nurses' general attitudes towards patients and some of the 'nurse-related' factors which might affect these attitudes were briefly investigated. The prediction made to guide this investigation (see hypothesis 1) was based on the results of the studies concerning the impact of training on nurses' attitudes (see section 1.3) and also on information about the philosophy of paediatric nursing (see section 1.5) which has clearly moved from a task orientated approach towards a more child and family-centred care model.

The focus on the relationship between nurses' attitudes and behaviour was felt to be particularly important in the light of the rather inconsistent results obtained from
studies in other specialties. Indeed, the research reviewed in section 1.4 casts doubt on the strength of the relationship between nurses' attitudes and behaviour with patients and thus on the usefulness of investigating nurses' attitudes per se: If measured attitudes are not predictive of nurses' behaviour then perhaps it would be more productive to concentrate on other variables that might influence interactions with patients. Thus, before becoming too concerned with the minutiae of paediatric nurses' attitudes, it would seem to make sense to establish whether or not they are actually linked to interactions with patients.

The research literature reviewed also suggests that a new approach is required to investigate the relationship between attitudes and behaviour. As described, Kelly & May (1982) have pointed out that much of the work in this field has failed to address the very complex and individual nature of nurse-patient interactions and suggest an interactionist model as an alternative framework for research. The present study attempted to take this idea into account by not only investigating the link between nurses' attitudes and behaviour at a general patient level (as in many previous studies), but also at an individual patient level. In line with the research to date, it was predicted that no significant link would be found between these two variables when general measures of attitude and behaviour were employed. However, it was predicted that a stronger relationship would be found where attitudes and behaviour were measured at a more individual level. Furthermore, in contrast with previous studies in paediatrics, the quality of interactions between nurses and patients was investigated in addition to the number and duration of such interactions.

2.2 AIMS

Main Aim:

(1) To investigate the relationship between the attitudes and behaviour of paediatric nurses in terms of their interactions with patients at both a group and
Additional Aims:
(2) To devise and pilot a scale to measure the general attitude of paediatric nurses towards patients.

(3) To measure the general attitudes and behaviour of paediatric nurses and briefly consider some of the factors affecting these variables.

2.3 HYPOTHESES
On the basis of the research outlined in the literature review above, it was hypothesised that;

(1) Those nurses who had received specialist training in the field of paediatric nursing (i.e. who had completed RSCN training) would show more tolerant/patient centred attitudes towards patients than those who had a more general training background or were unqualified, as measured by the Paediatric Attitude Scale (PAS).

(2) No association would be found between nurses' general attitudes towards patients, as measured using the Paediatric Attitude Scale (PAS), and:

(a) the overall quality of their interactions with patients, as measured by the observed composite quality score for the whole patient group (see 3.4.2).

(b) the overall duration of their interactions with patients, as measured by the observed composite duration score for the whole patient group (see 3.4.2).
(c) the **overall number of interactions with patients**, as measured by the observed number of interactions with the whole patient group per 10 minute observation session (see 3.4.2).

(3) An association would be found between nurses' **attitudes towards individual patients**, as measured using the 'popularity' and 'ease of nursing' ranking scales (see 3.4.2), and;

(a) the **quality of nurses' interactions with those particular patients**, as measured by the observed composite quality score for each patient (see 3.4.2). Specifically, it was predicted that those patients who were liked less and perceived as less easy to nurse would have interactions with nursing staff that were of **reduced quality** (i.e. less positive) compared with those patients who were liked more and considered more easy to nurse.

(b) the **duration of nurses' interactions with those particular patients**, as measured by the observed composite duration score for each patient (see 3.4.2). Specifically, it was predicted that those patients who were liked less and perceived as less easy to nurse would have **shorter interactions** with nursing staff than those patients who were liked more and considered more easy to nurse.

(c) the **number of interactions with those particular patients**, as measured by the observed number of interactions with each patient per 10 minute observation period (see 3.4.2). Specifically, it was predicted that those patients who were liked less and perceived as less easy to nurse would have **fewer interactions** with nursing staff than those patients who were liked more and considered more easy to nurse.
3.1 SETTING AND CONTEXT

The study was conducted on a paediatric ward (henceforth referred to as 'ward A') within a general hospital in the South West of England. This ward is one of two dedicated to the care and treatment of children from birth to 16 years.

As ward A is located in a general hospital setting it caters for children with a wide range of problems and illnesses, from chronic conditions such as cystic fibrosis to more acute problems such as pneumonia or bone fractures. Children may be admitted to the ward from home as the result of a planned admission (e.g. for routine treatment), but many arrive via the Accident and Emergency Department. Thus, at any one time, some patients on the ward may be very familiar to the nursing staff while others may be completely unknown. In addition, some children may be in hospital for many days or even weeks while others are discharged within hours.

Ward A tends to receive older children - from the age of five upwards - but also takes 'overflow' cases from the other paediatric ward (ward B) when necessary. The ward has a maximum of 19 beds; 15 of these beds are for general admissions (5 on the ward, 10 in separate cubicles) but ward A also has a separate oncology unit (4 beds) for those being treated for cancer.

Wards A and B have separate groups of nursing staff although nurses are sometimes 'shared' when one ward is busy. Ward A is staffed predominantly by 18 permanent members of nursing staff (16 qualified, 2 unqualified), although bank
staff are also used at times. The nursing day is divided into two 12 1/2 hour shifts (07.30-20.00 & 19.30-08.00) allowing for a half hour hand-over session where information about patients can be passed from one shift to another. The ward operates a 'named nurse' system where each patient is assigned a member of qualified staff on admission whose role is to oversee that child's care while in hospital. When this named nurse is not working, patients are allocated an 'associate nurse' on a shift by shift basis.

In addition to the nursing and medical staff, the ward is served by 3 teachers (who run a school in term time for those children in hospital for more than a few days) and a number of play therapists. Input to the ward is also provided by physiotherapists, dieticians, a Social Worker and a Clinical Psychologist.

3.2 PARTICIPANTS

Although the focus of the study was on paediatric nurses, the methodology employed meant that children in hospital during the data collection period were also indirectly involved. Thus both groups of participants are discussed.

3.2.1 Nurses

12 of the 18 permanent nursing staff who work on ward A took part in the study. Given time constraints, these staff members were selected according to the shift pattern at the time of the data collection but they appeared to be a representative sample of the total staff team.

In fact, a total of 15 members of staff were observed during the data collection period but 3 were excluded from the study because they were bank staff who worked on the ward rather infrequently. The final nurse group consisted of 11 women and 1 man, and included staff of different ages and grades with a wide
variety of backgrounds in terms of training and experience in the nursing profession. These characteristics are summarised in Table 1 below.

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<td>2</td>
<td>Senior Sister</td>
<td>1</td>
<td>A</td>
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<tr>
<td>26-35</td>
<td>5</td>
<td>Sister</td>
<td>2</td>
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<td>36-45</td>
<td>3</td>
<td>Staff Nurse</td>
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<td>Enrolled Nurse</td>
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</table>

Table 1 Demographic characteristics of the paediatric nurses involved in the study

As Table 1 reveals, 5/12 of the sample of nurses had completed specialist training in the field of children's nursing (RSCN) and, at the time of data collection, one nurse with general nurse training (RGN) had almost finished the conversion course to RSCN. Indeed, training was seen as a priority on the ward and many of the nurses in the group were involved in or had completed specific training courses (e.g. NVQ in child care, lifting and handling, study skills, etc) in addition to their formal nursing qualifications as detailed above.

1 Years of experience in the nursing profession
2 Years of experience in paediatric nursing
3 Registered General Nurse
4 Registered Sick Children's Nurse
5 State Enrolled Nurse
6 Orthopedic training
Prior to data collection all nursing staff received a letter (see Appendix A) which gave information about the study and also offered the chance to discuss any problems or queries that they might have about the project with the researcher. In addition, the researcher attended a ward meeting to give details of the project procedure and, although some nurses described feeling slightly anxious at the thought of an 'observer' on the ward, no member of staff expressed any major concerns about the study at this stage. However, verbal consent was also obtained at the start of each video/observation session by approaching each nurse individually.

3.2.2 Patients

Of the children resident on or admitted to the ward during the data collection period, 22 were included in the study. The mean age of this group was 9.05 years with a range of 2-15 years and, not surprisingly, the reason for admission varied widely (see Table 2), as did the time spent in hospital. Written consent for participation in the study was gained from the parent(s) of all 22 children (see Appendix A) and, where appropriate and possible, patients were also asked if they were happy to be observed.

<table>
<thead>
<tr>
<th>Illness/Problem</th>
<th>n</th>
<th>Illness/Problem</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>1</td>
<td>Croup/Asthma</td>
<td>2</td>
</tr>
<tr>
<td>Cystic Fibrosis</td>
<td>3</td>
<td>Febrile Convulsion</td>
<td>5</td>
</tr>
<tr>
<td>Kidney/Urinary Infection</td>
<td>3</td>
<td>Fracture</td>
<td>1</td>
</tr>
<tr>
<td>Head Injury/Concussion</td>
<td>1</td>
<td>Painful Hip</td>
<td>2</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>1</td>
<td>Epilepsy</td>
<td>1</td>
</tr>
<tr>
<td>Other (non-specific)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Summary of the problems/illnesses leading to admission of the patients involved in the study

A number of children on ward A during the data collection period were not
included in the study because they fulfilled one or more of the exclusion criteria defined to safeguard the care and privacy of patients. These exclusion criteria were discussed and agreed with the Senior Paediatrician, the Paediatric Nurse Manager and also with the Senior Ward Sister, and stated that patients on the ward would not be included in the study if;

   (1) they or their parents did not give consent (in fact, this did not occur)
   (2) in consultation with the nursing staff, they were considered too acutely ill for observation to be either safe (in terms of infection control) or appropriate.
   (3) they were being treated in the separate oncology unit
   (4) they were in hospital for less than 24 hours (see section 3.5.1)

3.3 DESIGN

Because of the different measures used to test the hypotheses in this study, a number of different designs were employed.

3.3.1 Hypothesis 1

The design used to investigate the first hypothesis involved between groups comparisons, allowing any differences between the attitudes of nurses with specialist paediatric training and those with more general training to be assessed.

3.3.2 Hypotheses 2 & 3

The design used to investigate the second set of hypotheses was correlational. This design allowed the level of association between the nurses' general attitude towards paediatric patients and the overall quality, duration and number of interactions with patients on the ward to be assessed.

The third set of hypotheses were also concerned with associations between variables. However, here the association to be investigated was that between
nurses' specific attitudes towards a number of individual patients (as measured by
patient rankings) and measures of their specific interactions with those patients.
Thus, a within-subjects, repeated measures (or ipsative) design was employed,
where the interaction variables were measured across a number of different patients
for each nurse. This design enabled the degree of association, as indicated by the
'correlation ratio', (w^2) between the ranked position of different patients and the
quality, duration and number of interactions with those patients to be analysed.

3.4 MEASURES

3.4.1 Attitude Measures - The Paediatric Questionnaire
All attitude measures described below were contained within one questionnaire -
the 'Paediatrics Questionnaire' - developed by the researcher (see Appendix C).

The Paediatric Attitudes Scale (PAS)
Despite a rigorous search, it proved difficult to find an appropriate attitude scale
which could be used to measure the general attitudes of paediatric nurses towards
patients. Thus, the initial stage of the study involved designing and piloting such a
measure for use in the main part of the research. This was a lengthy process
conducted over a period of six months following the methodology described by
Oppenheim (1992). The nurses involved in the preparation and piloting stage were
from two other hospitals in the South West. The following stages were conducted
during piloting;

(1) Eight in-depth, audio-taped interviews (approx. 40 mins. each) were
conducted with paediatric nurses of a variety of grades and experience. These
interviews were semi-structured and encouraged the nurses to discuss ;

* The role of the paediatric nurse

* Any particular difficulties associated with nursing children
* Characteristics and stereotypes of paediatric patients
* Likes and dislikes in terms of different 'types' of patients
* Support structures (e.g. supervision) helpful when working in a paediatric setting

(2) The information gathered from these interviews was then used to generate attitude statements and to adapt statements from attitude scales developed by other authors (Colton, 1989; Gibbon, 1991; Gipps, 1982; Jones & Galliard, 1983; Rosenbaum, Armstrong & King, 1987; Seefeldt, Jantz, Serlock & Bredekamp, 1982; Snape, 1986). These statements were discussed with a Clinical Psychologist who had direct experience of working with children and nurses in a paediatric setting and 48 statements were retained. The statements were associated with feelings towards and perceptions of paediatric patients and their families, and were felt to reflect attitudes on a dimension from tolerant/flexible/patient centred (henceforth referred to as 'tolerant') to authoritarian/rigid/task orientated (henceforth referred to as 'authoritarian').

(3) The 48 items (see Appendix B) were arranged in a Likert scale (Likert, 1932) with five possible responses (from strongly agree to strongly disagree). As with the usual convention for Likert scales, half of the statements were phrased so as to represent the tolerant extreme of the attitude dimension and half to represent the authoritarian extreme. The scoring key was devised such that agreement with the tolerant items (and conversely, disagreement with the authoritarian items) was reflected by a high score and vice versa. The scores allocated ranged from 1-5 such that tolerant items were scored 5 for 'strongly agree' and 1 for 'strongly disagree'. Likewise, authoritarian items were scored 5 for 'strongly disagree' and 1 for 'strongly agree'.

