An Exploration of Attachment Patterns among Physiotherapy Students and their Interactions with Patients in a Clinical Setting.

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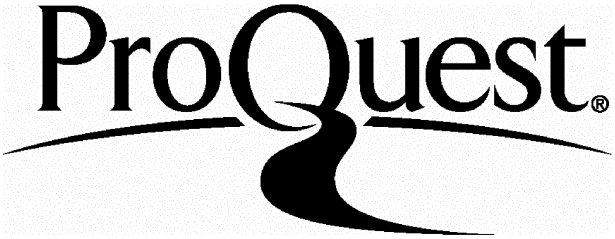

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Abstract

This study involved the first interview based assessment of physiotherapy students' attachment characteristics with two aims in mind. The primary aim was to examine the distribution of Adult Attachment Interview [AAI] classifications (Main and Goldwyn, 1994) among this group of student professional caregivers. The second aim was to consider their attachment status with their clinical examination results and their emerging skills at interacting with patients in a clinical setting. Diverse literatures from health psychology, attachment theory and patient satisfaction were reviewed.

Part one of the study assessed a group of physiotherapy students' responses to the AAI. The students' had a significantly different distribution of classifications compared to general samples (Van IJzendoorn and Bakermanns-Kranenburg, 1996) with a larger proportion of secure rather than insecure (dismissing or preoccupied) classifications.

The second part of the study considered the associations between the same group of students and patients in two clinical settings. The Patient Doctor Interaction Scale, (Falvo and Smith, 1983) a patient satisfaction questionnaire, was given to patients to elicit their opinions on their interactions with the students. The questionnaire did not identify any distinct problems with the interactions between the patients and the students.

The results from each part of the study were then analyzed together. There were limited links between the results of the interview, the patient satisfaction and the students' clinical examination results probably due to the skewed nature of both the attachment and patient satisfaction results. The correlations revealed patterns, and trends, in the data which suggest that patients may have different needs from their physiotherapy carers in different clinical settings, ie. in - patient versus out - patient locations. Important questions arise about the implications of attachment profiles for healthcare professionals and recommendations are made for further investigations.

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1. Introduction

Why are attachment theory and research relevant to physiotherapy ? This dissertation aims to address the question through an exploration of the attachment characteristics of a sample of physiotherapy students and by comparing these attachment profiles with ratings obtained from their clients and the students' clinical assessments. The introduction will introduce and outline the main subject areas addressed in the study and explain its rationale.

1.1. Background

Physiotherapy has been defined as "a health care profession that emphasises the use of physical approaches in the promotion, maintenance and restoration of an individual's physical, psychological and social well-being, encompassing variations in health status" Chartered Society of Physiotherapy and Council for Professions Supplementary to Medicine (1996, p6). The main concerns of physiotherapy are the physical aspects of healthcare, ie. the management of physical problems for people. Although the focus of physiotherapy is on the physical aspects of care, the importance of social interactions in a physiotherapy context is generally acknowledged. Interpersonal skills are thought by some to be particularly significant in physiotherapy (Gyllensten, Gard, Salford and Ekdahl, 1999, Martlew, 1996, Musa, 1988, Hough, 1987) but despite a greater emphasis on psychology in the curriculum (Chartered Society of Physiotherapy and Council for Professions Supplementary to Medicine, 1996) and a growth in research, there are few physiotherapy investigations into the therapeutic relationship or interactions with clients.

The few related publications and studies which have been carried out have tended either to focus on specific aspects, eg. patient compliance (Clopton & McMahon 1992), client-centred practice (Sumison,1997), the power of touch (Rothstein 1992), or on training methods to encourage positive attitudes to disability amongst physiotherapy students (Dickson & Maxwell 1985, Gartland 1984). These studies have explored physiotherapists' behaviour and how this can be modified through training, rather than examining any individual differences among physiotherapists, which may be attributable to social or current relationship factors or how they may be linked to interaction with patients.

Firestone (1990) investigated the personality characteristics of different groups of healthcare students and although he found some differences between physiotherapy students and medical laboratory technicians, ie. the physiotherapists were more dominant, independent and self-confident, he found no other significant differences with other groups, eg. medical and occupational therapy students. The influence of a physiotherapist's personality or experience on his or her interactions with patients was not examined.

Currently physiotherapy / patient or physiotherapy / client relationships[1] do not have or follow any particular theoretical model as a basis for practice (Roberts, 1994). If any model has been widely followed in the past it would be a medical model of healthcare. For historical reasons physiotherapy has

[1] The terms 'patient' and 'client' have been used interchangeably although the different connotations and values attached to these labels have been recognised. Here the terms have been used as they occur in the literature; ie. the therapeutic literature tends to refer to clients while the health literature usually refers to patients.

been closely linked to medical practice and late in the nineteenth and during the twentieth centuries physiotherapy has derived benefits from medical patronage, eg. respectability and recognition, (Barclay, 1994). Due to these close links physiotherapy has tended to relate to the traditional medical model of healthcare where the relationship with clients is based on the practitioner taking an active role and the patient a passive role (Szasz and Hollender, 1956). This model for a relationship may be necessary under certain circumstances, eg. when a person is unconscious, but it can lead to over-dependence, resentment and a lack of co-operation (Briggs and Banahan, 1990).

The idea of a paternalistic client relationship began to be less acceptable for physiotherapy during the 1980s (Roberts, 1994) when an alternative biopsychosocial view (Engel, 1977) began to be recognised. This was partly due to professional developments; ie. during the 1970's the Chartered Society of Physiotherapy, the professional body for physiotherapists, began to break away from its medical influence and develop greater autonomy while physiotherapists became legally entitled to practice in a more autonomous manner (Barclay, 1994). The biopsychosocial model allows for the biological, psychological and social aspects of a person's health to be recognised and considered together. The implications of the model for physiotherapist / client relationships is for co-operation and collaboration in health care, with the physiotherapist and the client taking different but equal roles in a partnership to improve health (Roberts, 1994). The next chapter will elaborate on these themes and provide a more detailed explanation of the current state of the research.

1.2. Attachment Theory

This dissertation is based on the assumption that further insight into the nature, functioning and implications of physiotherapy / patient interactions may be gained from applying the model of relationships suggested by John Bowlby's attachment theory (1982, 1977). On the level of face validity there is much that is relevant between the physiotherapist and the idea of the attachment figure who provides a secure base and care. Bowlby defines attachment as "the strong disposition to seek proximity to and contact with a specific figure and to do so in certain situations, notably when frightened, tired or ill", Bowlby, 1982, p371. This concept of attachment was initially related to child development and came from Bowlby's interest in children's relationships with their parents.

There are different styles of attachment that may develop as a result of childhood and adolescent experiences with attachment figures, usually parents, and consequently a person's ability to review the relative influence and importance of their relationships. Caregiving and the ability to respond sensitively to children's needs were considered by Bowlby to be essential to the development of attachment between children and their parents. The attachment bond between parent and child initially grows from the necessary physical dependence of children on their carers. From birth children are dependent on their caregivers to fulfil their physical needs but as physical dependence upon caregivers becomes less crucial it gives way to a dependence which is based on a psychological need with the consequent capacity as an adult both to depend on others and be depended upon.

1.3. Attachment Research: Children

Attachment theory was operationalised by Ainsworth et al (1978) who through observations of children developed a method of assessing the style of children's attachment to their parents. The method known as the Strange Situation creates a setting where a child, of about 12 to 18 months old, is separated from and reunited with a parent and a stranger. The reactions of a child to these episodes can be quite distinctive, and coding of the resultant video allows the child to be designated secure / insecure / unclassifiable in relation to attachment. This research enabled Ainsworth (1982) to develop the idea of the 'secure base' which, when established, allows a child to explore the unfamiliar world in the knowledge that the parent is available should anything distressing or uncomfortable occur. The classification of a child - parent relationship from the Strange Situation has been shown to be related to children's behaviour when they are older. For example, secure children observed at 5 years were found to be more adaptable to changing personal and environmental situations than other children (Matas, Arendt and Sroufe, 1978). It seems that children repeat the patterns of their early experience in later relationships.

1.4. Attachment Research: Adults

Adult attachment has been investigated in a number of studies of adults' mental representation of their childhood using the Adult Attachment Interview, AAI, (George, Kaplan and Main, 1996). The AAI is a semi-structured interview aimed at " surprising the unconscious" (George et al, 1996, p3) in relation to childhood experience of relationships. It gives a picture of a person's relationships with major attachment figures and the analysis provides 3 main categories: secure autonomous, insecure

dismissing and insecure preoccupied. A further 'unresolved' category relates to issues of trauma of loss where the person has a disorganised / disorientated response during the interview and this is allocated with one of the other main categories. Van IJzendoorn and Bakermans-Kranenburg (1996) in their meta-analysis of 33 studies showed that the distribution of classifications in a non-clinical population was 58% secure autonomous, 24% insecure dismissing, 18% insecure preoccupied. About 19% of the sample were unresolved with respect to loss or trauma or both.

The analysis of the interview provides four main classifications or divisions to describe state of mind in relation to attachment and each of these have been shown, in theory and experimentally, to correspond to Strange Situation infant attachment categories (Main and Goldwyn, 1994). Van IJzendoorn (1995) in his review and analysis of 18 samples consisting of 661 interviews showed the predictive validity of the AAI with 75% correspondence between the AAI and Strange Situation results. The AAI has a predictive quality in relation to people's caregiving as parents.

Adults' attachment patterns, as determined using the Adult Attachment Interview (Main and Goldwyn, 1994), have been shown to identify stable characteristics of a person's way of relating to others (Steele and Steele, 1994). It may indicate not only the relationship pattern with parents, siblings and children but also of adult / adult relationships, in this case relationships as health professionals. The Adult Attachment Interview (AAI) classification has been shown as an accurate predictor of the caregiving behaviour of parents towards their children. For example, parents who demonstrate secure attachment attitudes during the AAI are likely to interact

with their children in a more sensitive manner.

1.5. Adult Attachment Patterns and Physiotherapy

Bowlby (1988) recognised that psychotherapists could assume the role of an attachment figure by providing a secure base from which the patient explores and reassesses his or her working models of self and attachment figures. Although this seems unlikely when the interactions are focused on physical problems rather than relationship problems, there may be a similarity between psychotherapists and physiotherapists as secondary attachment figures. The physiotherapist does not have the same continuity as a primary attachment figure but may inspire trust, serve a useful function and, in relation to physical well being, be sought when further episodes of anxiety or health problems occur. "The clinician like the caregiver optimally serves as a secure base by being available and appropriately responsive" Dozier, Cue and Barnett (p.3, 1994). In the research conducted by Dozier et al (1994) the clinicians' interventions were related to both social care and psychological needs which meant that they were in a position to challenge clients' internal working models. Most physiotherapists, in their clinical settings, do not have an involvement with psychological problems within their realm of experience or expertise. Despite the obvious difference in caregiving roles between counsellors or case managers (Dozier et al, 1994, Pistole, 1999) and physiotherapists generally it is suggested that a physiotherapist's ability to fulfil his or her role as a caregiver is influenced by their attachment experiences and current mode of thinking and feeling about those past experiences.

Adult attachment behaviour is aimed at maintaining close relationships whereas physiotherapy / client relationships are by their nature more likely to be transient. The exploration of the attachment of physiotherapy students may reveal a different distribution of attachment characteristics than other groups of people who are not self - selected caregivers. From an attachment perspective this implies that they may be motivated to provide care beyond that normally expected and that this may be grounded in their relationship experiences. Physiotherapist / patient relationships are not close in the same way as mother / child or adult / adult social relationships but comparisons could be made with other healthcare relationships, eg. occupational therapists' client relationships. Physiotherapists like many other healthcare groups choose to be caregivers in addition to the care given and received in their social relationships. There may be a predominant pattern of attachment among physiotherapists which has an impact on the interactions associated with the care that they give. The physiotherapists' attachment experiences may effect their ability to be sensitive and responsive to their clients' needs.

Physiotherapists like the general population may mainly have secure attachments and they may choose to take a caregiving role in their work with a coherent and realistic perspective of their relationships; the prospect of helping people with health problems may stimulate their caregiving abilities. Perhaps an established secure relationship which enables a child to explore from a secure base also in later years produces a desire to be nurturing and caring outside the relationships that exist with family and friends. It may be that the desire to provide care as a professional is widely derived from a secure base. In addition those who have a secure state of mind in relation to attachment may be more sensitive in their interaction with patients, in the

same way in which secure mothers are more sensitive with their infants.

Alternatively another pattern of attachment can result in people being persistent caregivers; " the person who develops in this way has found that the only affectional bond available is one in which he must always be the caregiver" Bowlby (1977, p139). Despite the emphasis on physical care, physiotherapy clinicians may have a need to provide a secure base for people who are anxious and frightened in relation to health problems. Physiotherapists may include a higher then usual proportion of individuals who find that they relate best to people in a clinical, rather than a social situation when physical problems, rather than personal issues are the focus of the interaction. Perhaps insecurity of attachment and a lack of support, caring and love in family and social relationships leads some people to develop their work relationships to compensate. Physiotherapists with an insecure state of mind with regard to attachment may be less flexible and sensitive in their approach to patients. However in physiotherapy where the physical aspects of care are the focus for the relationship this may not be a significant issue.

1.6. Patient Satisfaction Research

In order to test the students' attachment style in relation to their work and their ability to be sensitive to patients' needs, a relevant outcome variable is the clients' views on whether or not the therapeutic relationship is satisfactory. This variable has already been researched in physiotherapy on a small scale but not directly related to attachment theory / research. For example, Johnson (1993) in a study on disabled peoples' perceptions of physiotherapy noted that some participants recalled treatment in a good light

because of the positive relationship they had with the physiotherapist. However, none of the clients mentioned "good" treatment given by a physiotherapist they did not like. The client rating of the relationship could indicate areas of dissatisfaction with the relationship which are amenable to change.

Also, there is an increasing demand and need for consumer feedback in the National Health Service (NHS), particularly in response to the NHS Management Inquiry (Griffiths, 1989) which criticised the NHS for its lack of action on consumer feedback and suggested that there should be demonstrable evidence of patient feedback. The development of the Patient's Charter (NHS Executive, 1995) was also an attempt to encourage the NHS to "listen and act on people's views and needs", by outlining general rights and standards. It is necessary for physiotherapists, like other health care professionals, to evaluate their services through feedback from their patients / clients.

Patient satisfaction is therefore a necessary outcome measure which in this case was assessed by a questionnaire (Falvo and Smith, 1983) which focused on the interactions with health care personnel rather than any of the other aspects of care, eg. waiting times or quality of food.

1.7. Research Aims

This research could provide information about the significance of the attachment pattern of physiotherapists, the specialities which are most suited to individuals and contribute to an explanation for the less successful students. If there are patterns of attachment which relate to patient

satisfaction or students' abilities as assessed by clinicians they may be used to influence selection or inform undergraduate education programmes. Wider knowledge of physiotherapists' attachment patterns and their implications may provide information for appropriate intervention or training for qualified physiotherapists to develop positive client relationships. It is also useful to explore physiotherapeutic relationships because positive client relations are increasingly important with the changing pattern of health care. It is possible that changes in health care provision will mean that fewer physiotherapists will be employed in the NHS because of the different methods of funding patient services. Physiotherapists will therefore have to use their time more effectively, not only by selecting the most appropriate patients / clients and physiotherapy management but also in their relationships with patients and other staff.

The first part of this study using the adult attachment interview with physiotherapy students is exploratory, the purpose being to find the distribution of attachment classifications among the sample of physiotherapy students.

The hypothesis which develops from this is:

- There is a difference between the attachment characteristics of these physiotherapy students and the general population.

null hypothesis:

- There is no difference between the attachment characteristics of physiotherapy students and the general population.

The hypothesis for the second part of the study that follows from the consideration of the attachment patterns of physiotherapy students and patient satisfaction with their interactions is:

- Physiotherapy students who have secure attachment characteristics are likely to interact with their patients in a more satisfactory way than physiotherapists who are classified as insecure / unresolved.

null hypothesis:

- Physiotherapy students who have secure attachment characteristics are not likely to interact with their patients in a more satisfactory way than physiotherapists who are classified as insecure / unresolved.

Therefore the project aims are:

- to review the literature relating to client / physiotherapist relationships, communication, patient satisfaction, attachment theory and health psychology.
- to use the Adult Attachment Interview (AAI) to classify the adult attachment of a sample of physiotherapy students
- to use a patient satisfaction questionnaire, (Falvo & Smith, 1983), as a means of assessing the interactions between patients and the physiotherapy students through patient feedback
- to investigate any links between the attachment pattern of physiotherapists and their therapeutic relationships.

2. Physiotherapist - Client Relationships

Physiotherapy practice and relationships with clients have been strongly influenced by the medical profession (Roberts, 1994). Before examining the nature and research relating to healthcare relationships, the development and context of physiotherapy will be described briefly. This is helpful because it provides an explanation for the way in which physiotherapy has had to change and develop its professional identity.

2.1 The Origins of Physiotherapy

Prior to the 1890's the physical means of treating health problems had been performed by people who administered massage, hydrotherapy, electrotherapy and therapeutic exercise but their work was not was co-ordinated professionally. In 1894 the British Medical Journal provoked a scandal by relating some dubious aspects of the work of masseuses and in consequence the masseuses who worked in health became organised and The Society of Trained Masseuses was established (Barclay, 1994). From that time physiotherapists came under the patronage of doctors who referred patients to physiotherapists and prescribed the physiotherapy treatment that should be given. The Society began to formalise physiotherapy training, a register of qualified practitioners was established and a code of conduct for practice was developed for the members. Also, in order to gain respectability and status The Society invited eminent members of the medical profession to be involved in the management of The Society and the examination of its students (Roberts, 1994).

The nature of physiotherapy and its recognition grew especially following the 1914 - 18 war when the large numbers of war casualties resulted in an increase in the scope of physiotherapy practice and its renown. The Society continued to develop as a national institution and in 1942 became the Chartered Society of Physiotherapy (CSP), (Barclay, 1994).

Despite the growth of physiotherapy it was not until the 1970's that the CSP began to develop clinical and professional autonomy for the members both in education and practice. This change was indicated by the increased responsibility of physiotherapists for the organisation of the CSP; medical practitioners were no longer involved in the examination of students, physiotherapists were appointed to the chair of the CSP and physiotherapists gained the right to independent rather than medically prescribed practice (Jones, 1991).

The development of physiotherapy since 1894 has been in parallel with the medical profession and the association between them, as described, has had a lasting impact on physiotherapy practice. Due to the joint history of physiotherapy with medicine the theory for physiotherapy has tended to develop from a medical perspective and medical research. Generally medical attitudes and approaches have been adopted by physiotherapists including ideas about relations with patients (Cott, Finch, Gasner, Yoshida, Thomas and Verrier, 1995).

2.2. Models of Healthcare and Healthcare Relationships

The conventional approach to physiotherapy - client relationships was based on the acceptance of the medical model of healthcare (Roberts, 1994). The

medical model, also known as the biomedical model, is based on a series of assumptions about disease and illness. The major assumption of the model is the idea that an unhealthy state is a deviation from the normal and can be considered abnormal and this has major implications for the way in which people with health problems were viewed by health professionals. The medical model traditionally focuses on physical function divorced from the social and psychological influences of health status and this model, as an approach, can also have implications for health professionals' relationships with patients.

In a situation where the medical model prevails, the physiotherapist, or other caregiver, can be seen as the expert who can take responsibility for the treatment of the patient because of their specialized knowledge and experience. Under these circumstances the needs, expectations and interests of the patient are not necessarily taken into account but are sublimated to the demands of the practitioner. The medical model of healthcare allows the doctor, or health worker, to be dominant and the patient to have less control over the management of their health problems and the interactions which take place. The result is a paternalistic relationship where people are not recognised as being responsible for their own health (French, 1997). This type of relationship has persisted through most of the twentieth century (Roberts, 1994), but approaches are thought to be changing in response to better informed patients, the emergence of consumer rights, self - help organisations and changing patterns of work, ie. health professionals working in multidisciplinary teams, where they need to work co-operatively with patients and co-workers (French, 1997). Also research relating to communication in healthcare has shown that traditional practitioner / patient

relationships are commonly typified by non-compliance (or non-adherence [1]), lack of negotiation and conflict (Ley, 1988) and so the co-operation of the patient can not longer be assumed when this approach is taken. The pattern of relationships based on a medical model may therefore lead to ineffective healthcare.

The model of health care which commonly influences ideas about healthcare relationships now is the biopsychosocial model of healthcare (Engel, 1980, Shaver, 1985). A biopsychosocial view of health aims for an integrated approach to the influences on a person's sense of well being. The model takes into account personal behaviour, eg. level of activity, appropriate host factors, eg. age or sex, the environment and social circumstances, eg. social support or housing conditions, psychological aspects of care, eg. levels of stress, and an individual's health status related to his or her physical condition. The implications of the biopsychosocial model for healthcare relationships is that attention is paid to the person as an individual with choices and a variety of needs, expectations, abilities and limitations in their personal circumstances which impact on their health and therefore should be taken into consideration (Engel, 1977).

However even if this more equitable type of heathcare relationship is followed in practice there may be difficulties. Stewart and Roter (1989) discuss the element of control in doctor / patient relationships in relation to the biopsychosocial model and discuss the implications of changing the

[2] The use of the term 'compliance' is more traditional than the term 'adherence' which tends to be used in current literature. The word 'adherence' is supposed, generally, to indicate a more collaborative and co-operative view of client relations.

balance. An example of the negative effects of a different approach would be when a patient has high control and a professional has low control; with a consumerist type of relationship developing. It is possible that this situation could develop in private medicine where market control and choice is an influence on care and it may be desirable for the patient where choices are available. Alternatively, it may cause difficulties in the NHS when choice can be limited by restricted budgets. The development of consumerism could create a new type of paternalism where patients' rights advocates and third parties paying for health assume the paternalistic role once held by the doctor (Beisecker and Beisecker, 1993). Whether or not patients want control of their healthcare encounters is an interesting area and has not been pursued in the area of physiotherapy. There may be situations when the patient having control is desirable and others when it is not; eg. patient choice about health interventions in palliative care may be important but at the scene of an car accident the patient may not be able to make a contribution to decisions.

In their classic paper describing doctor / patient relationships Szasz and Hollander (1956) outlined a typology of three different doctor / patient relationships which might be required for different health situations:

	Model	Prototype of Model
•	activity / passivity	parent / infant
•	guidance / co-operation	parent / child
•	mutual participation	adult / adult

From the perspective of attachment theory it is interesting that they compared their ideas about healthcare to parent and child relationships therefore acknowledging that similarities between the two can exist. The activity / passivity model implies an active role for the doctor and a passive role for the patient, eg. when a person is under anaesthetic or in a coma. Indeed it would be difficult to argue that this form of relationship is inappropriate for all health encounters because inevitably there are some situations when patients are unable to contribute to decisions about their health.

The idea of guidance / co-operation as a model suggests that the doctor tells the patient what to do and that the patient is co-operative and compliant and this corresponds with the medical model of healthcare relationships. The third model described by Szasz and Hollander proposes mutual participation which suggests that the doctor helps the patients to help themselves. Szasz and Hollander (1956) state that for the mutual participation model the doctor and patient must have:

- approximately equal power,
- mutual interdependence, ie. they need each other
- and engage in activity which is mutually satisfying.

These ideas correspond more closely with current thinking about healthcare relationships. When the patient and professional both have a high degree of control a relationship of mutuality can be the result with both parties being involved in decision making. This can be considered to be the exemplar for relationships with patients but problems may arise when neither party takes

control, ie. when the professional puts the onus on the patient who does not respond to the challenge, or visa versa (Stewart and Roter, 1989). Even if the emphasis of the healthcare relationship is patient centred, ie. based on the needs and expectations of the patient, it does not necessarily guarantee a constructive and purposeful relationship. There is not yet any evidence to say if patient centred care is desirable for professionals and patients and it may be dependent on the context of healthcare or the particular professional involved.

More recent models of medical care relationships have been developed. For example, Suchman, Markakis, Beckman and Frankel (1997) derived an empirically based model by describing the patterns of interaction between doctor and patient associated with the affective aspects of interviews. They found that patients do not tend spontaneously to verbalise their emotions and that for emotional issues to be addressed the doctor has to pick up clues. If the clues go unrecognised the patients sometimes try to raise the issues but they may be ignored while the doctor focuses on the diagnosis of physical problems. The model highlights the sensitivity which doctors should have in order to meet their patients needs effectively. It seems that physiotherapists have similar difficulties in addressing emotional issues. Gard, Gyllensten, Salford and Ekdahl (2000) found that physiotherapists mainly expressed positive emotions with patients, eg. interest, excitement and joy. Negative emotions, eg. sadness, anger and contempt were expressed less often. They concluded that physiotherapists responded to patients mainly on an intellectual level and that they need to learn affective skills as much as cognitive or psychomotor skills. The degree of sensitivity which physiotherapists employ may be related to their attitudes to attachment

issues.

Another example of a model for relationships in a healthcare setting is the Three Functional Model for the medical interview devised by Bird and Cohen-Cole (1990). The model was based on previous research, medical and educational, providing a structure for interviews and dividing it into 3 components: collecting information, responding to the patients' emotions and educating and influencing behaviour. Each component has been allocated objectives and the means or skills that are required to attain the objectives are listed. For example, in order to educate and influence patient behaviour, one objective is to involve the patient actively in the treatment process. The suggested skills required for this include describing the goals and plans, checking the patient's understanding and developing a plan for implementation. This model is designed to be an educational tool to assist the training of doctors with role-play exercises, simulated patients and video feedback but may also be useful for other groups of healthcare workers. The model does not have any weighting, ie. all aspects of the interview are given equal importance but research, eg. Ong, De Haes, Hoos and Lammes (1995), has shown that there are specific aspects of communication and interaction which are problematic and these will be discussed later in relation to patient satisfaction.

There are few models of healthcare that have been developed specifically for physiotherapy but relatively recently Cott et al, (1995) have developed a new concept for physiotherapy called the Movement Continuum Theory based on the idea of movement applied to a number of levels of description from the molecular to the level of a person in society. Although this model

recognises the physical implications of physiotherapy in developing "the maximal achievable movement potential" at each level described and the place of a person in his or her social environment it does not include or even recognise the importance of the communication, interactions and relationships between the therapist and the client. Perhaps this omission is indicative of the approach to physiotherapy / patient relationships from physiotherapy academics and educators. Certainly Bellman (1996) demonstrated that physiotherapists were important to hospital inpatients and were their main source of emotional support. This apparently was because the physiotherapist appeared to have more time to be able to respond to patients' psychological needs. Psychosocial aspects of care are associated with physiotherapy and their exclusion from models which aim to improve the understanding of physiotherapy practice is a real weakness.

Although a complete and tested model, which can be applied to physiotherapy relationships with patients in health care, has not been developed, there are some styles of interaction which have been demonstrated to contribute positively to these relationships, eg. style of communication, and these will be described in the next section.

2.3. Healthcare Relationships

Although the ideas promoted in the literature on healthcare relationships tend to be centred around the shifting and conflicting values relating to patient autonomy and paternalism, the term 'relationship' is very rarely defined. The term 'relationship', in this context, relates to a complex abstract concept and can be a useful shorthand for describing and formalising observations about a series of interactions over a period of time

and a number of encounters. The interactions which contribute to the development of a relationship are often observable behaviours and the type of relationship that develops depends on the style of the interactions which take place and their context (Hinde, 1976).

On some issues health literature is quite clear; the health encounter involves interactions between "individuals in non - equal positions, is often non - voluntary, concerns issues of vital importance, is therefore emotionally laden and requires close co -operation" (Ong, De Haes, Hoos and Lammes, 1995, p903). The purpose of healthcare relationships is for the maintenance and promotion of health through exchanging information, making health management decisions and executing treatment plans (Bird and Cohen-Cole, 1990) and the major element in forming a good relationship is the quality of communication.

Argyle (1994) describes 3 main characteristics of social relationships generally which contribute to satisfactory encounters:

- material and instrumental help,
- social and emotional support
- and common interests.

There is obvious common ground between these findings and health research. For example, two major divisions of communication behaviours were identified by Hall, Roter and Katz (1987): instrumental or task focused (cure orientated) and affective or socioemotional (care orientated). The first, task focused behaviours relate to expert behaviours or the technical skills used in problem solving. Examples of expert behaviours are giving

information, asking questions, discussing treatment, counselling and cognitive approaches to the patient. The second division of behaviours were identified as affective or socioemotional behaviours, ie. being friendly, showing concern and empathy, being open and honest, engaging in small talk and addressing patients by their first names. Although these behaviours have been identified and recognised as important their relative significance is not confirmed and there is disagreement about whether or not patients distinguish between them. Roter et al (1988) suggest that divisions or analyses like these are false because during interviews behaviour which contributes towards tasks, or appears neutral, carries affective content.

Also non - verbal communication has been less researched than verbal (Ong, et al, 1995) but both are integrated in any interview. Verbal messages can be inconsistent with non - verbal behaviours; eg. the physical posture and voice tone may leak a contradictory message which the verbal communication does not convey.

The communication and interactions between doctor and patient seem to have an influence on patient behaviour: coping strategies, quality of life, adherence, recall, understanding and satisfaction with care, and therefore has great importance in the effectiveness of healthcare encounters (Stewart, 1984, Squier, 1990, Bensing, 1991). The personal skills associated with healthcare are recognised as being an important building blocks in developing relationships but exactly which behaviours are most important is unclear (Roter, Hall and Katz, 1988).

So to summarize, there is no comprehensive analysis of a healthcare relationship which takes into account the complexities of how relationships develop. Also the personal characteristics of the caregivers have not been related to how they interact with patients. However well the interactions and communication in healthcare relationships are analyzed, the evidence of whether or not patients judge the competence of their carers by technical behaviour or quality of interpersonal skills is mixed. It is possible that the difficulty in separating and quantifying these two main aspects, which contribute to healthcare relationships, is because they are both important to patients and not judged separately by them. Ultimately the patient is the focus of the relationship and the factors which influence the patient and health professional to behave in a manner which will improve health is the key issue.

2.4. Doctor / Patient Relationships and Physiotherapist / Patient Relationships

The majority of the research to date relates to the activities of the medical profession and although it has general relevance to physiotherapy may not fully explain physiotherapy relations with patients because of the differences in practice and behaviour of physiotherapists and doctors.

In healthcare there is a need to develop a sense of trust between the patient and professional, sometimes very quickly, and the process of healthcare may involve a degree of intimacy in relation to a patient's personal life and a degree of physical closeness and exposure which would not normally be associated with a stranger. These aspects are common to healthcare provided by both doctors and physiotherapists and in hospitals this trust is often

reinforced by the wearing of uniform, by the nature of the surroundings and by the use of medical language. Nevertheless physiotherapists have a different status to doctors in relation to health. This can be demonstrated by different pay scales, length of education, influence on an individual's overall healthcare and the general influence of the professional bodies; the medical profession have higher socioeconomic status than physiotherapists (Office of Population Censuses and Surveys, 1990).