(4) The 48 items were piloted on a further 40 paediatric nurses. Ideally, these

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7 Some items did not clearly represent one extreme or the other. These items were still used and were given an arbitrary position which could be checked during item analysis.
items would then have been subjected to item analysis by correlating each item with a reliable external criterion of the attitude dimension being measured to check that it did reflect the desired attitude. However, as mentioned above, no such external criterion was available and so an internal-consistency method of item analysis (Oppenheim, 1992, p199) was used to investigate the intercorrelations between each item and the whole item score using the statistical package SPSS 4.0 (see Appendix B).

In fact, although the Cronbach's Alpha obtained from this analysis (0.8366) seemed reasonable, the item-total correlation co-efficients were fairly low - possibly because of the relatively small pilot sample size - and, as a result, criteria about the level of item-correlation that was acceptable had to be devised. The criteria chosen were; (a) that an item had a correlation co-efficient of 0.3000 or above, and (b) that the item also showed stability such that the correlation co-efficients obtained for the item when the data was divided into two random groups for analysis was relatively stable (i.e. both co-efficients were greater than 0.2500)

(5) 21 statements from the original item pool reached these criteria and were selected for the final scale. An item which almost met the criteria (Item 16) was also included to give an even number of items and to balance the statements in terms of phrasing. Thus the final Paediatric Attitude Scale consisted of 22 items with 11 reflecting the tolerant position and 11 reflecting the authoritarian position. The scoring criteria used in the main study were as described for the pilot (see scoring key in Appendix C). Thus, the range of possible scores was 22-110.

Individual attitude measures

The design of the study meant that attitudes towards individual patients also had to be measured and this was achieved by asking nurses to rank children according to
various criteria (see below), a method similar to that employed by Stockwell (1972). Each nurse was asked to rank 6 patients selected on the basis of the observational data collected during part (1) if the study. Although some of these patients were consistent across nurses, the selection procedure (see 3.5.2) meant that each nurse had a different list of children.

**Ranking scales**

(1) Popularity ranking - as mentioned in the introduction, at a very basic level an attitude towards someone or something can be described as the extent to which that attitude object is liked or disliked. Thus the relative attitude of nursing staff towards particular patients was measured by asking nurses to rank patients from the child that they *liked most* to the child that they *liked least*.

(2) Ease of nursing ranking - as much of the literature has equated patient popularity with the extent to which a patient is perceived as 'difficult' or 'easy', nurses were also asked to rank the same patients from the child that was *most easy* to nurse to the child who was *least easy* to nurse.

(3) Amount of input ranking - as one of the possible influences on the behaviour of nursing staff was considered to be the seriousness or type of illness experienced by patients, nurses were also asked to rank patients from the child that they felt *required most medical/nursing input* to the child who they felt *required least medical/nursing input*.

(4) Three additional ranking scales were also included in the questionnaire asking about other aspects of nurses' relationships with the identified children (see questionnaire in Appendix C). These were positioned before the 3 scales already described and were included mainly to provide nurses with some 'practice' in ranking children.

The instructions for completing the ranking scales specified that no tied ranks were
allowed. This was necessary as it was suspected that nurses might say that they had similar feelings for all the children mentioned if they were not encouraged to distinguish between them and this would have had serious implications for the data analysis.

The ranking scales were piloted using 15 of the 40 nurses who also took part in the PAS pilot. This process was designed to ensure that the instructions were clear and that the language used in each scale made sense and was generally perceived as the researcher intended. However, it also provided an opportunity to check that nurses were not uncomfortable about completing such scales. Indeed, during this pilot stage, one nurse commented that she would have felt more comfortable about ranking children if she had not had to write their names on the questionnaire. A coding system was, therefore, adopted whereby each child was given a confidential number for use in the ranking section of the questionnaire.

**Attitudes towards paediatric nursing**

The first part of the Paediatrics Questionnaire was concerned with nurses' attitudes towards nursing rather than towards patients themselves. This section was based on a questionnaire designed by Armstrong-Esther & Browne (1986) and asked nurses to rank how important and rewarding they found various nursing activities (see questionnaire in Appendix C). It was included in the questionnaire for two reasons. Firstly, to encourage nurses to start thinking about nursing and their role as paediatric nurses before completing the PAS. This seemed important as nurses had to fill in the questionnaires in work time and may have needed some time to 'switch off' from what had been happening on the ward etc. Secondly, to provide further information about the general attitudes of nurses, although no specific hypotheses were made about the answers to the questions.
**Other information**

The Paediatrics questionnaire was also used to gather demographic information concerning age, sex, qualifications etc of the nurses.

**3.4.2 Behavioural Measures - Interactions between nurses and patients**

The interactions observed between nursing staff and patients on ward A during data collection were coded in a variety of different ways as described below. A detailed description of the observation procedure can be found in section 3.5.

**Quality of Interactions**

The quality of the interactions observed between nurses and patients was recorded using a coding system similar to that developed by Kitwood & Bredin (1994) to help assess the quality of care provided for people with dementia. This system seemed particularly applicable in this study as it attempts to breakdown the quality of interactions into a number of different levels, rather than simply using three categories (positive, negative and neutral) as have been employed in previous studies (e.g. Salmon, 1993). This was thought to be important as experience on ward A suggested that a large majority of interactions with patients would be categorised as 'positive' and, as such, a more sensitive coding method was required.

In fact, the coding system devised by Kitwood and colleagues defines six possible quality 'scores' for each interaction, three positive (+5, +3, +1) and three negative (-1, -3, -5). The criteria for rating each interaction are quite carefully defined to make coding as objective as possible but, as the essence of the method is trying to assess the subjective experience of dementia sufferers, there is inevitably an element of subjectivity. In the present study, as the focus was on the objective behaviour of nurses rather than the effect of that behaviour on patients (that is another study!), it was slightly easier to define the characteristics of interactions
required for each score.

In order to shape up the coding system and to check its reliability prior to the data collection period, considerable time was spent on ward A observing and videoing interactions between nurses and patients. The purpose of this videoing was explained to nurses and also to patients on the ward. In addition, written consent was gained from the parents of those children on ward A at the time of the videoing (see Appendix A). A range of different interactions were recorded and 8 of these were viewed and discussed by the researcher and a Clinical Psychologist to further operationalise the coding method. During this process it became apparent that some interactions could not be readily be defined as positive or negative and were more neutral in quality. To address this, a seventh score of 0 was added to the codes.

The final operationalised system is outlined in Appendix D and was checked for inter-rater reliability by coding the remaining 8 interactions without discussion. The two raters agreed on all but one of the codings, giving an inter-rater reliability of 87.5% which was considered acceptable. It would obviously have been useful to have re-checked the reliability of the coding method during the data collection period but it was felt that introducing the video recorder or the second rater to the ward during this time might affect the behaviour of nurses and children and lead to inaccurate information about nurse-patient interactions being recorded (see section 3.5.1. for details of how reactivity was minimised during observation).

To generate a quality measure from the coded data, the quality scores obtained by each nurse during the observation period were summed and then divided by the total number of interactions to give a 'composite quality score'. This measure could be calculated for interactions with a group of patients or for those with an individual child.
Duration of Interactions

The duration of each interaction observed was also measured. Initially, it was planned that this would be recorded by noting the time (from a stop watch) at the start and end points of an interaction. However, in practice this proved impossible given the amount of information being recorded about each interaction and the brief gaps between interactions. Thus, another coding system was developed to simplify recording whereby a 'duration score' was given for each interaction depending on its length (see below).

<table>
<thead>
<tr>
<th>Time</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 seconds</td>
<td>1</td>
</tr>
<tr>
<td>10-60 seconds</td>
<td>2</td>
</tr>
<tr>
<td>1-5 minutes</td>
<td>3</td>
</tr>
<tr>
<td>5-10 minutes</td>
<td>4</td>
</tr>
<tr>
<td>10+ minutes</td>
<td>5</td>
</tr>
</tbody>
</table>

(i.e. interaction started before or continued beyond the period of observation)

Using this system the researcher only had to glance at the stop-watch at the start and end of an interaction in order to code the duration.

As with the quality scores, a measure of interaction duration was obtained by summing the coded scores and dividing by the total number of interactions to give a 'composite duration score'. As before, this could be calculated for interactions with a group of patients or with particular individuals.

Number of Interactions

The number of interactions between nurses and patients was easily established from the coding sheets using simple addition. However, as the amount of time that each nurse was shadowed varied, the measure used was the average number of interactions per 10 minute observation block. Once again, this measure could be calculated for a group of patients or for individuals.
Other information recorded

During the observation period, two pieces of qualitative information were also recorded. Firstly, where possible, an attempt was made to distinguish and note which party (nurse or patient) initiated the interaction. This seemed important as it was speculated that some children might be more pro-active than others in terms of interacting with nursing staff and this might obviously have an impact on the measures described above.

In addition, information was collected about the 'type' of interactions occurring. Indeed, although it proved difficult to find a simple way of quantifying this data for detailed analysis, it seemed reasonable to assume that there might be differences in the purpose of interactions between nurses and patients, differences that might also be influenced by nurses' attitudes towards individual children. Thus, each interaction was also coded according to its 'objective content' using another system developed by the researcher. Within this system, each interaction was assigned at least one letter code to indicate what had occurred (see Appendix D). However, as interactions are necessarily complex entities, more than one letter was often required to fully describe the contact. As with the quality coding system, this method of recording the 'type' of interaction was checked for inter-rater reliability (using the same videoed interaction examples) and a reliability measure of 87.5% was obtained.

3.5 PROCEDURE

The study was presented to and approved by the local Ethics Committee prior to piloting. Following the various piloting stages described above, a three week data collection period was arranged with the Senior Sister on ward A. This three week period was completed in December as, having checked the ward admission book, it seemed that the number of admissions (and, therefore, the number of children on
the ward) was greatest during the winter months. In fact, data collection was divided into two phases; (1) observation of interactions on the ward (2 weeks), and (2) completion of the Paediatric Questionnaire by staff (1 week). These two phases were conducted in this order because phase 2 involved asking nurses about patients who had been on the ward during the observation period. However, the ordering also meant that the researcher had little knowledge about the views and attitudes of nurses before starting the observation phase which ensured that behaviour coding bias was minimised.

3.5.1 Phase 1 - Observation

Process

During the two week observation phase, approximately 70 hours were spent on ward A. This time was divided into 12 sessions of between 4-8 hours where the researcher coded interactions by acting as a non-participant observer. The observation sessions all took place between 07.30 and 20.00hrs (i.e. during the day shift) and an effort was made to ensure that they were evenly distributed across different periods of time (e.g. morning, afternoon, evening) and days of the week (including weekends). Interactions were not coded continuously during each session as time had to be allowed for breaks, discussions with staff about patients and to gain consent from parents and children. Thus, the total amount of time spent actually collecting data was 55 hours.

Obviously trying to record every interaction on the ward would have been an impossible task. Thus a sampling procedure was employed whereby individual nurses were 'shadowed' for blocks of 10 minutes. During this time, an attempt was made to record and code every interaction between that nurse and patients on the ward using the methods described above. An interaction was defined as any observable 'communication' between a nurse and patient, including verbal, non-verbal (e.g. smiling) or physical contact, and each interaction was regarded as
complete once 5 or more seconds had elapsed between episodes of such contact.

To facilitate the coding process, a recording sheet was designed (see Appendix D) and each nurse and patient was allocated a confidential code number so that the protagonists in each interaction could be easily noted and identified during data analysis. As described above, the 12 nursing staff selected to take part in the study were those who happened to be working on ward A during the data collection phase. Luckily, most of these nurses were on the ward during a number of the observation sessions, allowing a considerable amount of interaction data to be collected for each nurse. The mean amount of time spent shadowing each nurse was 260.8 minutes (range 150-370 minutes).

As there were usually 3/4 members of staff working during any one observation session, the sequence in which nurses were shadowed was determined by a semi-random selection procedure. This sequence was adhered to as rigidly as possible but there were times – for example, when staff left the ward for breaks – when it had to be altered slightly in order to maximise the amount of data collected. As nurses inevitably moved around the ward while working, the researcher tried to shadow them as closely as possible. However, very occasionally there were times when this was impossible (e.g. if the nurse suddenly moved very quickly) or inappropriate (e.g. if a nurse went into a cubicle where a child was getting dressed) and, as a result, a very small proportion of interactions may have been missed.

Reactivity

It is well documented that the presence of an observer can affect the behaviour of those being observed (Orlowska, 1990) and a number of steps were taken to minimise such reactivity during data collection. Firstly, both nurses and patients were given information about the project and what the observation phase would entail. Ongoing feedback was also provided to help reduce any reactivity effects. Although the research procedure could not be entirely random as it was important to try to ensure that each nurse was shadowed for approximately the same amount of time.
Secondly, unless there was some kind of emergency on the ward, the researcher acted as a non-participant observer and remained as unobtrusive as possible. Finally, a habituation period of 15 minutes was included at the start of each observation session before formal recording began. In addition to this general habituation procedure, patients were not included in the observation until they had been in hospital for at least 24 hours to ensure that they were more familiar with the ward environment.

3.5.2 Phase 2 - Completion of questionnaires

Once the observation data had been collected, nurses taking part in the study were asked to fill in the Paediatric Questionnaire during quiet periods on the ward. This occurred during the week immediately following the 2 week observation period so that nurses would easily remember the patients who had been on the ward while data was being collected. The questionnaire took approximately 15 minutes to complete during which time the researcher was available to answer any queries. However, specific advice about particular items was not given to avoid influencing nurses' responses.

The 6 children that each nurse was asked to rank in the third part of the questionnaire were selected by studying the raw data sheets. As the observational data was to be summed to produce composite scores it was important that the number of interactions between nurses and patients used in the data analysis was reasonably high in order to minimise random errors. Thus, where possible, nurses were asked about patients with whom they had had at least 5 interactions during the observation phase. In the small number of cases where this was not possible (15/90), the patient with the next highest number of interactions was chosen.

9 As there was obviously a danger of staff and children becoming very aware of certain aspects of their behaviour, this information was given in quite general terms and participants were not told exactly what was being recorded.
4.1 DATA ANALYSIS

The quantitative data gathered during the study was analysed using the statistical package, SPSS 4.0 (Mac version). Given the study design and the form of the measures used, the first two hypotheses (concerning nurses' general attitudes and the relationship between attitudes and behaviour at a general level) could be tested using simple non-parametric statistics. However, the repeated measures design employed to test the third set of hypotheses (concerning the relationship between attitude and behaviour at the individual patient level) required more complex analysis.

One possible option would have been to calculate Kendall correlation co-efficients for each nurse to give an estimate of the association between his/her attitude towards different patients (as revealed by the position in which the 6 patients specified were ranked on the popularity and ease of nursing scales) and the various behavioural interaction scores. However, although an average co-efficient could have been calculated to give an overall impression of the degree of association between these variables, this seemed a rather cumbersome method of analysis and one which would have been very sensitive to random sample variation.

Thus, a series of within-subjects, repeated measures ANOVAs were chosen, where the variability of the three sets of behavioural interaction scores was tested as a function of ranked position on the popularity and ease of nursing scales. In other words, each of the 6 rank positions on the two scales was treated as an independent variable or category, and the effect for patients (in terms of the quality,
duration and number of interactions received) of being in a particular category was analysed.

This form of analysis yielded an F value which was used to test whether any differences between the interaction scores in each rank category were significant. However, it was also possible to calculate Eta\(^2\) \([w^2]\), the Correlation Ratio, which gives a measure of the strength of an association between variables or, as Hays (1994) describes it, the proportion of the variance in one variable [in this case, the various behavioural interaction scores] that is accounted for or explained by another variable [in this case, nurses' attitudes towards particular patients as indicated by ranked position].

4.2 CORRECTIONS TO DATA

The data collected from all 12 nurses was used to test hypotheses (1) and (2). However, one nurse was eliminated from further analysis because very few interactions had been observed between this nurse and patients during the data collection phase and it was felt that this might affect the accuracy of the results. This lack of data was due to the fact that this particular member of staff held a senior position and was often involved in administrative duties and also because they were only present for two observation sessions.

In addition, one of the remaining 11 nurses had only been observed interacting with a total of 5 patients. This nurse was, therefore, asked to rank these 5 patients and an additional patient who had been on the ward for the whole of the data collection phase. The number of interactions between the nurse and this additional patient was taken to be 0 but it was obviously not possible to guess what quality
and duration scores might have been obtained had any interactions occurred between them. Thus, the Yates estimation procedure, as described by Kirk (1982; p268), was used to generate substitute values for these missing observations.

Prior to estimating the missing values for this nurse, the raw data for each of the three behavioural interaction measures were inspected using box-plots to help identify any outlying values. This was especially important given the small sample size which meant that any variation in the data due to random error might considerably affect the results. During this process a number of outliers were detected and these values were trimmed off and replaced by the next most extreme values in the data set, a process known as 'Winsorising' (Howell, 1992; p315).

As the Yate's estimation and 'Winsorising' procedures tend to produce a slight positive bias in results, a number of corrections had to be made when the value of F was calculated and tested for significance. These corrections involved:

(1) Computing a 'corrected' sum of squares for the ANOVA within-subjects effect in each analysis where a value had been estimated.

(2) Reducing the error df by one for each value estimated or Winsorised

4.3 RESULTS

4.3.1 Nurses' general attitudes towards patients

The mean score of the 12 nurses on the PAS (the general attitude scale) was 91.17 with a range of 80-100. As mentioned, the scoring system for the PAS was such that the mid-point of the attitude dimension was equivalent to a score of 66, with scores below this indicating a tendency towards the authoritarian attitude and scores above indicating a tendency towards the tolerant attitude. Clearly, all 12 nurses obtained scores above this mid-point (some almost reaching the maximum
score of 110) and, as such, it seems that the group all held quite tolerant/patient centred attitudes towards paediatric patients.

**Hypothesis 1**

In terms of the prediction made in hypothesis 1, those nurses who had completed RSCN training did appear to show slightly higher scores on the PAS (mean 91.8, n=5) than those who had received a general training or who were unqualified (mean 90.7, n=7). This suggests that those nurses with specialist training held more tolerant/patient centred attitudes. However, the difference between mean scores was not statistically significant;

**Mann-Whitney test : U = 16 (n1=5, n2=7) p>0.80**

Although no specific hypothesis had been made concerning the relationship between the length of nurses' professional experience and their general attitudes, this was also investigated. However, there was no significant difference between the PAS scores of those nurses who had more than 10 years experience in paediatric nursing (mean 93, n=4) and those who had less than 10 years experience (mean 90.25, n=8);

**Mann-Whitney test : U = 11.5 (n1=4, n2=8) p>0.40**

**4.3.2 Behavioural Interaction Scores (whole patient group)**

**Quality of Interactions**

The mean composite quality score for nurses' interactions with all patients on the ward was 1.67 with a range of 1.07-2.29. This mean value and range indicated that, on average, the interactions between nurses and patients tended to be positive in nature. By looking at the raw data, it became apparent that this was the result of most interactions being rated as either +1 or +3, rather than some being negative/neutral and others extremely positive (+5). In fact, of the 971 interactions
observed during data collection, only 4.4% were rated as negative (with none below -1), 2.5% as neutral and 2.5% as very positive (+5). In other words, the vast majority of interactions between nurses and patients were positive and of a fairly consistent quality.

Duration of Interactions
The mean composite duration score for nurses' interactions with all patients on the ward was 1.68 with a range of 1.31-1.92. This mean score lies between 1 and 2 on the duration coding system (see 3.4.2.) and indicates that, on average, nurses' interactions with patients lasted between 1 to 60 seconds. However, examination of the raw data revealed that, while the majority of interactions scored 1 or 2, 13% of the 971 interactions lasted longer than 60 seconds.

Number of interactions
In contrast with the scores for quality and duration of interactions, the average number of interactions with patients on the ward per 10 minute observation block varied considerably between nurses. The mean score obtained was 3.04 with a range of 0.87-6.00.

4.3.2 Association between general attitudes and behaviours
Because of the small sample size and large discrepancies between the variance of the sets of scores obtained, non-parametric (Spearman rank) tests of correlation were used to analyse the relationship between nurses' scores on the PAS and their behaviour towards the whole group of patients.

Hypothesis 2
In fact, as predicted, examination of the data using scattergrams (see Appendix E) suggested that there was no simple linear relationship between nurses' scores on the PAS and any of the three behavioural interaction measures. This was confirmed.
by statistical analysis as all correlation co-efficients obtained were non-significant;

\[
\text{PAS vs Composite quality score (group): } r = -0.1617, p > 0.30 \text{ (n=12)}
\]
\[
\text{PAS vs Composite duration score (group): } r = -0.1162, p > 0.36 \text{ (n=12)}
\]
\[
\text{PAS vs No. of interactions/10 min. period(group): } r = -0.3058, p > 0.16 \text{ (n=12)}
\]

Given the variability of the scores relating to the number of interactions with patients, it seemed appropriate to investigate whether this variable was related to factors other than nurses' general attitudes. In this case, it seemed that the factor most likely to affect the amount of time spent with patients themselves was professional grade (and thus nurses' role on the ward). Figure 2 (below) shows a plot of the scores for number of interactions arranged according to these factors.

![Figure 2](image-url)

\text{Figure 2. - Plot of the mean number of interactions with patients per 10 minute observation block arranged according to professional grade.}

This plot seems to indicate that the number of interactions between a nurse and patients was associated with his/her professional grade, with nurses of a lower grade tending to have a greater number of interactions. However, because of the small number of nurses included in this study, this effect was not tested for significance.
4.3.3 Rankings of patients

As described above, in order to obtain a measure of the attitude of nurses towards individual children, a ranking system was employed whereby nurses were asked to rank six patients with whom they had contact during the observation period according to a number of different criteria. Of the six ranking scales used, of most interest in terms of analysis were those relating to how much each patient was liked (popularity ranking) and the extent to which each patient was perceived as easy or difficult to nurse (ease of nursing ranking). However, as it was feasible that nurses' behaviour might also be affected by their perceptions of the amount of input each patient required, the 'amount of input' ranking scale was also included in the analysis, although no specific hypotheses about possible effects with respect to this scale were made.

Although it was assumed within hypothesis 3 that the rankings of the six patients according to popularity and ease of nursing would be equivalent, examination of the raw data indicated that this was not necessarily the case. Indeed, it appeared that, for some nurses, the fact that a particular patient was less easy to care for did not inevitably mean that they were liked less. In fact, Kendall rank order correlations used to investigate this relationship revealed that, for all but one nurse, the correlation between the two sets of rankings was non-significant. This is interesting as previous authors have used the words 'un-popular' and 'difficult' inter-changeably to describe 'problem' patients. However, these results suggest that nurses' perceptions of patients are far more complex and that there is a distinction between those patients who are considered to be easy/difficult to nurse and those who nurses like more/like less. Given this finding, the data for each of the two ranking scales were analysed separately.

10One nurse only felt able to rank patients according to how easy they were to nurse and, as such, some of the following analyses are based on the scores of 10 rather than 11 nurses. This is indicated in the relevant tables.
4.3.4 Behavioural interaction scores (individual patients) and the association with nurses' rankings of patients

As expected given the research reviewed in the introduction, the behavioural scores relating to the quality, duration and number of interactions between nurses and individual patients varied for each nurse-patient dyad. Indeed, across all nurses, scores ranged between 0.83-3.00 for the quality of interactions, between 1.25-2.15 for the duration of interactions and between 0.00-1.67 for the number of interactions (per 10 minute block). Furthermore, in terms of within subject variations, the mean differences in scores for each nurse across the 6 patients ranked were 1.19 (range 0.58-2.17), 0.58 (range 0.26-0.90) and 0.80 (range 0.32-1.41) for quality, duration and number of interactions respectively.

Hypothesis 3

To establish whether these differences in interactions were associated with nurses' attitudes towards patients, the within-subjects repeated measures ANOVA described in section 4.1 was employed. The mean composite quality, composite duration and number of interaction scores across nurses for patients ranked using the popularity, ease of nursing and amount of nursing scales are shown in Tables 3, 4 and 5 respectively (see next page).

The trimming and 'Winsorising' process completed prior to analysis ensured that the assumption of homogeneity of variance was fulfilled for 7 of the 9 ANOVAs completed. In the 2 cases where this assumption was not met, the Greenhouse-Geisser correction to degrees of freedom (Hays, 1994; p575) was used to compensate for any positive bias in the F value obtained.

Quality of Interactions

In terms of the quality of interactions with different patients, the results shown in Table 3 revealed an apparent association between the mean composite quality
### Table 3: Mean composite quality scores and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (A), Ease of nursing (B) and Amount of input (C) scales

<table>
<thead>
<tr>
<th>RANK</th>
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<tr>
<td>SCALE</td>
<td></td>
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</tr>
<tr>
<td>(A) Liked Most</td>
<td>2.144</td>
<td>2.141</td>
<td>1.959</td>
<td>1.732</td>
<td>1.698</td>
<td>1.625</td>
</tr>
<tr>
<td>Liked least</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(B) Most easy</td>
<td>2.264</td>
<td>1.950</td>
<td>1.859</td>
<td>1.909</td>
<td>1.824</td>
<td>1.611</td>
</tr>
<tr>
<td>Least easy</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to nurse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Most input</td>
<td>1.900</td>
<td>2.072</td>
<td>1.754</td>
<td>1.646</td>
<td>1.952</td>
<td>1.969</td>
</tr>
<tr>
<td>Least input</td>
<td></td>
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<td></td>
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<tr>
<td>required</td>
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</table>

Table 3: Mean composite quality scores and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (A), Ease of nursing (B) and Amount of input (C) scales.

### Table 4: Mean composite duration scores and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (D), Ease of nursing (E) and Amount of input (F) scales

<table>
<thead>
<tr>
<th>RANK</th>
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<td>SCALE</td>
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</tr>
<tr>
<td>(D) Liked Most</td>
<td>1.755</td>
<td>1.764</td>
<td>1.602</td>
<td>1.647</td>
<td>1.647</td>
<td>1.529</td>
</tr>
<tr>
<td>Liked least</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(E) Most easy</td>
<td>1.858</td>
<td>1.625</td>
<td>1.656</td>
<td>1.725</td>
<td>1.591</td>
<td>1.709</td>
</tr>
<tr>
<td>Least easy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to nurse</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(F) Most input</td>
<td>1.648</td>
<td>1.665</td>
<td>1.581</td>
<td>1.637</td>
<td>1.692</td>
<td>1.793</td>
</tr>
<tr>
<td>Least input</td>
<td></td>
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<tr>
<td>required</td>
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</table>

Table 4: Mean composite duration scores and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (D), Ease of nursing (E) and Amount of input (F) scales.