The relative status may also be related to the importance of a professional to an individual's healthcare and, or the patient's perception of the technical difficulty and complexity of the care given. On the whole physiotherapists are not involved in primary care and may not be involved at all in other aspects of healthcare. Physiotherapists may be involved in critical or lifesaving activities, eg. on intensive / critical care units, but this is largely the domain of doctors and nurses. At different stages of healthcare the roles that health professionals take may vary in importance to the patient. For example, an orthopaedic surgeon has a crucial role in the overall management of a person's fracture but it is the physiotherapist who will teach the person to walk again.

While Ong et al (1995) say that doctor / patient relationships are non – equal, this is likely to be less true for physiotherapist / patient relations. From the point of view of Szasz and Hollander's (1956) idea of mutual participation the lower status of physiotherapists may contribute positively to physiotherapist / patient relationships because, unlike doctors, physiotherapists may be more likely to be considered equals by the patients. Despite this difference physiotherapists still have power in terms of their

knowledge, skills and management of healthcare problems which is likely to be an influence on their patient relations.

There are other features of physiotherapy encounters which differ from patients encounters with doctors. In some clinical settings physiotherapists tend to spend more time in one to one situations with patients than doctors (Bellman, 1996, Pratt, 1978) and this provides more opportunity not only for physiotherapy management to be discussed and undertaken but for other issues to be raised. Also physiotherapy may extend over a long period of time, eg. in a paediatric setting from weeks to years, and so relationships may develop over a period of time in the same way as general practitioners.

Part of physiotherapy treatment involves physical contact not only as a means of establishing the reasoning behind the therapy but also as a means of healing. This touch may have a significant and positive effect on relationships because it can communicate a degree of personal warmth or intimacy and can be interpreted as personal support (Pratt, 1978, Rothstein, 1992). Alternatively there may be patients who do not find touch therapeutic because they prefer not to be touched or the touch may be wrongly interpreted and consequently have a negative effect on a relationship but nonetheless it is an intrinsic part of physiotherapy. Another possible advantage that physiotherapy may have over medical practitioners is the nature of the treatment; it deals mainly with practical aspects of recovery or health promotion, it is not usually physically invasive, does not require complex investigations and can often be immediately beneficial, eg. in the use of pain relieving modalities like transcutaneous electrical nerve stimulation.

The mutual interest and exchange of information between the patient and clinician combined with the other factors mentioned may provide a good foundation for individual physiotherapists to develop positive relationships with patients (Pratt, 1978). The areas of physiotherapy which contribute positively or negatively to relationships with patients have not been researched although they are acknowledged by some authors as important (Klaber, Moffat and Richardson, 1997, Dickson and Maxwell, 1985, Hough, 1987). The identification of the aspects of physiotherapy interventions which contribute positively and negatively to patient / physiotherapist relationships deserve investigation so that any developments in the profession or changes in the education of physiotherapists can retain the positive aspects that exist.

Positive interactions with patients is an aim for physiotherapy consultations and probably contributes to the placebo effect associated with treatments. The placebo effect being the form of a treatment without its substance; "consisting of ill defined, subconscious effects of the interaction between the patient, treatment and practitioner" (Vernon, 1994, p69). Aharony and Strasser (1993) consider the placebo effect to be important, probably playing a large part in healing, although patients tend to be more satisfied if their health care workers are sensitive and caring. The link between improved health outcomes and compliance and satisfaction has been made, eg. by Ley (1988).

In the past physiotherapists have followed the lead taken by the medical profession but changes in healthcare, eg. the increased emphasis on community based services and evidence based practice, associated with

increased professional autonomy, may induce physiotherapists to challenge the previously accepted conventions of healthcare.

2.5. Physiotherapists and Patients

Although health psychology literature discusses relationships, encounters and interactions in a healthcare context and despite the number of models, which may in part be explanatory, relations between physiotherapists and patients have not been systematically explored. A clear description of physiotherapist - patient interactions, encounters or relationships has not been made yet and certainly any generalisations across the profession become difficult when the many different circumstances for care are considered, eg. public versus private health or hospital versus home based care.

Definition of the terms used is not clear in medical literature and is not addressed in physiotherapy literature. For a broad definition of a relationship between two individuals which is applicable to healthcare relationships it was useful to go to child development literature: "Their relationship includes not only what they do together, but the perceptions, fears, expectations and so on that each has about the other and about the future course of the relationship, based in part on the individual histories of the two interactants and the past history of their relationship with each other." (Hinde and Stevenson - Hinde, 1987, p2). This description identifies many of the key elements that have been researched in relation to patients, rather than health professionals, and it indicates the complexity of the relationship. Another element which could be added for healthcare relationships is the success or failure of previous healthcare episodes. Also Hinde and Stevenson - Hinde

(1987) point out that relationships are dynamic, constantly changing and developing in response to the latest encounter and this is an element that does not emerge from health psychology literature.

The dearth of information in relation to physiotherapy is mainly due to the relatively short history of research in the profession and its reliance on medical approaches. Some suggestions have been made to explain any differences between physiotherapist - client relationships and others, eg. doctors or occupational therapists, but there is no comparative evidence and there may be as many similarities as there are differences.

For the purpose of this study an encounter in a healthcare situation is interpreted here as a single meeting for the purpose of improving a person's health. Interactions are seen as parts of an encounter or the building blocks which contribute to the development of relationships. In the absence of a coherent approach, theory or any previous research which could help to define or explain healthcare relationships for physiotherapists, or the interactions which lead to their development, attachment theory has been used as a starting point for this exploration. Attachment may not be an obvious choice but it seeks to explain early relationships and the development of close family relationships. An important aspect of these early relationships is the bond that develops in relation to caregiving and this is an intrinsic part of a health professional's role. It seems that attachment theory is therefore a reasonable place to start an exploration of caregiving relationships. The assumption has been made that other relationships, ie. not family or adult partner relationships, which are not as close are built on these attachment experiences and the attitudes arising from them. Peoples'

characteristics, values, attitudes, biases and past experience all have an influence on the way they communicate and on their relationships but it may be that attachment is particularly important.

"For a relationship between any two individuals to proceed harmoniously each must be aware of the other's point of view, his goals, feelings, and intentions, and each must adjust his own behaviour so that some alignment of goals is negotiated." (Bowlby, 1988, p131) This applies as much to healthcare as social relationships although aspects of the relationship can be taught (Novack, Suchman, Clark, Epstein, Najberg and Kaplan, 1997, Bird and Cohen-Cole, 1990, Gartland, 1984,). Some parts of healthcare depend on caregivers ability to be sensitive to other people and this may be inherent as well as teachable, where sensitivity is understood to be the ability of people to be appropriately responsive to another person's needs. Thus sensitivity to others has a direct influence on interactions and the development of healthcare relationships.

The following chapter explores the influences behind attachment style and relationships which have been shown to be an influence on peoples' sensitivity to others and caregiving from an early age.

3. Attachment Theory

Does attachment have an influence outside close relationships ? Attachment theory provides an explanation for the nature of close relationships within families but there are other types of relationship which people develop. People may develop broader networks of relationships outside the family which fulfil other needs, eg. in this case work relationships, and these may be influenced by their early attachment experiences. Bowlby (1982, p371) defined attachment as "the strong disposition to seek proximity to and contact with a specific figure and to do so in certain situations, notably when frightened, tired or ill". In healthcare the provider of a service, eg. a physiotherapist, may fulfil a patient's requirements by being constant in times of distress but being needed may also fulfil the needs of the physiotherapist.

3.1. The Origins and Framework of Attachment Theory

Attachment theory is a means of describing the need and nature of people to make and maintain close affectional bonds with others and explaining the emotional distress that can result from separation or loss. A basic assumption of attachment theory is that the survival of immature and vulnerable infants at birth depends on an adult caregiver to protect and nurture them. Infants and caregivers develop complementary behaviours that maintain their proximity and relationship. Closeness in the relationship promotes feelings of love and security whereas interruptions can initiate anger and sadness. Bowlby (1982) argued therefore that attachment is an emotional bond with a biological basis.

Attachment theory was originally developed by Bowlby (1982) whose work in child psychiatry led him to become dissatisfied with explanations of childhood problems from the traditional Freudian perspective adhered to by his colleagues. This was mainly because analysis of problems was retrospective rather than being based on direct observation of children (Wollheim, 1971). For a Freudian the patients account of past relationships is seen to reflect fantasy as much as reality and Bowlby, while considering himself a psychoanalyst, was determined to base his theorising on reliable observations. The main difference in Bowlby's approach was to look at the relationships formed in childhood and track them to later patterns of response. His ideas were initially rejected by the psychoanalytic establishment but they have gradually become influential in the areas of social development and relationships (Rutter, 1995).

Bowlby (1982) noted that Freud recognised the limits of retrospective psychoanalysis, firstly, because the relative influence of different factors causing problems were unknown and secondly because the factors identified were not necessarily comprehensive. Bowlby argued that attachment theory had parallels with a psychoanalytic view and could be seen as similar and different for the following reasons:

- they share the concept of relationships being influenced by trauma relating to an event or causal conditions,

- the agreement that early childhood is a particularly vulnerable period,

- they differ in the way they explain motivation behind relationships,

- Freud's interest in the broader aspects of psychology would mean that his attention would have been attracted to other concepts and developments.

Bowlby (1982) developed the concept of attachment in relation to internal working models and while retaining some ideas from psychoanalysis, ie. the role of unconscious mental processes, repression as an active process keeping them unconscious and the origins of neurosis in childhood as major influences on behaviour.

Attachment theory has developed from the concept of 'object relations' developed by others, eg. Klein and Winnicott, the main difference being in the influences of other disciplines, eg. control theory, which have been used to define instinctive behaviour. Instead of object relations Bowlby (1982) used the term 'internal working model' to describe the mental or internal representation of the world, past and present interpersonal interactions, attachment figures and self. According to Bowlby (1982) past experiences become internalised to form mental states or internal models which Main, Kaplan and Cassidy (1985, p66) defined as " a set of rules for the organisation of information relevant to attachment and for limiting access to that information".

Internal working models allow a form of short - cut in mental processes, enabling a person to use conscious and unconscious conclusions about

previous experiences, situations and self without having to rethink every situation from the beginning. Emotional and cognitive processes are actively and continually represented and reappraised consciously and unconsciously in the manner of a control system with a set goal, comparator and constant feedback.

These mental representations rely on feedback and are seen as resistant to change (Steele and Steele, 1994). However they also retain some flexibility and may be modified in the light of development and experience (Bretherton, 1999, Sroufe, 1988). The purpose of these representations which include emotion, cognition, and behaviour enable a person to predict how attachment figures will behave and how they view themselves.

Ideas about internal working models have changed since Bowlby (1982) first suggested the notion in relation to attachment theory in 1969. Now they are viewed as developing from early childhood and can be linked to another developmental theorist, ie. Piaget. It has also been suggested that interactions and real life events become Representations of Interactions that have become Generalised (RIGs) and these form an intermediate stage before new information is incorporated into internal working models (Bretherton, 1999, Steele and Steele, 1994, Stern 1985).

The idea of instinctive behaviour is based on the idea of a biological control which promotes proximity seeking in young children. Bowlby (1982) viewed attachment as an instinctive behaviour in the same class of behaviours as feeding or mating, with parallels in other species. There is enormous variation in human behaviour in different cultures but common

features can be seen in the care of infants and children and the attachment of young to their parents; these are examples of instinctive behaviour. These behaviours are not the same as those of animal species but can be seen to be derived from them in a more complex and sophisticated form. Bowlby (1982) identifies 4 main characteristics of instinctive behaviour:

- it follows a similar pattern in all members of a species / sex,
- it is a sequence that follows a predictable course,
- it contributes to self – preservation,
- it develops even when the circumstances for learning are scarce or absent.

Instinctive behaviour is seen by Bowlby as environmentally stable, ie. as long as the environment stays within an acceptable range of normal, the behaviour will conform to a particular pattern. Attachment behaviour is used to name observable regularities in behaviour which are essential for the survival of human young.

The actual nature of the control system associated with attachment and how it works is not yet explained. For example, although ideas have been postulated it is still not clear exactly what initiates attachment behaviours and how the differences in attachment relationships are determined.

The main generalisations of attachment theory (Bowlby, 1981) are:

- attachment behaviours are biologically determined and result in attracting or retaining the proximity of a particular person;

- The behaviour is seen as different from but as significant as feeding and sexual behaviours;

- during a child's development attachment behaviour leads to the making of firstly affectional bonds between child and parents and then on to adult / adult bonds. The behaviour and bonds persist throughout the life cycle. These bonds may also change or break with, eg. loss and separation experiences (Bowlby, 1988);

- the goal of attachment is to maintain proximity / communication with attachment figure/s through instinctive behaviour. The achievement of the goal is self regulated and behaviour is adjusted to elicit the required response;

- with a well established attachment bond behaviour will have adapted and proximity or communication may only be required in states of distress or change;

- the development, maintenance and renewal of attachment relationships create intense emotions. Formation and maintenance of a bond create joy and security. Equally the loss or threat of the loss of an attachment figure arouses anxiety and sorrow;

- attachment behaviour is considered to be a characteristic of not only humans but also other species in order to improve survival rate, eg. to protect from harm and to nurture offspring;

- caregiving is a behaviour which complements attachment and is commonly shown not only by a parent to a child but also from adult to adult in times of stress, eg. in relation to loss;

- the main influence on a person's attachment behaviour is the experience with attachment figures during the early years of life; infancy, childhood and adolescence. This in turn influences the affectional bonds that are made during life;

- disturbed or insecure patterns of attachment can be present at any age due to previous attachment experiences.

3.2. The Development of Attachment Theory

The early studies of children in the 40's and 50's (Bowlby, 1982) showed some agreement about the behaviour of children of more than 6 months who were separated and then reunited with their mothers[3] under different circumstances, eg. when hospitalised or taken into care. Three phases of behaviour were observed on separation: protest, despair and detachment. Protest was the initial stage of behaviour observed where the child appeared acutely distressed and sought signs of the mother returning while other carers tended to be rejected. This phase was followed by despair which

[3] In Bowlby's work the term 'mother' is not only literal but also relates to the primary care giver or the attachment figure.

suggested hopelessness and was associated with withdrawal, ie. the child interacting with people less often, and less actively. During this phase the child became more accepting of care from other carers. If the separation continued the child tended to lose interest when the mother returned and remained detached, ie. not seeking to interact with the mother. Initially after separation the child sought other attachment figures but if they proved to be transient the child became less and less attached and would not seek further attachments. The child's contact with others tended to be superficially cheerful but not associated with or paying particular attention to individuals.

The factors increasing the intensity of the observed reactions were greater isolation, a strange environment and a longer period of separation, whereas factors like the presence of a sibling or the substitution of a single constant carer reduced the distress. Although any variables could account for the behaviour, eg. unsatisfactory relations with mother, strange people or environment, Bowlby (1982) argued and used case studies to establish that the main variable producing these responses was the absence of the mother.

Bowlby's influence was felt particularly in the area of childcare. His 1951 report for the World Health Organisation suggested that group daycare was potentially psychologically damaging for young children. This view has been substantially modified and although there may be suggestions that there is a higher rate of insecurity for children who have early and continuing daycare this is now thought to arise from the quality of care rather than the separation from parents (Rutter, 1995). Conclusive evidence that full time care has negative effects, especially for babies less than one year old, is not yet available.

3.3. The Strange Situation

Attachment theory was operationalised and further developed by Ainsworth, Behar, Waters and Wall, (1978). Based initially on her observation of infants and mothers in Uganda and Baltimore, Ainsworth found that the idea of attachment usefully explained the interplay of different behavioral systems, eg. exploration and food seeking, in young children. If the attachment figure was present and the infant rested, healthy and not hungry, the attachment system was likely to be inactive or active at a low intensity, (Ainsworth, 1982); this provided a secure base from which the baby could then explore.

Ainsworth's major contribution to attachment theory was the idea of 'secure base' which becomes established by the reciprocal behaviours of mother and child and provides protection for the child. Should the baby stray too far or too long the need of the child for proximity reasserts itself and becomes a priority. The idea that a set goal, in terms of control theory, had been exceeded could be demonstrated and exploration was temporarily suspended while proximity to the mother was sought. When nearness had been re-established the attachment behaviours, ie. attracting attention or moving closer to the mother, would subside and exploration could begin again. Ainsworth (1982) also observed that a strange environment or a strange person could provoke more intense attachment behaviours and therefore context is highly important. The component behaviours which indicated the attachment bond between mother and child, eg. crying, smiling, touching, were not found to be consistent but the overall pattern of behaviour for achieving the goal of attachment was stable over time.

The 'Strange Situation' as a means of assessing parent - infant attachment was developed by Ainsworth, Blehar, Waters and Wall (1978), based on their observation of infants of about 12 months old with their mothers. The Strange Situation consists of episodes of increasing stress: separations from a parent, meeting with a stranger and being left alone in an unfamiliar environment. The behaviour of the child over 20 minutes during each brief episode is assessed, particularly the reunion with the parent. Ainsworth et al (1978) discovered that in addition to attachment behaviours being displayed some children also behaved in an avoidant or resistant manner to their reunion with their mother.

Although the majority of infants were classified as secure in their attachment (66%) another group was identified as anxiously attached either in an avoidant (22%) or ambivalent way (12%). The study was based on only 23 babies but was confirmed by Van IJzendoorn and Kroonenburg (1988) with similar results from their meta-analysis of the Strange Situation based on 1,990 babies from 32 studies.

Securely attached babies actively sought physical contact or interaction on being reunited with their mothers and this reunion stopped any distress; the infant was then able to continue with play and exploration. Avoidant babies avoided the caregiver during episodes of reunion whereas ambivalent babies displayed conflicting behaviour, eg. sought being picked up and yet struggled and resisted being held. This was also shown to be consistent with behaviour at home and in free play situations. A fourth category has developed from further observation and analysis of the videotaped interaction of children who were unclassifiable in the secure, ambivalent or

avoidant categories. The behaviour of these infants showed a range of disorganised and disorientated behaviours, eg. repetitive, stereotypical movements (Main, 1991). This has been linked to unresolved trauma of the attachment figure which leads to them being frightened / frightening at times with the child.

The behaviour of the infants is thought to be a consequence of the unpredictable behaviour of the parent (Ainsworth and Eichberg, 1991). Security of attachment rather than dependence allows the child to feel safely independent. The difference between dependence, described from a social learning theory perspective, and attachment has become clearer although originally they were seen as being at the very least overlapping ideas. Now they are recognised as substantially different because dependency is thought of as a personality trait rather than being reliant on the context of a relationship or being related to biological functions (Bretherton, 1985).

Bowlby (1988) did not believe that the early interactions with parents necessarily fixed the pattern of infant attachment permanently. For example the loss of an attachment figure may be eventually resolved through grief and mourning and enable the child to find new attachment figures, (Bowlby, 1981). The assumption was made that those who had anxious early relationships were more likely to have difficulty with mourning and subsequently with their intimate bonds.

The relationship which develops between children and their parents depends to a large extent on whatever the parents bring to the relationship. The mother's contribution to her relationship with the child "derives not only

from her biological make - up, but from a long history of interpersonal relationships with her family of origin and from absorbing the values and practices of her culture", (Bowlby, 1982, p342). For example, the Strange Situation has been used extensively but may be limited in its use cross - culturally because of different child - rearing practices. For example, in Japan young children are less likely to have separation experiences from their mothers (Miyake, Chen and Campos, 1985).

The idea of parental behaviour having a major impact on attachment is well supported by attachment research (Ainsworth et al, 1978), where maternal sensitivity during the first 3 months of a child's life was indicative of the quality of his or her relationship at 9 - 12 months. Mothers' consistency of response and sensitivity to infant signals, eg. feeding and play at 3 months, correlated to the infants' behaviour in the Strange Situation at 12 months (Ainsworth et al, 1978, Grossman, Grossman, Spangler, Suess and Unzner, 1985). Also Main (1996) showed that parents who reported a dislike of physical contact with their infants could be predicted from their ratings of their rejection during childhood. Also a child may have differing qualities of attachment with each parent as assessed by the Strange Situation but it is not clear how one parent may become more influential than another nor the comparative importance of professional caregivers.

Other than parental input a major influence on attachment and infant behaviour would be the child's temperament. Although some studies have shown a correlation between infant characteristics, eg. apgar score, propensity to cry, and their behaviour strategies in the Strange Situation overall the results are inconclusive (Bretherton, 1985). There is no evidence

to suggest "that future relationships are fully determined by an infant's temperamental disposition at birth" (Bretherton, 1985, p19). It is generally thought that temperament is one of many factors which could influence a child's behaviour in the Strange Situation.

The majority of children show secure attachments but a large percentage are classified as insecure; this can be as high as 40% (Van IJzendoorn and Kroonenburg, 1988). Therefore any negative effects of insecurity may have broad implications but should not really be considered to be abnormal because there are no direct links to any psychopathology although there are two disorders in children which are largely classified by the features of insecurity which are displayed, ie. one associated with institutional care and another linked to parental neglect or abuse (American Psychiatric Association, 1994).

It has been suggested (Hinde, 1991) that although a secure response to the Strange Situation is the best scenario for a child the other responses are founded on what is biologically best for the child in his or her environment. So where parents are less sensitive and responsive the child manages to maintain proximity by adopting a style of behaviour which is optimal under the circumstances. There is evidence to show that the quality of parenting and particular parental attributes have a huge influence on the security of a child's attachment relationships (Rutter, 1995). For example, the incidence of insecure attachment is much higher in abused children and those with depressed mothers. Also parental sensitivity has been correlated with attachment security. What does not seem clear is the importance of the various qualities that parents bring to the development of insecurity, eg.

reduced contact with a parent following divorce.

3.4. Attachment Beyond Infancy

Follow up studies of children who had been assessed in the Strange Situation (Matas, Arendt and Sroufe, 1978) showed that securely attached 2 year olds sought and accepted their mothers' help with problem solving activities whereas anxiously attached avoidant children were more likely to seek help from the experimenter and ambivalent children gave up easily. The same secure children observed at 5 years (Arendt, Gove and Sroufe, 1979) were found to be more adaptable to changing personal and environmental circumstances than the other children. It seems that children repeat the patterns from their early experience in later relationships.

The attachment characteristic of the child, as demonstrated by the Strange Situation, may start as an indication of a child's dyadic relationships with their parents but how this then becomes an intrinsic part of a child's approach to other people and therefore an individual characteristic is unclear.

As children get older there is a shift in the manner of attachment behaviours which has been attributed to the ability of the child to understand the parent's perspective and negotiate. Bowlby (1982) referred to this as a "goal corrected partnership" associated with the development of working models and the acquisition of language between the ages of 3 and 4 years. At this stage the child can tolerate separation from the attachment figure for longer periods and with less distress. Development in motor skills, eg. walking, also enable the child to explore further from the secure base and broaden

social contact with peers and strangers.

With the onset of adolescent and physical maturity attachment develops in the direction of partnership with similar aged peers and this is associated not only with hormonal changes but with the increased ability of people to reflect on their own cognitive abilities, ie. metacognition (Ainsworth et al, 1991), although this is said to begin developing from an early age and be acquired by most children by six years of age (Main, 1991). Metacognition is defined by Main (1991, p128) as being able to think about thought, "being able to reflect on its validity, nature and source". This is seen as a more complex concept than thinking or possessing mental representations and ties in with the idea of multiple models. Multiple models was the term Bowlby (1977) used to describe the development of contradictory models relating to attachment as opposed to the multiplicity and diversity of models that would be an expected part of mental life. Multiple models is a term which is used to describe the existence of more than one model of attachment which can lead to conflict of ideas, representation and memory. It has been suggested by Main (1991) that where multiple models of attachment exist either metacognitive knowledge has failed in its monitoring and evaluation or it has not developed.

Attachment to parents is relinquished to a certain extent during adolescence and autonomy increases although new attachments to sexual partners does not mean that parental attachment stops. "Most adults continue a meaningful association with their parents regardless of the fact that parents penetrate fewer aspects of their life than before" (Ainsworth, 1991, p.36). Other secondary attachments may also be significant and continue to provide

support, eg. teachers, but these do not necessarily develop into the same affectional bonds. A relationship between two people is not necessarily important enough to have an impact on internal organisation and may be short term, whereas affectional bonds, by definition are seen as long lasting and significant, having an impact on internal working models. An affectional bond, of which attachment is an example, could be described as an enduring tie with a partner which is important in a unique way and which cannot necessarily or easily be interchanged with another bond (Ainsworth, 1991).

3.5. Adult Attachment

Research in the area of attachment has developed beyond childhood and adolescence and has been applied to a wide range of subjects from the formation of adult pair bonds to old age. Attachment theory assumes that the security derived from childhood experiences with parents has an influence on the key relationships throughout a person's life (Bowlby, 1988). Although some qualities of the early parent - child relationship have been identified and their meaning interpreted this has not yet been achieved for adult relationships.

Hazan and Shaver (1994) have used attachment theory as a basis for trying to understand adult pair bonds and analysing whether or not they are attachments in the same way as adult - child bonds. They suggest that the qualities of attachment relationships with parents when young are gradually transferred during adolescence and adulthood to romantic partners. For example, in infancy parents provide a secure base but this is later transferred to an adult partner, although the parents are not necessarily completely

relinquished as attachment figures. They submit that there are three conceptual categories: caregiving, sexual mating and attachment attitudes, which can trigger adult - adult romantic relationships. So, for example, a person who wishes to provide care will be attracted to a person who appears to be need care. Although the purpose of infant attachment is protection and survival the reason for the continuing attachment bond with parents and the development of bonds with other adults has not been as clear. Hazan and Zeifman (1999) suggest that it too has an evolutionary basis because the need for protection when young changes and develops into the protection necessary for successful reproduction.

Hazan and Shaver (1994) identified some features of adult - adult relationships which could be linked to insecurity, eg. a reluctance to commitment in relationships, viewing partners as inattentive. What is not yet clear is the significance of these features or their meaning and associations. It would be interesting to explore the pair bonds established by professional caregivers to find out whether or not caregiving is an important part in establishing and maintaining their relationships.

3.6. The Adult Attachment Interview

Adult attachment has also been investigated in a number of studies of adults' mental representation of their childhood attachment using the Adult Attachment Interview (AAI) which was developed by George, Kaplan and Main. The AAI is semi-structured and aimed at "surprising the unconscious" (George, Kaplan and Main, 1996, p.3) in relation to childhood experience of relationships. It gives a picture of relationships with major attachment figures, usually parents and mainly consists of a narrative outlining the

person's view of relationship experiences when he or she were less than 14 years old.

The interview elicits answers to questions about key figures in childhood in terms of attachment, separation and loss. Specific questions are asked in a set order with structured follow up probes but the interviewee is encouraged to express themselves freely. The interviews are taped, transcribed and can then be analysed using the system devised by Main and Goldwyn (1994). The analysis of the interview provides four main classifications or divisions to describe state of mind in relation to attachment and each of these have been shown, in theory and experimentally, to correspond to Strange Situation infant attachment categories (Main and Goldwyn, 1994). (See table 1 for corresponding classifications between the AAI and Strange Situation.) In fact the interview developed from analysis of the narratives of parents which intuitively seemed to relate to the outcome of the Strange Situation of their children (Hesse, 1999).

Table 1: Brief Description of the Adult Attachment Interview Categories in Relation to the Infant Strange Situation Categories.

Adult Attachment Interview	Infant Strange Situation Response
Secure / Autonomous (F) Coherent, collaborative discourse is maintained during description and evaluation of attachment related experiences, whether these experiences are described as favourable or unfavourable. Speaker seems to value attachment while being objective regarding any particular experience or relationship.	*Secure (B)* Shows signs of missing parent on first separation and cries during second separation. Greets parent actively seeking to be held. After briefly maintaining contact with the parent, settles and returns to play.
Dismissing (Ds) Normalising, positive descriptions of parents are unsupported or contradicted by specific memories. Negative experiences said to have had no effect. Transcripts are short, often with insistence on lack of memory.	*Avoidant (A)* Does not cry on separation, attending to toys or environment throughout procedure. Actively avoids and ignores parent on reunion, moving away, turning away or leaning away when picked up. Unemotional; expressions of anger are absent.
Preoccupied (E) Preoccupied with experiences, seeming angry, confused and passive, or fearful and overwhelmed. Some sentences grammatically entangled or filled with vague phrases. Transcripts are long, some responses irrelevant.	*Resistant - Ambivalent (C)* Preoccupied with parent throughout procedure, may seem actively angry, alternately seeking and resisting parent, or may seem passive. Fails to return to settle or return to exploration on reunion and continues to focus on parent and cry.
Unresolved - Disorganised (U/d) During discussions of loss or abuse, shows striking lapses in the monitoring of reasoning or discourse; may otherwise fit well into Ds, F or E.	*Disorganised - disorientated (D)* Disorganised or disorientated behaviours displayed in parent's presence, eg. may cling while leaning away. May otherwise fit well to A,B or C.

Source: Main and Goldwyn (1994)

The analysis of the AAI does not depend on the accuracy of a person's recall of his or her childhood but on the nature of the description and the extent to which the speaker can fill out the description in a balanced, organised manner. Adults who are designated secure present a coherent, plausible and consistent story of their attachment experiences and beliefs. However people who are considered to be insecure with regard to attachment produce incoherent, inconsistent stories which is thought to be due to conflicting multiple internal models. Insecure adults may have a conflict with more then one internal model of their past relationships; for example, people who idealise their parental relationships in general but who report specific incidents of rejection (Main and Goldwyn (1994).

3.7. The Validity of the Adult Attachment Interview

Although attachment theory has been established as a concept there are other influences which could potentially effect a person's narrative during the Adult Attachment Interview, eg. personality differences. The reliability of the AAI has been tested in a number of studies. Inter - rater reliability has been tested by Sagi, Van IJzendoorn, Scharf, Koren-Karie, Joels and Mayseless (1994) and Bakermanns-Kranenburg and Van IJzendoorn (1993). Not only was there consistency of AAI classification from different interviewers but also amongst the different coders of the transcripts. Test - retest studies have shown the AAI classifications to be stable over a period of time; eg. Sagi et al found 90% of their sample were stable over a 3 month period and Benoit and Parker (1994) had 90% consistency over 18 months; similar results have been obtained by Steele and Steele (1994) and Bakermanns-Kranenburg and Van IJzendoorn (1993).

The discriminant validity, or independence of the interview has been established by comparing results from the Adult Attachment Interview (AAI) with information relating to people's personality traits, adjustment and verbal skills (Bakermanns-Kranenburg and Van IJzendoorn, 1993, Sagi et al, 1994, Steele and Steele, 1994). This confirms that the Adult Attachment Interview classification system seems to be able to provide a general assessment of the adult's mental representations concerning attachment; in particular it has been found independent of demography, of verbal skills, of personality traits including neuroticism and extroversion, and of mental health problems (Steele and Steele, 1994) In other words, the idea of attachment security in adulthood has successfully and usefully been operationalised by the AAI classification system.

Nevertheless Van IJzendoorn and Bakermans - Kranenburg (1996) in their meta- analysis of 33 studies, of 2,000 AAI classifications, showed that the distribution of mothers was 58% autonomous/ secure, 24% dismissing / insecure and 18% preoccupied / insecure. About 19% of the sample of mothers were unresolved with respect to loss or trauma or both. Mothers from low socioeconomic groups and with clinical problems tended to yield a higher proportion of unresolved classifications, 28% and 40%, and dismissing classifications, 25% and 26% respectively.

Fox (1995) argues that the results of the AAI are likely to be due to untested personality factors, current psychological state, beliefs and current environment rather than early attachment experience. However he does not take into account the work of Bakermans-Kranenburg and Van IJzendoorn (1993) and Sagi et al (1994) which shows the AAI to be stable over time,

unrelated to Intelligence Quotient and interviewer effects. Van IJzendoorn (1995) in his review and meta-analysis of 18 samples consisting of 661 interviews showed the predictive validity of the AAI with 75% correspondence between the AAI and Strange Situation results. Although the predictive validity of the AAI has been replicated it is still not clear exactly how attachment representations are passed between parents and infants.

3.8. The Adult Attachment Interview and Mental Health Problems

The adult attachment interview (AAI) has been used in identifying states of mind in relation to attachment in areas other than child rearing, for example, in the arena of psychopathology and mental health. Van IJzendoorn and Bakermanns -Kranenburg's (1996) meta - analysis included clinical samples whose distribution of secure AAIs was significantly reduced, ie. 13% rather than 58% in general low risk samples. This would appear to indicate that mental health problems are more prevalent among people with insecure attachment.

The evidence for the links made between people's AAI results and mental health problems is difficult to interpret because of effect of comorbidity on the different categories of problems, eg. unipolar and bipolar depressive disorders versus eating disorders. Some of the evidence appears to be contradictory; Fonagy et al, (1996) showed links between depression and a preoccupied state of mind, but other studies have shown a dismissing state of mind to be linked with depression (Dozier, Stovall and Albus, 1999). The picture is therefore inconsistent.

Overall, it does seem that mental health problems are associated with the insecure or non- - autonomous and unresolved states of mind but the nature or cause of the links between them has not yet been clarified. Although the evidence is not yet conclusive, Dozier et al (1999) suggest that generally dismissing states of mind, which indicate the minimising of attachment needs, will prove to have links to problems which are associated with minimising feelings, eg. eating disorders and substance abuse. Whereas preoccupied states of mind, which tend to maximise attachment needs will be associated with problems related to an absorption with feelings, eg. depression. They also suggest that the links between heritable problems and AAI results will prove to be less clear than those which could be associated with a person's childhood experience and environment.

The variation in the results of studies is probably due to the difficulties and the complexity of categories and dimensions used to define mental health. Another problem which may account for the variation across the studies is the consistency of rating the AAI, which continues to develop, and whether or not studies have relied on raters with sufficiently similar training to high levels of inter - rater reliability and inter - laboratory reliability.

3.9. Attachment and Caregiving Relationships

Relationships between two people do not necessarily develop in the same way as an affectional bond, eg. between parent and child or between adults in a loving relationship. A relationship may be short lived and formed for a particular purpose, for example health care. Relationships are based on the history of interactions between two people whereas an affectional bond is a characteristic of an individual and influences the internal working models of

the person (Ainsworth et al, 1991). Relationships are likely to be characterised by different components, eg. caregiving, teaching, socialising, but caregiving specifically relates to attachment arising from the need to protect. Caregiving is a key aspect that contributes to the development of a relationship with an attachment figure and may have an influence on relationships that develop specifically for that purpose.

The physiotherapist does not have the level of contact or the same continuity as an attachment figure, but may be a person who inspires trust, serves a useful function and who is sought when health problems cause distress or anxiety. "The clinician like the caregiver optimally serves as a secure base by being available and appropriately responsive" Dozier, Cue and Barnett (p.3, 1994).

Dozier, Cue and Barnett (1994) used the AAI to investigate the attachment of clinicians and their clients with mental health problems. The clinicians were case managers with a variety of experience and training in psychology and social work and the interventions varied from practical, eg. helping to find work, to psychological, eg. counselling. Dozier et al (p.18, 1994) found that security / insecurity of attachment of the case managers was "particularly important in their ability to respond therapeutically to the individual needs of clients". The secure case managers were more likely to provide help which challenged the attachment strategies of their clients and were more likely to facilitate change. The insecure case managers tended to have less flexible intervention strategies which reflected their own attachment characteristics, ie. they did not respond to individual client needs.

Physiotherapist / patient relationships are not close in the same way as mother / child or adult / adult social relationships but they are unique. Other healthcare professionals have similar consistency of contact, eg. speech and language therapists, spend an equal length of time for consultation and treatment, eg. occupational therapists, and use touch as an essential part of their contact with clients, eg. nurses, but physiotherapists are probably the only health profession who combine all these factors. Physiotherapists like many other healthcare groups choose to be caregivers in addition to the care given and received in their social relationships. A key aspect of developing attachment between mother and child is caregiving. It may be that an established secure relationship which enables the child to explore from a secure base also in later years produces a desire to be nurturing and caring outside the relationships a person has with family and friends. Also it may be that the desire to provide care as a professional is widely derived from a secure base. In addition those who have a secure state of mind in relation to attachment may be more sensitive in their interaction with patients as secure mothers are with their infants.

Alternatively some healthcare students may be persistent or compulsive caregivers, ie. "the person showing it *(compulsive caregiving)* may engage in many close relationships but always in the role of giving care, never that of receiving it. . . . . the person who develops in this way has found that the only affectional bond available is one where he must always be the caregiver" (Bowlby, 1977, p139). Perhaps insecurity of attachment and a lack of support, caring and loving in family and social relationships leads some people to develop their work relationships to compensate. Physiotherapists with an insecure state of mind with regard to attachment

may be less flexible and sensitive in their approach to patients. Gaining feedback from patients about their relationships with their physiotherapists may help to clarify any association between these factors. Physiotherapy is a profession where the physical aspect of care is the reason for the relationship and these issues may not be significant because the relationship is secondary to the purpose of the encounter.

Caregiving, from an attachment perspective, is seen as a key influence on the early relationships that are formed with parents, adult romantic relationships and possibly from a professional point of view for the providers of healthcare.

4. Adult Attachment Patterns among Physiotherapy Students

This exploratory study consisted of two parts; the first and major part of the study was the use of the adult attachment interview with physiotherapy students and part two was the collection of feedback from the students' patients about their interactions.

The major participants in the study were undergraduate physiotherapy students from the Middlesex Hospital and University College London (UCL), School of Physiotherapy. Before any part of the study began ethical permission was sought from the Clinical Investigations Panel of The Middlesex Hospital. Permission for the study to proceed was granted by chairman's action, 14th October 1994, see appendix 10.1.

4.1. The Students

Permission to enrol the students in the project was given by the Head of the School of Physiotherapy. There was a positive attitude to this type of investigation and complete access and co-operation was given. The students were recruited initially by placement of a poster on their notice board, in the School of Physiotherapy, and explanations to them in their year groups. For the wording of the poster see appendix 10.2.

The physiotherapy students were volunteers and no payment was made or academic advantages offered to encourage their participation. The students were given an information sheet, appendix 10.3., giving details of the necessary commitment to the project and when they volunteered they were asked to sign a consent form, see appendix 10.4. The possibility of

withdrawing from the project at any time was emphasized. The students were not excluded from any of the usual activities associated with the physiotherapy course and a substantial increase in the students' workload was not anticipated.

The information was kept confidential to the researcher and project supervisor but the students were given access to all the information relating to themselves on request. The information from the research was not made available to any UCL staff or other physiotherapy educators. The data collected was held in a secure place so that there was no possibility of the information collected during the interviews or the level of student involvement having an influence on the students' interactions with other staff, their academic studies or their examination results.

4.1.1. The Sample Size

A sample size of 50 students was originally chosen on the basis of Van IJzendoorn and Bakermann – Kranenburg's (1996) meta – analysis of non – clinical samples, who had been interviewed using the AAI. The distribution of classifications in the meta – analysis suggested that a sample of 50 students might produce results with a sufficiently large number of students in each of the interview categories, 3 way and 4 way, to permit investigation of the hypothesis under consideration.

Using a formula for the determination of sample sizes from Bland (2000) power calculations were computed in order to identify the number of students needed to detect a difference in the proportions of the secure groups with a power of 95% and a 5% significance level. The anticipated test for

the interview results was a chi squared and so calculations of proportion, applying the results of the meta - analysis, were used for the table below.

Table 2: Results from the Sample Size Calculations

Possible proportion of secure AAI among physiotherapy students	Number of physiotherapy students required to detect a difference in proportions with a power of 95%, and a 5% significance level
0.83	39
0.82	44
0.81	51
0.31	49
0.3	45
0.29	41

The table shows that a sample of 50 students would be adequate to detect a difference between the ratio of secure students to the sample size and that in the meta - analysis, provided the ratio was reasonably different. The ratio in the meta - analysis was 0.58 with a sample size of 647.

The hypothesis states that differences were sought between general samples from the meta - analysis and the physiotherapy students therefore the table is based on both a larger proportion and a smaller proportion of secure AAI from the physiotherapy students' results.

The scale of the study was decided on both pragmatic grounds and sample size calculations. The AAI is a complex and time consuming interview to analyse and therefore time constraints were considered prior to the

recruitment of the students. At the time of the first request for volunteers there was a 100% response from the 48 UCL physiotherapy students in the 1992 and 1993 cohorts but after reflection 5 students chose not to be interviewed. The students who decided not to be interviewed were not asked the reasons for their withdrawal and their common features were that they were all under 21 years of age and female. Due to the closure of the Middlesex Hospital School of Physiotherapy it was not possible to recruit and interview additional students, therefore a total of 43 students were interviewed using the AAI, a participation rate of 89.58% from the two cohorts.

The sample size calculations indicate that 50 students were a reasonable number of participants. The level of probability chosen as an acceptable indication of statistical significance for this study, considering the smaller sample size, was $p \leq 0.01$. The level of probability which is commonly considered acceptable is $p = 0.05$ but in this case there would have been an increased possibility of a type I error at this level, so more stringent requirements were chosen.

Type I errors occur when the sample is small and consequently there is a risk that the sample represents a small part of the population rather than the whole, ie. the null hypothesis is rejected when it should be accepted. To avoid this problem a more demanding level of probability may be used as an indication of significance but this increases the risk of a type II error. Type II errors occur when the sample is in fact representative of the population but the results are rejected, ie. the null hypothesis is accepted when in fact it should be rejected (Kirkwood, 1994).

4.1.2. The Characteristics of the Sample

The demographic information available from the Chartered Society of Physiotherapy, (CSP), about the age, sex and ethnic origin indicate that the students from UCL reflected the characteristics of physiotherapy students in the UK, see table 3. However, the sample of UCL students tended to have fewer men, mature students, ie. people starting the course over the age of 21, and people who consider their ethnic origin to be non - european. The analysis was limited because of the scope of the information collected by the CSP; who only collect data in these three categories.

The withdrawal of 5 students did not have a great effect on the demographic profile of the sample of students who participated. The 1993 students who undertook the AAI, as a group, were more representative of the population of physiotherapy students in 1993 than the whole 1993 cohort in terms of the number of mature students and the ratio of male to female students, see table 3. The 1992 cohort profile was relatively unaffected by the withdrawal of one student from the group.

There were a larger proportion of men and mature students in the 1993 than the 1992 cohort of students. This was not due to any change in either school policy or in the selection procedure but to the inconsistency of the profile of applicants to the course from one year to the next.

Table 3: Demographic Data

A Comparison between the Profile of Physiotherapy Students at University College London and from the United Kingdom

	1992			1993		
	UK * %	UCL all %	UCL sample %	UK * %	UCL all %	UCL sample %
Sex women	81.1	95.9	95.7	78.8	83.4	80.0
men	18.9	4.1	4.3	21.2	16.6	20.0
Ethnic origin european	95.0	100	100	97.0	100	100
Age mature students (over 21 years)	32.7	12.5	13.0	35.0	29.0	35.0

Source: * Unpublished data from The Chartered Society of Physiotherapy, Department of Education.

The classification of the socioeconomic background of the students who were interviewed was based on Standard Occupation Classification, Office of Population Censuses and Surveys, (1990), see table 4. The majority of students had a background from socioeconomic group 1, 44.2% (managers and administrators) and group 2 34.9% (professional). The other occupational groups represented by more than 1 student were: associated professional and technical 7.0%, and personal and protective service occupations 4.7%. The clerical and secretarial, sales occupations, plant / machine operatives and "other" categories were only represented by one student each. Only one socioeconomic group, craft and related occupations was not represented at all. The student group as a whole was therefore a predominately middle class sample.

Socioeconomic data on students on physiotherapy courses nationally was not available because it was not collected. Therefore it was not possible to establish how similarities or differences in the socioeconomic background of UCL students compared to UK students as a whole.

Table 4: Socioeconomic Background of the Adult Attachment Interview Participants

socioeconomic group	group description	physiotherapy students UCL number	%
1	managers & administrators	19	44.2
2	professional occupations	15	34.9
3	associate professional & technical occupations	3	7.0
4	clerical & secretarial occupations	1	2.3
5	craft and related occupations	0	0
6	personal & protective service occupations	2	4.7
7	sales occupations	1	2.3
8	plant & machine operatives	1	2.3
9	other occupations	1	2.3
	totals	43	100

Source: Standard Occupation Classification,
Office of Population Censuses and Surveys, (1990)

4.2. The Adult Attachment Interviews

The adult attachment interview (AAI) is a semi - structured interview that was developed by George, Kaplan and Main (1985). It aims to elicit memories which relate to childhood relationships, ie. mainly parents but also other people seen as key figures when young. Participants were asked to describe their relationship with their parents during childhood and illustrate with specific memories, see appendix 10.5. for the list of the AAI questions with the suggested prompts and cues. The interview includes questions which address experiences of rejection, being upset, ill and hurt as well as loss, abuse and separations. Additionally the participants were asked to describe their current relationship with their parents and the influence of their childhood experience on their adult personality (George et al., 1985).

4.2.1. Preparation for the Interviews

Preparation and training of the interviewer for conducting the interviews followed guidelines recommended by George, Kaplan and Main (1985). An initial interview was conducted with the researcher as a subject and a friend as the interviewer. This interview provided the researcher with an experience being interviewed and insight into the problems of participating. For example: it can be difficult to access memories and the interview can be an emotional experience by arousing memories from childhood about family relationships which are difficult or painful to recall. The interview questions and prompts were memorised and then practised on two friends; who responded naturally rather than role playing. The study supervisor and the interviewees gave feedback on these interviews to the practising interviewer and the comments they provided indicated that greater fluency with the questions and prompts would be useful. The interviewer then revised and

learnt the interview questions again, prior to the first student interview.

4.2.2. The Student Interviews

The AAI was used to interview the physiotherapy students before their clinical placements so that their clinical experience did not influence their responses. During clinical placements students sometimes work with dying and seriously ill patients and their involvement of that type in situations could have influenced or provoked a response related to their own attachment experiences, particularly those relating to personal losses. Not all the students who had originally volunteered to participate in the research wanted to be involved with the interviews, consequently forty - three interviews were conducted and audiotaped rather than the forty - eight. The students were given a choice of interviewer, either the researcher, who was known to them, or an unknown researcher in the field who was a clinical psychologist. All the students chose to be interviewed by the researcher.

A private office with an informal seating area was used for the interviews; this was a room familiar to the students and where complete privacy was assured. The students were all familiar with the situation having been at the UCL for at least a year when the interviews took place. Confidentiality and access to the tapes was limited to the interviewer and supervisor and this was explained to the students before the interview began.

The 43 interviews were audiotaped and lasted between forty five and eighty minutes depending on the expansiveness of the student. Some students found the interview an emotional experience and cried. They were given time to express themselves as they wished before they progressed with the

questions. The taping was continuous and these episodes were transcribed as prolonged pauses if the student did not continue to speak.

After the interview the students were given the opportunity to discuss their responses and feelings. They were also offered a follow up session, at a time of their choosing, if they wanted to talk any more about the content of their interview or their childhood experiences. Professional counselling was also available and was offered to the students if they wanted to discuss any of the issues that had been raised in depth.

As the interviews were conducted they were reviewed by the researcher and supervisor for clarity of questioning and errors as recommended by George, Kaplan and Main (1985). For example: any tendency to be overly formal or informal which might have inhibited the responses of the students was carefully monitored.

4.3. Transcribing and Analyzing the Interviews

The interviews were transcribed verbatim, according to the guidelines of Main (1994). This document describes every detail of a consistent method of transcription from the general layout and margins to the timing and notation of pauses. Thirty - five of the transcripts were typed by the researcher and eight of the transcripts were typed by a professional typist. The transcripts each took at least six hours and often more to transcribe and then all the transcripts were checked for errors. The original audiotapes of the interviews were used to review all the typed interviews for accuracy and consistency of notation.

The transcripts of the interviews are not included with this thesis because that would put the students' family histories into the public domain. Descriptions of the students' childhood experiences could be used to identify the participants in the project. The precedent for excluding the interviews has been set by previous PhD theses at UCL, for example Alves (1995), China (1996), Holder (1996), Croft (1997), Fearon (1999).

In order to be able to analyze the tapes the researcher attended an intensive two week course at the University of California, Berkeley, facilitated by Professor Deborah Jacobvitz, University of Texas, and supervised by Professor Mary Main. The two week intensive course was followed up with participation in a reliability study carried out over a period of two years. This consisted of analyzing 40 transcripts set by Professor Main, and developing at least 83% reliability across the most recent 30 transcripts. See appendix 10.6. for confirmation from Professor Main that this level of reliability was reached.

The process of analyzing the interviews requires several readings of the transcript. The first reading of the transcript is used to appraise the likely quality of the individuals' attachment related experiences with their family and rate them against Main's 'scales of experience'. The second reading allows the researcher to assess the current quality of the persons' state of mind with respect to their attachment experience. Both these aspects drawn from the transcript are coded and given a value on a scale. Each of the aspects from the interview is marked on a 16 point scale (1.0, 1.5, 2.0, 2.5 etc. to 9.0) and these can be related to key descriptors in the Adult Attachment Scoring and Classification Systems (Main and Goldwyn, 1994).

See appendix 10.7 for the rating and classification sheets from all the interviews in this study.

There follows a description of the scales for experience and the state of mind scales with quotes from the UCL students' interviews as examples.

4.3.1. Scales for Experience

The five scales for experience are:

- loving
- pressure to achieve
- rejecting
- neglecting
- involving / reversing

Each of these aspects of the interview are distinctive but related, as defined by Main and Goldwyn (1994). The scales are scored in relation to the mother, father and any other close adults, eg. step - parents. The experience scales are specific because each scale is applied to the individual parenting described for the mother and father. The scoring of these scales is based not on the analyst's interpretation of the experience but on the interviewees' perception of their childhood and therefore their probable experience.

The high score from the assessment of the loving scale is based on a strong indication of a loving relationship with a parent which in this analysis relates to statements of comfort, support, physical affection and dependability, especially in the light of having done something bad. A low score would be given for this scale if a parent seems to have provided basic

physical or educational care but no evidence of having supplied affection, emotional support or interest. An example of a statement which would support a higher score for loving experience:

> *They were always really supportive to me and my brother, I don't remember having any problems when I needed support, I mean they were always just there and they were always helping me with my work.*
> (Interview 4, lines 178-180)

This quote typifies loving experience by the unconditional support given by the parents and taken in the context of the interview with examples of loving behaviour by the parents resulted in high scores of 8.0 for mother and father loving in this interview.

The high rating of the experience of rejection is based on childhood experience which appears to be empty of affection, where the child was not supported, was rebuffed, apparently not wanted and may have been ridiculed when distressed or ill. Rejection is also rated highly when a person describes himself or herself as a favourite or spoilt as a child and this is not supported by descriptions of affection; it may be associated with material objects that the child did not feel that they deserved.

For example this excerpt where the child was scolded when hurt:

> *I've fallen over I've slipped this has happened and my mum would say "Its funny you haven't scraped your knees" and well no I was very lucky mum and she'd say "Can I see your knees" and I'd say "Alright mum it was me" and she'd tell me off 'cos it was always me but er.* (Interview 17, lines 236-240)

In this quote the child is injured and tries to hide it. The mother has a cool approach to the child's injury and scolds the child rather than offering care or comfort. The accumulated score for mother rejection for this interview was 7.00. For ratings at the lower end of the rejection scale the interviewee may have had parents who stressed early or inappropriate independence rather than negative experiences of this sort.

Neglect differs from rejection according to Mary Main; the child who is neglected may be given little attention, eg. it may be due to parental illness or a preoccupation with work, whereas a rejected child may be actively involved with the parent but in a negative way. The neglect scale rates the degree to which a parent paid attention to the child when actually present, a highly neglecting parent in this analysis would not really interact with the child and do nothing towards developing the child's physical or psychological well being.

> *Well that's from really it wasn't so much, I didn't feel it so much feel it -- um when he wasn't there but that time he came and he ignored me then I really felt it and then I started after that, it was sort of like he doesn't want to be with me at all.*
>
> (Interview 24, lines 348-350)

This quote is part of a description of a meeting with an absent father and illustrates the fact that the father did not pay attention to the child on this rare occasion of a meeting. This was the only incident in this transcript which contributed to the neglect score for the father and therefore the overall score for neglect was only 2.00. Lower ratings of the neglect scale would indicate that the parent was present but unavailable in a limited way or for a short period of time perhaps because of a preoccupation with activities

which did not relate to the child.

The scale for involving / reversing relates to the way in which a parent may at the lower end of the scale have been disorganised or incompetent and the child takes on a parental role with siblings, perhaps advising the parent. Higher up the scale this might be developed to the point where there was obvious role reversal which has become a significant part of the child's experience, with the parent seeking the child's attention. The child may even take on a role of protecting the parent, being responsible for the parent or as a substitute spouse.

> *I was the oldest and I tended to get her (younger sister) to look after or do things with her . . . . . Cos I practically brought her up she was my baby sort of thing cos I was a lot older could look after her.*
>
> (Interview 11, lines 188-192)

This example of role reversal where the child is a substitute parent for a sibling and takes on an adult role resulted in a score of 4.5 for mother involving / reversing.

Pressure to achieve in the context of this interview relates to how much the child was pushed towards achieving some sort of excellence, status or exceeding other family members but failure to achieve was not linked to punishment. Lower scores might indicate some particular concern about school reports limited to a particular point in time. Alternatively a high score would be awarded when the parents had consistently stressed the child to perform in a particular field and this becomes the entire focus of the relationship.

He was always very exacting particularly academically about what we should I mean I always found it very difficult to cope with um you know we used to get our reports read out that was always a very early memory of all our school reports were read out at the dinner table and with everyone there and you'd go through and all sort of going like could be better and all of this and er you know I used to feel sick the night before and hate it horrible yuh.

(Interview 44, lines 178-184)

The pressure in this quote is derived from the manner in which academic achievement and school reports were used probably as a means of motivation but producing a great deal of stress in this child.

4.3.2. Scales for State of Mind

The state of mind scales focus on the way in which people organise and understand their attachment related experiences which are crucial to deciding the overall classification. They assess how the degree of objectivity, emotional involvement and current thinking expressed by the person is appropriate to the description of their experience. The scales for state of mind include three scales which are parent specific and eight scales which are not parent specific.

The state of mind scales are assessed using discourse analysis as outlined in the AAI scoring manual, Goldwyn and Main (1994). This relates to the quality, clarity, consistency and truthfulness of the transcript.

The person's state of mind is scored in relation to the following factors:

- idealisation
- derogation
- metacognition
- fear of loss
- involving anger
- lack of recall
- passivity
- unresolved in relation to death / loss
- unresolved in relation to trauma.
- coherence of transcript
- coherence of mind

The first three scales are classified in relation to the mother and father. The first scale of idealisation is an indication of a person's representation of his or her mother and father based on whether or not they have a thorough, consistent and objective view. This can be seen in a transcript as a mismatch between generalised and semantic representations, for example, an interviewee providing very positive adjectives to describe a parent and then giving examples of incidents which are neutral or negative. In a highly idealising individual the parents are described in ideal terms without any criticism or balance when at another point in the interview they may give examples of negative experiences. Any difficulties in the parent - child relationship may not be acknowledged.

> *They (parents) were excellent as far as I can remember, we always have got on really well, just I don't know they were really good, considering I was their oldest child they didn't have time to learn from their mistakes. They were excellent.*
>
> (Interview 2, lines 26-28)

Subsequently this statement was not supported by positive experiences with the mother but vague and inconsistent episodes which did not tally with this general, positive view. The maternal idealisation score for this interview

was 4.0. Lower idealisation scores may have an incidence of this extremely uncritical approach and this can be quite common at the beginning of an interview when the person is "warming up".

Involving anger is usually scored from transcripts which show expressions of current feelings about past events which still rankle with the interviewee. Anger towards attachment figures often leads to contradictory statements and incoherent statements during the interview. Lower scores may show some anger or resentment towards a parent but these may then be belied by using humour, describing an alternative interpretation, being contained or by dismissal of the issue. Higher scores are given for this scale when distinct, strong anger is expressed at regular intervals throughout the interview and the parent is denigrated. For example, trying to persuade the interviewer to agree about the unreasonable behaviour of a parent or the unlicensed addressing of the parents during the interview without introduction.

> *That's what came on later whereas name 2 got left not doing that for ages which caused mountains of arguments. Why did I have to do it at this age and he didn't ? and -- whatever but dad would just sit there.*
>
> (Interview 12, lines 143-147)

This quote would have been scored for involving anger because the interviewee is addressing the mother, as she would have done as a child at the time, in an angry style. If this had been introduced, ie. "and then I would say ....." then the anger would have definitely been placed in the past and not been considered for this scale.

Derogation is scored for insulting or dismissing statements made about individual parents which can be used to indicate a person's general approach to relationships. Statements of this type assess the extent to which a person understates the importance of his or her childhood experiences and their close family relationships.

Lower scores at the bottom of the scale may be due to a number of dismissing statements which are counteracted by an underlying valuing of attachment. Higher scores are given to transcripts where there are actively dismissing, cool and derogatory remarks about attachment figures without any balance being described.

For example:

> *She (mother) was making it really is making up for what she didn't have from her own mother so I think that's probably why she was like that um and its just my mum she's very open and stupid.*
>
> (Interview 6, lines 450-452.)

This is a relatively minor insult to the mother is counteracted by a positive adjective and in the context of the interview did not produce a very high score, only a moderate score of 4.00.

The following state of mind scales are not parent specific and apply to the quality of a person's general attitude towards attachment related topics by assessing their narrative. Lack of recall is common and may even be evident at the beginning of secure interviews. Although when associated with security it is usually counteracted by a gradual improvement of memory through the interview. In insecure interviews the continuing inability to

remember childhood is typified by phrases like "I don't remember" which block any further discussion of a question. In high scoring transcripts the loss of memory fails to develop as the interview progresses and the person continuously reports difficulties in remembering experiences. For example the responses below show the style of limited responses which would be typical of a higher scoring transcript:

What happened if you were physically hurt ?

I was sort of looked after.

And who looked after you ?

Mum {pause 6sec}

Can you think of a time you fell over ?

Yeah, sort of {pause 8sec} mum would come out and say it was alright and well.

And then what happened ?

I really haven't, things like that are very distant nothing specific you know. Can't think of anything particular, never -- nothing major. I can't remember little incidents like that.

(Interview 2, lines 206-228)

This shows a limited response to questions and the questions are not fully answered because of lack of memory. The interviewee had a final score of 3.5 for lack of memory for this transcript which would indicate their memory was not consistently deficient.

Metacognition is the assessment of mental processes which may be the ability of people to monitor, reflect and reconsider their previous thoughts in a new light. The ability to reassess past experience in a different way, especially during the interview will produce a high score on this scale. The

metacognition scale allows an assessment of awareness, of the interpretation of a person's feelings and thoughts, of the motivation which may guide subsequent behaviour.

This can be a recognition that things may be seen in another light by oneself, other people or the same person at a different time.

I just remember just it was always me and my dad and us the kids it was a very sort of tight unit so its that's what I think -- it may be wrong.

(Interview 37, lines 407-409)

This interviewee has made a statement and then questions whether or not her perception of events was accurate, ie. the fact that there could be more than one way of assessing a situation.

Passivity is a vagueness that enters the transcript, eg. in the form of incomplete sentences, inability to express the meaning of feelings or a situation, or child - like speech which detracts from meaning. It indicates a tendency to be immature, submissive, and overly dependent in the description of past attachment experiences. This may, at the lower end of the scale, be apparent in one or two instances during an interview. For higher scores there is a general lack of focus for the interview with many incomplete or vague answers and the interviewees may seem unable to make up their minds or specify a meaning.

.....and um anyway I wanted to go and dad said no I had to make him a cup of tea before I went because he'd come in so I was I don't want to make you a cup of tea blah blah blah.....

(Interview 11, lines 216-218)

This quote shows an answer to a question which includes a typical feature of passivity, ie. the use of nonsense language, which enables the interviewee to be vague and avoid finishing the sentence or thought.

Fear of loss relates to the loss of a child but none of the students had children and so this scale did not produce a score or data for this study. The scoring for the unresolved scales for responses to death and trauma, namely abuse, are both scored in similar ways. Signs of incomplete mourning following a loss may refer to any important loss not only family members. The person may fail to focus on the loss, may be confused and give conflicting information, or still be involved giving a very detailed story of their experience.

So have you had any important losses as an adult ?

Well my grandmother died um -- she was she died as a result of Alzheimers um and she was born in (date) and she died in (date) and up to (age) she was the most active you know person I'd ever met and there was absolutely nothing wrong with her. I mean for all I know she could have had really bad arthritis and stuff like that but never ever remember her having a stick or anything.

Up to this point the interviewee has been answering the question by addressing the loss of his grandmother and the possible reasons. Then he begins to be involved with his own story and continues by relating incidents of his grandmother's life and her house which are not relevant.

She was my dad's dad's mum and she used to live above the shop that my granddad runs to this day he's a (occupation) in place 10 she lived above him um we used to go round to her house every two weeks and it used to be full of dust and everything and she

used to cook the most amazing roast dinner and ice cream and stuff and I remember that she used to be a really really good cook and she used to be so happy her little room had lots of old photos in it and it was -- I don't know they'd done to it they'd it looks like someone had pegged it and then papered it 5 times again over the years painted it about 6 times and the last colour that was on it was bright pink walls and the ceiling just a light bulb and there was all these pictures black and white photos it was quite horrible really and used to sit on the sofa and it had a cover over it and if you hit it like that all this dust used to come out of it.

The involvement with the story is told in long sentences with hardly a pause for breath, as indicated by the lack of sentence structure. As the narrative continues, the interviewee finally gets around to telling about the grandmother's death but in a very detailed way which seems to indicate signs of continuing involvement, even absorption and incomplete mourning.

There used to be this doll that was about 150 years old sitting in the corner of the sofa sort of looking ancient but she died well she went doolally in about a week it was amazing and then she went into a home and she went into a really dodgy place in the easter they used to sit there just drooling out of the corner of their mouth and they were all on really strong valium or something and they were just I mean they used to just sit there they didn't even knit or sing and then they got us all in there she was in there for about a year and they said right she's sort of a she's going to say goodbye to the world any minute now. So the last time I saw her she was laying in bed I mean she could

have been dead for all I know basically as far as we were all concerned she was she was no teeth no hair no -- flesh just skin and just lying there. All sort of yellow.
(Interview 20, lines 535-538)

Similarly unresolved response to trauma is scored in relation to the consistency of the interview, feelings of deserving or causing the abuse, or subsequent denial of events. With both unresolved scales, as with all states of mind scores, disorientated speech is a key means to scoring, eg. sudden changes of mind, changes in manner of speaking, disorientation or changing the subject.