### Table 5: Mean number of interactions per 10 minute observation block and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (G), Ease of nursing (H) and Amount of input (I) scales

<table>
<thead>
<tr>
<th>RANK</th>
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<tr>
<td>SCALE</td>
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</tr>
<tr>
<td>(G) Liked Most</td>
<td>0.707</td>
<td>0.855</td>
<td>0.715</td>
<td>0.651</td>
<td>0.440</td>
<td>0.561</td>
</tr>
<tr>
<td>Liked least</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(H) Most easy</td>
<td>0.485</td>
<td>0.664</td>
<td>0.685</td>
<td>0.671</td>
<td>0.742</td>
<td>0.644</td>
</tr>
<tr>
<td>Least easy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to nurse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(I) Most input</td>
<td>0.690</td>
<td>0.764</td>
<td>0.774</td>
<td>0.665</td>
<td>0.549</td>
<td>0.487</td>
</tr>
<tr>
<td>Least input</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>required</td>
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</table>

Table 5: Mean number of interactions per 10 minute observation block and standard deviations (SD) for patients ranked from 1 to 6 on the Popularity (G), Ease of nursing (H) and Amount of input (I) scales.
scores and nurses' popularity (A) and ease of nursing (B) rankings. Indeed, consistent with hypothesis 3(a), there appeared to be a downward trend in mean quality scores from those patients ranked at 1 on each of these scales to those ranked at 6. These trends were more obvious when the mean scores were plotted (Figure 3 below) and suggested that those patients who were liked more and who were considered to be more easy to nurse, tended to receive interactions which were of slightly higher quality.

![Figure 3](image)

*Figure 3* Plot of the mean composite quality scores for patients ranked 1-6 on the popularity and ease of nursing ranking scales (1 = most liked/most easy to nurse, 6 = least liked/least easy to nurse.

However, as Figure 3 also reveals, the trend patterns for the two ranking scales were slightly different. Indeed, while the scores for the popularity ranking showed a gradual, fairly linear decrease from rank 1 to rank 6, those for the ease of nursing ranking were less even, showing an initial drop from rank 1 to rank 2 followed by a plateau and a final drop from rank 5 to rank 6.

The significance of the association between the quality of interactions and nurses' rankings of patients was established by the repeated measures analysis which revealed that, in both cases, the apparent differences between scores were approaching significance;
The correlation ratios ($\omega^2$) obtained for the two sets of ranks were 0.15 and 0.13 respectively indicating that nurses' rankings of patients (and thus their attitudes towards those patients) accounted for 15% and 13% of the variance in the quality scores, with the popularity ranking explaining slightly more of the variance than the ease of nursing ranking. In line with the F values obtained, these correlation ratios were suggestive of a small but reasonable association between the behavioural and attitude measures. However, given the small sample size in this study, it is difficult to know whether these results reflect the true extent of the association between nurses' attitudes and the quality of their interactions with patients.

In contrast with the popularity and ease of nursing rankings, no particular trend was evident in the case of the amount of nursing input ranking (C) and no significant effect was found;

Amount of input ranking: $F = 0.85 (5, 42), p > 0.40 (n=10)$

This result was further reflected in the very low $\omega^2$ value of 0.06 obtained.

Duration of Interactions

Consistent with hypothesis 3(b), there also appeared to be an association between nurses' popularity (D) and ease of nursing (E) rankings and the duration of interactions received by patients. However, as Figure 4 (below) reveals, the pattern of the relationship for each of the two sets of rankings was, once again, rather different.

In terms of the popularity ranking, there was a fairly consistent downward trend in
scores for patients ranked 1 to those ranked 6, similar to that observed for the quality scores\footnote{As the range of mean scores relating to the duration of interactions was less than that for interaction quality, the scale of the graph in Figure 4 is increased compared with Figure 3. Thus, differences between points in Figure 4 are slightly more exaggerated.}. This suggests that patients who were liked more tended to receive slightly longer interactions with nurses although the repeated measures analysis indicated that the difference in scores for this set of rankings was not significant;

\textbf{Popularity ranking}: \(F = 1.61 (5,41), p>0.17\) \((n=10)\)

However, the correlation ratio \(w^2\) obtained was 0.13 suggesting that the effect size or level of association between the popularity rankings and the duration of interactions with patients was actually higher than might be expected and comparable with that found for the quality scores.

In contrast, the duration scores for the ease of nursing ranking showed an initial drop from rank 1 to 2 and then appeared to begin stabilising rather than dropping away as rank position increased. This suggests that patients considered most easy to nurse also tended to receive longer interactions than other patients, but that
there was little change in the length of interactions as patients were considered to be increasingly more difficult to nurse. The differences in these scores approached significance;

Ease of nursing ranking: \( F = 2.17 \ (5, 45), 0.05 < p < 0.10 \ (n=11) \),

and a value of \( w^2 = 0.16 \) was obtained, indicating that the ease of nursing ranking accounted for more of the variance in the duration scores than the popularity ranking.

As with the quality scores, no trend was apparent and no significant association was found between the duration scores and the amount of input (F) ranking;

Amount of input ranking: \( F = 0.71 \ (5, 41), p > 0.50, w = 0.07, \ (n=10) \)

Number of Interactions
In contrast with the quality and duration scores, the association between the number of interactions and nurses' rankings of patients was less clear cut. Indeed, although there appeared to be some rather uneven trends within the data, no significant effects were found for any of the three (G,H,I) ranking scales;

Popularity ranking: \( F = 1.85 \ (2.5, 21.1), p > 0.20, \ (n=10) \)
Ease of nursing ranking: \( F = 0.62 \ (5, 48), p > 0.60, \ (n=11) \)
Amount of input ranking: \( F = 1.14 \ (3.7, 32.5), p > 0.30, \ (n=10) \)

However, the values of \( w^2 \) obtained - 0.10, 0.04 and 0.07 respectively - indicated that the popularity ranking accounted for slightly more of the variance in the number of interaction scores (i.e. 10%) than the other two sets of rankings. When the scores for the popularity ranking were plotted (see Figure 5 below), the reason
Figure 5. Plot of the mean number of interactions per 10 minute observation block for patients ranked from 1-6 on the popularity ranking scale (1 = most liked, 6 = least liked)

for this became clear as a somewhat uneven downward trend can be observed within the data. Thus, it is possible that the number of interactions received by patients was also associated with nurses' attitudes towards them (specifically, whether they are liked more or less by a nurse) although, once again, it is difficult to draw any firm conclusions on the basis of such a small sample size.

4.3.5. Additional findings

As described in the method section, some additional information concerning nurses' general attitudes and their interactions with patients was also recorded during the course of the study.

Answers to Part 1 of the questionnaire - Views about paediatric nursing care

The first section of the Paediatrics Questionnaire asked nurses to answer a number of questions about paediatric nursing in general. This section consisted of three parts (see Appendix C), the first two of which (A & B) required nurses to rate four different nursing activities according to (a) how important they considered them to be on a paediatric ward and (b) how rewarding/enjoyable they found them. At a rather simplistic level, these four activities could be viewed as including two 'patient centred' activities (i.e. talking to patients and playing with patients) and
two 'task related' activities (i.e. giving 'basic care', carrying out treatments). The third section (C) involved a similar task, but this time nurses were asked to rate six possible aims and objectives of paediatric nursing in order of importance. These aims and objectives could be basically divided into 'patient centred' (i.e. providing emotional support, being a friend and advocate for patients), 'task related' (treating illness, keeping children clean, dry and comfortable) and other/neutral (keeping patients happy, education).

Although no formal hypotheses were made concerning nurses' responses to these questions, it seemed reasonable to expect that those nurses who obtained higher scores on the PAS (and, therefore, showed a tendency towards a more tolerant/patient-centred attitude) would tend to rate 'patient-centred' activities and aims as more important than 'task related' activities and aims. Conversely, nurses who obtained lower PAS scores might be expected to rate 'task related' activities and aims as more important.

In fact, analysis of nurses' answers indicated that this did seem to be the case. Indeed, with reference to Part A, the mean PAS score for nurses who rated talking to and/or playing with patients as the most important activity was 94.6 (n=7, range 83-100) whereas the mean score for nurses who rated one of the two 'task related' activities as most important was considerably lower at 86.4 (n=5, range 80-90). This difference was statistically significant;

\[
\text{Mann Whitney test: } U = 4.5, (n_1=7, n_2=5), p<0.05
\]

In Part C, all 12 nurses rated either a 'patient centred' or a 'task related' aim as being most important. Furthermore, as expected, the mean PAS score for nurses who highlighted one of the two 'patient centred' aims as being most important was greater at 95.4 (n=7, range 89-100) than the mean for nurses who rated one of the two 'task related' aims as most important which was 85.2 (n=5, range 80-90). Once
again, this difference in mean scores was statistically significant;

\[
\text{Mann Whitney test : } U = 2.0 \ (n_1=7, \ n_2=5), \ p<0.025
\]

The consistency in responses to Parts A and C was very high (i.e. those nurses who rated 'patient centred' activities as most important in part A tended to also rate 'patient centred' aims as being most important in part C) with only 2 nurses 'swapping' from one response set to the other.

In terms of answers to Part B, 10 of the 12 nurses reported finding talking to and/or playing with patients most enjoyable and rewarding. The remaining 2 nurses stated that they most preferred carrying out treatments.

NB Because of time constraints, the analysis carried out on this section of the questionnaire was rather basic and took no account of the total pattern of responses given by nurses. As such, what were very complex and varied opinions about paediatric nursing care are enormously simplified here.

Content of interactions
As mentioned in the method section, information about the purpose or content of interactions between nurses and patients was also recorded during the observation phase. However, while it had seemed relatively easy to categorise the interactions recorded on video for standardising the coding system, in reality interactions were often extremely complex and it proved difficult to accurately and completely code their content. As such the figures below should be treated with caution and really only represent additional qualitative data.

At an anecdotal level, the researcher observed that many interactions between nurses and patients were purely social in nature. While a good proportion of these social interactions were started by patients (see below), most members of staff were
also observed initiating interactions with patients outside the normal nursing routine. In addition, it was clear that many medical/care related interactions were not purely task orientated and that members of staff used such interactions as an opportunity to talk with patients at a 1:1 level.

The rough figures obtained seemed to support this anecdotal evidence as approximately 45% of the 971 interactions observed were coded as being social or as containing a social element. In contrast, approximately 30% of interactions were specified as involving medical/care related contact. Thus, almost half of all nurse-patient interactions had a social component with at least 15% of these interactions occurring outside of the normal nursing routine.

**Initiation of interactions**

As with the coding of the content of interactions, the realities of observational recording meant that it was extremely difficult to note down who initiated every interaction, partly because it was sometimes impossible to specify and partly because so much information was being coded at once. However, at an anecdotal level, both patients and staff were observed to initiate interactions although nurses appeared to establish contact with patients slightly more often. Not surprisingly, it was clear that some patients and some nurses initiated more interactions than others.

As with the results relating to the number of interactions, one factor which seemed to influence how often nurses initiated interactions was grade and responsibility on the ward, with nurses of a higher grade almost inevitably having less time to initiate interactions with patients outside of routine work. In terms of the patients, one important factor was obviously mobility, with the more mobile patients being able to initiate interactions with nurses more easily. However, personality also appeared to play a important role (as some children were more sociable or demanding than
others) as did the amount of time that visitors spent with each patient.

4.4 SUMMARY OF MAIN RESULTS

In summary, nurses' scores on the PAS suggested that their general attitudes towards patients tended to be tolerant/patient centred rather than authoritarian/task orientated and, in contrast to hypothesis (1), there was no significant difference between the attitude scores of nurses with RSCN training and those without. In addition, the PAS scores obtained appeared to be consistent with nurses' responses in section 1 of the Paediatrics Questionnaire concerning paediatric nursing care.

Consistent with hypotheses 2(a), 2(b) and 2(c), no significant association was found between nurses' general attitude towards patients and their overall behaviour in terms of the quality, duration or number of interactions with the whole patient group. However, as predicted in hypotheses 3(a) and 3(b) there did seem to be an association between nurses' attitudes towards individual patients - as revealed by the popularity and ease of nursing rankings - and their interactions with those particular patients. Indeed, although the pattern of scores differed for the 2 sets of ranks, overall downward trends were found in both quality and duration scores as rank position increased, suggesting that patients who were liked more and were perceived as more easy to nurse received interactions which were longer and more positive.

While the associations between these individual attitude and behaviour measures only tended towards statistical significance, the correlation ratios obtained indicated that rank position on both the popularity and ease of nursing ranking scales accounted for a fair proportion (between 13-16%) of the variance of the quality and duration scores. However, it is important to note that the actual
differences in mean scores observed were relatively small.

Finally, in contrast with the findings relating to the quality and duration of interactions, the relationship between nurses' individual attitudes and the number of interactions with particular patients was less clear. Furthermore, the quality, duration and number of interactions did not appear to be associated with the amount of input that each patient was perceived as requiring.
5.1. DISCUSSION OF INDIVIDUAL HYPOTHESES

5.1.1. Hypothesis 1

Those nurses who had received specialist training in the field of paediatric nursing (i.e. who had completed RSCN training) would show more tolerant/patient centred attitudes towards patients than those who had a more general training background or were unqualified, as measured by the Paediatric Attitude Scale (PAS).

As described, this hypothesis was not supported by the results of the present study. Indeed, while the mean PAS score for those nurses who had completed RSCN training was slightly higher than that for nurses who had a more general training or were unqualified, this difference was not statistically significant and the total range of scores was only 20 points. This finding contrasts with similar research in other specialities which has indicated a link between nurses' attitudes and their level of professional training (Altschul, 1972; Gething, 1992; Salmon, 1993), and suggests that there was little difference between the attitudes of those nurses with specialist training in children's nursing and those of the other nurses working on the ward.