Ummm . . . . . {5sec} I don't think my I don't think my dad ever I think my dad was quite so scary in that he he its funny he's not an aggressive person but there's something about him that you don't really want to mess with do you know what I mean ..... I spat at him once and he held me on the floor and just like spat in my face and I don't remember but I don't think I would have kind of messed with him because I mean that kind of discipline don't really want you know to go messing around with it ..... (Interview 41, lines 242-250)

The definition and description of abuse, in the interview context, are clearly laid out in Main and Goldwyn (1994) and being held down and spat at would be considered abuse. Spanking would not necessarily be considered abuse unless it was repeated or hard enough to leave marks.

Of all the scales the rating of coherence of transcript is the most indicative of the final classification. The final classification chiefly depends on

whether or not the transcripts satisfy the four criteria of coherence based on:

- a good fit between memories of experience and evaluations about attachment
- a succinct yet complete picture
- the provision of relevant examples of experience
- clarity and orderliness (Main and Goldwyn, 1994)

The idea of coherence is related to discourse analysis which assesses the overall extent to which there are contradictions and there is an organised use of language. If the language is consistent and clear, ie. it is possible to follow the meaning of the narrative easily, then higher scores are given. The assessment of the coherence of the transcript is supported by the scales for experience and scales for the state of mind of the interviewees, so that a high score for coherence can not be achieved if it is not supported by low scores on idealisation, involving anger, passivity etc.

The style of discourse analysis was developed by Main and Goldwyn (1994), based on ideas from Grice (1975) and uses his four maxims of quality, quantity, relation and manner. Quality of discourse is based on whether or not the interviewees provide evidence for what they say. For example there may be a difference between the general description of peoples' relationship with their parents and the specific incidents which they choose to describe. There is also judged to be poor quality of coherence in a transcript when there are logical or factual contradictions and oscillations of viewpoint, ie. rapid changes of mind within a sentence or response.

Considering quantity allows the judge to decide whether there is sufficient information to support an explanation, to decide if the story is complete; this is often supported by the score for lack of memory. Alternatively some transcripts have what can be considered excessive descriptions and would therefore also be considered to violate the maxim of quantity. Excessive descriptions would include run-on sentences which are entangled or confusing and long descriptive passages in which the person seems to be lost in his or her own thoughts / memories / evaluations.

The assessment of relevance in the AAI is noted when the person deviates from the subject under discussion; he or she may change to a subject not related to the family or attachment issues or jump from one subject to the next without any obvious rationale. The person may completely forget the purpose of the interview or avoid the question entirely by raising a completely irrelevant subject.

Violations of the maxim of manner relate mainly to clarity and order which can include quoting or addressing family members without an introduction, the use of nonsense or childish language, sentences which are difficult to understand and unfinished sentences. Lapses into jargon which limit an explanation of whatever happened are also considered to be an infringement of manner and reduce the coherence score.

For example passages which would contribute to a low coherence score:

(Searching for adjectives to describe relationship with father)

He'd always ask me to go along and help even if it was or just like talking to him not doing anything else and um {13 second

pause} I help him fix the car he taught me to drive and I smashed up his car, he taught me how to drive and um I bashed the car and um um he taught me all sorts of things I guess a lot um {10 second pause} Something that I would do with dad that I wouldn't do with mum er oh god {4 second pause} It was very the same but I'd do things with both of them, I mean some things we'd do them all four together but some things were more like I'd go running to mum for help whereas other things I'd go running to dad and er {4 second pause}.

(Interview 17, lines 179 - 192, overall coherence of transcript 3.0) Here the passage is not relevant to the question because it does not supply adjectives that describe the relationship with the father, it only describes activities. The subject of the answer is changed from the father to the rest of the family.

Have there been many changes in your relationship with your parents since you were a child ?

Yeah when I was little they did everything for me and as I grew up I started to do more things for myself and now I do lots of things for them. Since I was fifteen well I'd have to do, if they weren't around as weren't, could you do anything ? Well not buy a house but whatever they were supposed to do I was supposed to do for them and er now I do anything.

(Interview 17, lines 467- 479, overall coherence of transcript 3.0)

This interviewee appears to ask a question in the middle of the response "could you do anything?" and replies to herself "well not buy a house". This unlicensed intrusion does not help to answer the question but diverts attention away from the issue of relationships. Again the interviewee has not

answered the question and has described what she was allowed to do as a child rather than how she related to her parents.

An example of coherent response to the same question follows:

> *Yeah, I'd say its far more friends now. Um I feel like we give each other more now. Umm you know its far more we both offer advice and we both offer comfort and support and things like that to each other whereas before it was them, sort of it felt like them always giving to me. I'm sure I gave to them in some ways but I wasn't really aware of it. Yeah now its far more two way relationship and um very close friends.*

(Interview 5, lines 475 – 480, overall coherence of transcript 8.0)

Here the interviewee answers the question directly and clearly. There are no intrusions of thoughts about irrelevant topics or activities. The use of language is straightforward with no distracting devices or long sentences which inhibit understanding.

Coherence of transcript is not the same as dysfluency of speech, eg. difficulties in starting questions which are obvious by the repetition of the same word are not considered to be incoherent. The quality of the discourse in the transcripts tends to be different from what would be expected of the written word because it is not edited but transcribed absolutely verbatim with all the hesitations, pauses, repetitions and dysfluency of spoken conversation.

The coherence of transcript is supplemented by, but different from, the scale coherence of mind which largely relies on the inconsistencies in the

transcript between what the person says and the way in which they say it. It was developed to allow an assessment of mind separate from the assessment of verbal coherence and it particularly takes into account the scores from the idealisation, memory and any confusion in relation to loss, eg. belief that the interviewee was responsible for a death, where evidence for this is missing or where no cause is explained.

The score for coherence of mind takes into account the beliefs of the person but is mainly concerned with factual contradictions. Although less commonplace, unconventional beliefs are taken to be coherent if they are expressed clearly, co-operatively and truthfully. There were no distinctive examples from this set of interviews.

The way in which all these scales are brought together in order to allocate an AAI classification will now be explained.

4.3.3. Overall Classification

The basic classification system, as outlined in the previous chapter, assigns the interviews to one of 3 or 4 groups, either insecure or secure and unresolved. Each secure and insecure classification has a further sub-classification which captures the variety of responses found in the transcripts.

- *insecure - dismissing or detached (Ds)* designation is given for an interview that is brief but incomplete with a lack of fit between memories and evaluations. The classification is assigned when there is an attempt to limit the influence of attachment relationships on thoughts, feelings and

everyday life. There is a combination of idealisation, lack of memory and an insistence on independence and a lack of importance of close relationships. There is usually little questioning of, or reflection on the person's early experience. In the insecure - dismissing category there are four subgroups Ds 1, Ds 2, Ds 3, Ds 4.

Ds 1 - this category is allocated to interviews where the child has experienced high levels of rejection and shows strong idealisation of at least one parent and usually both.

Ds 2 - these transcripts show consistent devaluing of attachment experiences and relationships combined with derogation of parents. There may also be expressions of manipulation and craftiness in relation to attachment.

Ds 3 - these interviewees show a limited response to attachment but not as distinctly as Ds 1. They usually show moderate coherence and although negative experiences are discussed they are normalised, ie. difficult, unusual or unpleasant experiences are presented as ordinary and commonplace and the parents are considered in a positive light regardless of their actions in these situations.

Ds 4 - these individuals score very highly on the scale 'fear of loss' and demonstrate confusion and continuing fear and are unable to produce a rational account of this fear. They are referred to as being "cut off from the source of fear of death of a child" (Main and Goldwyn, 1994).

- *insecure - preoccupied (E),* for interviews that are neither succinct nor

complete with irrelevant detail, much passive speech or high current anger. These interviews are characterised by their lengthy and complex stories which lack clarity and any objectivity. The sense of personal identity does not seem separate and continues to be involved with their family. There are frequently long discussions about feelings and thoughts but these remain entangled in past relationships. In the insecure / preoccupied category there are three subgroups (E 1, E 2, E 3).

E 1 - the chief characteristic of these interviews is a high level of passivity, usually a score of more than five. They include long rambling sentences without a focus or direction and they are sometimes confused, vague, often incoherent. The description of the parents may not include particularly harsh experiences but explanations of these are not consistent throughout the interview.

E 2 - the people who produce this category of interview are often angry or conflicted about their parents. The interview is characterised by lengthy descriptions of difficulties with parents usually to the present time and interspersed with angry addresses to the parents.

E 3 - this classification is not often used and often relates to fearfulness arising from childhood abuse, war or a parent with mental health problems. The fear may have arisen in the past but continues to preoccupy the person causing them to be confused and overwhelmed by the interview.

- *autonomous - secure (F),* for interviews which fulfil most or all of the criteria of coherence, where thoughts and feelings are explored freely and

openly. The individuals usually express the way they value relationships with balance, ie. negative experiences are seen in a forgiving way with both sides of a story being seen. The secure category has 5 subcategories F 1 to F 5 with F 3 being the group exemplar.

F 1 - difficult or harsh childhoods are often the experience of these interviewees and although there is some active setting aside of attachment experiences as a result of consideration of the past, it is in contrast to a dismissing interview where there has been little attempt to evaluate the past.

F 2 - this category refers to people who appear to be detached in relation to attachment issues during the interview. They may be dismissive initially but this is later counteracted by humour, underlying affection, compassion and the valuing of relationships.

F 3 - these interviews contain the most open, coherent, balanced and straightforward narratives. These people have usually grown up in mainly supportive families and had mostly positive childhood experiences. When they have had difficult experiences as children they usually speak in a clear and thoughtful way about their experience.

F 4 - these individuals are often sentimental and slightly preoccupied with the past or generally with attachment relationships but this is associated with a strong valuing of their relationships.

F 5 - these people tend to express themselves in a thoughtful manner but also show some anger and conflict about their attachment relationships.

Unlike E 2 individuals they do not deny any continuing involvement with the parent but recognise and accept it.

A fourth classification (U) can be used alongside the D, E or F classification for a four way classification where interviews may also be classified as unresolved in relation to past trauma or loss if they have scores on those scales of more than 6. Furthermore if a transcript is mixed, ie. with many of the characteristics of more than one classification, then a transcript can be labelled as 'can not classify' (CC) followed by the classifications which it most resembles, eg. CC / Ds 1 / E 1.

These sub - categories, while interesting and indicative of the range of states of mind which can be expressed, have not been tested for reliability as the major categories and therefore can not be compared with other studies. The next chapter will recount and discuss the results of the physiotherapy student interviews which were analyzed using the method described above.

Petty Nikki

To: nicky.langford@virgin.net
Subject: coursework

Nicky
Please could you send me a copy of your theoretical aspects of manipulative therapy coursework and if you have proof of posting great. You can send me the coursework by email if you like.
Thanks

Nikki

5. The Results of the Adult Attachment Interviews

This chapter presents the findings of the adult attachment interviews with the physiotherapy students. The analysis of the data derived from the interviews was subjected to a 3 way (dismissing, preoccupied, secure) and 4 way (dismissing, preoccupied, secure and unresolved) analysis. The results from the AAI were then considered with the students' ages, sex and socioeconomic groups. All forty three of the AAIs were coded by the researcher according to the method outlined in the previous chapter (as approved by the author of the interview, see appendix 10.6. for confirmation of rater reliability). The scores for the interviews were rated and the individual results for each interview can be seen in appendix 10.7. with a summary of results in appendix 10.8. One scale, 'fear of loss', was not rated for any of the students because it relates to loss of a child and none of the students had children at the time they were interviewed. The results were analysed using SPSS.PC, the statistical package for social sciences.

5.1. The 3 Way Adult Attachment Interview Classifications

A comparison was made between the allocation of the students' results and the AAI classifications among low risk, non - clinical samples from Van IJzendoorn and Bakermans - Kranenburg's (1996) meta - analysis. It showed that the distribution of results was indeed different with the students having a far higher percentage of secure classifications than general samples; 79% versus 58%. There were 18.6% insecure classifications in the student sample versus 42% from the meta - analysis. Only one student was in the preoccupied category and seven were in the dismissing category. If the physiotherapy students had produced a similar distribution of classifications

to the meta - analysis then there would have been eighteen students in the insecure category, instead of the eight observed.

The statistical analysis of the data from the AAI was limited in terms of the range of tests that could be used because the AAI classification produces a nominal type of data, therefore the chi squared statistical test was used. The results of the interview were initially subjected to a 3 way analysis (dismissing, Ds, preoccupied, E, autonomous - secure, F) and a comparison was made between the physiotherapy student sample and the results from Van IJzendoorn and Bakermanns - Kranenburg's 1996 meta - analysis, see table 5.

Table 5: Crosstabulation of the Distribution of AAI Results among Physiotherapy Students and Low Risk General Samples (3 way) *

	frequency	physiotherapy students	general samples *	total
AAI results Ds	Observed	7	139	
	Expected	10	136	146
E	Observed	1	107	
	Expected	7.4	100.6	108
F	Observed	35	338	
	Expected	25.6	347.4	373
total		43	584	627
result	Pearson χ^2	= 10.64	2° freedom,	p= 0.005
	Likelihood ratio	= 13.65	2° freedom	p= 0.001

* Source: Van IJzendoorn and Bakermans - Kranenburg (1996)

Table 5 shows that the result of the Pearson chi squared test was $\chi^2 = 10.64$, and the Likelihood ratio was 13.65, both results being statistically significant at a probability level of $p \leq 0.005$.

The results from the AAI analysis show that the physiotherapy cohort from UCL were very different from general samples and therefore the first hypothesis of the study is supported by these results. In the 3 way analysis there is a difference between the attachment characteristics of these physiotherapy students and the general population. The main difference stems from the greater than expected number of secure interviews and less than expected insecure / preoccupied interviews.

5.2. The 4 Way Adult Attachment Interview Classifications

The results of the AAIs were then subjected to a four way analysis and comparison to the general sample from Van IJzendoorn and Bakermanns - Kranenburg's (1996) meta - analysis, see table 6.

Table 6: Crosstabulation of the Distribution of AAI Results among Physiotherapy Students and Low Risk General Samples (4 way) *

		physiotherapy students	general sample	total
AAI results	Observed	3	80	
Ds	Expected	6.73	76.26	83
	Observed	0	44	
E	Expected	3.56	40.43	44
	Observed	34	269	
F	Expected	24.5	278.4	303
	Observed	6	94	
Ud	Expected	8.11	91.88	100
total		43	487	530

result	Pearson χ^2	= 10.63	3^0 freedom	p=0.014
	Likelihood ratio	= 14.43	3^0 freedom	p= 0.002

- Source: Van IJzendoorn and Bakermans - Kranenburg (1996)

Table 6 shows that the inclusion of the unresolved category did not alter or balance out the distinct differences between the results of the physiotherapy students and the general samples. Van IJzendoorn and Bakermans - Kranenburg's (1996) 4 way meta - analysis show that 19% of the general sample were classified as unresolved compared with 14% of the physiotherapy students.

The inclusion of the unresolved category in the analysis does not change the number of students in the secure category much from the 3 way analysis, the majority of unresolved interviews had their second classification from the insecure / dismissing category. Again the physiotherapy students from UCL had a very different distribution of AAI classification from the samples in the meta - analysis. A much larger number of students had secure classifications than insecure and unresolved classifications: a ratio of 34:9. If the students had a similar distribution of classifications to the meta - analysis then there would have been eleven students in the insecure category and in fact there were only three.

A chi squared test was used to discover whether or not the differences between the UCL students and the Van IJzendoorn and Bakermanns - Kranenburg's 1996 meta - analysis had statistical significance, shown in table 6. The result of the chi squared calculation of the 4 way AAI shown in table 6 are Pearson $\chi^2 = 10.66$, $p = 0.014$, and a Likelihood ratio of 14.43, $p = 0.002$, which are both statistically significant at a level of $p < 0.02$ but not at the level ($p = 0.01$) considered acceptable for this study.

The physiotherapy students had a different distribution of AAI classifications from the meta – analysis with the Likelihood ratio being statistically significant at the $p = 0.01$ level of probability which was considered acceptable for this study, as previously discussed. Likelihood ratios are a statistic which often produce similar results to the Pearson chi with large samples but they are considered a more suitable indicator of statistical significance, especially with smaller sample sizes (Field, 2000). In fact Likelihood ratios are generally a more accurate statistic because they calculate the maximum likelihood ratio whereas the Pearson chi is only an approximation to the maximum likelihood ratio (Williams, 1976). Therefore it seems reasonable to accept the result of the Likelihood ratio, rather than the Pearson χ^2, which indicates that the results could be considered to be highly significant and supportive of the first hypothesis.

The differences with this sample appear to be due to far fewer AAI results in the insecure categories, particularly in the preoccupied category which had no physiotherapy students, and the larger than expected number of students in the autonomous / secure category. The number of students in the unresolved category was not very different from general samples although there were fewer than would have been expected.

The results of the 3 way analysis clearly confirm the first hypothesis of the study because the distribution of AAI classifications are, statistically, significantly different from the general population, represented by the meta - analysis data from Van IJzendoorn and Bakermanns - Kranenburg (1996). The results of the 4 way analysis were as conclusive as the 3 way analysis with the results of the Likelihood ratio being statistically significant at a p =

0.002 level, which reaches the level of significance specified for this study.

5.3. The Sub - categories from the Adult Attachment Interview

In addition to the 3 and 4 way analyses subcategories have been developed for the secure and insecure classifications (Main, 1994), see table 7 below.

Table 7:

Distribution of the Adult Attachment Interview Sub - categories

insecure					total
Ds1 1	Ds2 1	Ds3 5	Ds4 0		7
E1 1	E2 0	E3 0			1
secure					
F1 0	F2 7	F3 16	F4 9	F5 3	35

The subcategories show that the secure classifications are mainly F3, the most candid and clear of the secure group of interviews, coming from individuals who have been convincingly nurtured and supported during childhood. Their ease of access to childhood memories contributes to a believable and consistent narrative where they express their feelings about their relationships in an open, clear way while acknowledging both positive and negative events. For example:

> *I mean I can have a laugh with my mum now really well.*
> *Like on the phone, when I phone I speak to my parents I*
> *speak to my mum for about forty minutes. I speak to my dad*

for about five because I've got more to talk to my mum about. I've got more in common with my mum really. I think maybe we're they are certain things about us which are quite alike so that's why I don't know maybe when I was younger we didn't really get along so well. I feel more on her wavelength. With my dad I don't really I can't have a joke with my dad but I can talk with him and I think its like his sense of humour it's sort of how you state how you are on your wavelength. (Interview 25, lines 484 - 492)

This quote shows that the interviewee values her continuing contact with her parents while acknowledging that there are still difficulties and limits on her relationship with her father. Balance is demonstrated by the openly stated change in her relationship with her mother.

The other secure subcategories show some limitation in the expression of their experience. In this study there were no F1 classifications where people have often had harsh childhood experiences. These transcripts may show that with the help of a person who has given them special attention they have managed to have a coherent but somewhat restricted expression of the valuing of their attachment relationships.

There were seven interviews classified in the F2 category and the variation from F3 is that there is some restriction on the way in which attachment issues are expressed. This limitation is not as developed and the interview is more coherent than those which are classified as dismissing / insecure and is counteracted by the use of humour or affection. For example this extract shows the interviewee being able to discuss feelings but is not completely

open:

> *I just sometimes feel a bit angry with both of them for being like that cos I always end up thinking my mum you're out of order for like just being so aggressive and giving dad a hard time and that and I think dad if you didn't back down so easily then she wouldn't do it to you um and I feel a sort of -- until I moved out til I started living with my girlfriend.*
> (Interview 40, lines 462 - 455)

This excerpt reveals a valuing of independence ("until I moved out") against the background of ongoing difficulties with and between parents. This use of escape to solve attachment problems, which are otherwise described coherently, puts the interview in the F2 category.

By contrast, the F4 subgroup was the second most frequent classification used, after F3. Generally in this sub - category dependency is amplified. F4 shows some preoccupation with attachment experiences and the interviewees have a tendency to express themselves in a sentimental manner, not only treasuring but also sometimes exaggerating their feelings. For example:

> ***Have there been many changes in your relationship with your parents since childhood ?***
> *I never went through a kind of rebellious stage or anything where I distanced myself or tried to kind of prove I didn't need them. I've always kind of known that I need them and been close to them so not dramatically but you know since I've been away as well since I've been to university I think*

I've become a lot more independent and I see them as friends really. Mum's my best friend I tell her everything so it's changed a lot that before I used to look up to her and now I value her advice but she's like a best friend too I give her advice too which I find quite strange sometimes.

(Interview 35, lines 552 - 560)

The interviewee here is being very positive about her relations with her mother in an open but slightly idealising way. The parent is seen as excellent with no criticism and the experiences described in this transcript were not as ideal as the adjectives used or this statement.

F5 is represented by a small group, only three participants in this study. The variation from F3 for the F5 subgroup is also a tendency to be currently preoccupied but with an awareness, rationality and coherence which distinguishes these interviews from the preoccupied / involved (E) classification. For example the response to the final question:

The interviewee here is being very positive about her relations with her mother in an open but slightly idealising way. The parent is seen as excellent with no criticism and the experiences described in this transcript were not as ideal as the adjectives used or this statement.

F5 is represented by a small group, only three participants in this study. The variation from F3 for the F5 subgroup is also a tendency to be currently preoccupied but with an awareness, rationality and coherence which distinguishes these interviews from the preoccupied / involved (E) classification. For example the response to the final question:

Is there any one thing that you think you've learnt from

your childhood experience ?

I think its a communication cos I think the big thing between um I guess the thing that's stayed with me the most and the overriding thing is my relationship with my father when I was young and I know it all revolves from lack of communication on both sides and he didn't have the time or anything or didn't really feel that he should I think communicate with his children but I'm sure that if he had and if he had said you know I'm tired and I'm worried about my business and you know I'm having to work hard um and taken that time with us then I'm sure we would have understood and it would have been a lot clearer instead of the irony is that he did all that and got into that kind of situation because of us you know and wanting to provide for us so.

(Interview 44, lines 538 - 548)

This is a typical example of a preoccupied sentence which rambles on without a pause and without answering the question clearly. The answer meanders around the subject and there is a sense that the interviewee has become slightly distracted by her own thoughts but not to the extent found in insecure transcripts, where the sense of the sentence is often lost completely.

Within the secure / F category, beyond the subcategories outlined above, there can be a further subdivision using a / b. These letters are used when the personal history of the interviewee is clear, ie. an 'a' can be allocated when there is a consistently positive picture of the parent's support during childhood and a 'b' can be allocated to a script where there were

predominantly negative experiences and a harsh childhood is recalled but the interviewee has put his or her experiences in perspective. The 'b' designation is an indication of earned security through a thoughtful and reflective outlook.

The majority of students did not provide a picture of their childhood that was so consistent in nature that it could be allocated one of these letters. Overall in the F category there were 9 students who received an 'a' or a 'b' designation. Of these only 3 were allocated 'b' showing that the sample contained very few people with earned security, ie. people who had reflected on their past experiences and been able to think about them in a balanced way, both recognising their problems but being forgiving about those who had made their lives difficult.

The largest number of insecure interviews fell into the subcategory Ds3 dismissing, with only one interview being classified in the Ds1 and Ds2 groups which are more distinctly dismissing but in subtly different ways.

The Ds3 category represents interviews which contain a greater restriction of emotion than secure interviews but are more coherent than interviews from other dismissing sub - categories. Negative experiences may be discussed but their effects are not admitted. For example this participant (Interview 8) when asked about relationships had problems remembering anything other than physical activities; strictly non - attachment experiences.

> ***Try and describe your relationship with your parents***
>
> ***when you were young.***
>
> *As in what describe how we had lots of camping holidays*

when we were small um. We did a lot of sport together and we used to go to the leisure centre a lot. Mum and dad used to play a lot of squash the whole family played squash and er what else did we do ? (Interview 8, lines 14 - 19)

And then when prompted further:

Can you remember how you felt about them when you were little ?

I can remember having fun but I can't actually remember my memories aren't that good. (lines 31 - 32)

This shows the combination of lack of memory and the description of activities as a desirable childhood which is found in most dismissing interviews.

Ds1 is similar to Ds3 but more distinctly dismissing, so that idealisation and lack of memory scores are higher and coherence is lower. Ds2 interviews are considered to be dismissing in a different way because these interviews contain obvious derogation of one or both parents and noticeable degree of general derogation towards attachment experiences. There was only one example of Ds2 subcategory from these interviews. Ds4 is a category which relates to a person who develops a fear of death of a child which can not be linked to any known causes. In this study none of the participants had children and therefore this category was not used.

There was only one participant in the insecure / preoccupied classification in the subcategory of E1. The E1 subcategory is distinct from E2 and E3 because the interviewee shows a sense of continuing involvement and preoccupation with their past in a passive and vague way rather than angry

or fearful way. It is difficult to use one particular example from the transcript to characterise this particular subcategory because the picture builds throughout the transcript. Passivity is often noticeable through vague, long-winded and incomplete sentences and these lose their impact when read separately.

Overall, the students had mainly positive childhood experiences and were at the most coherent of the subcategories.

5.4. The Analysis of the Scales from the Adult Attachment Interview

The range, mean, standard deviation (SD), and mode of each experience scale and each state of mind scale were calculated and are shown in tables 8 and 9. The individual score sheets and the summary of the AAI results are shown in appendix 10.7. and 10.8, respectively.

Table 8:
The Descriptive Statistics for the Experience Scales

Scale	Range	Mean	SD	Mode
Loving				
mother	3 – 9	6.91	1.86	9.00
father	1 - 9	6.14	2.00	7.00
Rejecting				
mother	1 - 7	2.36	1.71	1.00
father	1 - 8	2.82	2.04	1.00
Involving/ Reversing				
mother	1 - 5	1.57	1.11	1.00
father	1 - 5	1.17	0.75	1.00
Neglect				
mother	1 – 3	1.08	0.37	1.00
father	1 - 6	1.44	1.07	1.00
Pressure to Achieve				
mother	1 - 2.5	1.07	0.28	1.00
father	1 - 5	1.40	0.87	1.00

Table 9:
The Descriptive Statistics for State of Mind Scales

Scale	Range	Mean	SD	Mode
Idealisation				
mother	1 – 7	1.88	1.44	1.00
father	1 - 7	1.91	1.99	1.00
Involving Anger				
mother	1 – 4	1.15	0.51	1.00
father	1 - 3	1.17	0.46	1.00
Derogation of Attachment				
mother	1 – 4	1.10	0.48	1.00
father	1 – 5	1.09	0.61	1.00
General Derogation	1 - 5	1.25	0.86	1.00
Lack of Memory	1 - 7	1.62	1.32	1.00
Metacognition	1 - 2.5	1.19	0.41	1.00
Passivity	1 - 5	1.86	0.92	1.50
Unresolved				
Loss	1 – 7	2.43	1.80	1.00
Trauma	1 - 4	1.07	0.45	1.00
Coherence of Transcript	3 - 8	6.16	1.38	7.00
Coherence of Mind	2 - 8	5.97	1.58	7.00

The descriptive statistics for the experience scales, in table 8, show that the positive scale, loving, has the highest scores for mothers and fathers. The minimum loving score was 3.00, the mode for fathers was 7.00 and for mothers 9.00. This scale produced a wider range of scores than any of the negative aspects of experience. This indicates that the students had mainly very positive, loving experiences in childhood, because the distribution of scores was negatively skewed.

The full range of the negative experience scales was not used in the scoring of the transcripts and the distribution of the scores for these scales shows a strong positive skew, mode for all the scales being 1.00. From the negative experience scales, shown in table 8, the largest range of scores was for rejection (minimum score 1 and maximum score 8) and the lowest scores were from the mother / pressure to achieve scale with a maximum score of 2.5. The highest scores for involving / reversing and neglect were 5 and 6 respectively. Taking the modal score of 1.00 for all the negative experience scales into account these moderate scores again confirm the largely positive childhood experiences of the physiotherapy students.

The descriptive statistics for the state of mind scales, table 9, show that the scores for students are mainly low on the negative scales, ie. those scales which can combine to reduce the overall coherence of transcript, which explains the high modal score for coherence and contributes to the large proportion of secure AAI classifications.

All the scales for state of mind except metacognition contribute negatively to the overall coherence scales. Metacognition is a positive scale, ie. the

higher the score the more frequent the occurrence of metacognitive monitoring in the transcript. In this sample of interviewees there were very few examples of metacognitive monitoring; only 9 students had a score of more than 1.00 and there was no score higher than 2.5. High scores on the metacognitive monitoring scale are unusual and so the low scores found with this sample are not exceptional (Main and Goldwyn, 1994). Fewer of the participants had traumatic childhood experiences than could, for example, be expected in a clinical sample where perhaps more negative experiences might have provoked more reflection or metacognitive monitoring during the interview.

The widest range of scores was for the idealisation and lack of memory scales which are particularly associated with dismissing classifications. The scales closely associated with the preoccupied classification, passivity and involving anger have only moderately high scores, 4 and 5. The modal score of 7 for both coherence of mind and coherence of transcript are the most indicative of the final classification and in this case the predominantly secure classifications.

5.5. Relationship between AAI Results and Sociodemographic Characteristics

The influence of age, sex and socioeconomic background were analyzed in relation to AAI classification. For the analysis of age the students were divided into two groups: school leavers, ie. students who started the course directly from school, and mature students, those who started the course when they were at least 21 years old. This was necessary because of the small number of mature students, only 12 in the cohort.

There were no students in a mature / preoccupied and only one in the mature / dismissing category therefore the AAI categories were compressed; the 3 way AAI results were divided into secure versus insecure categories and the 4 way into unresolved versus others. Even so the chi squared test was not valid for the analysis because more than 20% of expected frequencies were less than 5 (Kirkwood, 1994). Therefore the analysis of the AAI results was calculated using Fisher's Exact Test, which allows for low frequencies in 2 by 2 contingency tables (Anthony, 1999).

The results for age versus AAI results was $p = 0.4$ for secure / insecure and $p = 0.65$ for resolved / unresolved, neither result being significant (see appendix 10.10 for the calculations).

Similarly the influence of socioeconomic group versus AAI was calculated with two groups: socioeconomic groups 1 and 2 together and the other groups, ie. 3 to 9, together. The chi squared test was used but again the expected frequencies did not meet the requirements of the test which meant that the chi squared test was not valid. The Fisher's Exact Test result was $p = 1.00$ for secure / insecure and resolved / unresolved AAIs versus socioeconomic group, which showed conclusively that there was no relationship between socioeconomic group and AAI classification (see appendix 10.10.).

Also there were no sex differences in this AAI sample; again the chi square test result was not usable with such small numbers and the Fishers Exact Test produced a significance of $p = 0.228$ for secure / insecure classifications and $p = 0.13$ for resolved / unresolved classifications. The

calculations are shown in appendix 10.11.

5.6. Discussion

5.6.1. The Adult Attachment Interviews

A major criticism which could be applied to the conduct of the adult attachment part of the study is the fact that the interviews were conducted and coded by the same person. Although this may seem undesirable as a cause of bias Sagi et al (1994) have shown that the AAI is robust against interviewer effects provided the recommended training has been provided. In all respects the guidelines of Main (1994) were followed not only in the way the interviews were carried out but also in the manner of the transcription and coding of the interviews (Main and Goldwyn, 1994). The appropriate training of a two week course and involvement in a 2 year reliability test were successfully completed. Furthermore, this follows the precedent set by a number of published studies which have relied on ratings and classifications assigned to interviews by a single trained rater eg. Routh et al (1995) and Fonagy et al, (1996).

Another criticism of the AAI part of the study could be the number of students making up the sample. Although the participation rate was high (89.58%) the planned sample size of 50 was reduced to 43. The acceptable level of probability was therefore adjusted to $p \leq 0.01$ for this study. The purpose of the adjustment was to reduce the possibility of a type I error. It is possible that the students involved were an exceptional group who are neither representative of physiotherapists generally or physiotherapists qualifying in the same year as the two cohorts involved.

The difficulty with making the probability level more stringent is that while the sample may be representative of the population the results are not accepted thereby creating a type II error. The Pearson chi results did not produce the same probability levels as the Likelihood ratios but the Pearson chi seems a less appropriate statistic considering the way in which it is calculated and the sample size in this study (Williams, 1976, Field, 2000).

5.6.2. The 3 Way Interview Results

The overall AAI classifications of this sample of physiotherapy students were markedly different from general samples (Van IJzendoorn and Bakermanns - Kranenburg, 1996). In the 3 way analysis these students had a higher proportion of secure classifications and fewer were insecure especially in the preoccupied / involved (E) category.

All the classifications were made with careful consideration of the whole interview as a picture, as well as the detailed responses to each question. As yet there is not sufficient research on the subcategories of the interview to be able to compare these results with those from other studies. The overall picture of the students, who were allocated the secure / F classification, is one of mainly supportive families who provided consistent care and attention in times of anxiety and distress. The attitudes of the students formed by their experiences would seem to support the notion that their ability to provide care outside their family relationships was not based on their need to be compulsive caregivers. The students whose interviews were classified in the insecure category were predominantly at the least extreme of the subcategories, showing reasonable coherence, which suggests that even the insecure students were not overwhelmed by their past experiences

with their families.

Overall the pattern of classifications from the interviews for this study show childhood experiences in a mainly positive light which have provided most of the students with a firm foundation for their social relationships. There were only a few students who had extremely negative experiences and all these were discussed in a coherent way. The most striking aspect of analyzing the students' experience and state of mind is that the students' childhood experiences did not have to be harsh, ie. include stories of abuse or trauma, in order to produce an insecure interview.

5.6.3. The 4 Way Interview Results

The 4 way analysis results, involving the additional unresolved category, demonstrated statistical significance at a level of $p < 0.002$, using the result of the Likelihood ratio, which suggests the distribution of classifications was different from Van IJzendoorn and Bakermanns - Kranenburg's (1996) analysis.

There was a high proportion of secure ratings in the analysis for this sample and the majority of the unresolved classifications had their secondary classification from the insecure / dismissing category. A study of the attachment attitudes of American psychology students, Lapsley, Varshney and Aalsma (2000), at the same stage of their university education, showed a lower percentage of secure classifications (53.6% versus 79%). These results are interesting but there are difficulties in drawing any comparisons between the two studies because the American results were based on self - report measures, rather than the Adult Attachment Interview.

The unresolved category shows the number of students who have demonstrated disorganised responses to questions relating to losses and lapsed into a different manner of speaking, distinctly less coherent than the rest of the interview. When talking about their losses or trauma the students' ability to monitor the relevance and structure of their answers to questions is reduced. Although many of the students demonstrated this to some extent when discussing their losses it was not at the consistently high level which would draw them into an unresolved classification. For example:

> ..... *but I just have this feeling um I keep everyone tells me not be be stupid but I have this feeling I should have thrown my arms around him and given him this really big kiss and said I love you very much and I'll see you tomorrow sort of thing but you know you never thing that sort of thing. It's one of the things I regret actually but it was horrible the funeral was really bad.*
>
> (Interview 11, lines 432 - 436)

This passage was rated 3.0 for unresolved response to loss because the student was discussing an expected event which had occurred two years previously and still demonstrated continuing regret and a loss of coherence in her speech; the flow and meaning of the speech becomes less clear during this passage. A more extreme example rated 6.0 for unresolved response to loss:

> ***Do you think that the death had an effect on your adult personality ?***
>
> *What death ? I don't know I suppose so (inaudible phrase) when my relatives died like when my gran died, she died and went away and then died.* (Interview 17, lines 470 - 473)

This passage gives an indication of the lapse in monitoring that can be produced in the AAI. There is a loss of clarity in relation to the issue under discussion followed by a loss of orientation about the grandmother's death over time "she died and went away and then died". The coherence of the interview is suddenly lost, the sense of time / sequence is confused and in the context of the discussion of death the interviewee was unable to be consistent with the rest of her story. Often it is brief, odd comments like this which go uncorrected, that lead to high scores on the unresolved scales.

The unresolved classifications all arose from losses rather than trauma. Although there were incidents of trauma experienced by the students these were not so severe that they scored above the level where the transcript could be allocated to the unresolved category.

5.6.4. Results from the Scales

The scales for experience confirm that the students' childhood experience as they remember it was on the whole supportive with any descriptions of negative aspects of experience in the interviews being limited to a few students. This does not imply that all the interviews classified as secure described only positive experiences or that those interviews which were classified as insecure were entirely based on negative experiences.

The scales for state of mind which are notable are metacognition, idealisation and lack of memory. Metacognition is an indication of the ability of the interviewee to recognise changes in the way they view their experiences, to be reflective in relation to their past or current thinking. The participants in this study did not produce high scores on this scale, few

produced a score much greater than the minimum and the highest was 2.5. This indicates that metacognition was not a common occurrence, rarely more than one incidence in a single interview. In fact only one student reached 2.5 on this scale and she was given an F2 classification which indicates some limitation in the expression of affection and the importance of attachment. A higher score for metacognition is allocated to interviews where instances of metacognition occur more often and become characteristic of a person's discourse. So although the majority of classifications were secure this scale does display that the students as a group were not particularly reflective about their family relationships. This reinforces the finding of very few secure 'b' allocations which denote earned security.

Idealisation and lack of memory produced high scores for a few individuals but these were only for the few dismissing interviews; there was not a general trend for high scores in these areas. The security of most of the interviews was influenced by the low scores for these scales but it is worth noting that even the insecure interviews did not produce the highest possible scores. The insecure interviews were therefore not at the most extreme range of the classifications.

5.6.5. Sociodemographic Factors in Relation to the Interviews

The influence of sociodemographic background in relation to AAI classification was not statistically significant. In this sample of physiotherapy students security of attachment was independent of age, socioeconomic group and sex, thereby confirming the discriminant validity of the Adult Attachment Interview established by other studies (Sagi et al,

1994, Steele and Steele, 1994, Bakermanns - Kranenburg and Van IJzendoorn, 1993). The current sample, on account of their homogenous social characteristics, did not help to build a picture of how the social background of physiotherapy students could be influential for their thinking and feeling regarding their relationships.

5.6.6. Implications of the Results for Physiotherapy

The first hypothesis for the study is confirmed by the results of the 3 way and 4 way analysis which both show an acceptable level of statistical significance. There seems to be a difference between the attachment characteristics of this group of physiotherapy students and the general population. Therefore a limited assumption can be drawn from the overall classification results, ie. that the majority of people involved in this study, who chose to become physiotherapists did so, in Bowlby's terms, from an established secure base, from a background of nurturing and caring. This means that the majority of the group interviewed are likely to be more sensitive in their close relationships and in their role as parents as confirmed by previous research (Van IJzendoorn, 1995).

Although the link between the likely pattern of caregiving ability as parents and their caregiving ability as healthcare providers is beyond the scope of this study, it is possible that secure physiotherapists are more responsive and sensitive in relating to their patients. This links to the second hypothesis, which states a possible connection between secure attachment characteristics and more positive interactions with patients. The security of the sample combined with a general lack of thoughtfulness about relationships, indicated by low metacognition scores, may be influential. The students may

have a caring yet somewhat superficial approach or naive approach to the psychosocial aspects of care.

The implications for physiotherapy practice generally are positive if physiotherapists broadly have the same approach to relationships as the group who participated in this study. The idea that insecurity of attachment among carers leads them to choose a caring profession in order to compensate for lack of support in their family and social relationships is not supported by this study.

The unresolved in response to loss classifications also may have implications for practice for these potential physiotherapists. For example, it may mean that in some circumstances, eg. when working in palliative care, that they have difficulties focusing or engaging in their work.

5.6.7. Generalisability

It is not possible to generalise from this sample of students to qualified physiotherapists for a number of reasons. Firstly the population of qualified physiotherapists does not necessarily have the same status, education and experience as the students here.

Physiotherapists who have been practising for more than seven to ten years did not automatically have the opportunity to gain a university degree. Part of the development of having the professional qualification tied into degree programmes is that the educational requirements for physiotherapy students has changed. Over the last 20 years the change has been from no 'A' levels to three at increasingly higher grades. This may have influenced the process of

self - selection of people who decided on a career in physiotherapy. The selection process for physiotherapy students is increasingly competitive and this may also mean that this cohort of students is different from those who have been practising.

Secondly the NHS, which is the main employer of graduating students, has changed. The representation of the NHS in the media could have an influence on the choices which prospective students make nowadays. For example, the media coverage of issues of incompetence, litigation and low pay contribute to a negative image of the NHS (Potter, 2001). The cohorts that were recruited in the 1990s may have different and perhaps even greater motivation for choosing to be physiotherapists than previous generations. Despite the declining image of the NHS as an organisation, health care provider and a potential employer, they still decide to become physiotherapists. This may, in part, be due to their loving and nurturing experiences as children which has contributed to their choice to be a professional caregiver.

Thirdly, the size of the sample of students is small and although statistical significance has been shown, especially compared to Van IJzendoorn and Bakermanns - Kranenburg's (1996) meta - analysis. Potentially there is too great a possibility of a sampling error to be able to generalise. If this sample of students is typical of the population of physiotherapists who have been qualifying since 1993 then the majority of these physiotherapists have secure AAI classifications and therefore positive attitudes towards attachment but to establish this conclusively a greater number of physiotherapists would have to be interviewed.

The initial size of the sample was deemed appropriate from the point of view of the scale of work and power calculations but does not have particular power from which to generalise. The sample of forty - three were a convenience sample taken from student cohorts at one school of physiotherapy and after the study had begun the school began to close and unfortunately no further cohorts were available for interview.

Before any conclusions are reached the conduct and results from the second part of the study, the patient satisfaction survey, will be described.

6. Patient Satisfaction

The Adult Attachment Interview was used in the first part of the study to indicate the attitudes of people towards the relationships which they develop, especially with their families. This has an impact on a person's close relationships but may also relate to the therapeutic relationships formed by physiotherapists and patients.

There are different ways of exploring and assessing the interactions and relationships between clinicians and patients, eg. focus groups and interviews, but these were beyond the scope of this study because of the wide geographical distribution of the student placements, where data collection would take place. In this second part of the study a measure of the physiotherapists' ability to interact with patients was used in order to assess any association there might be between attachment attitudes and physiotherapist / patient interactions. Before selecting a questionnaire the literature on patient satisfaction was reviewed.

6.1. Background to Patient Satisfaction Surveys

Patient satisfaction surveys are subjective assessments of health care which ideally allow the users to state their opinions and possibly have an influence on how the services are delivered. The chosen method was a survey based on patient opinions, rather than relying on either self assessment by the students or another person, eg. clinical educator, because the patient was considered to be the most important source of information about physiotherapist / patient interactions. Patient based approaches to feedback are commonly referred to as patient satisfaction surveys.

Bowers, Swan and Koehler (1994) looked at the attributes of health that define patients' perceptions of quality and satisfaction and found that they differed from the generic Service Quality Dimensions [SERVQUAL] that Parasuraman, Zeithaml and Berry (1988) identified for other consumer services. They found that two additional dimensions: caring and communication were needed. Thompson and Sunol (1995) also considered health care to be different, distinct and unique from other services and the provision of goods. Health based surveys should therefore be specifically designed not only to take into account patients' needs, expectations and beliefs, but also the health care environment and in the United Kingdom, (UK), the health care culture because of the common lack of choice beyond the NHS .

For a complete view of patient satisfaction the needs and expectations of the customers and the potential customers in the population should also be taken into account. The majority of surveys of patient satisfaction only involve the current users of health care and are incomplete because they have not considered the concerns of relatives, carers, other professional groups and other departments in the NHS, who are also consumers of services (Carr-Hill, 1992). However this was beyond the needs or scope of this study and therefore the views of the person in contact with the physiotherapy students was not supplemented by the opinions of other parties.

6.2. The Concepts and Definition of Patient Satisfaction

Patient satisfaction as a concept is difficult to define. Firstly, the phrase itself is ambiguous; the word 'satisfaction' may mean that a minimum standard has been reached or that the highest expectations have been

fulfilled. Secondly, the way in which patients make a judgement on satisfaction is not fully understood.

Patient satisfaction is commonly divided into a number of dimensions. Linder-Pelz and Streuning (1985) investigated satisfaction with medical outpatient visits and found that patients identified 3 main aspects: doctor conduct, convenience and appointment getting. They also found that doctor conduct was more important than anything else in determining patient satisfaction, as did Ware, Synder and Wright (1976) with general health care surveys. Other researchers have provided a larger number and more detailed list of dimensions for patient satisfaction including:

- personal aspects of care
- technical quality
- accessibility
- availability
- continuity
- effectiveness
- acceptability
- convenience

These dimensions have been used to construct patient satisfaction questionnaires but most of these dimensions were not directly relevant to this study and so a questionnaire that focused on relationships and interactions was sought.

The theory underpinning patient satisfaction is not well developed but there are a number of suggested models based on the idea that patient satisfaction is multidimensional. For example Linder-Peltz (1982a) developed the Value Expectancy Model based on job satisfaction theory. It views patient satisfaction as a positive attitude or feeling of favour towards health care following an evaluation of health care dimensions. The results of her study were not conclusive because it showed that expectations accounted for less than 8% of the variance in satisfaction (Linder-Peltz, 1982b). Further work also failed to support the relationship between expectations, health beliefs and patient satisfaction in the model (Linder-Pelz and Streuning, 1985).

Discrepancy Theory Models have also been suggested. These models outlined by Williams (1994) are based on consumer and marketing research outside health care. They suggest that patient satisfaction is the result of the perceived gap between a person's aspirations, ie. expectations, values or desires, and what is actually achieved. The scores from patient satisfaction studies generally tend to have a negative skew and neither of these models have explained the high level of satisfaction expressed, nor have they accounted for the fact that satisfaction may alter in the light of new experience and altered expectations. Also, the problem of relating the concepts of consumer research to health were not addressed. The consumer has a unique viewpoint and can give insights which may not be obvious to the care givers, eg. on personal interactions (Fitzpatrick, 1990). However, health care is not like other consumer services. Carr-Hill (1992) took the National Consumer Guidelines and related them to the NHS. He demonstrated that the basic principles of consumer rights can not be easily transferred into a health care context. For example, the principle of safety

for a consumer means that products are not expected to produce unforeseen risks; in health care the risks can not necessarily be anticipated.

Pascoe (1983) suggests an alternative model drawing on consumer and patient satisfaction research. He suggests that the patient reacts to the context, process and result of health care, ie. that patient satisfaction is an evaluation of directly received services which is a combination of cognitive evaluation and affective response. He bases his model on the idea of a person setting a subjective standard from an ideal, a sense of what they deserve, past experiences or a minimal acceptable level. Experiences which fall within the standard are assimilated while experiences which are more positive or negative are compared with the standard and a "contrast effect" occurs. He argues that this would account for the generally high satisfaction ratings that occur because a broad latitude in the standard would assimilate the majority of experience and people would be satisfied. For dissatisfaction to occur, either the subjective standard would not be reached or the health care was poor. Thompson and Sunol (1995) in their Assimilation / Contrast Model suggest a similar view based on health care expectations. These models have not been tested and have also omitted an explanation of how consumer theory could be generalised to health care.

Strasser, Aharony and Greenberger (1993) have developed a more comprehensive and dynamic model for patient satisfaction based on information processing. It relates six "principles" to patient satisfaction:

- patient satisfaction is driven by human perceptions
- there may be multidimensional and single global constructs

- dynamic process, ie. likely to change between and within encounters
- patients react in terms of their attitude and behaviour
- the patient acts as a judge and activist
- individual differences have an influence, eg. beliefs, values, expectations

These principles are drawn together in a complex model which describes the encoding / ignoring of information and an initial judgement, followed by two levels of response or reactance. These are feedback loops which may alter perception either through cognition, emotion or behaviour. "Patients are viewed as learners who develop a database of information about their health care experiences and use this to influence future health care encounters so that they may attain desirable outcomes" (Strasser et al, p243, 1993). The model seeks to explain a more flexible view of patient satisfaction specifically in the context of health care and proposes nine hypotheses for further research. The testing of these hypotheses has not yet been published. The model allows for patient satisfaction to be an outcome and an influence on health, to change in response to different experiences and allows for differences in people's relationships with health care practitioners.

There is some agreement among authors that satisfaction is related to the perceived needs, expectations, previous experience of health care and health status consisting of both affective and cognitive evaluations (Pascoe, 1983, Fitzpatrick, 1990, Wilkin, Hallam and Doggett, 1992, Strasser, Aharony & Greenberger, 1993, Williams, 1994, Thompson and Sunol, 1995). However,

the majority of these models have been based on encounters with doctors and it may be that other health care professionals are judged differently because of their comparative status and diverse roles. It is clear from the research that doctor conduct is particularly influential on patient satisfaction and this may also be true for other professionals. However, it is still not clear from the studies whether all or particular attributes of health care influence satisfaction and expectations.

The effect of interactions with a number of professionals in a single health care episode has not been considered; the patient's perceptions of different professionals and their relative importance or effectiveness may be crucial to their whole experience and their evaluations of health care. For example, a consultation with a doctor followed by a treatment given by a nurse may not be evaluated in the same way as a single consultation. The context of the care may also be important and the testing of models has mainly been conducted in hospital and surgery settings. Assessments of home based care and day care centres may help to further inform these models. The issue of context remains unresolved but was unlikely to have a major impact on this study location because it was exclusively hospital based. The influences resulting from interactions with many different healthcare professionals was not addressed and the study focused solely on patient interactions with physiotherapy students.

The lack of agreement or confirmation of a model of patient satisfaction continues to make definition of the concept difficult. However, a broad view which encompasses the models described was expressed by Koehler, Fottler and Swan (1992); they defined patient satisfaction as an individual's

favourable or unfavourable, subjective evaluation of the various outcomes and experiences associated with a service encounter. Apparently objective measures, eg. waiting time, are included as subjective because they rely on patients' perceptions, eg. too long, short.

6.3. Patient Satisfaction as an Outcome Measure

Despite the lack of theoretical support for patient satisfaction as a concept it is a desirable goal, or outcome, of health care and has been linked to other outcome measures, eg. adherence. Outcome measures can be defined as the results or consequences of health care encounters - either the achievement or failure of reaching a goal. Patient satisfaction has been recognised as an important outcome measure and as a means of providing feedback on health care, particularly in primary health care in the USA, since the 1970s (Ware, Davies - Avery and Stewart, 1978, Pascoe, 1983, Fitzpatrick, 1991a, Carr-Hill, 1992). Outcome measures are used in physiotherapy but the research is not always rigorous. The measures used are frequently devised by clinicians for their own use rather than using standardised or validated measures which would have more credibility (Chesson, Macleod and Massie, 1996, Gard et al, 2000).

Research suggests that there are direct relationships between patient satisfaction and other health outcomes. Dissatisfied people are less likely to adhere to regimes with general practitioners (Ley, Whitworth, Skilbeck, Woodward, 1976, Kincey, Bradshaw and Ley, 1975), hospital doctors (Falvo and Tippy, 1988, Sherbourne, Hays, Ordway, DiMatteo and Kravitz, 1992), and dentists (Zimmerman, 1988). Satisfied patients are likely to return to the same service / hospital (Rubin, 1990), and choose the same

practitioner for further treatment (Ware and Hays, 1988). It is not clear if satisfied patients had better outcomes but there is a positive correlation between health status and satisfaction (Weiss, 1988), which may be because the patient has adhered to medical advice thereby giving the treatment a chance to be effective. Alternatively, there may be a placebo effect (Aharony and Strasser, 1993); communication skills seem to have a strong influence on patients' satisfaction ratings (Rowland-Morin and Carroll, 1990, Korsch, Gozzi, and Francis, 1968).

The style of communication is not the only factor influencing satisfaction but is thought to be highly influential. Bowers, Swan and Koehler (1994) found that communication was a highly significant predictor of overall patient satisfaction with medical interviews. The specific interview behaviours that contribute to patient satisfaction are adequate opening and closure, a clear introduction, explanation of the purpose of the consultation, using different question types to facilitate information giving, listening, responding and drawing the interview to a close (Korsch, Freeman and Negrete, 1971). High levels of satisfaction have been reported with patient centred interviewing where patients felt understood and were given more opportunity to volunteer information, ask questions and identify concerns. Lower levels of patient satisfaction were linked to the doctor interrupting the patient, using technical language and being dominant (McComas, Kosseim and Macintosh, 1995, Vaughan, Burn, Bakheit and Hanspal, 1996).

Patients tend to be more satisfied if they perceive health care workers as caring and sensitive to their needs. This was confirmed by Ware and Hays (1988) and Sherbourne et al (1992) who found a strong correlation between

satisfaction with interpersonal skills and the intention to recommend and return to a doctor. Similarly, Press, Ganey and Malone (1990) found that positive attitudes towards patients and higher rated interpersonal skills in doctors was associated with reduced pain medication, shorter length of stay, and improved adherence. Even without the elusive confirmation of any concept of satisfaction there is widespread evidence of its links to positive health outcomes.

6.4. Predictors of Patient Satisfaction

There have been a large number of studies which have looked at sociodemographic variables as predictors of patient satisfaction. Hall & Dornan (1990) have made the most comprehensive study, a meta - analysis of 221 patient satisfaction studies, reporting on 8 sociodemographic variables:

- age
- ethnicity
- sex
- social status
- income
- education
- marital status
- family size

Their results showed that relations between these characteristics and patient satisfaction were extremely small even when they were statistically significant. They thought that the results supported the validity of

satisfaction measures because they were designed to measure perceptions rather than be a reflection of response bias. Overall they concluded that people who were older, had less education, higher social status (in terms of occupation) and married tended to be more satisfied. The strongest correlation was between older people ($r = 0.13$, $p = 10^{-7}$), higher social status ($r = 0.11$, $p = 0.06$) and increased satisfaction. The studies that Hall and Dornan (1990) analyzed were concerned with medical consultations but it was not clear whether they were all based in the USA. As Carr-Hill (1992) noted they did not address the issue of a common conception of patient satisfaction, if the studies were scored or based on inference or if the studies were specific or general.

Ware, Synder and Wright (1976) used the Patient Satisfaction Questionnaire (PSQ) in six centres, with different populations and they found that correlations between satisfaction and sociodemographic variables were not consistent. Similarly, Fox and Storms (1981) described the lack of agreement and contradictions in the literature as "chaotic" although in their research they too found that age had the greatest correlation with satisfaction. Weiss (1988) found that greater age had the strongest correlation with patient satisfaction ($r = 0.21$) but it was not significant. He found that confidence in the health care system ($r = 0.34$), having a regular source of care ($r = 0.29$) and being satisfied with life in general ($r = 0.34$) were statistically significant ($p < 0.05$) and more important predictors of patient satisfaction than sociodemographic factors.

Social and demographic factors have not been conclusively proved to be consistent predictors of satisfaction in terms of education, income, sex or

ethnicity. However, there is some agreement about the influence of age; older people tend to be more satisfied with their care (Ware, Synder and Wright, 1976, Fox and Storms, 1981, Linder-Peltz and Struening, 1985, Weiss, 1988, Hall & Dornan, 1990, Hseih and Kagle, 1991). It may be that older people were generally more mellow and more accepting, perhaps they were following the traditional passive role of the patient or were more reluctant to give negative judgements on their care. It may be that older patients are given better care.

The disagreement amongst researchers about other variables may be due to the fact that their samples did not include a representative number of people in each social and demographic group considered, eg. Hsieh and Kagle (1991) used university staff and students who were younger and better educated than the general population. Also many studies do not have a common conception of patient satisfaction or consider the different types of care / service being evaluated. The methods of measurement were not the same in the studies considered and the dimensionality / different aspects of care inquired about were not commented on. These factors could explain the lack of consistency in the results of the studies.

6.5. Physiotherapy and other Professions Allied to Medicine

There have been few published studies of patient satisfaction with non-medical or non-nursing health care professionals. Dixon and Carr-Hill (1989) surveyed the NHS and showed that most health regions had conducted consumer feedback surveys. However, only in Doncaster was there evidence of a physiotherapy department reporting the results of a patient satisfaction survey. The unpublished study used an unspecified

questionnaire which included hotel services and waiting times but gave no personal feedback about individual therapists.

Marks (1993 and 1994) developed a patient satisfaction questionnaire for outpatient physiotherapy services based on questions proposed by physiotherapists and reviewed by previous physiotherapy patients. Reliability and validity studies of the questionnaire have not been reported. The weakness of the questionnaire was that it was largely based on professionals' views when patient satisfaction is a subjective measure and needs to be based on the patients' needs and perceptions. This was recognised by McComas, Kosseim and Macintosh (1995) when they developed their multidisciplinary client centred questionnaire for a seating clinic. Also, it has been shown that patients and health professionals think differently about the importance of the aspects of care which contribute to quality (Larrabee, Engle, and Tolley,1995).

Satisfaction has usually been highly scored on questionnaires and that may be because what was important to professionals has been scored rather than the aspects that were important to patients. Roush (1995) used a 14 item questionnaire, the Therapist Evaluation Form (TEF) based on a modified Physician Satisfaction Questionnaire (PSQ). The validity of this questionnaire was tested for internal consistency and with factor analysis but no other aspects.

There have not been any published studies which thoroughly validate questionnaires for the therapeutic professions. Ideally, a questionnaire for physiotherapy and other therapeutic services should be developed from

interviews or focus groups so that they can be based on the views of patients, eg. the Quality of Care from the Patient's Perspective (QPP) questionnaire (Larsson, Larsson and Munck, 1998). There have been developments in the last ten years; there have been more published studies in physiotherapy but again the validation of the instruments used has been weak. At this time there are a number of validated patient satisfaction measures which have been developed to assess general satisfaction with certain client groups and physiotherapy, eg. Keith (1998) and Roush (1995) for rehabilitation, but not specifically for interactions between patients and physiotherapists.

6.6. The Patient Satisfaction Survey

This part of the study was a survey which focused on the interaction between the patient / client and the physiotherapist. A wide range of methods can be used to determine patient views, eg. interviewing and focus groups but a questionnaire was chosen because it was efficient, it did not involve any training for the students and could be anonymous for the patients.

It was important to choose a method that did not burden the students or the clinical educators with excessive time spent on data collection. The choice of a questionnaire was also determined by the circumstances; the students collected data on their placements across a wide geographical area which did not allow for daily or even weekly contact with individual students or the patients on each placement.

6.6.1. The Choice of a Questionnaire

The questionnaire chosen for this study was the Patient Doctor Interaction Scale (PDIS) developed by Falvo and Smith (1983). It was selected because it focused on the caregiver / patient relationship and it was derived from patient opinions. The questions were initially developed from patient interviews and then a panel of eighty patients determined the final set of 17 questions by rating the questions which they thought were most relevant to their satisfaction.

Other questionnaires, eg. the Medical Interview Satisfaction Scale (Wolf et al, 1978), the Client Satisfaction Questionnaire (Nguyen et al, 1983) and the Patient Satisfaction Scale (DiMatteo and Hays, 1980), were rejected because they were too broad. They included dimensions of patient satisfaction other than interactions or relationships with staff, eg. cost, competence, access, bureaucracy, facilities, which were not directly relevant to the study.

Interaction with patients has been found to be a single dimension in patient satisfaction (Reeder and Chen, 1994) and other satisfaction questionnaires which were communication orientated, eg. Doctor Patient Communication Inventory, Schneider and Tucker (1992), were not selected because they were too medically orientated and did not focus on interactions. They included factors that were not relevant to both orthopaedic and outpatient physiotherapy. For example, in the 28 item inventory there were 4 questions relating to waiting time. Questionnaires that were based on professionals' opinions, eg. Marks (1993 and 1994) for outpatient physiotherapy services, were not selected because they were not based on a patient perspective and their validity had not been established.

The PDIS questionnaire (see appendix 10.12) fulfilled the requirements for a questionnaire but was designed for medical consultations. It was therefore modified by substituting the word 'physiotherapist' for 'doctor' and adding two global satisfaction questions, as used by Bowman et al (1992) to help establish predictive validity. The PDIS was previously validated for medical consultations in diverse health validity settings in the USA by Bowman, et al, (1992) but further validity testing was considered necessary because of the difference between UK and USA healthcare cultures and the use of the questionnaire by a different health professional.

Other considerations that influenced the choice of questionnaire were the number of questions, the use of a Likert Scale and reverse questioning. The PDIS has a total of 19 questions, including the 2 questions used for validity, which makes it answerable in approximately 10 minutes and therefore it was not excessively time consuming for the patients to answer. The 5 point Likert Scale enabled the results from the questionnaire to be open to numerical analysis. Reversal of the scoring was used for questions 2, 3, 4, 7, 8, 11, and 13 so that patients who responded passively by consistently ticking one category, eg. strongly agree, for all the statements could be excluded from the analysis.

The questionnaire was shown to 2 outpatient and 2 orthopaedic physiotherapists for their opinion on its suitability. The outpatient physiotherapists thought that all the questions were appropriate to their speciality but the orthopaedic physiotherapists thought that question 9, on diagnosis, would not be understood by patients. It was therefore excluded from the questionnaire that was presented to patients on orthopaedic wards.

Sociodemographic questions were also asked with the questionnaire, to identify the characteristics of the respondents; these were age, sex, ethnic origin, marital status, education, employment status and occupation. An additional question asking for the number of sessions with the student was included with the sociodemographic questions (see appendix 10.13).

Bowman et al (1992) found that the use of the PDIS questionnaire with telephone completion was reliable. The last 10 students on their outpatient placements therefore had an additional question on their questionnaires, asking for the patient's telephone number, so that a test - retest reliability study could be conducted by 'phone.

6.7. The Participants and Ethical Considerations

Although the major participants in the study were the undergraduate physiotherapy students many other people were involved, ie. patients, clinical managers and clinical educators. The ethical considerations relating to the use of a patient satisfaction questionnaire in a clinical setting were included in the application to the Clinical Investigations Panel of The Middlesex Hospital and approved (see appendix 10.1).