There are a number of possible reasons why this result may have been obtained. Firstly, it should be noted that only the total PAS score was used to test hypothesis 1 and no detailed analysis of the response patterns of different nurses (in terms of answers to particular items) was undertaken. Thus, it may have been that subtle differences in attitudes did exist between the two groups of nurses, but that this
was not obvious from the overall scores. In addition, it is obviously possible that nurses did not respond truthfully about their attitudes. As mentioned in the Introduction, attitude scales like the PAS involve self report and disclosure and, therefore, rely to a large extent on the frankness and honesty of respondents. In this case, all nurses scored well above the mid point of the scale (indicating a tendency towards tolerant/patient-centred attitudes) and, while it is feasible that this was an accurate representation of the their attitudes, some nurses may have been influenced by social desirability. In other words, they may have responded as they thought they 'should', giving answers which were consistent with the current philosophy in paediatric nursing rather than their 'real' opinions.

However, it is also possible that the scores obtained were 'real' and did reflect nurses' true opinions and attitudes. As such, it seems important to try to account for the discrepancy between this result and the findings of studies in other specialities (mentioned above) which have indicated greater differentiation between the attitudes of nurses with different professional qualifications. One explanation might be that nurses' attitudes towards paediatric patients are not greatly influenced by specialist training. Indeed, it may be that those people who choose to work with children already tend to possess attitudes which can be considered tolerant/patient-centred and that RSCN training, while obviously providing paediatric nurses with vital knowledge concerning the special needs of child patients, does not actually change these fundamental attitudes to any great degree.

Alternatively, the present results may reflect the fact staff on ward A were a fairly homogenous group in that they had all elected to work in paediatrics. This is important as many studies which have looked at nurses' attitudes have been conducted in very labour intensive specialties, such as geriatrics, where some nursing staff may have been 'deployed' without choice and where, as such, there is more likely to be diversity in terms of attitudes. In fact, Armstrong-Esther,
Sandilands & Miller (1989) found that one of the best predictors of positive nurse attitudes towards the patients in their study (older adults) was expression of a preference for working with this client group. Thus, it may be that the nurses on ward A held similar attitudes because they had all chosen to work in paediatrics.

Finally, it is also possible that the similarity in nurses' scores on the PAS resulted from the influence of 'ward culture'. Both Miller (1979) and Moss (1988) discuss the importance of the common culture shared by nursing staff in moulding the perceptions and attitudes of individual nurses towards different patients and patient groups. Indeed, Moss argues that particular attitudes towards patients may be, 'passed on to successive intakes of nurses through formal and informal channels' (p.617) and, if this is so, it is easy to see how nursing staff working exclusively on one ward might begin to 'converge' in terms of attitude, with less experienced or un-qualified nurses adopting, 'attitudes similar to those of established ward staff' (Miller, p.1931). In the case of ward A, the consistently tolerant/patient-centred attitudes expressed by nurses may, therefore, have been representative of a general culture in which this kind of attitude was encouraged and modelled by the staff in charge.

**Links between PAS scores and other variables**

Although no specific hypotheses were made concerning the links between nurses' scores on the PAS any other variables, it seems appropriate to briefly discuss the two other relationships considered during the study.

*Length of experience in paediatrics*: previous research has produced mixed results in terms of the impact of experience with a particular client group on nurses' attitudes. Indeed, while some researchers have found that attitudes towards patients seem to 'improve' with greater experience (Penner et al, 1984), others have argued that they become less positive as the amount of contact with patients
increases (Wright, 1988). However, once again these studies have tended to focus on services for older adults and it is, therefore, difficult to extrapolate results to paediatrics. In fact, the present study suggested that the length of experience in paediatrics did not influence nurses' general attitudes to any great degree, as no significant difference was found between the PAS scores of nurses who had worked in paediatrics for more than 10 years compared with those of nurses who had less than 10 years paediatric experience.

*Views about paediatric nursing care* - the PAS scores obtained by nurses were also considered in the light of their responses to Section 1 of the Paediatric Questionnaire which was designed to assess opinions about paediatric nursing. As described in the Results section, although analysis of these responses was rather crude, there did seem to be a relationship between nurses' general attitudes towards patients and the importance which they attached to certain nursing tasks and aims, with those who prioritised 'patient centred' activities and aims tending to obtain higher scores on the PAS. These differences in scores were statistically significant and confirm the findings of Armstrong-Esther et al (1989) who reported that nurses who rated 'basic care' tasks as less important held more positive attitudes towards patients. Furthermore, this logical consistency between nurses' responses on the two measures is important in terms of the validity of the PAS, as it implies that the scale did measure attitude along the dimension intended.

**5.1.2. Hypothesis 2**

No association would be found between nurses' general attitudes, as measured by the PAS, and the overall quality, duration and number of interactions with all patients on the ward (see section 2.3. for full specification of hypothesis).

As predicted from the previous research in this field, the correlational analysis employed to test hypothesis 2 revealed no significant relationship between nurses'
general attitudes towards patients and their behaviour in terms of the quality, duration or number of interactions with patients on the ward. This finding is consistent with the results of studies in other specialities which have focussed on the link between nurses' attitudes and behaviour at a general level (e.g. Salmon, 1993, Sanson-Fisher & Poole, 1980), and would seem to suggest that paediatric nurses' overall behaviour cannot be simply predicted form their reported attitudes towards paediatric patients.

However, as discussed in the Introduction, this apparent lack of association between attitudes and behaviour is perhaps less surprising given the way in which both variables were measured. Ajzen & Fishbein (1977) have argued that a strong correlation between attitude and behaviour will only be observed when there is a high level of correspondence between the specificity of the measures used, such that the target, action, context and time elements components of both are equivalent and defined to the same degree. However, in this case (as in the two studies cited above) there was very low specificity correspondence. Indeed, the attitude measure (PAS) was specified in terms of target only ('paediatric patients') whereas the behavioural measures were effectively specified in terms of target ('paediatric patients'), action ('interactions with patients'), context ('ward A') and time ('the period of observation'). Furthermore, it can be argued that the target of the attitude and behaviour measures was actually different, as the PAS referred to all paediatric patients while the behavioural measures related to a subsection of all patients, i.e. those on the ward during the observation phase.

It is, therefore, possible that a relationship would have been found if the measures of attitude and behaviour had been more closely specified. As Stahlberg & Frey (1988) suggest, one way of doing this would have been to make the behavioural measures less specific by considering a greater variety of 'patient-related' activities (e.g. discussions about patients with other nurses), in a greater range of contexts.
(e.g. outpatient clinic). However, the utility of adopting this approach in terms of investigating the significance of attitudes in directing nurses' behaviour towards *individuals* would obviously be rather limited. Thus, it would seem to make more sense to achieve greater correspondence by increasing the specificity of the attitude measure, as was attempted in hypothesis 3 of the present study. Indeed, this second approach is more consistent with the interactionist model of attitudes proposed by Kelly & May, (1982) which, as described in the Introduction, is far more credible in terms of defining nurses' attitudes than the traditional structuralist model on which previous studies have been based.

5.1.3. Hypothesis 3

An association would be found between nurses' attitudes towards individual patients and the quality, duration and number of nurses' interactions with those particular patients. Specifically, it was predicted that those patients who were liked less and perceived as less easy to nurse would have fewer interactions with nursing staff and that these interactions would be less positive and shorter in length (see section 2.3. for full specification of hypothesis).

The ranking scales employed to measure nurses' attitudes and test this hypothesis allowed analysis of the relationship between nurses' attitudes and their behaviour towards patients at a more specific and individual level. Interestingly, before this analysis was completed, it was noted that nurses' rankings of patients on the popularity and ease of nursing scales did not correspond as might be expected. Previous authors have used a variety of expressions to describe how patients might be labelled by nurses, apparently assuming that they are equivalent and that those patients who are perceived to be 'difficult' will also be 'unpopular'. However, the responses of nurses on ward A suggested that this is not necessarily the case, as those patients ranked as being more difficult by nurses were not always liked less. In fact, overall, no significant correlation was found between the two ranking
scales. Without further investigation, it is obviously difficult to know whether this finding reflected the particular characteristics of the nurses on ward A or can be generalised to paediatric nurses or nurses in general. However, given the limited correlation between nurses' popularity and ease of nursing rankings, the data relating to these two scales were analysed separately and are discussed individually below.

**Popularity ranking**

Consistent with hypotheses 3(a), 3(b) & 3(c), there did seem to be an association between nurses' attitude towards individual patients in terms of patient popularity, and the quality, duration and number of interactions with those individuals. In the case of the quality of interactions, this association was characterised by a fairly consistent linear downward trend in scores in the direction predicted, suggesting that those patients who were liked more tended to receive interactions with staff which were more positive in nature than those received by patients who were liked less. Furthermore, although the pattern of scores was rather less consistent for the duration and number of interactions (possibly because of the influence of random error - see section 5.2.1), the overall trends for these measures were similar, implying that patients who were liked more also tended to receive a greater number of interactions with staff and that these interactions were longer than those for patients who were liked less.

While statistical analysis indicated that the association between nurses' rankings and the behavioural measures was only approaching significance in the case of the quality scores, the correlation ratios calculated suggested that ranked position (and, therefore, the degree to which each patient was liked) accounted for 15% of the variance in the quality scores, 13% in the duration scores and 10% in the number of interaction scores. These values were felt to be indicative of a reasonable relationship between nurses' attitudes and their interactions with patients,
especially as the small sample size involved may have reduced the magnitude of the effects and the significance of the results.

Ease of nursing ranking

As predicted in hypotheses 3(a) & 3(b), associations were also found between the quality and duration of nurse-patient interactions and nurses' attitudes in terms of the extent to which patients were considered more or less easy to nurse. However, while both these associations were found to be approaching significance and produced correlation ratios of 13% and 16% respectively, the patterns of scores were rather less straightforward than those predicted or observed for the popularity rankings.

In terms of the quality of interactions, while an overall downward trend in scores was observed (with patients who were considered more easy to nurse tending to have more positive interactions with staff), there seemed to be a plateau between rank positions 2 and 5. This suggests that patients in these middle ranks received interactions of a similar quality which was lower than that of those patients who were perceived to be more 'easy' to nurse but higher than that of patients who were considered more 'difficult'. While it is possible that this pattern is an artefact resulting from random errors in the data (see section 5.2.1), a further explanation for the plateau is that it indicates of a group of patients who were not perceived as being particularly easy nor particularly difficult to nurse and who thus received interactions which were of intermediate quality. Such individuals have been described by Dingwall & Murray (1983) as 'ordinary' patients who tend to pass through wards and units without provoking particular responses from nursing and medical staff or being labelled as 'good' or 'bad' patients.

The pattern of scores relating to the duration of interactions was somewhat different, showing an initial drop from rank 1 to 2 followed by scores which
oscillated around this lower level. Thus, in contrast with the quality scores, no drop in the duration of interactions was observed for those patients ranked as being least 'easy'. Although this pattern might again be explained, in part, by the existence of a group of 'ordinary' patients who occupy the middle ranks in terms of nurses' attitudes and receive interactions of intermediate duration, this theory does not account for the fact that no reduction in duration scores was observed for those patients considered the least easy to nurse.

A possible extension to this theory is, therefore, that factors other than attitudes were very influential in directing the duration of nurses' interactions with those patients perceived to be least easy to nurse. Such factors might include the professional sense of duty discussed in the Introduction which may have encouraged nurses to spend more time with the most 'difficult' patients. This would fit with Fishbein & Ajzen's (1975) model of attitudes which incorporates the idea of social norms and expectations into the attitude-behaviour equation. However, given that nurses' interactions with more 'difficult' patients were found to be less positive, it is also possible that the amount of time spent with such patients was crucially determined by their behaviour. In other words, those patients who were perceived to be least easy to nurse may have actually demanded (either directly or indirectly through 'naughty' or 'disturbed' behaviour) increased attention from nurses.

Finally, in contrast with hypothesis 3(c), no substantial association was revealed between the ease of nursing ranking and the scores relating to the number of interactions with patients. This would, therefore, seem to suggest that nurses' attitudes regarding the extent to which patients were more or less easy to nurse had no bearing on the number of nurse-patient interactions observed. As with the duration scores, this may have been because the number of interactions was strongly influenced other factors such as patients' behaviour or the nature of their
illnesses. However, in this case, the situation was further complicated by the fact that the scores relating to the number of interactions were confounded by patterns of interaction initiation.

Indeed, although nurses may have chosen not to initiate interactions with patients who they considered to be less easy to nurse, those patients were obviously free to initiate interactions with nursing staff. Thus, while the total number of interactions recorded may have appeared similar for all patients, the actual proportion of interactions initiated by nurses may well have varied according to how 'easy' or 'difficult' patients were perceived to be. However, because of the lack of consistent information about who initiated nurse-patient contacts (see section 4.4.3), the interactions initiated by patients could not be taken out of the analysis and the element of hypothesis 3(c) relating to the ease of nursing ranking could not really be tested fully12.

Summary and general comments

In summary, the results of the present study seemed to be generally consistent with hypothesis 3. Indeed, although no real relationship was observed between the ease of nursing ranking and the number of interactions with patients, modest associations were found between the other variables specified in the hypothesis, with correlation ratios ranging between 0.10 and 0.16. Nevertheless, the patterns of scores obtained suggested that the exact nature of the relationships between nurses' attitudes and the behavioural interaction measures was rather complex, especially in the case of the ease of nursing rankings.

Although the actual differences between scores for the patients ranked in different positions were relatively small, these findings are important as they suggest that

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12 This confounding of information might also account for the slightly lower correlation ratio of 0.10 observed for the association between the popularity ranking and the number of interactions.
nurses' interactions with individual patients may well be influenced by their attitudes. Furthermore, in combination with the results pertaining to hypothesis 2, they imply that the attitudes of relevance in terms of predicting behaviour are those towards individual patients (in terms of the extent to which patients liked and are considered more or less easy to nurse), not general attitudes towards the patient group as a whole. As such, these results are clearly in keeping with the interactionist ideas of Kelly & May (1982).

It is tempting to assume that the correlation ratios obtained could be summed to give an overall estimate of the proportion of the variance of the quality, duration and number of interaction scores explained by the two attitude ranking scales. However, despite the fact that no significant correlation was found between the scales, they were inevitably related to some degree and, as such, some of the variance in scores would probably have been shared between them. Thus, without completing a full regression analysis or partialling out one set of data - something which was not attempted because of the small sample size - it was difficult to assess the true strength of the association resulting from the two ranks combined.

Finally, with reference to previous research, these results seem to confirm the findings of Stockwell (1972), Fielding (1986) and Jeffery (1979), who all reported a link between nurses' evaluations of patients and their behaviour on the ward. However, the findings are not consistent with those of Tucker et al (1991) whose research - concerning nurses' attitudes and nurse-patient interactions in an outpatient haemodialysis unit - was perhaps most similar in terms of methodology to the present study. Indeed, Tucker and colleagues also measured nurses' attitudes in terms of individual patient popularity (using a Likert format inventory instead of rankings), but found no significant association between these attitudes and the quality of nurse-patient interactions. However, this negative result may have been due to the use of a rather insensitive measure of interaction quality and also the
Likert attitude inventory which may have allowed nurses to be more conservative in their discrimination between patients.

5.2. METHODOLOGICAL AND INTERPRETATIONAL ISSUES

As has already been observed on a number of occasions, there are a variety of factors which complicate the interpretation of the present results, the majority of which relate to the study design and methodology. These are discussed in more depth below.

5.2.1 Sample size and selection

The issue of sample size has been mentioned in passing a number of times. In fact, this is an extremely crucial issue in the interpretation of the findings as the very small sample size of 12 nurses would have inevitably increased the potential for the results to be affected by random errors and random sample variation. As such, the size and significance of the effects observed may have been reduced and it is difficult to assess whether the patterns of scores observed are reliable.

For example, the associations found in relation to hypothesis 3 were fairly modest in nature and, although some apparently approached significance (with a probability of between 0.05 and 0.10), others were clearly non-significant. However, because of the small sample size, it is impossible to gauge whether these results are likely to be 'correct' and represent the real levels of association between the variables involved or whether, with a larger sample, the strength and significance of the associations would be increased. Thus, it is obviously essential that the results are treated with a great deal of caution and that this study is seen as a pilot to guide future research (involving a larger sample size) rather than a definitive account.
Further difficulties in the interpretation of the results arise from the selection of the sample of nurses. As mentioned, the sample was effectively pre-selected in that the nurses involved were those who happened working during the observation phase. Thus, while this group was considered to be fairly representative of the whole staff team of ward A, it is possible that the results obtained are biased and may not be generalisable to the other nurses from ward A. In addition, it cannot be assumed that the results will generalise to all paediatric nurses or to nurses in general. In fact, it is quite possible that paediatric nurses working in a general hospital setting (as in this study) are very different in terms of attitude and behaviour from those based in specialist children's hospitals, especially given the potential effects of 'ward culture' discussed above (Miller, 1979; Moss, 1988). Furthermore, at a statistical level, it is important to note that the statistic \( w^2 \), the correlation ratio, is purely descriptive and refers only to the sample from which it is calculated (Hays, 1994, p403). Once again, replication of the study with a larger and broader sample would, therefore, be necessary to confirm the findings and check their consistency across other populations of paediatric nurses.

5.2.2 Mediating variables

The issue of the influence of other variables has already been mentioned with reference to the possible impact of factors other than attitudes on nurses' behaviour. However, given that so many variables have been identified as influencing nurses' attitudes (e.g. Johnson & Webb, 1995; Kelly & May, 1982) and their behaviour towards patients (e.g. Hodges et al, 1986; Moss, 1988; Woods & Cullen, 1983), the results of the present study may be further complicated by the fact that some of these variables may have an independent effect on both attitudes and nurse-patient interactions. In other words, it is possible that the findings actually reflect the impact of uncontrolled, 'mediating' variables which may have suggested the presence of associations where none existed.
For example, the results described here could be interpreted as indicating that variables such as the age of patients (which has previously been found to affect nurses' attitudes towards patients - see Altschul, 1972, Papper, 1970) influence nurses' attitudes towards particular individuals which, in turn, determine the nature of their interactions with those patients. However, it is also feasible that the age of patients might influence nurses' attitudes and behaviour separately, impacting on both directly without reference to the other. Thus, as the age of patients was not controlled in this study, it is possible that the associations found between attitude and behaviour towards individual patients were due to the influence of this third variable, age, on both. This situation is represented in Figure 6 (next page) which shows a variety of variables which may have affected nurses' attitudes and behaviour and which illustrates those which the researcher feels were potentially mediating.

As Hays (1994) discusses, one way of dealing with the influence of such mediating variables is to control for them (by holding them constant) and to observe the effect of this control on the association in question. Alternatively, such variables can be controlled statistically by measuring and partialling them out of the analyses. However, the context of the present study and the small sample size involved meant that such procedures were difficult to apply, again indicating the need to treat the results with caution and for further research in this area.

In addition to these so called mediating variables, the results may also have been influenced by factors affecting the stability of the attitudes held by nursing staff. Regan & Fazio (1977) found that the strength of the association between students' attitudes and behaviour was determined by the amount of direct experience that each student had had of the attitude object in question and hypothesised that this was because greater experience increased the clarity and stability of the students'
Figure 6 Variables affecting paediatric nurses' attitudes and behaviour towards patients (including potentially mediating variables)
attitudes. In a similar way, in the present study, it could be argued that increased experience with particular patients may have resulted in greater consistency between the attitudes and the behaviour of nurses on the ward. As such, the degree of familiarity of patients (which, as mentioned, was extremely diverse) may have greatly influenced the results and should be controlled in future studies.

5.2.3 Design

A further difficulty in terms of interpreting the results of the present study relates to the designs employed. In particular, it should be noted that the methods used to test the strength of association between the various attitude and behavioural measures give no indication of the direction of causality with respect to these two variables. Thus, although it has been generally assumed throughout the study that nurses' attitudes guided their behaviour with patients, it is equally possible that the experience of interactions with patients influenced their attitudes. For example, while one interpretation of the results concerning the link between nurses' attitudes and the duration of interactions with patients is that nurses spent longer with patients that they liked, an alternative perspective is that having longer interactions with certain patients made nurses' perceptions of those individuals more positive.

In fact, as Kelly & May (1982) indicate, it seems likely that the situation is actually even more complex. Indeed, in an effort to simplify the methodology of the present study, the observational data collected was limited to that concerning the behaviour of nurses during interactions with patients. Nevertheless, in reality, patients clearly have a significant role in such interactions and are not just passive receivers of nurse behaviour. Thus, it seems inevitable that some kind of feedback loop exists between nurses' attitudes, their experiences of interactions with patients and their individual responses to those patients on the ward. This idea is represented graphically in Figure 1 (see Introduction) and illustrates the limitations of the present study which attempted to stop and analyse one element in what is
necessarily a very complex and ever changing system. In addition, this proposed re-

negotiation of nurses' attitudes on the basis of their interactions with patients

places doubt on the significance and meaning of causality in this field of research,

and suggests that it is perhaps enough to identify where associations exist between

attitudes and behaviour and to encourage discussion about the implications of

such associations for nursing practice.

5.2.4 Measures

Given that the accuracy of the results of any study depend on the validity and

reliability of the measures used to gather data, it also seems important to consider

the benefits and limitations of the variety of measures used in the present study.

Paediatric Attitude Scale

As described in the Method section, the PAS was developed by the researcher and

piloted quite extensively to help maximise its validity and reliability. Nevertheless,

had more time been available, it would obviously have been beneficial to conduct

further analysis of the scale (including other qualities such as test-retest reliability)

and to pilot it on a larger sample of nurses. In fact, due to the lack of relevant

external criteria, the validation process involved item analysis which helped to

reveal the attitude statements in the scale which were most consistent in terms of

discriminating between nurses. As a result, while the PAS can be considered

internally valid, there is no certainty that it also has external validity and tapped the

attitude dimension required (e.g. tolerant -> authoritarian). However, the apparent

correspondence between nurses' scores on the PAS and their responses to Part 1 of

the Paediatric Questionnaire (see section 4.4.1) suggested that the scale did

distinguish nurses along the dimension intended.

In terms of nurses' reactions to the PAS, most found it relatively easy to complete

and a number of nurses commented that it was thought provoking. In contrast,
some nurses reported difficulty in completing the scale because they felt it assumed a rather simplistic perspective and left no room for individual differences and unique circumstances. While this is perhaps inevitable given the nature and purpose of the scale, these comments were interesting and illustrated what has been argued throughout this paper; that it is almost meaningless to ask nurses about their general attitudes as their behaviour on the ward is far more likely to be guided by the specifics of each individual situation, including their attitudes towards those particular patients involved.

Ranking scales
The ranking scales seemed to work well and 11 of the 12 nurses involved in the study felt able to complete them all as requested. The member of staff who did not complete them reported difficulty in distinguishing between the patients named on all but the ease of nursing ranking and, as a result, the data relating to this nurse was not included in the other analyses.

However, this difficulty is important as it illustrates a limitation of the ranking scales which may have affected the results obtained. This limitation relates to the fact that the scales imply an equal 'distance' between each of the six ranks. Indeed, because nurses were asked to rank patients relative to each other, one might be tempted to assume that an equivalent difference exists between each of the six patients in terms of the attitude in question. However, this is not necessarily the case and the ranks give no information about the real extent of the difference between patients in terms of nurses' attitudes towards them. While this characteristic of the ranking scales was obviously countered somewhat by the use of the within-subject design, it may have increased the overall variability of scores and, therefore, reduced the size of the associations between ranked position and the behavioural scores.

A solution to this difficulty would be to use a rating rather than a ranking scale to
measure nurses' attitudes towards individual patients. An example of such a rating scale is the visual analogue scale designed by Marshall (1985) which required nurses to mark a 100mm line to indicate the degree to which they enjoyed caring for particular patients. This line was labelled "I enjoy caring for this patient" at one end and "I do not enjoy caring for this patient" at the other and scores were obtained by measuring the distance between nurses' marks and one end of the scale. This kind of approach to measurement would obviously give a separate rating for each patient and would, therefore, overcome the problems encountered by using ranking scales. However, the visual analogue also has its limitations, not least of which is the potential for nurses to be rather cautious and conservative in their ratings and for all patients to receive similar scores. Indeed, it was for this reason that the ranking system was chosen in the present study as this 'forced' nurses to distinguish between individual patients.

It is also important to recognise that the patients selected for ranking may have been a biased population. Indeed, as the selection procedure was designed to maximise the accuracy of the quality and duration scores, it biased selection towards patients who had had more interactions with nurses. Thus, although the effect of this selection bias was minimised by asking nurses to rank patients relative to each other, it is possible that the group of patients chosen for ranking were different in some way from the other patients observed (either in terms individual characteristics or their relationships with staff). As such, the results obtained may not be representative of nurses' interactions with all patients.

Finally, because nurses were each required to rank a different set of 6 patients, it was not possible to formally assess whether a shared concept existed amongst paediatric nurses in terms of patients who were liked/disliked or considered 'easy'/'difficult' to nurse. However, there were some children who were on the ward for the whole of the observation phase and who appeared on the lists of most
nurses. It was, therefore, possible to make some kind of analysis of the similarity between individual nurses' attitudes. In fact, the available data suggested that nurses had very different patient preferences and opinions about which patients were most/least easy to nurse. As the interactionist model (Kelly & May, 1982) would predict, this implies that there was no shared concept of a 'good' or 'bad' patient and that patient evaluation occurred at an individual level.

**Behavioural interaction measures**

In general, the coding systems devised to collect the behavioural data were easy to use and allowed quite detailed analysis of nurses' interactions with patients. As described, the quality coding system used was far more sensitive than in previous studies (e.g. Salmon, 1993; Tucker et al, 1991) and was tested for reliability prior to formal observation. The duration and number of interactions were obviously fairly straightforward to assess, although the use of a coding system allowed the duration to be recorded more easily.

However, there were a number of difficulties with the recording and coding of interactions which should be noted. Firstly, given the amount of information that was recorded about each nurse-patient interaction, there were times - particularly when interactions occurred in quick succession - when codes had to be chosen very rapidly and may have been incorrectly applied. In fact, the reliability of coding could have been increased by using video recordings of interactions throughout the study but, as discussed, this was considered to be too intrusive and likely to increase the reactivity of both nurses and patients to recording.

In addition, although a gap of .5 seconds was defined as indicating the end of an interaction, it was sometimes difficult to decide when one interaction had finished and another had begun, especially if successive interactions occurred with the same patient. Some interactions may also have been missed altogether because a nurse...
was temporarily out of sight. Finally, as mentioned in the results section, the data relating to who initiated each interaction and to the content of interactions proved impossible to collect consistently and reliably. As a result, it was only used to provide additional, qualitative information.