6.7.1. The Clinical Placements

Not all the placements that the students had to complete were considered suitable for the patient satisfaction survey. Some of the placements were predominately observation based, eg. paediatrics, community care, mental health, and therefore it was not possible to assess patient satisfaction with the students. The placements where patient data could be collected by the students were: care of the elderly, outpatients, orthopaedics, amputations

and hydrotherapy and medical care. However, after consultation with the head of the school of physiotherapy it was decided to limit the administration of the questionnaire in order to encourage student compliance with the project. Therefore, two placements where health problems were least likely to interfere with people's ability to read and write were selected: orthopaedic inpatient and outpatient physiotherapy settings.

Permission for the students to collect data on their clinical placements was sought from each physiotherapy department manager and each clinical educator in sixteen locations, for a list of the hospitals involved (see appendix 10.14.). Firstly, the managers were sent a letter asking for permission to use the questionnaire with the students, (appendix 10.15.). A brief research protocol (appendix 10.16.), a consent form (appendix 10.17.) and a questionnaire were enclosed with the letter.

The consent forms were returned by the physiotherapy managers, except in one case where additional approval by a local ethical committee was required. This was only made known to the researcher at a late stage and the dates of the committee meetings did not allow permission to be received before the placement started. Therefore, one student was prevented from using the questionnaires on their outpatient placement.

Once consent had been received from the physiotherapy managers the clinical educators were contacted by 'phone and sent information about the study. All the educators gave their verbal permission to use the questionnaire. The clinicians who worked with the students were offered access to the results which related to their clinical speciality but not to the

results for individual students.

6.7.2. The Students

Although initially there was a 100% response from the physiotherapy students in practice not all of them were able to collect information from both the orthopaedic and outpatient placements. Three students were unable to use the questionnaire on their placements because their allocated hospital was already collecting satisfaction information from patients and the use of another questionnaire with the same people was thought, by the physiotherapy manager, to be excessive.

The students were assured that the information that they collected would be confidential. Individual students' information from the research was not made available to any clinicians, clinical educators or managers. Therefore there was no possibility of the information having an influence on the students' academic studies or their clinical examination results.

The patient satisfaction questionnaires were not used on the students' first clinical placement because it was considered to be an additional and unnecessary stress. The questionnaires were therefore collected between the students' second and tenth placements, in the third and fourth years of their course. The students were given instructions on the exclusion criteria, how to present the questionnaire to people and the importance of avoiding coercion.

6.7.3. The Patients

The students were asked to administer the questionnaire on their clinical placements at the end of their last session with the patient. An information sheet (appendix 10.18.), and consent form (appendix 10.19.) were included with the questionnaire and sociodemographic questions. Confidentiality was assured by giving the questionnaires to the patients with a stamped addressed envelope which the patients could seal and give to any member of the hospital staff to put in the hospital post.

People who were unable to complete a questionnaire independently were excluded from the study because any assistance given to them by a student, physiotherapist or other member of staff would undermine confidentiality, probably create bias and increase the workload of the students or qualified staff. On some of the students' placements the patients might be incapacitated by their health problems and unable to fill in a form independently, eg. an unconscious person, or need assistance to complete a questionnaire, eg. people who could not read and write English, and they were excluded from the study.

The criteria for the inclusion of patients in the study were that they:

- could read and write English
- could fill in the questionnaire independently
- were adult, ie. 16 years old or older

Only adults (over 16 years old) were included because people under sixteen would require parental permission to participate. This complication would

have been difficult to address at a distance by the researcher and would have created additional work for the students and clinical educators.

6.8. The Results and Analysis of the Patient Satisfaction Survey

The patient satisfaction questionnaires were distributed between October 1994 and May 1997. A total of 357 questionnaires were returned to the researcher with 96% being correctly completed, 176 from outpatients and 168 from orthopaedics. The 4% of the questionnaires that were not included in the analysis were either incomplete or the responses were only made to one category on the Likert scale, ie. indicating either a passive response or that the questions may not have been read and understood. The orthopaedic and outpatient questionnaires were analyzed separately because of the omission of question 9 for the orthopaedic patients. The data from the questionnaires was analyzed using the Statistical Package for the Social Sciences (SPSS.PC).

6.8.1. Validity of the PDIS

Reliability and validity of the questionnaire were considered separately for orthopaedics and outpatients because of the different number of questions used in each setting. Reliability is the ability of an instrument, in this case the questionnaire, to perform consistently. A test - retest reliability study was attempted with the last 10 students on their outpatient placements. An additional question asking the patients for a contact telephone number was included with the questionnaire but only 5 telephone numbers were given and so this part of the study had to be abandoned. Internal reliability was measured using Chronbach's alpha, with a resultant $\alpha = 0.84$ on orthopaedics and $\alpha = 0.82$ in an outpatient setting. Thus indicating a 16%

and 18% error variance respectively.

Face validity was assessed informally by consultation with 4 colleagues prior to the use of the questionnaire and this resulted in the withdrawal of question 9 from the questionnaire used on the orthopaedic wards. Otherwise the clinicians considered the questionnaire to be relevant to physiotherapy interactions with patients and to the clinical settings. The content validity or balance of the questions in relation to the domain of application was not tested. In the case of patient satisfaction the literature shows a lack of agreement among researchers and the domain is not well defined. Therefore, it was not possible to confirm content validity against a thorough domain description, which is considered necessary (Oppenheim, 1992). However, the questionnaire was developed and constructed from statements which were taken from patient interviews. Patients then selected the most important statements and therefore for this study it was assumed that they were meaningful to patients.

Criterion validity could not be tested because there were no comparable, published questionnaires that have been validated in physiotherapy. Predictive validity or whether or not the questionnaire was meaningful in terms of subsequent patient behaviour was tested by adding two global questions (Bowman et al, 1992). These questions asked whether the patient would recommend the physiotherapist to others and if further treatment by the same therapist would be sought. A correlation was then made between the scale score and the score from these two questions. The Spearman correlation obtained was rho = 0.496, $p < 0.01$ (2 tailed), for the orthopaedic results and rho = 0.514, $p = 0.00$ (2 tailed), for the outpatient results. Non

parametric correlations were used because of an observed negative skew of the data.

6.8.2. The Sociodemographic Information

The sociodemographic data collected with the questionnaires was compared with that of the UK population (Church, 1996), see table 10. The table shows the age, sex, ethnic origin and marital status of the patient participants compared with the general population of the UK.

Table 10: Sociodemograhic Data: A Comparison of the Main Characteristics of the Respondents who Completed a Questionnaire and the UK Population

	Respondents %		UK Population
	Orthopaedics	Outpatients	%
Sex			
male	36	40	48
female	64	58[4]	51
Age			
16-39	10	34	44
40-64	36	50	36
65-79	41	18	15
80+	10	2	4
Ethnic Origin			
Outside UK	9	8	6
Marital Status			
married	52	47	1
separated	2	1	63
not married	17	31	30
divorced	8	10	3
widowed	20	10	4

Source: Church, J. (1996) Social Trends 26, Central Statistical Office.

[4] Some of the totals do not add up to 100% because there was missing data from the questionnaires.

Of the people who completed the questionnaire there were a greater number of women, older (65+ years) and widowed people than the general population and the majority of respondents had their origins in the UK.

It was not possible to assess whether or not the respondents were representative of people admitted to orthopaedic wards or seen in outpatients because that data was not available. The hospitals who participated in the study were not willing to supply the information. The education and occupation questions with the questionnaire elicited a low response rate, 59% and 57%, and therefore were not analyzed.

6.8.3. Questionnaire Results from Orthopaedics

The maximum score from the questionnaire on orthopaedics was 80 from 16 questions, the minimum score was 16 and a score of 48 indicated a neutral response. The overall mean score from the 168 complete questionnaires was 70.95, standard deviation 6.58, range 53 to 80. The mean scores from individual questions were highest for questions 2 and 13 (mean 4.7) and the lowest for question 1 (mean 4.2). The mean number of contacts of the patients and the students was 6.55, standard deviation 3.43, range 1 to 20. There was no relationship between the questionnaire scores and the number of contacts between patients / physiotherapy students (Spearman rho = 0.11, p = 0.23, 2 tailed)

Correlations were made between the sociodemographic information and the questionnaire scores; there was no relationship with patient age (Spearman rho = 0.02, p= 0.73, 2 tailed), sex (Mann-Whitney U = 2657.5, p = 0.17), ethnic origin (Kruskal-Wallis H = 6.75, df = 5, p = 0.24) or marital status

(Kruskal-Wallis H = 2.39, df = 4, p = 0.66).

A total of 34 students distributed questionnaires, the range of mean scores for individual students was between 63.50 and 78.00. The mean number of questionnaires completed for the students was 4.9, standard deviation 2.45, range of 1 to 10.

6.8.4. Questionnaire Results from Outpatients

A total of 176 completed questionnaires were received from the patients of 29 students. The maximum score from the questionnaire was 85 and the minimum was 17, with a neutral response being indicated by a score of 51, from 17 questions. The mean score from 176 questionnaires was 75.31, standard deviation 6.67, range 56 to 85. The mean number of contacts with the students in an outpatient setting was 4.26, standard deviation 1.61, range 1 to 9. Spearman correlations between the satisfaction score and the number of sessions with the student were not significant (rho = 0.12, p = 0.16,' 2 tailed). Scores from individual questions were highest for questions 5 and 13 (mean 4.7) and the lowest mean score was for question 1 (mean 4.2).

Spearman correlation between the satisfaction score and the age of the patient was not significant (Spearman rho = - 0.03, p = 0.65, 2 tailed). Other calculations were made between the total score and sex (Mann-Whitney U = 2700, p = 0.007), ethnic origin (Kruskal-Wallis H = 10.11, df = 5, p = 0.34) and marital status (Kruskal-Wallis H = 2.60, df = 4, p = 0.62) and none of these were statistically significant. The range of mean scores for individual students was between 68.1 and 81. The mean number of questionnaires per student was 5.44, standard deviation 2.75, range 1 - 11.

6.9. Discussion of the Patient Satisfaction Survey

6.9.1. The Characteristics of Respondents

In terms of their sociodemographic characteristics the outpatient respondents were more representative of the UK population than the inpatient respondents from orthopaedics. Compared with the general population the sample of outpatients also had a smaller percentage of people under 40, married people, a larger number of women, divorced and separated individuals than the general population. This probably reflects the profile of people who would attend a physiotherapy outpatient department although information to confirm this was not available.

The larger percentage of older people, especially in orthopaedics, could be explained by a large amount of routine surgery, eg. total hip replacements, performed in orthopaedic wards due to the diseases of old age. On orthopaedics the students may have been allocated the elective, routine and perhaps less complicated patients to manage rather than the younger occupants of the ward who may have had complex trauma, eg. as a result of road traffic accidents.

6.9.2. Validity of the Patient / Doctor Interaction Scale

The assessment of validity of the modified Patient / Doctor Interaction Scale was limited due to the lack of supporting research and a tested model of patient satisfaction. The questionnaire was assessed for face validity, predictive validity and internal reliability and these aspects of validity for the questionnaire were satisfactory with similar results from both clinical settings.

Predictive validity was tested by using additional responses from extra questions as used by Bowman et al (1992). Although this may give an indication of how patients think about their future behaviour at the time of completing the questionnaire it may be a weak indication of their actual behaviour. Ideally predictive validity should be confirmed by a follow- up of the patients' subsequent activity, particularly as satisfaction with healthcare has been shown to degrade over time (Ware et al, 1976).

6.9.3. The Questionnaire Scores

Generally the students' interaction was rated highly satisfactory and a ceiling effect was demonstrated by the large number of maximum scores. The distribution of the scores had a distinct negative skew, ie. overall the scores were high, so that generally the orthopaedic patients and the outpatients were satisfied with the interactions they had with the students. This is consistent with the high scores reported in the literature on patient satisfaction.

Patient satisfaction has usually been highly scored on questionnaires and older people tend to be more satisfied with their care (Ware et al,1976, Fox and Storms, 1971, Linder-Peltz and Struening, 1975, Weiss, 1977, Hall & Dornan, 1990, Hseih and Kagle 1991). The patients from orthopaedics tended to be older than those from outpatients. The orthopaedic patients had a mean age of 62.3 years, (standard deviation = 15.9), 51% of the respondents were over 65 years compared with 19% in the general UK population. This may have had an influence on the scores from orthopaedics; older people may be more appreciative of the care provided or perhaps they were more reluctant to give negative judgements about their

care. It may be due to the fact that they remember and compare with pre-NHS care or that they are treated differently (Carr-Hill, 1992). There was not a significant relationship between age and score in an orthopaedic or outpatient setting in this study but this could be due to the small number of people under 40 who were represented.

The number of questionnaires which were returned for students was sometimes low which means that they may have chosen to give questionnaires only to those patients they thought would give them a favourable response. Also there were other factors which could have influenced the small number of questionnaires from students. There were problems for some students in anticipating the discharge time for patients, eg. on orthopaedic wards people could be discharged over a weekend without prior notification and outpatients may decide to discharge themselves without giving notice.

Towards the end of the study the students collected fewer questionnaires which could have been because the data collection was on two 4 week placements, during the third and fourth years of their course, and they were less motivated towards the end of the project. Also the students may have needed more encouragement at the end of the study when the researcher was less available to provide support and encouragement having moved to another institution. Personal contact, by letter and telephone, was maintained with the students when their turn for questionnaire collection was due but this may not have been enough. On outpatients only 25 out of the 29 students who distributed questionnaires had managed to collect more than two. Similarly on orthopaedics 24 out of 34 students collected three or more

questionnaires. A correlation between the mean scores and the number of questionnaires collected on outpatients was rho = - 0.12, p = 0.514 (2 tailed) and on orthopaedics the same relationship was Spearman rho = 0.22, p = 0.20 (2 tailed). So there was not a statistically significant relationship between the mean scores and the number of questionnaires collected in an orthopaedic or outpatient setting. These results mean that even if the students saw their patients more often it did not improve the patients' satisfaction with their interactions or visa versa.

The correlations between score and the number of sessions with the physiotherapy student did not demonstrate any significance in this survey which was surprising because the relationship between the student and patient could have been expected to develop in some way, either in a positive or negative way, as they spent an increasing amount of time together.

Participating in the study may have altered the behaviour of the students. When the students were working in the specialities where the questionnaires were being distributed they may have paid more attention to their interactions with patients. Alternatively the high scores may have been influenced by methodological error. The students were instructed to give the questionnaire to patients at the end of their last session together and this created the opportunity for the students to select the patients who were given questionnaires. These problems might have been detected and addressed if there had been an opportunity to carry out a pilot study.

The high scores from the PDIS may be due to the patients' view of the students as inexperienced or vulnerable people who they did not like to criticise. Alternatively the students may have been skilled at interacting with patients in a caring, sensitive manner thereby confirming previous findings (Ware and Hays, 1988) and justifying their scores.

6.9.4. The Individual Question Scores

The statements which were rated most highly by the patients related to questions 2 and 13, which shared the same mean score. Question 13 was "the physiotherapist behaved in a professional and respectful manner towards me" and this was scored highest in both clinical settings. Question 2 was "the physiotherapist greeted me pleasantly" scored equally highly on orthopaedics and in outpatient settings. The other questions do not seem to have had a distinctive or especial relevance to the patients with their similar mean scores.

The statement which produced the lowest score related to the therapist going straight to the problem without greeting the patient which received the lowest mean score in both clinical settings. It seems contradictory for questions 2 and 1 to have the highest and lowest mean scores because they both relate to how the person was greeted although the difference between these mean scores is small, ie. there was a 0.5 difference in the mean scores. This may be an area where the students are inconsistent or which does not receive much attention during the students' education and requires more attention prior to clinical placements. Alternatively the wording may have been ambiguous or the order of the questions may have been confusing.

6.9.5. Individual Student Scores

A mean score was calculated for each student from the questionnaires that they collected from orthopaedic and outpatient settings. The questionnaire did not identify the strengths and weaknesses of the students as a group but could be useful for the students individually. Although there were no students with a neutral or negative mean score a review of each student's profile could be used to show any areas of interaction which were repeatedly given a low score and this could be used to reflect and give feedback on interactions and influence the teaching of interpersonal skills. With a larger number of questionnaires from each student a more thorough and consistent assessment could be made of their individual profiles.

As previously discussed in 6.9.3. it is difficult to estimate the number of patients that were seen by the students in each clinical setting and therefore the number of questionnaires that each student could have collected. This is another issue that could have been addressed had a pilot study been conducted. There may have been considerable variation in the number of patients allocated to the students by different clinical educators in different settings and locations. The number of questionnaires that could have been collected if the students had closely followed the protocol was expected to be about 10 questionnaires for each placement. This seems to have been over optimistic as the maximum number of questionnaires collected by one student on a single placement was eleven. Overall the number of questionnaires collected by each student was disappointing and made any conclusions from this part of the study much less robust.

There are a number of possible explanations for the small number of questionnaires collected from each student. It may have been difficult for them to identify the last session with a patient because it was not possible to anticipate the time of discharge. Secondly, the students may have distributed the questionnaire to people who they judged would give them a positive response. It may have been important to some students to present with a positive image, the effect of social desirability being stronger then the earnest encouragement of the researcher. Overall the questionnaire did not produce scores that were particularly discriminating in either orthopaedics or outpatients settings.

A number of students did not manage to collect any questionnaires. For some students, working on orthopaedic wards, this was because the Head of the School of Physiotherapy did not want students involved with the study on their first placement. This reduced the number of participating students by 10 and then a further 4 students did not co-operate with the data collection. There were 5 students working on outpatient placements who did not collect questionnaires because permission was not given by the hospital with a further 10 who did not collect any of their own volition. This number could be explained by the fact that the outpatient placement was during the fourth year of the course, when there was minimal contact with the researcher and the students would have been under increased pressure of work.

The correlations between the overall scores and patient age, sex, marital status or ethnicity did not provide statistically significant results. Therefore the results did not help in distinguishing any particular needs or lack of

satisfaction related to the sociodemographic characteristics of the respondents. The results do provide some indication of discriminant validity of the instrument rather than for example cultural differences.

Before the conclusions for this part of the study are made the combined results of the AAI and patient satisfaction parts of the study will be analyzed together and discussed.

7. The Results from the Attachment Interviews Compared with Patient Satisfaction and the Students' Examinations

The second hypothesis of the study relates to an association between the Adult Attachment classifications and the patient interactions of physiotherapy students. In this chapter the relationships between these two areas and the students' clinical examination results will be explored.

The AAI produces a final classification which is categorical, or nominal, in terms of the type of data, and this is of limited use when searching for relationships using statistical analysis. The scores from coherence of transcript have been shown in previous research to distinguish best between secure and insecure AAI groups and predict maternal caregiving (Fonagy, Steele and Steele, 1991). Therefore the coherence of transcript scores were used in the first place for the comparative analysis. They are the highest indicator of security of all the scales from the AAI because they take the balance and pattern of all the other scales into account. The coherence of transcript score was used to look for relationships between the AAI, the PDIS mean scores from outpatient and orthopaedic settings and the mean result from the students' clinical examination results. Spearman correlations, ie. non - parametric tests were used because the scores from the AAI were ordinal data.

7.1. The Adult Attachment Interview and the Patient Satisfaction Results

The Adult Attachment Interview and the patient satisfaction results were analyzed together to search for any correlations between attachment security

and clinical interactions. A Spearman correlation was made between the students' coherence of transcript and their mean scores on outpatients, r_s = 0.04, p = 0.83 and orthopaedics, r_s = - 0.14, p = 0.5 (2 tailed).

In case the results had been distorted by the large proportion of students who collected only one or two questionnaires, further correlations were sought only using only the mean scores of the students who had collected three or more questionnaires, see appendix 10.20. The resulting correlations between coherence and patient satisfaction of outpatients, r_s = - 0.136, p = 0.52, and orthopaedics, r_s = - 0.23, p = 0.134 (2 tailed), did not reach significance. To utilise the data collected as thoroughly as possible further relationships were sought between the individual scales from the AAI and the patient satisfaction results.

Table 11 shows the correlations between the scales for experience and state of mind from the AAI and the students' mean patient satisfaction scores from orthopaedics. None of the correlations between the AAI scale scores and the mean scores from an orthopaedic setting were significant. The pattern of negative versus positive correlations was not consistent in relation to the positive and negative scales from the AAI. Only two of the correlations produced coefficients which approached significance at the level of a trend, ie. mother / pressure to achieve and father / idealisation. Both calculations produced negative correlations with p value results of 0.08 and 0.09 respectively. These results were not significant.

Table 11: Results from Correlations* between AAI Scales and Students' Mean Orthopaedic Scores

Scale **n = 30**	**Orthopaedic Scores**				
Experience Mother	rho =	p value	**Experience Father**	rho =	p value
Loving	0.12 -	0.51	Loving	0.02	0.87
Rejection	0.25	0.16	Rejection	-0.17	0.36
Involving	0.17	0.35	Involving	-0.07	0.69
Pressure to achieve	-0.32	0.08	Pressure to achieve	0.07	0.69
Neglect	-0.07	0.7	Neglect	-0.08	0.67
States of Mind Mother	rho =	p value	**States of Mind Father**	rho =	p value
Idealisation	-0.24	0.19	Idealisation	-0.31	0.09
Involving Anger	0.05	0.76	Involving Anger	0.19	0.29
Derogation	0.005	0.97	Derogation	0.22	0.23
General States of Mind	rho =	p value			
General Derogation	0.05	0.76			
Lack of Recall	-0.09	0.62			
Metacognition	0.03	0.86			
Passivity	0.1	0.57			
Unresolved Loss	0.03	0.87			
Unresolved Trauma	0.11	0.53			

(* 2 tailed)

Similarly the results of the correlations between the AAI scales for experience and state of mind and the students' mean scores from the patients' satisfaction in an outpatient settings are shown in table 12. Only one of the scales from the AAI suggested a significant correlation with the mean scores from outpatients and that was the scale relating to passivity which was significant at a level of $p = 0.02$. Higher scores of passivity were associated with higher patient satisfaction scores. This can only be considered a trend, given the a priori level of significance for this study which was set at $p = 0.01$.

Again the pattern of negative versus positive correlations is not consistent with regard to the positive and negative scales from the AAI. The results were different from the correlations obtained in an orthopaedic setting; with outpatient satisfaction the father and mother loving scales produced negative correlations. The only other scale which approached statistical significance, with a negative correlation, was father derogation. Overall there were fewer negative correlations than expected from the negative AAI scales, eg. neglect, rejection.

Table 12: Results from Correlations* between AAI Scales and Students' Mean Outpatient Scores

Scale n = 29	**Outpatient**	**Scores**			
Experience Mother	rho =	p value	**Experience Father**	rho =	p value
Loving	-0.29	0.15	Loving	-0.33	0.103
Rejection	0.95	0.65	Rejection	0.29	0.14
Involving	0.21	0.3	Involving	0.11	0.59
Pressure to achieve	0.18	0.37	Pressure to achieve	-0.19	0.34
Neglect	0.27	0.18	Neglect	0.18	0.38
States of Mind Mother			**States of Mind Father**		
Idealisation	0.1	0.6	Idealisation	0.03	0.85
Involving Anger	0.21	0.3	Involving Anger	-0.03	0.87
Derogation	-0.19	0.35	Derogation	-0.34	0.09
General States of Mind	rho =	p value			
General Derogation	-0.13	0.52			
Lack of Recall	0.3	0.13			
Metacognition	0.05	0.81			
Passivity	0.47	0.02			
Unresolved Loss	-0.00	0.96			
Unresolved Trauma	0.05	0.78			

(* = 2 tailed)

7.2. The Interview Results and the Clinical Examination Results

To test the results of the AAI and PDIS further the students' clinical exam results were used as a combined evaluation of their clinical physiotherapy skills and their interactions with patients, ie. to test both the PDIS and AAI against an independent measure.

In the final year of their BSc (Hons) course the students were assessed on their clinical skills. These assessments consisted of 3 patient management sessions which were observed and examined by a clinical educator, who had been supervising the student, and a member of the teaching staff from the school of physiotherapy. The assessments included a demonstration of physiotherapy management with a patient, selected by the clinician, followed by a discussion about the management programme with the examiners. The result of the examination contributed to the students' final degree classification and was used as a means of judging the students' clinical competence. The consistency of these exam results as a measure may be debatable but each student had three assessments carried out by three different pairs of examiners on different patients and the mean mark across the assessments is used. See appendix 10.21. for the examination with the AAI results.

There are no obvious associations to be made between the examination results and the AAI results. There were seven students who obtained a mean exam result of 70% or above and two of these participants had insecure / dismissing attachment interviews. In relation to the lower scores in the 40 - 50% band of marks there were three students and one of these was in the insecure / dismissing category.

There were six students who failed an assessment on their first attempt but these results did not correspond to a particular AAI category or form a distinctive pattern. Correlations were made between the coherence of transcript and the examination results, Spearman rho = 0.25, p = 0.09, 2 tailed. Thus, at best, only a trend was detected in the expected direction.

Further statistical analyses were calculated between the students' mean exam results and the AAI scales which are shown in table 13. None of these were significant although the majority of negative scales produced negative correlations with the examination results. Only one of the scales produced a correlation coefficient that approached significance at the level of a trend, ie. father rejection. Father rejection scores went down as exam results went up.

Interestingly the correlations between the mean satisfaction scores and the examination results did suggest significance at a p = 0.02 level; outpatient rho = 0.48, n = 25, and orthopaedic rho = 0.488, n = 24 (2 tailed tests).

Table 13: Correlations* between AAI Scales and Students' Mean Exam Results

Scale n = 43			**Examination Results**		
Experience Mother	rho =	p value	**Experience Father**	rho =	p value
Loving	0.25	0.1	Loving	0.2	0.18
Rejection	-0.14	0.36	Rejection	-0.26	0.08
Involving	-0.01	0.92	Involving	0.04	0.8
Pressure to achieve	0.18	0.24	Pressure to achieve	-0.22	0.14
Neglect	0.01	0.93	Neglect	0.07	0.63
States of Mind Mother	rho =	p value	**States of Mind Father**	rho =	p value
Idealisation	-0.09	0.55	Idealisation	-0.05	0.75
Involving Anger	-0.03	0.83	Involving Anger	-0.16	0.3
Derogation	0.01	0.95	Derogation	-0.04	0.77
General States of Mind	rho =	p value			
General Derogation	-0.12	0.43			
Lack of Recall	-0.11	0.47			
Metacognition	-0.12	0.41			
Passivity	-0.03	0.8			
Unresolved Loss	-0.2	0.18			
Unresolved Trauma	-0.21	0.17			

(* 2 tailed)

7.3. Discussion of the Combined Results

To explore any links between the students' attachment and their ability to interact with patients, statistical analyses were made, including analyses between the AAI results and the mean mark from the students' clinically based examinations. Overall the results did not demonstrate a useful set of statistically significant correlations despite the large number of associations sought.

7.3.1. The Adult Attachment Interview and the Patient Satisfaction Survey

The general absence of statistically significant relationships between the AAI and questionnaire results from orthopaedics and outpatients did not support the second hypothesis or the idea that there is a link between attitudes to attachment and patients' satisfaction with the student physiotherapists' interactions, although there appear to be different patterns of positive and negative correlations appearing with the orthopaedics and outpatients results.

The main contributing factor to the lack of statistically significant results was not only the low number of questionnaires collected but also the number of students who collected them. The sample sizes used for the calculations were less than 43, 30 for the orthopaedic calculations and 29 for the outpatient calculations. The sample size was reduced because some students did not collect any questionnaires, as discussed in 6.9.5. This made the occurrence of statistically significant results unlikely. The calculations based on students who had collected more than three questionnaires, which reduced the sample size even further, also did not produce statistically

significant results.

It is difficult to state conclusively whether or not the results are due to the absence of an association between patient satisfaction and coherence of transcript or because of the difficulties with data collection, eg. the sample size, the spread of participants across a broad geographical area, the problem of social desirability bias. Also the weaknesses associated with patient satisfaction generally could have been an influence or the appropriateness and modification of the questionnaire used in this study. A questionnaire produced from consultation with the users of physiotherapy services in this country may have produced different results. The present analysis does demonstrate the independence or discriminant validity of the AAI, adding to the findings of Bakermanns - Kranenburg and Van IJzendoorn (1993). This underlines the possibility that it is caregiving in the parental context, not caregiving in a professional context, that is assessed by the AAI.

The only scale from the AAI which had a significant correlation with the PDIS results was the unexpected and difficult to interpret finding that passivity was correlated with the outpatient scores from the questionnaire. Passivity is one of the state of mind scales and is marked in the transcripts where vague, unfinished sentences or ominous statements are made. It seems strange that this correlation should be positive when intuitively it would seem that vagueness related to interactions would be likely to reduce the patients' satisfaction with interactions. The rating of passivity was not however rated very highly on these transcripts and the maximum score for the students was 5, with the modal score being 1.5. Clearly the scores show that the passivity displayed in the interviews was not extreme, 5 being only

the mid-point of the scale. Many of the students with secure classifications had higher scores on this scale but these were relatively mild indications of passivity. Although there was a weak statistical link shown between passivity and higher PDIS scores from outpatients it is unlikely that this one correlation has implications or meaning for the whole picture of physiotherapy / client interactions. This correlation was not demonstrated with the satisfaction results from orthopaedic patients and so although there may be different needs and responses from people who are in - patients rather than out – patients it can not be assumed from this one result. With so many tests being made it was likely that a statistically significant result would occur by chance.

There was no statistically significant evidence of any clinical implications for the AAI results in relation to clinical interactions for this group of students but there were indications of differences between the orthopaedic versus outpatient results. The correlations between the AAI scales, which contribute to insecure classifications, and patient satisfaction in an orthopaedic situation produced mainly negative correlations. The higher scores on scales, such as rejection and idealisation, were associated with lower satisfaction scores. This suggests that more secure physiotherapists produce higher satisfaction responses from patients in an orthopaedic ward. Alternatively, there are fewer results from outpatients which show the same pattern. The opposite effect seems to be demonstrated from the pattern of positive and negative correlations which have been calculated, ie. father and mother loving are negatively correlated with satisfaction scores from outpatients. This suggests that students with more loving experiences, who tend to be more secure, provoked lower satisfaction scores in an outpatient

setting.

This evidence, if confirmed by further study, could indicate that physiotherapists with different attachment approaches are, from a patient perspective, suited to different specialities within physiotherapy.

The orthopaedic patients, who are temporary hospital residents, rated the secure physiotherapists more highly, perhaps because they were more needy and dependant and the physiotherapist provided them with a secure base. The pattern of correlations from people visiting outpatient physiotherapy clinics was the opposite. The results are not sufficiently consistent or complete to test the second hypothesis which suggested that security of attachment would produce greater patient satisfaction than insecure attachment.

7.3.2. The Adult Attachment Interview and the Clinical Examination Results

The search for links between the AAI results and the clinical examination marks did not yield significant results. The judgement of the students' clinical competence through the exam provides a different view of the students' ability to interact with patients because technical ability was also assessed.

The correlations produced were not significant but the pattern of positive and negative correlations suggests that links between the students' security and their examination results would be interesting to investigate further. The results may have been significant had a larger sample of students been

recruited.

The highly significant correlation between the patient satisfaction scores and the exam results confirms the validity of the examination and indicates that the exams were a useful means of judging physiotherapy student / patient interaction and clinical skills. They are interesting because both the educators and the patients assessed the students similarly, ie. higher scores from the patient satisfaction survey were associated with higher scores from the examinations. This shows that the educators and the patients found the same students satisfactory.