There were also a number of potential problems with the measures generated from this observational data. For example, the measures of interaction quality and duration were effectively average scores and were, therefore, inevitably influenced by the total number of interactions. As such, the composite scores calculated for nurse-patient dyads where relatively few interactions had been observed may have been less accurate. Although this was not an issue in the case of the number of interaction scores, this final measure was complicated by the fact that interactions were initiated by both nurses and patients.

5.2.5.Clinical significance
The final issue relating to the interpretation of results is that of the clinical significance of the findings. Indeed, it is arguable that the apparent association between nurses' attitudes towards and behaviour with individual patients is only important if those patients who were liked less and considered more difficult to nurse actually suffered as a result. In fact, although some researchers have claimed that the effect of such differential behaviour towards patients can be extremely detrimental (Stockwell, 1972), the relatively small differences between scores for individual patients observed in the present study suggest that this was less likely to be the case on ward A. However, this issue cannot be resolved without further research concerning the actual impact of nurses' behaviour on patients, an area to which this study did not extend.
5.3. GENERAL CHARACTERISTICS OF NURSES' INTERACTIONS WITH PATIENTS

Given the apparent lack of recent research concerning the relationships between paediatric nurses and their patients, it seems important to also include a more general discussion about the nurse-patient interactions observed on ward A.

In fact, the nurse-patient behaviour observed compared very favourably with the results of the few previous studies discussed in the Introduction. Perhaps most importantly, almost half of all interactions observed involved a social element. This is in stark contrast to the findings of Hawthorn (1974), Stacey et al (1970), J.C. Smith (1976) and Cleary (1977), who all described little spontaneous contact between paediatric nurses and patients and also reported that most interactions in the context of routine nursing tasks. In addition, Pill (1970) found that, 'nurses' conception of their role did not include playing with or talking to children on the ward' (p.125), something which was not borne out by the results of the present study in terms of the observational data or nurses responses to Part 1 of the Paediatric Questionnaire.

As mentioned in the Introduction, no previous research could be found which measured the quality of interactions between paediatric nurses and patients. As such, the results relating to quality can only be compared to the findings of studies in other specialities. In fact, although it is recognised that a more sensitive method of coding quality was used than has been described in previous studies, the results again compared very favourably. For example, both Tucker et al. (1991) and Salmon (1993) - who studied nurses' interactions with dialysis and elderly patients respectively - reported that most interactions observed were coded as 'neutral'. In contrast, the vast majority of interactions in the present study were coded as positive, with a large proportion of these scoring +3 or +5.
The results concerning the duration of interactions between nurses and patients are similar to those reported by J.C. Smith (1976) who found the average length of nurse-patient contacts to be less than 1.5 minutes. While there are inevitably many factors which affect the length of time that paediatric nurses spend with patients (one of which seems to be attitudes towards those patients!), this similarity may reflect a long standing pressure on nurses to be 'busy'. In the past, being 'busy' as a nurse meant not spending a great deal of time talking to patients and their families. Indeed, Stockwell (1972) reported that nurses' in her study, 'felt guilty if they "chatted" to patients because their colleagues would think they were slacking' (p.59). Although this attitude has clearly changed in recent years, the pressure to look 'busy' may still felt by nurses. Alternatively, the fairly short duration of interactions may simply reflect the great demands on paediatric nursing staff which were very obvious during the observation phase.

In terms of the number of interactions with patients, the method of recording used in this study (i.e. observing nurses for blocks of 10 minutes) precluded any meaningful comparison with the findings of previous research. However, at a general level, the overall scores obtained revealed a great deal of variability in the number of nurse-patient interactions between nurses. As discussed in the Results section, this variability seemed to relate to nurses' professional grade, with nurses at lower grades apparently having more interactions with patients than those at higher grades. In fact, this is not really surprising given the different roles of nurses on the ward, as one might expect those of a higher grade to have more responsibility (in terms of administration, management, supervision, technical procedures etc.) and, therefore, less opportunity to become involved in interactions with patients. In contrast, nurses at lower grades tend to become more involved with basic care tasks, etc., a role which inevitably increases their contact with patients.
Bearing in mind the issue of sample size and context discussed in the previous section, it is obviously not possible to generalise these findings concerning the general characteristics of nurse-patient interactions to paediatric nurses elsewhere. However, the results clearly suggest that, on ward A at least, paediatric nurses are now more patient-centred in their approach to nursing.

5.4 CONCLUSIONS

In conclusion, the results of the present study tentatively support the notion that nurses' attitudes towards patients are associated with their behaviour in terms of the quality, duration and, to a lesser extent, the number of interactions with patients. However, consistent with the interactionist model proposed by Kelly and May (1982), the findings indicate that this is only the case when nurses' attitudes and behaviour are considered and measured at an individual patient level. As discussed, a variety of factors mean that it is difficult to assess whether the modest associations found represent the true strength of the relationship between nurses' attitudes towards individual patients and their behaviour with those individuals, and further research will obviously be required to help confirm this issue. Further research will also be essential to establish the precise nature of the relationship between different elements of nurses' attitudes (e.g. the extent to which a patient is liked, the extent to which a patient is considered easy/difficult to nurse) and nurse-patient interactions, and to check that these findings can be generalised to paediatric nurses working in different settings and also to nurses in other specialities.

At a more general level, the results suggest that the patient-centred attitude towards patients currently advocated throughout the nursing profession is held by the paediatric nurses who were involved in this study. In addition, the findings
identify an apparent change in paediatric nursing practice from that observed in the 1970s by a number of other authors. Indeed, observations on ward A suggested that paediatric nurses are now also far more patient-centred in their approach to patients and are generally sensitive to the whole range of needs (both physical and emotional) of children in hospital.

Finally, while it is recognised that it is not the place of the researcher to dictate how nurses should or should not respond to the findings of this study, it seems important to consider their general implications for the nursing profession, and specifically for paediatric nurses. Fundamentally, the results suggest that paediatric nurses should not assume that their attitudes towards patients are unrelated to their behaviour, and perhaps indicate the need for staff to be mindful of this. In addition, they may imply the need for a very flexible approach to allocation of named or primary nurses, as discussed by Stower (1992), to ensure that the positive nature of the relationship between children and those nurses in charge of their care is maximised. Having said this, given the generally positive nature of nurse-patient interactions and the relatively small differences in nurses' interactions with individual patients on ward A, the need for extensive action to address these findings is somewhat debatable and will obviously depend on the results of subsequent research concerning the impact of such differential treatment on children's experience of hospitalisation.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

The scale of the present study was such that it can really only be thought of as a pilot project and replication will obviously be important to confirm its findings. As mentioned, such replication would obviously benefit from the use of a much larger sample and should extend analysis to a wider range of paediatric nursing settings.
In addition, although there are clearly many factors to consider in relation to nurses' attitudes and their behaviour, increased control over the potentially mediating and confounding variables identified here would also be essential.

Future research must also consider the actual effect on children of differential treatment by nurses. As discussed, in the present study, it was impossible to assess whether the slight differences in interactions between nurses and individual patients meant that some children had a less positive experience of hospitalisation. Subsequent studies must, therefore, focus on the experience of paediatric patients in nurse-patient interactions in order to establish whether or not this is the case. In fact, given that individual nurses showed different preferences for patients, it seems likely that children will always find at least one nurse with whom they get on well, something which may actually mitigate against the impact of less positive interactions with other nurses.

In addition, researchers should further consider the issue of family centred care and the impact that the implementation of this philosophy may have on the attitudes and behaviour of paediatric nurses. Although the majority of paediatric nurses seem to support the concept of family-centred care, a variety of authors have emphasised the difficulties it can create for both parents and nursing staff in terms of role negotiation (e.g. Pill, 1970). As such, the relationship between nurses and family members (particularly parents) is also important, and future studies may also wish to consider the significance of nurses' attitudes towards parents in moulding their evaluations of and behaviour towards patients on the ward.

In summary, the effect of nurses' attitudes and behaviour on children's experience of hospitalisation remains an important area of study. Future research will hopefully extend our understanding still further and allowing continuing efforts to be made to maximise the quality of care on paediatric wards.
APPENDICES

APPENDIX A
STAFF INFORMATION LETTER

To: All Nursing Staff

Dear Colleagues,

As you may already know, I am currently conducting a research project looking at children's experience of hospitalisation and how this relates to the perceptions and views of paediatric nurses. As part of this project, I am going to be spending some time on Ward observing the behaviour of both nursing staff and children. Following this observation period (from the 5th to the 18th of December), I hope to spend some time with each member of staff and will be asking you to complete a short questionnaire giving information about your ideas and perceptions of paediatric nursing and patients. The information obtained from this questionnaire will be kept in the strictest confidence and the answers of individual nurses will not be disclosed or reported in the research write up.

In order to help me plan the best method of observation, I need to make some video recordings of activity on the ward. I am therefore planning to do a days 'filming' on Ward on the 4th November. The video recordings will be brief and I will endeavour to be as unobtrusive as possible. The tapes may be viewed by my research supervisor (Andre Delwiche, Clinical Psychologist) but will otherwise be treated as confidential and will be erased at the end of the project.

Although I am not able to give full details of what I will be observing at this stage (as this may affect the results), I will report back to you and discuss my findings with all members of staff once the project is completed in the New Year. For your reassurance, I would emphasise that my study is concerned with general patterns of behaviour and will not focus on individual nurses or patients. In addition, the project will not involve monitoring the performance of nursing staff and is not an audit of the ward.

I will obviously be gaining consent from the children and parents on the ward during the filming and the observation period, but I also wanted to check that you, the nursing staff, are kept informed about what is what is happening and are happy for me to go ahead with the study. If you do have any concerns or queries about the project do not hesitate to contact me on 0934 643733 (work) or 0272 738916 (home) or grab me when I am on the ward.

Yours sincerely

Liz Curtis
Trainee Clinical Psychologist
Dear Parents,

I am currently conducting a research project looking at different behaviours of both nurses and children on children's wards. It is hoped that the findings of this study will increase our knowledge about children's experience of hospitalisation and, as a result, help us to enhance the care provided for them in hospital.

As part of my research I will be spending some time on ward observing nurses and children and I would be very grateful if you would consider allowing me to include your child in the study. For your information, as the study is concerned with general patterns of behaviour on the ward, the observation will not focus on the behaviour of particular children and no child will be identified in the research write-up. In addition, the way in which I plan to observe children and staff will be as unobtrusive as possible and will not in any way affect your child's care while in hospital.

You are under no obligation to agree to your child being included in this study - participation is entirely voluntary. If you are unsure about whether your child should be included or would like to know more about the study, do not hesitate to contact me via a member of the nursing staff. However, if you are happy for your child to be included, please sign the consent form at the bottom of this letter and give it to the ward sister.

Thank you for your co-operation.

Liz Curtis
Trainee Clinical Psychologist

I/we give permission for my/our child to be observed while resident on Ward .

Signed ....................................................
Dear Parents,

I am currently conducting a research project looking at different behaviours of both children and nurses on children's wards. It is hoped that the findings of this study will increase our knowledge about children's experience of hospitalisation and, as a result, help us to enhance the care provided for them in hospital.

As part of this research I will be spending some time observing nurses and children on ward and, prior to starting the study, I need to make some video recordings of activity on the ward to help me plan the best method of observation. I would therefore be very grateful if you would consider allowing your child to be recorded on video for this purpose.

For your information, the video recordings will be brief and as unobtrusive as possible, and will not in any way affect your child's care while in hospital. In addition, because my research is concerned with general patterns of behaviour, particular children's behaviour will not be analysed or assessed and no child recorded on video will be identified or discussed in the research write-up. As it is often helpful to check the design of a research project with a colleague, the recordings may be viewed by my research supervisor (a Chartered Clinical Psychologist) but will otherwise be treated as strictly confidential. All tapes will be erased at the end of the project.

You are under no obligation to agree to your child being recorded on video - participation in this study is entirely voluntary. If you have any concerns or queries about the project or are unsure as to whether to include your child, please do not hesitate to contact me via a member of the nursing staff. However, if you are happy for your child to be included, please sign the consent form at the bottom of this letter and give it to the ward sister.

Thank you for your co-operation.

Liz Curtis
Trainee Clinical Psychologist

I/We give permission for my/our child to be recorded on video while resident on Ward .

Signed .........................................
APPENDIX B
ATTITUDE STATEMENTS

ORIGINAL ITEM POOL

(1) Children should be encouraged to stick to a strict routine while in hospital.

(2) I find it easy to like all children that come onto this ward.

(3) Paediatric nurses should encourage children to talk about their feelings and worries about being in hospital.

(4) Obedience is very important in children.

(5) The parents of most paediatric patients look after their children well.

(6) A child who is cheeky to nursing staff should not be allowed to get away with it.

(7) Working with children is very refreshing.

(8) It's best for a child with a problem or illness not to think about it, but to keep busy with more pleasant things.

(9) Some parents should take more interest in their children while they are in hospital.

(10) It is important to tell children about what will happen to them while they are in hospital.

(11) It is annoying if a child on the ward has too many visitors.

(12) Working with children is interesting and personally rewarding.

(13) Children in hospital ask too many questions.

(14) Paediatric patients need a lot of care and attention.

(15) Children who receive a lot of attention turn out to be spoiled.

(16) Children are fun to do things with

(17) It is important for children to have their parents with them as much as possible while they are in hospital.

(18) A paediatric nurse should never give in to a child.

(19) Most children on the ward are from good, sensible homes.

(20) Paediatric patients should not question the nurses.

(21) It is important that paediatric nurses are honest and open with patients and their families.

(22) The parents of paediatric patients are often angry and demanding.

(23) Paediatrics is not a particularly interesting specialty.

(24) Children in hospital often experience emotional or psychological difficulties.

(25) Paediatric nursing is intellectually stimulating.
(26) It is very important that paediatric patients are given time to talk about their illness while in hospital.

(27) It is not a good idea for paediatric nurses to get too involved with children or their families.

(28) Paediatric patients are often deliberately difficult and unco-operative.

(29) It is important for nurses to spend time talking and playing with children on the ward.

(30) Children are very manipulative and will twist you round their little fingers if you are not careful.

(31) Children are really just 'mini-adults'.

(32) It is important that children feel able to ask questions while in hospital.

(33) The parents of some children in hospital take advantage of the system.

(34) You should think twice before prompting a child to talk about his/her anxieties or problems as this may stir up emotions that are difficult to cope with.

(35) Paediatric nurses should be firm but flexible in their approach to children on the ward.

(36) Many parents do not discipline their children properly while they are on the ward.

(37) Children's opinions should be valued.

(38) Being too friendly with children on the ward makes for bad discipline.

(39) A paediatric nurse should never make his/her emotions obvious to a child or their family.

(40) Children who mis-behave while in hospital usually have an underlying difficulty that they cannot communicate to staff.

(41) The parents of children in hospital are often anxious and upset.

(42) It is better if children are not told what will happen to them in hospital.

(43) It is good practice for paediatric nurses to become closely involved with patients and their families.

(44) Most children on paediatric wards are attention seeking.

(45) Parents should be encouraged to do as much as possible for their child while they are in hospital.

(46) Paediatric patients have very different needs than adults in hospital.

(47) When parents are on the ward, they often get in the way.

(48) Coming into hospital is a traumatic experience for children.
**INTER-ITEM ANALYSIS**

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APPENDIX C
PAEDIATRICS QUESTIONNAIRE

This questionnaire is designed to survey the views and perceptions of nurses working with children in a paediatric setting.

For your information, I am in sole control of collecting and analysing the data obtained from the questionnaires and once I have taken the information I require for my project, each questionnaire will be destroyed. You do not have to write your name anywhere on the questionnaire - it can only be identified by a confidential number. Information given by individual nurses and details about particular children will be treated as strictly confidential and WILL NOT be disclosed to anyone else.

As I am interested in your real feelings and ideas, please answer all questions honestly without worrying about what you feel you ought to say. If you have any questions while you are completing the questionnaire, please feel free to ask.

I would be grateful if you could avoid discussing your answers with others. Thank you for your help.

Liz Curtis
Trainee Clinical Psychologist

PART I
VIEWS ABOUT PAEDIATRIC NURSING CARE

(A) Please rank the following nursing activities in order according to how important you feel they are generally on a paediatric ward by placing 1-4 in the boxes provided (1 = most important, 4 = least important). Each number should be used once only.

(a) Giving 'basic care' such as helping children to wash themselves, making beds, assisting patients with eating and drinking etc. □

(b) Talking to children and their families. □

(c) Playing with children. □

(d) Carrying out treatments such as dressing wounds, giving medication, etc. □

(B) Please rank the following nursing activities in order according to how rewarding and enjoyable you find them, by placing 1-4 in the boxes provided (1 = most rewarding, 4 = least rewarding). Each number should be used once only.

(a) Carrying out treatments such as dressing wounds, giving medication, etc. □
(b) Giving 'basic care' such as helping children to wash themselves, making beds, assisting patients with eating and drinking etc.

(c) Talking to children and their families.

(d) Playing with children.

(C) Please rank the following nursing aims and objectives in order according to how important you feel they are when working with children, by placing 1-6 in the boxes provided (1= most important aim, 6= least important aim). Each number should be used once only.

(a) Treating children's illnesses.

(b) Keeping children clean, dry and comfortable and ensuring adequate nutritional intake.

(c) Providing emotional support for children and their families.

(d) Educating children and their families about illness.

(e) Keeping children happy and occupied.

(f) Being a friend and advocate for children and their families.

PART 2
PERCEPTIONS OF PAEDIATRIC PATIENTS AND THEIR FAMILIES

Below are some views expressed by nurses working with children about patients and their families. Please indicate how much you agree or disagree with each statement by circling the appropriate number. There are no right or wrong answers and no trick questions.

NB. It is recognised that those working in paediatrics have a range of experience and training but for simplicity the words 'nurses' and 'paediatric nurses' are used to refer to all nursing staff working with children in a paediatric setting.

1 = strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, 5 = strongly disagree.

(1) The parents of most paediatric patients look after their children well.

(2) It is not a good idea for paediatric nurses to get too involved with children or their families.

(3) It is annoying if a child on the ward has too many visitors.
1 = strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, 5 = strongly disagree.

(4) Children are fun to do things with
(5) It is important that paediatric nurses are honest and open with patients and their families.
(6) A paediatric nurse should never give in to a child.
(7) It is very important that paediatric patients are given time to talk about their illness while in hospital.
(8) Paediatrics is not a particularly interesting specialty.
(9) Paediatric patients are often deliberately difficult and unco-operative.
(10) It is important for nurses to spend time talking and playing with children on the ward.
(11) Children are really just 'mini-adults'.
(12) Children's opinions should be valued.
(13) Being too friendly with children on the ward makes for bad discipline.
(14) The parents of children in hospital are often anxious and upset.
(15) It is better if children are not told what will happen to them in hospital.
(16) Most children on paediatric wards are attention seeking.
(17) It is good practice for paediatric nurses to become closely involved with patients and their families.
(18) Paediatric patients should not question nurses.
(19) It is important that children feel able to ask questions while in hospital.
(20) When parents are on the ward, they often get in the way.
(21) Paediatric nursing is intellectually stimulating.
(22) Coming into hospital is a traumatic experience for children.

Please check that you have circled a number for all 22 statements.

PART 3
PERCEPTIONS OF INDIVIDUAL PATIENTS

I am also interested in nurses' perceptions of individual patients. On the separate piece of paper you have been given are the names of six patients who have been on this ward over the last two weeks together with a code number. Please take a few minutes to think about these children and then list them in order (using the code numbers given to ensure confidentiality) according to the criteria described below. To remind you, this questionnaire will be treated in the strictest confidence and any information that you give about specific patients will not be disclosed to anyone else.

In each case, please do not put more than one code number on each line.
(A) Please list the children in order, from the child who was most rewarding to work with to the child who was least rewarding to work with.

MOST REWARDING: 

LEAST REWARDING: 

(B) Please list the children in order, from the child that you got on with most well to the child that you got on with least well.

MOST WELL: 

LEAST WELL: 

(C) Please list the children in order, from the child that you enjoyed working with most to the child that you enjoyed working with least.

ENJOYED MOST: 

ENJOYED LEAST: 

(D) Please list the children in order, from the child that you feel required most medical/nursing input while on the ward to the child that you feel required least medical/nursing input while on the ward.

MOST INPUT: 

LEAST INPUT: 

117
(E) Please list the children in order, from the child that you liked most to the child that you liked least.

LIKED MOST: ______

       ______

       ______

LIKED LEAST: ______

(F) Please list the children in order, from the child who you feel was the most easy patient to nurse and care for to the child who you feel was the least easy patient to nurse and care for.

MOST EASY: ______

       ______

       ______

LEAST EASY: ______

PART 4
GENERAL INFORMATION

Please answer the following questions by placing a tick next to the appropriate response.

(A) Please indicate your professional status and training:

Sister ______ RSCN ______
Staff Nurse ______ RMHN ______
Enrolled Nurse ______ RGN ______
Health Care Assistant ______ SEN ______
Nursing Auxiliary ______ RMN ______
Student Nurse ______ Project 2000 (please specify branch) ______
Other (please specify) ______

(B) Please indicate your sex and age:

Female ______ 16-25 ______
Male ______ 26-35 ______
       ______ 36-45 ______
       ______ 46+ ______
(C) How long have you been in the nursing profession?

Less than 1 year  
1-5 years  
6-10 years  
11-20 years  
20+ years  

(D) How long have you been working in paediatrics?

Less than 1 year  
1-5 years  
6-10 years  
11-20 years  
20+ years  

How long have you been working on this ward?

Less than 1 year  
1-5 years  
6-10 years  
10+ years  

THIS IS THE END OF THE QUESTIONNAIRE - THANK YOU AGAIN FOR YOUR HELP
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
APPENDIX D
## CODING SYSTEM - QUALITY OF INTERACTIONS

### GENERAL PRINCIPLES

<table>
<thead>
<tr>
<th>Positive scores</th>
<th>Negative scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing reassurance and comfort</td>
<td>Not providing reassurance or comfort</td>
</tr>
<tr>
<td>Giving personal recognition</td>
<td>Not giving personal recognition</td>
</tr>
<tr>
<td>Showing respect/concern/interest</td>
<td>Showing disrespect/lack of concern/disinterest</td>
</tr>
<tr>
<td>Acknowledging and responding to needs</td>
<td>Ignoring needs</td>
</tr>
<tr>
<td>Participating in information exchange</td>
<td>Not participating in information exchange</td>
</tr>
<tr>
<td>Encouraging increased interaction and engagement</td>
<td>Discouraging interaction and engagement</td>
</tr>
<tr>
<td>Providing validation of feelings</td>
<td>Not providing validation of feelings</td>
</tr>
</tbody>
</table>

### CODING OF INTERACTION SCORES

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+5</td>
<td>* Verbal or physical contact which is likely to be very therapeutic, enjoyable and rewarding OR which allows expression/validation of feelings (e.g. positive one-to-one time with child). *Very detailed and clear explanation and/or reassurance given before or during a painful medical procedure.</td>
</tr>
<tr>
<td>+3</td>
<td>* Verbal or physical contact which is likely to be enjoyable, supportive or reassuring, i.e. with smiles, jokes, laughs, hugs, reassuring tone, etc. (e.g. exchange of information involving joke). *Clear explanation and/or reassurance given to child given before or during a painful medical procedure.</td>
</tr>
<tr>
<td>+1</td>
<td>* Greeting, exchange of gestures, brief or fairly 'straight' exchange of information. *Minimal explanation or reassurance given to child given before or during a painful medical procedure.</td>
</tr>
<tr>
<td>0</td>
<td>* Neutral interaction - cannot be readily coded as positive or negative (e.g. 'no interaction'- care/meds given with no verbal or physical contact)</td>
</tr>
</tbody>
</table>
*No explanation or reassurance given before or during a painful medical procedure.
*Not responding to child's attempts at interaction or contact (e.g. when child has tried to make contact at least twice).
*Telling child off.

*Sustained lack of response to child's attempts at interaction or contact (e.g. when child has tried to make contact more than twice)
*Telling child in an abrupt manner.
*Verbal contact with limited acknowledgement or slight invalidation of feelings.

*Verbal contact with no acknowledgement/severe invalidation of feelings (e.g. telling a child not to be silly when missing parents)
*Telling child off/ordering a child to do something in a highly aggressive and angry manner.

13Although it was recognised that children sometimes need to be guided in their behaviour, reprimanding a child was still considered to be a negative interaction.
## CODING SYSTEM - CONTENT OF INTERACTIONS

### NURSE > PATIENT INTERACTION

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>SOCIAL</td>
<td>e.g. chat, conversation, joke, statements</td>
</tr>
<tr>
<td>E</td>
<td>EDUCATIONAL</td>
<td>e.g. helping child in schoolroom/with computer, giving information about illness</td>
</tr>
<tr>
<td>M</td>
<td>MEDICAL</td>
<td>e.g. giving medication, ward round</td>
</tr>
<tr>
<td>C</td>
<td>CARE</td>
<td>e.g. distributing food, help with dressing, discussion about care</td>
</tr>
<tr>
<td>R</td>
<td>PLAY/ACTIVITY (RECREATIONAL)</td>
<td>e.g. playing games, reading to child</td>
</tr>
<tr>
<td>P</td>
<td>PHYSICAL</td>
<td>e.g. comforting, hugs, cuddles, carrying child, holding hands</td>
</tr>
<tr>
<td>Q</td>
<td>QUESTION/REQUEST</td>
<td>e.g. asking child what they want for tea, asking a child to sit down</td>
</tr>
<tr>
<td>A</td>
<td>ANSWER</td>
<td>e.g. answering question from child about where the toilet is</td>
</tr>
</tbody>
</table>

### RULES

1. Record the category which appears to correspond to the *main purpose* of the interaction and also any other relevant categories. The quality of the interaction is then indicated by a numerical value (see 'Quality of Interaction').

2. Use the Q and A categories if the question or answer is the only interaction occurring, i.e. if questions or answers occur in the course of another type of interaction, use a different main code plus Q or A.

3. Place an '*' by the staff/patient code for each interaction to indicate who initiated it.
## SAMPLE DATA RECORDING SHEET

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME PERIOD OF OBSERVATION</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PATIENT CODE</th>
<th>NURSE CODE</th>
<th>TIME 1</th>
<th>TIME 2</th>
<th>DURATION</th>
<th>ACTIVITY CODE</th>
<th>QUALITY CODE</th>
<th>COMMENT</th>
</tr>
</thead>
</table>

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(1) Scattergram of the relationship between nurses' overall composite quality scores and scores on the PAS

(2) Scattergram of the relationship between nurses' overall composite duration scores and scores on the PAS

(2) Scattergram of the relationship between nurses' mean number of interactions per 10 minute observation block and scores on the PAS
REFERENCES


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