Overall the findings from the combined analysis do not support the second hypothesis; there does not seem to be a relationship between the students' Adult Attachment Interview results and their interactions in clinical settings, as judged by the patients. However, the patterns produced in the analysis suggest that there may be an association between the AAI results and the examination results. Also the responses of patients to students working in orthopaedics and outpatient situations may be different. This would be worthy of further investigation because it could have implications for the quality of communication and impact on adherence / compliance, health outcomes and placebo effects.

It was hoped that the combined results could be used to develop a model of physiotherapist - client relations but the lack of significant findings make this difficult. The lack of confirmation of any links may be due to the moderating effects of education. The education that physiotherapy students receive may prepare them in a way which means that their underlying

attitudes to close relationships do not overflow to their interactions with patients.

Dozier (1993) and Dozier et al (1994) showed that people involved in social care were influenced in their work by their attachment style. Case managers in a community mental health setting with different approaches to attachment issues from their clients were more likely to challenge their ideas about relationship problems. In this study the students' interactions, with different attachment attitudes, were not influential on patient satisfaction in a clear way but the attachment of the patients was not known.

In Dozier's (1994) study the educational background of the participants varied widely. Some of the people involved in the 1994 study were trained in counselling and psychotherapy and others were not and so it is not possible to assess the influence of education in that study. Also the nature of the work in social care versus physiotherapy might be a major influence on whether or not attachment style is an instrumental factor for patient / client management. The two clinical settings chosen for the collection of the patient satisfaction data were orthopaedics and outpatients where the main health problems of the patients are likely to be physical. Perhaps in other physiotherapy settings, eg. mental health or community care for long term disability, the nature of the health problems would provoke distinctly different interactions from physiotherapists with unlike AAI classifications.

A number of the results from the correlations approached a significant level of probability but these were considered with caution because of the small sample size and the numerous calculations which were made. If a larger

sample of physiotherapy students had been available these results might have produced more convincing and conclusive outcomes. With so may tests being made it was likely that a statistically significant result would occur by chance. The reporting of these findings has been aimed at navigating a meaningful path between the scientific pitfalls associated with discounting significant results versus over estimating non - significant results

The conclusions which can be drawn from the whole study will be addressed in the next chapter.

8. Conclusions

The question posed at the beginning of this study was to ask if attachment theory was relevant to physiotherapists' relationships with patients. This question was pursued by attempting to relate the attachment characteristics of physiotherapy students to their interactions with their patients in two clinical settings. This chapter will summarise and discuss the findings from the study and try to draw conclusions not only on the results but also on future directions for research. The results from each part of the study will be discussed separately and then together.

8.1. Influences on the Distribution of AAI Classifications of the Physiotherapy Students

An attachment perspective to physiotherapist / patient relationships may seem an unconventional approach but the idea that such relationships could be influenced not only by training and selection but also by social, emotional and familial experiences is not unique; it has been considered by other researchers, eg. Dozier at al., (1994). This study has been conducted with the intention of exploring the possibility of attachment influences rather than ruling out the power of other factors, eg. formally taught or acquired interaction skills.

The first part of the study produced an analysis of the AAIs of the physiotherapy student participants. The major finding from both 3 way and 4 way analyses of the AAIs showed that the physiotherapy students produced a significantly different distribution of classifications than those found with general samples, ie. there were more secure classifications. The other

influences, which may produce such a distinct allocation of attachment attitudes and may have lead the students to become physiotherapists, are considered in this discussion.

The fact that this group of physiotherapy students had significantly more secure attachment characteristics than general population samples both in the UK and Europe has implications for the physiotherapy profession. Firstly there is the question of why people who are securely attached should be attracted to physiotherapy as a profession. The influences of self selection, university selection and the public perception of physiotherapy may have strong effects on whether or not physiotherapy is considered as a career option as well as the desire to be a caregiver.

8.1.1. The Influence of Self Selection

A recent study with 100 students at the School of Physiotherapy, Brighton University identified the major influences on the career choice of physiotherapy students (Fanshawe, 1999). The main factor which induced people to consider this vocation was the experience of themselves, a friend or a relative receiving physiotherapy. The second most important factor was having a friend or relation working as a physiotherapist or having friends or relatives working in healthcare in another capacity (Fanshawe, 1999). Although further research would be necessary to establish whether or not the familial or personal physiotherapy experiences of student physiotherapists had any links with attachment issues it would be particularly interesting to see how widely there was a tendency within families to be caregivers in different capacities, ie. in both health and social care.

8.1.2. The Influence of Selection by the School of Physiotherapy

Another major influence on the people who make up the student population is the selection process carried out by schools of physiotherapy. There are a number of ways in which the schools select their student cohorts. Some schools interview prospective students, others make their selection randomly from application forms and at other schools the students are selected only on their academic achievement. The selection of physiotherapy students by interview rather than other methods may produce cohorts with different qualities from those who have not had any personal contact.

At the University College and Middlesex Hospital School of Physiotherapy the prospective students were short listed for interview from applications received from university clearing. The only distinctive difference between UCL / Middlesex and other schools of physiotherapy was the fact that students were required to have chemistry 'A' level. While this may have an influence on their academic credentials it has been shown that attachment is independent of intelligence (Bakermanns - Kranenburg and Van IJzendoorn, 1993). It is difficult to see how there might be any links between the acquisition of a chemistry 'A' level and attachment patterns which could be a source of bias in this study. Whether or not students should be interviewed for vocational courses in healthcare is an area of contention in higher education and amongst physiotherapy educators.

Some schools of physiotherapy now select students only on their academic achievements and consider it unnecessary to have an assessment of their communication skills and level of motivation through a face to face

interview. It may be that an interview process selects people who relate well to others in interviews, ie. both to the interviewer and subsequently the patients, and who have secure attachment strategies. The cohorts who participated in the study from UCL may therefore have been different from other schools of physiotherapy, who do not conduct interviews, and this makes any generalisation of the findings to all physiotherapy students less valid.

This linkage between performance at interview and attachment characteristic could be an area for further research with physiotherapy students. The possible differences between the characteristics of student cohorts from different schools of physiotherapy with alternative selection procedures has not been investigated. If information of this sort was correlated with the clinical performance of the students then perhaps recommendations on selection procedures could be developed.

8.1.3. Sociodemographic Influences on the Student Cohort

There were no links between the age, sex, or socioeconomic group of the students and their attachment attitudes, as assessed by the AAI, which was demonstrated by statistical analysis. This confirms the work of Bakermanns - Kranenburg and Van IJzendoorn (1993) and Steele and Steele (1994).

The results could be due to the fact that this was a predominately middle class sample of students where the incidence of insecurity has a tendency to be lower than in general samples. Indeed, Van IJzendoorn and Bakermans - Kranenburg (1996) in their meta - analysis of 3 way and 4 way samples of

AAI results showed that there was a higher incidence of insecurity among people with lower socioeconomic status or mental health problems.

8.1.4. The Influence of Attachment Experience on Choice of Profession

The categories and subcategories, derived from the analysis of the AAIs, support the idea that the majority of students in this study seem to typify a naive yet straightforward approach to relationships produced by predominately good experiences as children, combined with very little metacognitive monitoring or reflection on their relationships. This may mean that generally these physiotherapists are less prone to analyse or reflect on their relationships with patients as well as their families. Physiotherapy as work may be selected because it is seen as active and helpful rather than focusing on relationship issues which may be seen as generally direct, open and candid. It seems that generally the physiotherapy students in this study did not choose to become physiotherapists from a need to compensate for difficulties or absences in their family relationships. The choice of physiotherapy is probably based not only on some experience of the profession but also on the positive experiences of their childhood have led to a desire to be involved with a caring profession.

It may be that physiotherapy does not promote an image of caregiving, in the media or by personal contact, in a way that attracts a high proportion of people who are insecure in their attachments. People who receive physiotherapy may not be seen as particularly needy, eg. athletes, and therefore physiotherapy would not fulfil the attachment needs of someone who particularly wanted to be in demand for their caregiving. It may be that

the public image of other professions, eg. nursing, would promote a more dependent picture of patients.

It would be interesting to investigate the proportion of secure versus insecure AAI classifications in other groups of health professionals, eg. nursing students, where the perceived role may be seen as caring for people who are much more needy, which may stimulate caregiving in a different way. Also studies with groups of nurses, who have specialised in areas where the people are needy in different ways would be interesting. Patients who are dependent and communicative, eg. patients involved with palliative care, versus patients who may be less able to communicate, eg. in intensive care units where the people are often dependent and unconscious.

Also, people attracted to other specialist roles, eg. occupational therapy and clinical psychology, which demand a different range of skills and interactions might demonstrate other links between their attachment characteristics and caregiving outside close relationships because their work is associated with mental health problems and relationship issues.

8.2. Unresolved AAI in Relation to Experiences of Trauma and Loss

The incidence of people who had been classified as unresolved with respect to loss or trauma was also different, ie. slightly lower than the general population. This could partly be explained by the youth of a large proportion of the group interviewed for this study. The students might not have had the experience of losing someone close, although many of them had experienced the loss of a pet or relative who was not close, which could have provoked

an extended or persistent period of mourning. However, this appeared not to be the case.

A very small percentage of the students had experienced some sort of trauma in relation to their childhood experience, as defined by Main and Goldwyn (1994). The two students who had experienced trauma had scale scores of 4.00 and 1.00 which showed that they had a balanced view of the experience rather than a continuing and active involvement with their experiences. Certainly this group of people with predominately securely classified AAIs had largely positive childhood experiences which means that their ability to be balanced, open and secure had not been tested in the same way as the two students who had negative experiences and earned security.

Generally the security of the group was not earned through the consideration of relationship difficulties. Even the students whose interviews were classified as dismissing of attachment were at the more coherent end of the classification. The only student who had a preoccupied classification did not have an abusive or economically disadvantaged background. The preoccupied rating was derived from a perceived lack of attention, rejection and role reversal combined with low coherence.

The research, eg. Slade (1999), shows that the AAI classifications do have implications for present and future relationships with family members. In the areas of clinical psychology and social work there are implications for work (Dozier, 1994) but in the physiotherapy arena the implications are less clear.

8.3. The Patient Satisfaction Survey

The purpose of this part of the study was to determine patients' opinions on whether or not the students' interactions were satisfactory. Patient satisfaction surveys, by nature, are a problem; not only are they based on an imprecise understanding of what is being measured but they generally tend to produce high scores which do not necessarily indicate the strengths and weakness of the healthcare services that they aim to evaluate.

8.3.1. The Overall Scores

The high level of patient satisfaction indicated by the respondents using the PDIS is an indication that the interactions with the students were well thought of and may be a positive influence for any placebo effect as well as outcomes such as adherence. However the lack of discrimination between the ability of different students means that there were no clear variations in the overall quality of their interactions with patients. Any differences in the results may only be due to the natural variations of patient satisfaction surveys (Ware et al, 1976, Carr - Hill, 1992, Thomson and Sunol, 1995), the quality of the PDIS as a measure and the flaws in the methodology.

Firstly the questionnaire used, the Patient Doctor Interaction Scale (PDIS), as an instrument may not be precise enough and this may be related to the appropriateness of the statements for use with physiotherapists in the UK, the PDIS having been devised for doctors in the USA. The choice of the PDIS for this study was made because there were no validated questionnaires in the UK for interactions with patients. If there had been sufficient resources and time, the content of the PDIS questions could have

been checked for their meaning and relevance to physiotherapy patients in the NHS. Interviews or focus groups could have been used for validation of the questionnaire content but this was not within the scope of this project particularly because of the financial and time constraints.

Secondly, it may be that the students scored very well and that they may have been good at interacting with patients. It is difficult to judge whether or not this is a reasonable assumption from the data collected because of the way the questionnaires were distributed. It would have been desirable for a pilot study to have been carried out prior to the first use of the questionnaire by students on placement. This may not have improved the completion rate of 96% but by rewording or changing the layout of the questionnaire may have made the questions easier to understand and more discriminating. A pilot study may have also meant that the difficulties of distributing the questionnaire would have been identified and another method could have been considered.

The main problem with collecting the data clinically was the geographical spread of the placements and the necessary reliance on the students to distribute the questionnaires to their patients. It was possible for students to select who was given a questionnaire. If students only gave questionnaires to the people they thought had positive interactions with them a selection bias may have been created which then distorted the results. In future studies the delivery of questionnaires could be made more consistent with more resources; the questionnaires could be distributed by a third party, eg. a receptionist or ward administrator.

A pilot study was not conducted because the School of Physiotherapy associated with the study lost its funding, there were to be no more intakes of students and the closure of the school was planned. This increased the time pressure on the project and, because of the previous validity tests and rigorous construction of the questionnaire, the data collection proceeded which with hindsight was a major methodological error.

8.3.2. Individual Question Scores

Different questions were scored highest in orthopaedic and outpatient settings but there was a small difference between the highest and lowest mean scores showing that either the questionnaire generally was not very discriminating or that the students were consistently good at interacting with their patients.

The high scores from the PDIS could also be explained by the fact that the students have a smaller workload and can give more time and attention to the patients. Another explanation for the consistently high scores is the fact that the majority of students are women, who have in medical consultations been found to be rated more highly on interpersonal skills than men (Colliver, Nu Viet Vu, Marcy, Travis and Robbs, 1993, Delgado, Lopez-Fernandez and De Dios Luna, 1993). However, this may have been counteracted by the age of the students who were mainly under 25 years old. Hall, Irish, Roter, Ehrlich and Miller (1993) found that people were less satisfied with their care when they consulted young female physicians.

Although the overall mean score from the PDIS (70.95) was high and the individual student scores (63.5 - 78) were all positively rated the individual scores do allow for some differentiation between the students from their interactions with the patients. The mean scores from individual questions did not allow for conclusions to be drawn about general weaknesses in patient / physiotherapist interactions but the results could provide useful feedback to the lower scoring students.

8.3.3. Validity of the PDIS

The investigations have so far shown a reasonable level of validity and reliability. The modified PDIS used by the physiotherapy students on orthopaedics and outpatients demonstrated a similar and reasonable level of validity compared with its use by doctors, but this has to be considered in the context of patient selection by the students. Further confirmation of content validity is necessary and crucial before wider use of the questionnaire could be suggested. Ideally, a sample of United Kingdom residents should be consulted, through interviews or focus groups, about the relevance of the statements, their meaning and clarity or for the development of different questions. Further analysis of the incomplete questionnaires may also support the omission or rewording of particular questions.

Test - retest validity was satisfactorily assessed by Falvo and Smith (1983) but should be tested further to establish reliability for use by physiotherapists. Any further study which looked at the predictive validity of the PDIS ideally would follow the patients' progress in terms of their adherence to suggested management and subsequent behaviour in order to

confirm the level of predictive validity shown here. A study of patient satisfaction using the PDIS with qualified physiotherapists could help to establish validity further because it may prompt lower and more discriminating scores. Patients might be more critical of qualified staff because they are seen as less vulnerable and they may spend less time with patients.

Patient satisfaction can be an important outcome measure, it is useful for assessing personal interaction and can provide unique feedback for individuals and services. Questionnaires of this type could be used to review individual physiotherapists or general patient opinions on physiotherapy staff in different clinical settings.

Questionnaires can be useful but the information they provide is limited; they do not necessarily give a complete picture of patient satisfaction or contribute to a wider understanding of the subject. Ideally information from surveys using a questionnaire should be supplemented by information from people with particular needs, either by using different methods or by a third party assisting questionnaire completion. The feedback gained from the survey focused on the opinions of literate adults but for a full picture of the needs and opinions of patients / clients different methods would have to be employed. The needs of people excluded by the selection criteria should be supplemented by those who are unable read and write English and may have special communication needs, eg. people with learning difficulties. Physiotherapists' interactions with people in less conventional healthcare settings, eg. a person's home, may require different skills and the

interactions which occur may be less or more satisfactory for the person receiving physiotherapy. Patient satisfaction studies for community based care where relationships with healthcare providers is long term might provide more insight into how relationships develop and the key activities which help to maintain positive interactions.

This part of the study did not provide sufficiently discriminating information to make interpretation of the results notable but it has identified some of the difficult aspects of the research. These could be addressed in the conduct of any further research in the area and help to make the results of similar studies more robust.

8.4. Conclusions on the Combined Results

Correlations were sought between the classification style, identified by the AAI, and the clients' views on their interactions with the physiotherapy students, indicated by a patient satisfaction questionnaire. The interpretation of these results is hampered by the sources of bias resulting from the conduct of the patient satisfaction part of the study. Most of the correlations were not statistically significant. The differences between the number of patient contacts, indicated by the number of sessions together, and the different clinical specialities were sought but none of these relationships had statistical significance.

Some students collected very few questionnaires, ie. one or two, but even when these students were excluded from the statistical analysis the results were not significant. It is therefore difficult to draw conclusions from these

results not only because of the small sample and inability to generalise but also because of the possible effect of methodological flaws in the patient satisfaction survey which have already been discussed.

8.4.1. The Combined Results

The statistical analysis of the data from the AAI and the patient satisfaction survey yielded a pattern of almost exclusively non - significant results. There was only one significant correlation, which could easily have been a chance finding, and few which could be considered at the level of a trend. So the expectation that insecure students might be less favourably appraised by patients has not been confirmed.

Despite the non - significance of the correlations between attachment interview ratings and patient satisfaction scores, there were some interesting patterns emerging from the observed positive and negative correlations. From this evidence it seems that the patients may have different preferences in alternate health care settings which would be more obvious and conclusive if the sample had been larger and more students had managed to collect a larger number of patient satisfaction questionnaires. A more detailed study which focused on the emotional needs of patients would be useful to inform models of patient satisfaction with physiotherapists and healthcare in general.

The specific characteristics and qualities of physiotherapists which contribute to patient satisfaction and therefore to effective healthcare still need to be identified. If the relative importance and nature of these aspects

of a physiotherapists' work were known, then an effort could be made to preserve them while the profession develops. It may be that the emphasis on evidence based practice which is becoming more important in healthcare in the UK should be directed towards the interpersonal as much as the technical aspects of care. An interesting initial study would be to follow the students who participated in the AAI for this research and find out how they view the interpersonal aspects of their work and relate it to any changes in their attitudes to attachment.

The correlations between the exam results and the AAI scales were predominately negative which showed that security of attachment was not related to academic achievement in this study. The only scale which produced a positive correlation and approached statistical significance, for both mother and father, was loving experience. This would support the idea that a supportive experience encourages achievement. In other words, a child who has a store of convincing evidence that s/he is well - loved is likely to have greater confidence outside the home in school and learning settings, perhaps far into the future. By contrast, students who were pressured to achieve by one or other parent during childhood did not necessarily achieve high exam results. Thus, the message parents aim to transmit to their children is not always the one they learn.

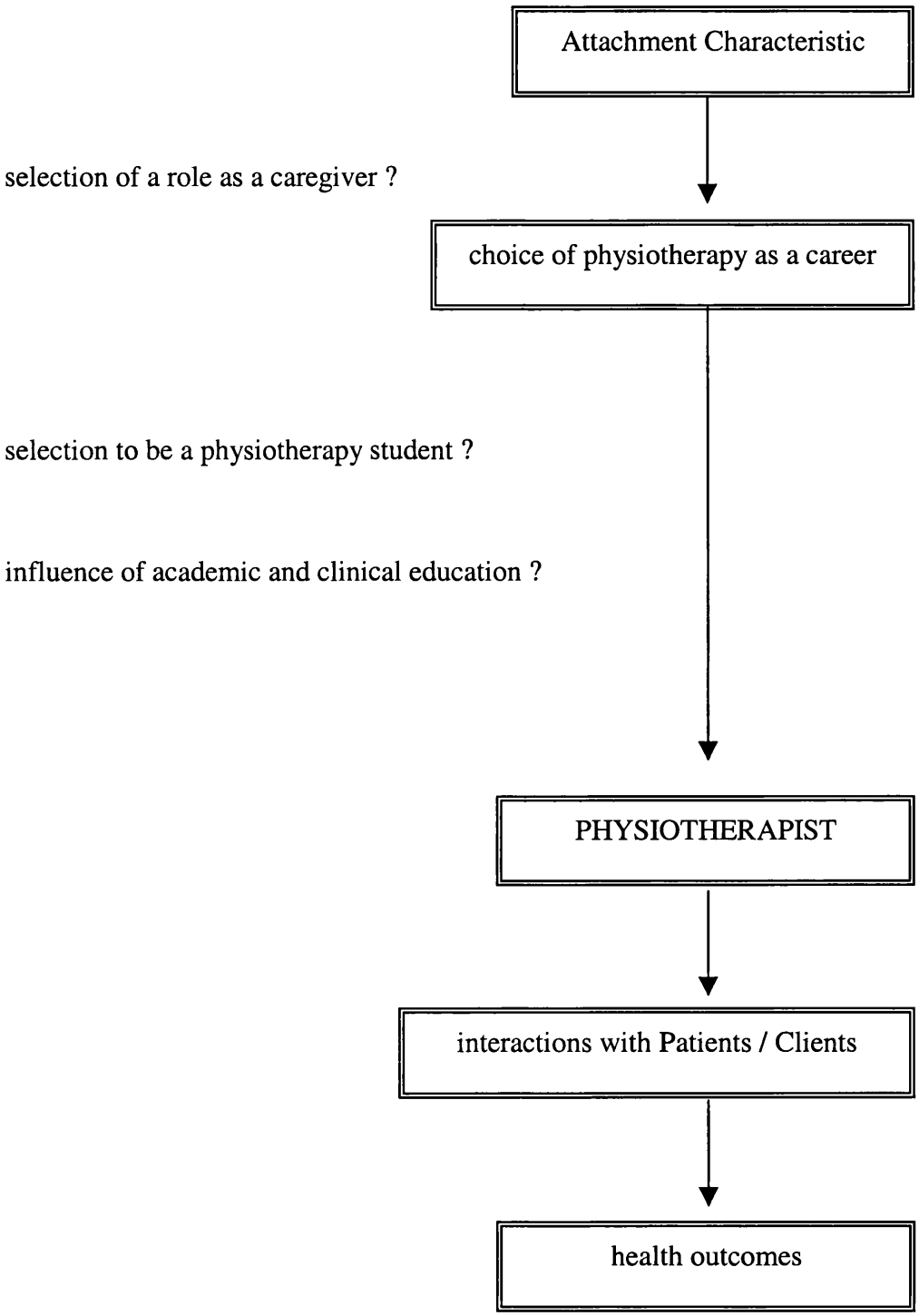
8.5. Towards a Model of Physiotherapist / Patient Relationships

It was hoped that the combination of the information from the two parts of the study could be drawn together in order to develop and produce a model for understanding attachment influences on physiotherapy patient

relationships but the results make this difficult. Although there is insufficient information from this study for a single comprehensive model for physiotherapy client relationships, the attachment influences on people who choose to become physiotherapists can be identified. Figure 1 presents a flow diagram of the related issues, which have been discussed, showing the areas which need further investigation in order to answer some of the questions which arose from this study about the influences on physiotherapy / patient interactions.

The flow diagram starts with the person's attachment characteristic which, from the results of this study, tends to be secure when someone chooses to become a physiotherapist. What is not yet clear is whether or not the selection of a role as a caregiver is a conscious preliminary choice before physiotherapy is considered by prospective students or whether other factors are more influential, eg. perceived role of physiotherapists. Also students who are not selected for a physiotherapy course may or may not choose to become caregivers in another capacity. This may be influenced by their experiences and attitudes related to attachment. Further research would be needed to explore this question.

Figure 1: Flow Diagram to Show the Possible Influences on Physiotherapy Patient / Client Relationships



Once physiotherapy has been chosen as a career the schools of physiotherapy have selection procedures which may also be a major factor in determining the characteristics of the cohort. The students are then subjected to a programme of clinical and academic education which has an unknown level of influence on the way in which they interact with patients. The educative process may influence students in a number of ways, eg. by adopting role models from their clinical experience or by acquiring knowledge of health care research.

The comparative importance of all the factors discussed which are likely to impact on the interactions of student physiotherapists, and subsequently qualified physiotherapists, is not currently quantifiable. Although it has been shown, from a health psychology perspective, that the interactions between physiotherapists and patients could influence health outcomes, (Klaber - Moffatt and Richardson, 1997) the empirical evidence has not yet been produced.

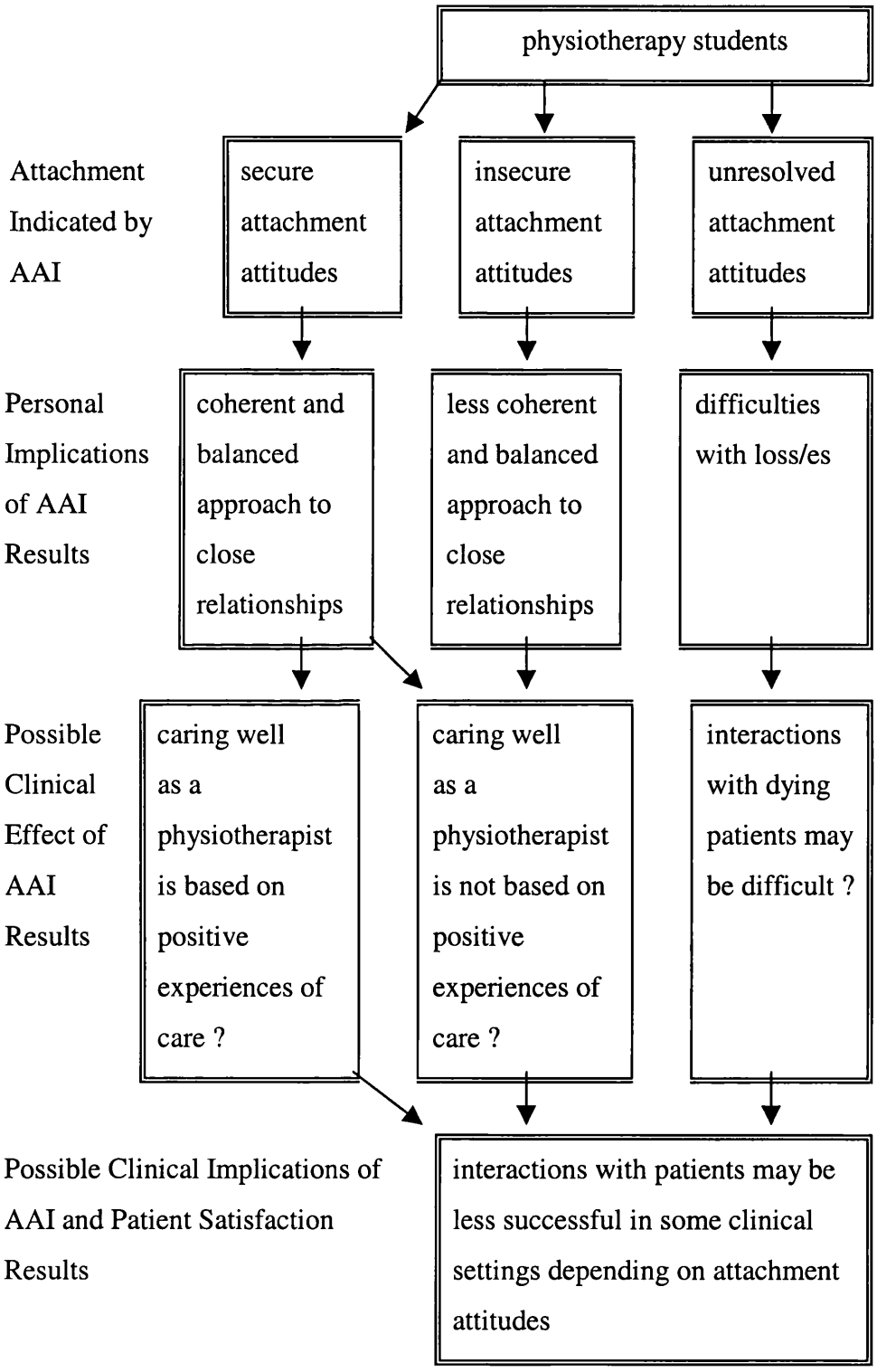
Thus, figure 1 allows for the possibility that physiotherapists' relationships with their patients may only be minimally influenced by the physiotherapists' state of mind and past experience concerning attachment. If this were he case, the internal model required for effective work as a physiotherapist may be very different from those which are formed by, and inform familial relationships. If so, the weakness of the observed links between attachment interviews and patient satisfaction may be explained. This possibility would have to be confirmed by sound investigations in a clinical setting. Perhaps a person's state of mind in relation to attachment

does not influence relationships which are not close or where interactions are non - threatening. An alternative internal working model may develop as a result of the students' education, their observations of qualified physiotherapists in practice and their increasing range of clinical experience.

On the other hand, the current results are compatible with the idea that security of attachment is a common predisposing factor leading an individual to choose to become a physiotherapist. Whether attachment security plays a determining influence on the choice to train in other caregiving professions remains to be investigated in future research. This potential model assumes that attachment characteristics have a role in influencing choices to train, and actual behaviour, as a physiotherapist and this is explored in more detail below.

The overall attachment classification of the students showed a large number of secure interviews which were low in metacognition and based on positive family experiences. This could be important in understanding the way in which physiotherapists actually interact with their patients but observations and analysis of physiotherapist - patient encounters would be necessary to confirm this. The current study did not include such direct observations and therefore this remains another possibility for future research.

Figure 2: A Model to Suggest the Possible Clinical Implications of Attachment Attitudes of Physiotherapy Students



Students who showed an unresolved response to loss may have difficulties working with people who are dying, which is likely in a hospital setting. Constant exposure to situations where losses occur may be a problem because they provoke memories about personal experiences. The unresolved response may be a temporary state while a person is actively grieving or it may be a more established response which characterises their reaction to loss and incomplete mourning (Lyons - Ruth and Jacobvitz, 1999). Whether or not this is restricted to close friends and family or could extend to others in a clinical setting is not known. In the latter case, where an unresolved response continues, this may be influential in the students' choice of specialities within the physiotherapy field, eg. where contact with dying patients is less likely. However, further research would be necessary to investigate this area as the number of unresolved interviews in this sample was very small.

The meaning of the results of this study in relation to attachment theory is interesting in terms of the caregiving of secure individuals and their choice to care for others outside their families. A high proportion of the students were school leavers and so had not established their own families separate from their parents. With a larger sample of students and a higher proportion of mature students it would be possible to investigate any links between the mature students' motivation for caregiving in a professional capacity due to their personal circumstances and life experience. Perhaps any inclination to be a compulsive caregiver, as discussed in the literature review, in order to compensate for the absence of a family or an adult partner might become apparent when people are older. The twelve mature students in this study did

not display this inclination because only one student had an AAI classified as dismissing while all the others' AAIs were classified as secure. The students in this study were distinctly prone to being secure.

This study has not found any students who interacted poorly with patients and so this could not be linked to attachment attitude. There was the possibility that the study would identify people who were either well cared for or not well cared for as children and subsequently did not interact well with patients but neither of these combinations occurred. These options were therefore not included in the model.

The unearned security of the students may mean that physiotherapists generally are less reflective about relationships than people with earned security. The implications for their relationships with patients is unclear but this may be one of many reasons why the recruitment of physiotherapists in the arena of mental health is difficult. A lack of experience in addressing or thinking about relationship issues may be an influential factor. A comparative study between the AAIs of physiotherapists and occupational therapists might help to answer this question because occupational therapists' work is perceived differently and often addresses difficulties associated with mental health problems.

8.6. Overall Conclusions

Although the AAI results did not have any consistent statistical significance in relation to patient satisfaction with interactions in this study. To develop the theme of the study it would be useful to compare the results from these

physiotherapy students with other professional groups who have been interviewed using the AAI. This might reveal distinct differences in the preoccupations and experiences of occupational groups who are caregiving which relates to their different professional roles. At this time there are AAI studies being conducted with clinical psychologists and this will be particularly interesting because their role has such a different focus, ie. predominately mental health concerns (Shumeli, 2000, personal communication).

A more conventional approach to the study of physiotherapy client / patient relationships would have been to take an occupational psychology approach. This would be particularly useful in analysing the nature of the interactions which take place and the relative importance of different components of physiotherapy management, for example, the balance between communication and hands on management in relation to treatment outcomes. This has been investigated from the physiotherapists' perspective but not taking into account the opinions of patients (Gyllensten et al, 1999). Also an analysis of the nature of the differences between physiotherapists and other professionals have been the focus of speculation (Bird and Cohen - Cole, 1990) but not studied in detail.

There is also the possibility that a physiotherapist's attachment may be influential at different stages of his / her career. The professional development of physiotherapists in the NHS usually follows a pattern of newly qualified physiotherapists doing a number of short (3 - 6 month) placements in a number of medical specialities. This period can last up to or

beyond 5 years but at some stage within this period physiotherapists usually choose a speciality and this is not only the clinical arena that is the focus of the therapists' subsequent career but will also largely determine the nature of the relationships that are formed with patients, for example, physiotherapy in the community, where longer term relationships may be formed, versus physiotherapy work in the outpatient department. The next stage of this research will be to follow up the students who have been interviewed and find out which specialities they have chosen since qualification.

Ultimately it would be useful to develop a theoretical basis for the study of physiotherapist - client relationships in order to provide a structure for inquiries and to bring together any research as it is produced. It is difficult to devise a comprehensive model on the basis of this study but elements from the work can be investigated so that possible links and influences can be tested against further work.

Developing the physiotherapist - client relationship into a model currently seems to produce more questions than answers. What is not clear are the characteristics of physiotherapists and patients which might make such relationships difficult or less productive in terms of healthcare. The context of healthcare may be crucial to the nature and development of relationships. The needs of the patient may be very different in disparate healthcare settings, eg. hospital versus community or hospital inpatient versus outpatient, and consequently the aims and expectations of the encounters would be changeable.

This exploration of physiotherapist - patient relationships started by focusing on two hypotheses. The first hypothesis was successfully investigated and showed that security of attachment was predominant in this group of students. The results which were derived from investigation of the second hypothesis were less successful in terms of methodological problems but provided some interesting questions and avenues for further research.

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10. APPENDICES

1. Ethical Committee Approval
2. Advertisement for Student Participants
3. Students' Information Sheet
4. Students' Consent Form
5. List of Questions from the Adult Attachment Interview and Prompts, to Cue the Interviewer and to Probe the Topic
6. Letter of Confirmation of Reliability in Classifying the Adult Attachment Interviews.
7. Rating and Classification Sheets for Adult Attachment Interviews
8. Summary of the Adult Attachment Interview Classifications
9. The Calculation for the Relationship between Adult Attachment Interview Results and Student Age
10. The Calculation for the Relationship between Adult Attachment Interview Results and Socioeconomic Group
11. The Calculation for the Relationship between Adult Attachment Interview Results and Sex
12. Modified Patient / Doctor Interaction Scale
13. Additional Questions Included with Questionnaire
14. List of Physiotherapy Departments Co-operating in the Project
15. Sample Letter to Physiotherapy Services Manager
16. Protocol for Physiotherapy Services Managers
17. Consent Form for Physiotherapy Services Managers
18. Clients' Information Sheet
19. Clients' Consent Form
20. Number of Usable patient Satisfaction Questionnaires collected by the Students
21. Results of Student Clinical Examinations

1. Ethical Committee Approval

UNIVERSITY COLLEGE LONDON MEDICAL SCHOOL

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UCL
MEDICAL
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DT/cw

14 October 1994

Please address **all** correspondence to:
Miss Carol Walcott
UCLMS Administration
Ground Floor
Rayne Institute

Ms Virginia Jenkins
PhD Student
Department of Psychology
Middlesex Hospital School of Physiotherapy
Arthur Stanley House
Middlesex Site

Dear Ms Jenkins

Middlesex Hospital Clinical Investigations Panel

Number: 94/111 (Please quote in any future correspondence)

Title: An investigation into the correlation between Physiotherapists' attachment and client/Physiotherapist relationships

Thank you for your application to the above Committee. I have now looked at your proposal and am happy to take Chairman's Action, you may now go ahead with your study.

Yours sincerely

Dr F D Thompson
Chairman

1. Ethical Committee Approval

2. Advertisement for Student Participants

VOLUNTEERS NEEDED

Physiotherapists' Relationships Study

Would you be interested in taking part in a research project about physiotherapists and their relationships with their clients ?

Would you like to know more about how physiotherapists' view relationships ?

Are you interested in physiotherapist / client interaction?

Involvement consists of an interview and collecting client data on clinical placement.

If you think you might be interested or you would like to find out more visit Virginia Jenkins at the staff offices on the first floor, extension 4720.

3. Students' Information Sheet

Middlesex Hospital School Of Physiotherapy
Arthur Stanley House
Tottenham Street
London W1P 9PG
071 636 7333 X4720

Dear Student,

The purpose of the study is to develop a greater understanding of physiotherapists' wider social relationships and their relationships with their clients. The participants will be asked to take part in the Adult Attachment Interview (AAI). The AAI is designed to elicit information about family relationships past and present, and lasts approximately 1 hour.

The participants will also be asked to collect client opinions on some of their clinical placements, ie. where the clients are capable of completing a questionnaire independently. The client opinions will be a satisfaction rating the client / physiotherapist relationship for completion at the end of the final treatment session.

- The data collected from the students and the clients will be held in confidence by the research workers involved.

- The client opinions will be collected by the student on the placement and given directly to the researchers.

- The clinical supervisors of the placements where client data is collected will not have access to the data collected by individual students or their particular placement. They will have access to information relating to their clinical speciality.

Yours sincerely,

Virginia Jenkins — Physiotherapy Lecturer, UCL & Middlesex Hospital School of Physiotherapy
Dr. Howard Steele — Lecturer in Psychology, UCL

4. Students' Consent Form

Physiotherapist / Client Relationships Study

Virginia Jenkins Physiotherapy Lecturer, UCL &
Middlesex Hospital School of Physiotherapy

Dr. Howard Steele Lecturer in Psychology, UCL

1. I have read the attached information sheet concerning this study and I understand what will be required of me if I take part in this study.

2. The questions concerning this study have been answered by

.....

3. I understand that I may withdraw from the study at any time without a given reason. All materials collected would then be returned to me or destroyed.

4. I understand that any records which are made will be kept confidential, and that any reports arising from the work will be anonymous, and that I will not be identified.

5. I agree to take part in this study

Signed: .....

Date: .....

5. List of Questions from the Adult Attachment Interview and Prompts, to Cue the Interviewer and to Probe the Topic

Italics indicate optional questions

1. Orientation re: family, where you lived, moved much, what family did for a living Grandparents all known, or died when parents young (what age .. know anything about this grandparent ?) ..... Other persons living in family household ? .... Siblings now scattered or nearby ?

2. I'd like you to describe your relationship with your parents as a young child .... if you could start from as far back as you can remember ?

3. Five adjectives to describe mother. Pause to think. Memories, incidents for each.

4. Five adjectives to describe father. Pause to think. Memories, incidents for each.

5. Closest parent, why ? Why not the same as other parent ?

6. When upset as a child, what do ? Pause. a) emotionally
   b) physically hurt ... incidents ?
   c) when ill what would happen ?

7. First separation ? Others ?

8. Felt rejected as a child ? How old ? How felt ? What did parent realise she/he was rejecting you.

9. Parents ever threatening .. for discipline, jokingly / Some of our parents have memories of some kind of abuse in family .. happen to you or in your family ? ... how old, how severe, how frequent ? ... this experience affect you as an adult ? *affect approach to child ?*

10. Effect experiences on adult personality ? Any aspects experiences a set-back to your development

11. Why do you think your parents behaved as they did, during your childhood ?

5. (continued) Adult Attachment Interview Questions and Prompts, to Cue the Interviewer and to Probe the Topic

12. Other adults close like parents as a child / Or other adults especially important though not parental ? (Ages... live in household .. caregiving responsibilities ... why important).

13. Loss of parent, other close loved one (eg. siblings) as a child ? ...age ? ...circumstances ? ... how respond at time ? ... sudden or expected ? ... feelings at the time ? ... feelings regarding this death changed over time ? .. funeral ?... effect on remaining parent ? .. effect on adult personality ? ... *on approach to own child ?*
13a. Other losses in childhood. Queries as above.
13b. Important losses in adulthood. Queries as above.

14. Have there been many changes in your relationship with parents since childhood ?

15. What is relationship with parents like for you now as an adult ?

16. Feel now when separated from child ? .. Ever worried about child ?

17. If 3 wishes from child 20 years from now, what ? Thinking of kind of future you'd like for your child. Minute to think.

18. Any one thing learned from own childhood experience ? *What would you hope child learned from his experience of being parented ?*

6. Letter of Confirmation of Reliability in Classifying the Adult Attachment Interviews.

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DEPARTMENT OF PSYCHOLOGY
3210 TOLMAN HALL #1650

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TEL: (510) 642-5292

May 24, 1999

Virginia Jenkins
Flat 1
2 Eastern Terrace
Brighton BN2 1DJ
United Kingdom

Dear Virginia,

We are delighted to congratulate you on having completed and passed the full 30-case reliability testing for the analysis of the Adult Attachment Interview.

You have been found highly reliable across 30 cases in sequence whether we consider a three-category analysis (the Dismissing, Secure and Preoccupied adult attachment categories), or whether the fourth, Unresolved/disorganized category is considered as well.

This represents an outstanding accomplishment, and we look forward to learning about your forthcoming work with this instrument.

Mary Main

Erik Hesse

7. Rating and Classification Sheets for the Adult Attachment Interviews

Participant 1

Scales for Experience	**Mother**	**Father**	**Other**
Loving	8.0	7.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	3.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0		1.0
Involving Anger	1.0		1.0
Derogation	1.0		1.0

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2.5
Fear of Loss	N/A
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.5

Classification F3a

Participant 2

Scales for Experience

	Mother	**Father**	**Other**
Loving	3.5	4.0	
Rejecting	6.0	6.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	4.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	3.5
Metacognitive Processes	1.0
Passivity of Thought Processes	2.5
Fear of Loss	N/A
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.0
Coherence of Mind	4.0

Classification Ds3

Participant 3

Scales for Experience

	Mother	**Father**	**Other**
Loving	5.0	4.5	
Rejecting	5.0	5.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	2.5	3.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	3.0	2.5	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	4.5
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	N/A
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.5
Coherence of Mind	4.5

Classification Ds3

Participant 4

Scales for Experience

	Mother	**Father**	**Other**
Loving	8.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	3.0	2.5	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.0
Passivity of Thought Processes	1.0
Fear of Loss	N/A
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.5

Classification F4

Participant 5

Scales for Experience

	Mother	**Father**	**Other**
Loving	8.5	8.5	
Rejecting	1.5	1.5	
Involving / reversing	1.0	1.5	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.5	1.5	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	8.0
Coherence of Mind	8.0

Classification F3a

Participant 6

Scales for Experience

	Mother	Father	Other
Loving	5.0	4.0	
Rejecting	3.0	4.0	
Involving / reversing	3.0	1.0	
Pressured to Achieve	1.5	1.5	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	5.0	5.0	
Involving Anger	1.0	1.0	
Derogation	4.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	4.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	2.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.0
Coherence of Mind	3.5

Classification Ds3

Participant 7

Scales for Experience

	Mother	**Father**	**Other**
Loving	7.0	6.0	
Rejecting	3.0	2.5	
Involving / reversing	1.0	1.0	
Pressured to Achieve	2.5	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	2.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F3a

Participant 8

Scales for Experience

	Mother	Father	Other
Loving	4.0	3.5	
Rejecting	3.0	3.0	
Involving / reversing	2.0	5.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	3.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	5.0
Metacognitive Processes	1.0
Passivity of Thought Processes	4.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	6.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.0
Coherence of Mind	3.0

Classification Ud / Ds3

Participant 9

Scales for Experience

	Mother	**Father**	**Other**
Loving	7.0	7.0	
Rejecting	3.0	3.0	
Involving / reversing	3.5	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.5
Passivity of Thought Processes	2.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.5
Coherence of Mind	6.5

Classification F2

Participant 10

Scales for Experience

	Mother	**Father**	**Other**
Loving	5.5	8.0	
Rejecting	1.0	2.0	
Involving / reversing	4.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	2.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.0
Coherence of Mind	5.5

Classification F3

Participant 11

Scales for Experience

	Mother	Father	Other
Loving	4.5	4.0	
Rejecting	5.0	4.0	
Involving / reversing	4.5	4.0	
Pressured to Achieve	1.0	2.5	
Neglecting	1.0	4.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	3.0	3.0	
Involving Anger	2.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	5.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	6.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.0
Coherence of Mind	3.0

Classification Ud / E1

Participant 12

Scales for Experience

	Mother	**Father**	**Other**
Loving	9.0	7.5	
Rejecting	1.0	3.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	3.5	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	1.5	
Involving Anger	2.0	2.5	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	5.0
Coherence of Mind	5.0

Classification F4

Participant 13

Scales for Experience

	Mother	**Father**	**Other**
Loving	6.0	6.0	
Rejecting	2.5	2.5	
Involving / reversing	3.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F3b

Participant 14

Scales for Experience

	Mother	Father	Other
Loving	8.0	9.0	
Rejecting	1.5	1.5	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.5	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	6.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.5
Coherence of Mind	6.5

Classification Ud / F3

Participant 15

Scales for Experience

	Mother	Father	Other
Loving	5.0	5.0	
Rejecting	5.0	5.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.0	3.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	5.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	5.5
Coherence of Mind	5.0

Classification F2

Participant 16

Scales for Experience

	Mother	Father	Other
Loving	9.0	7.0	
Rejecting	1.0	1.5	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	2.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F3

Participant 17

Scales for Experience

	Mother	**Father**	**Other**
Loving	3.0	2.5	
Rejecting	7.0	7.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	7.0	7.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	2.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	6.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	3.0
Coherence of Mind	2.0

Classification Ud / Ds1

Participant 18

Scales for Experience

	Mother	**Father**	**Other**
Loving	4.0	4.0	
Rejecting	6.0	7.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	2.0	2.0	
Neglecting	1.0	6.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	7.0	3.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	7.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	6.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	4.0
Coherence of Mind	4.0

Classification Ud / Ds3

Participant 19

Scales for Experience

	Mother	**Father**	**Other**
Loving	8.5	7.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.5
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F3

Participant 20

Scales for Experience

	Mother	**Father**	**Other**
Loving	3.0	2.5	
Rejecting	6.0	7.5	
Involving / reversing	5.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	3.0	1.0	
Involving Anger	1.0	2.0	
Derogation	2.0	5.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	5.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	3.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	7.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	3.0
Coherence of Mind	2.0

Classification Ud / Ds2

Participant 21

Scales for Experience

	Mother	**Father**	**Other**
Loving	6.0	4.0	
Rejecting	2.0	4.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	5.0	
Neglecting	1.0	3.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	2.0	
Involving Anger	1.0	2.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	2.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	5.0
Coherence of Mind	5.0

Classification	F4

Participant 22

Scales for Experience

	Mother	**Father**	**Other**
Loving	6.0	6.0	
Rejecting	3.0	3.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	1.5	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.5
Coherence of Mind	6.0

Classification F2

Participant 23

Scales for Experience

	Mother	Father	Other
Loving	8.0	7.0	
Rejecting	1.5	2.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.0
Coherence of Mind	6.0

Classification F3

Participant 24

Scales for Experience

	Mother	Father	Other
Loving	7.0	1.0	
Rejecting	1.0	8.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	4.0	2.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	4.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	4.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	4.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	5.0
Coherence of Mind	5.0

Classification F5

Participant 25

Scales for Experience

	Mother	**Father**	**Other**
Loving	7.0	7.5	
Rejecting	3.0	3.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.5
Coherence of Mind	6.5

Classification F3

Participant 26

Scales for Experience

	Mother	Father	Other
Loving	9.0	8.0	
Rejecting	1.5	1.5	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	2.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	8.0
Coherence of Mind	8.0

Classification F3

Participant 27

Scales for Experience

	Mother	**Father**	**Other**
Loving	8.5	7.0	
Rejecting	1.5	2.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	3.0	
Involving Anger	1.0	1.0	
Derogation	1.5	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.5
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F4

Participant 28

Scales for Experience

	Mother	Father	Other
Loving	9.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	2.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	3.0	2.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	2.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F4

Participant 29

Scales for Experience

	Mother	**Father**	**Other**
Loving	7.0	5.0	
Rejecting	1.5	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.5	
Neglecting	3.0	4.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.5

Classification F3a

Participant 30

Scales for Experience

	Mother	**Father**	**Other**
Loving	8.0	5.0	
Rejecting	1.0	3.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	3.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	2.0
Metacognitive Processes	1.0
Passivity of Thought Processes	3.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F2

Participant 31

Scales for Experience

	Mother	**Father**	**Other**
Loving	9.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	2.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.5

Classification F3

Participant 32

Scales for Experience

	Mother	**Father**	**Other**
Loving	9.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	2.0	2.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	2.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F3a

Participant 33

Scales for Experience

	Mother	**Father**	**Other**
Loving	9.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	6.5

Classification F3a

Participant 34

Scales for Experience

	Mother	Father	Other
Loving	6.5	6.5	
Rejecting	2.0	2.0	
Involving / reversing	2.5	1.0	
Pressured to Achieve	1.0	2.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.0
Coherence of Mind	6.0

Classification F2

Participant 35

Scales for Experience

	Mother	Father	Other
Loving	9.0	8.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.5	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	4.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0

Classification F4

Participant 37

Scales for Experience

	Mother	Father	Other
Loving	7.0	9.0	
Rejecting	3.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.0
Passivity of Thought Processes	1.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.5

Classification F3b

Participant 38

Scales for Experience

	Mother	Father	Other
Loving	8.5	9.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	2.0	2.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.5
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	2.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	5.5
Coherence of Mind	5.5

Classification F4

Participant 39

Scales for Experience

	Mother	**Father**	**Other**
Loving	7.5	7.0	
Rejecting	2.0	1.0	
Involving / reversing	2.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.0
Coherence of Mind	7.0
Classification	F5

Participant 40

Scales for Experience

	Mother	**Father**	**Other**
Loving	6.0	7.0	
Rejecting	2.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	2.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.5
Metacognitive Processes	1.0
Passivity of Thought Processes	1.5
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.0
Coherence of Mind	6.0

Classification F2

Participant 41

Scales for Experience

	Mother	**Father**	**Other**
Loving	5.0	3.0	
Rejecting	4.0	6.0	
Involving / reversing	4.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	3.0	1.5	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	4.0
Highest Score for Unresolved Trauma	4.0

Coherence of Transcript	6.5
Coherence of Mind	6.5

Classification F4b

Participant 42

Scales for Experience

	Mother	Father	Other
Loving	9.0	6.0	
Rejecting	1.0	3.0	
Involving / reversing	2.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	2.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.5
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	7.5
Coherence of Mind	7.0

Classification F4

Participant 43

Scales for Experience

	Mother	Father	Other
Loving	6.0	6.0	
Rejecting	1.0	1.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	1.0	
Neglecting	1.0	1.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	Father	Other
Idealising	1.0	2.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.0
Insistence on Lack of Recall	1.0
Metacognitive Processes	2.0
Passivity of Thought Processes	2.0
Fear of Loss	n/a
Highest Score for Unresolved Loss	1.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	8.0
Coherence of Mind	7.5

Classification F2

Participant 44

Scales for Experience

	Mother	**Father**	**Other**
Loving	9.0	5.0	
Rejecting	1.0	4.0	
Involving / reversing	1.0	1.0	
Pressured to Achieve	1.0	3.5	
Neglecting	1.0	2.0	

Scales for States of Mind Respecting the Parents (or other persons)

	Mother	**Father**	**Other**
Idealising	1.0	1.0	
Involving Anger	1.0	1.0	
Derogation	1.0	1.0	

Scales for Overall States of Mind

Overall Derogation of Attachment	1.5
Insistence on Lack of Recall	1.0
Metacognitive Processes	1.0
Passivity of Thought Processes	2..0
Fear of Loss	n/a
Highest Score for Unresolved Loss	3.0
Highest Score for Unresolved Trauma	1.0

Coherence of Transcript	6.0
Coherence of Mind	5.5

Classification F5

8. Summary of the Participants AAI Results.

participant number	AAI result	participant number	AAI result
1	F3a	25	F3
2	Ds3	26	F3
3	Ds3	27	F4
4	F4	28	F4
5	F3a	29	F3a
6	Ds3	30	F2
7	F3a	31	F3
8	Ud/Ds3	32	F3a
9	F2	33	F3a
10	F3	34	F2
11	Ud/E1	35	F4
12	F4	36	withdrew
13	F3b	37	F3b
14	Ud/F3	38	F4
15	F2	39	F5
16	F3	40	F2
17	Ud/Ds1	41	F4b
18	Ud/Ds3	42	F4
19	F3	43	F2
20	Ud/Ds2	44	F5
21	F4	45	withdrew
22	F2	46	withdrew
23	F3	47	withdrew
24	F5	48	withdrew

9. The Calculation for the Relationships between AAI Results and Student Age

insecure vs. secure AAIs / age group contingency tables

	frequency	age		
		school leavers	mature	total
AAI results insecure	Observed	7	1	
	Expected	5.0	2*	8
vs	Observed	24	11	
secure	Expected	26	10	35
total		31	12	43

$\chi^2 = 0.38$, df = 1, invalid *25% cells have a frequency less than 5

Fisher's Exact Test p = 0.407

resolved vs. unresolved AAIs / age group contingency tables

	frequency	age		
		school leavers	mature	total
AAI results unresolved	Observed	4	2	
	Expected	4.3*	1.7*	6
vs	Observed	27	10	
resolved	Expected	26.7	10.3	37
total		31	12	43

$\chi^2 = 0.74$, df = 1, invalid *50% cells have a frequency less than 5

Fisher's Exact Test p = 1.00

10. The Calculation for the Relationships between AAI Results and Socioeconomic Group

insecure vs. secure AAIs socioeconomic group contingency tables

	frequency	socioeconomic groups 1 & 2	3 - 9	total
AAI results insecure	Observed	7	1	
	Expected	5.5	1.5*	7
vs	Observed	27	8	
secure	Expected	28.5	7.5	36
total		34	9	43

$\chi^2 = 0.22$, df = 1, invalid *25% cells have a frequency less than 5

Fisher's Exact Test p = 1.00

resolved vs. unresolved AAIs socioeconomic group contingency tables

	frequency	socioeconomic groups 1 & 2	3 - 9	total
AAI results unresolved	Observed	5	1	
	Expected	4.7*	1.3*	6
vs	Observed	29	8	
resolved	Expected	29.3	7.7	37
total		34	9	43

$\chi^2 = 0.22$, df = 1, invalid *50% cells have a frequency less than 5

Fisher's Exact Test p = 1.00

11. The Calculation for the Relationships between AAI Results and Sex

insecure vs. secure AAIs / sex group contingency tables

	frequency	sex		
		male	female	total
AAI results insecure	Observed	2	6	
	Expected	0.8*	6.2	8
vs	Observed	3	32	
secure	Expected	4.2*	31.8	35
total		5	38	43

$\chi^2 = 0.12$, df = 1, invalid *50% cells have count less than 5

Fisher's Exact Test p = 0.228

resolved vs. unresolved AAIs / sex group crosstabulation

	frequency	sex		
		male	female	total
AAI results unresolved	Observed	2	4	
	Expected	0.7*	5.3	6
vs	Observed	3	34	
resolved	Expected	4.3*	32.7	37
total		5	38	43

$\chi^2 = 0.07$, df = 1, invalid *50% cells have count less than 5

Fisher's Exact Test p = 0.13

12. Modified Patient / Doctor Interaction Scale, Falvo and Smith (1973).

	strongly agree	..... agree	unsure	disagree	strongly disagree
1. The physiotherapist went straight to the problem without greeting me.	[ ]	.....[ ]	[ ]	[ ]	[ ]
2.The physiotherapist greeted me pleasantly.	[ ]	.....[ ]	[ ]	[ ]	[ ]
3.The physiotherapist seemed to pay attention as I described my condition.	[ ]	.....[ ]	[ ]	[ ]	[ ]
4.The physiotherapist made me feel as if I could talk about any type of problem.	[ ]	.....[ ]	[ ]	[ ]	[ ]
5.The physiotherapist asked questions that were too personal.	[ ]	.....[ ]	[ ]	[ ]	[ ]
6.The physiotherapist handled me roughly during the sessions/s.	[ ]	.....[ ]	[ ]	[ ]	[ ]
7.The physiotherapist gave me an explanation of what was happening during the sessions.	[ ]	.....[ ]	[ ]	[ ]	[ ]
8.The physiotherapist explained the reason why the treatment was recommended for me.	[ ]	.....[ ]	[ ]	[ ]	[ ]
9.I felt the physiotherapist diagnosed my condition without enough information.	[ ]	.....[ ]	[ ]	[ ]	[ ]
10.The physiotherapist recommended a treatment that is unrealistic for me.	[ ]	.....[ ]	[ ]	[ ]	[ ]
11.The physiotherapist considered my individual needs when treating my condition.	[ ]	.....[ ]	[ ]	[ ]	[ ]
	strongly agree	.... agree	unsure	disagree	strongly disagree

12. Modified Patient / Doctor Interaction Scale (continued)

	strongly agree	..... agree	unsure	disagree	strongly disagree
12.The physiotherapist seemed to rush	[ ]	.....[ ]	[ ]	[ ]	[ ]
13.The physiotherapist behaved in a professional and respectful manner toward me.	[ ]	.....[ ]	[ ]	[ ]	[ ]
14.The physiotherapist seemed to brush off my questions.	[ ]	.....[ ]	[ ]	[ ]	[ ]
15.The physiotherapist used words that I did not understand.	[ ]	.....[ ]	[ ]	[ ]	[ ]
16.The physiotherapist did not give me all the information that I thought I should be given.	[ ]	.....[ ]	[ ]	[ ]	[ ]
17.The physiotherapist criticised me for nor taking care of myself.	[ ]	.....[ ]	[ ]	[ ]	[ ]
18.I would recommend this physiotherapist to a friend.	[ ]	.....[ ]	[ ]	[ ]	[ ]
19.I would return to this physiotherapist for future health care.	[ ]	.....[ ]	[ ]	[ ]	[ ]

strongly agree	..... agree	unsure	disagree	strongly disagree

13. Additional Questions Included with Questionnaire

Please tick the boxes and write where indicated.

Number of Sessions with this physiotherapist: .....

Further information that will help us - Your Details

Sex: Female[ ] Male [ ]

Age: .....

Ethnic origin:

African	[ ]	Bangladeshi	.....[ ]	English	[ ]
Caribbean	[ ]	Chinese	.....[ ]	Irish	[ ]
		Indian	.....[ ]	Scottish	[ ]
		Pakistani	.....[ ]	Welsh	[ ]

Other:.....

Marital Status:

Married	[ ]	Separated	[ ]	.....Never married	[ ]
Divorced	[ ]	Widowed	[ ]		

Education:

Secondary School [ ] College [ ] University / Polytechnic [ ]

Current Employment Status:

Full - time	[ ]	Part - time	[ ]	.....Retired	[ ]
Housewife	[ ]	Student	[ ]	.....Unemployed	[ ]

Occupation:.....

14. List of Physiotherapy Departments Co-operating in the Project

Basildon District General Hospital
Chase Farm Acute Unit
Hemel Hempstead Hospital
Hillingdon Hospital
Mayday University Hospital
Middlesex Hospital
Milton Keynes Hospital
North Middlesex Hospital
Royal National Orthopaedic Hospital, Stanmore
Royal National Orthopaedic Hospital, Bolsover Street
St Alban's City Hospital
St Ann's Hospital Tottenham
Solihul Hospital
Southend Hospital
University College Hospital
Whittington Hospital

15. Sample Letter to Physiotherapy Services Manager

Middlesex Hospital and University College School of Physiotherapy
Arthur Stanley House
Tottenham Street
London W1 ODL

Barbara Engstrom
Physiotherapy Services Manager
UCLH Trust
Middlesex Hospital

..... 3rd November 1995

Dear Barbara

I have begun a research study into physiotherapy / client relationships for a doctorate at University College London. I enclose a brief protocol which describes what I will be doing. The ethical committee of the Middlesex Hospital and University College London have approved the project in order for me to proceed.

The volunteer physiotherapy students who are participating in the project will be asked to collect information from their patients / clients and I would like your permission for them to do this in your department. The students will be asked to give a questionnaire to their patients on discharge and no others. The questionnaire has been designed to give an indication of the patients' satisfaction with the physiotherapy / client relationship. It is only to be given to patients who are able to complete it independently, and should therefore not interfere with either the clinical staff or student workload.

Several of the volunteer students will be working with your staff and I would like your permission to proceed in order to ask your staff for their co-operation. I enclose a copy of the questionnaire that will be used. Please could you confirm that the insurance cover that is usually provided for the patients for their normal treatment is in place.

Please contact me if you would like to have more information or you have any queries.

Yours sincerely

Virginia Jenkins
Physiotherapy Lecturer

16. Protocol for Physiotherapy Services Managers

Physiotherapist / Client Relationships Study

Although the focus of physiotherapy is on the physical aspects of treatment the importance of personal interactions in any therapeutic situation is acknowledged and thought to be particularly significant in physiotherapy, eg. Musa 1977, Hough 1977 & Ford 1975. There have been studies of the relationship between clients and physiotherapist but these have focused on specific aspects, eg. patient compliance, Clopton & McMahon (1992), or on training methods to encourage positive attitudes to disability amongst physiotherapy students, eg. Dickson & Maxwell (1975).

This purpose of this study is to develop a greater understanding of how physiotherapists' view relationships and their interaction with clients.

Firstly, the physiotherapists' view of relationships will be determined by using the Adult Attachment Interview (George, Kaplan & Main, 1975). The lasts approximately 1 hour and the interviewee is asked to recall relationship experiences. The interview has been shown to identify characteristics of a persons' way of relating to others (Steele & Steele, 1993).
Secondly, the volunteer physiotherapy students will be asked to give their patients a questionnaire to complete. The questionnaire is a modified version of the Patient - Doctor Interaction Scale, Falvo & Smith (1973), and has been designed to give an indication of how the patient views their relationship with a clinician who has been treating them. The questionnaire will therefore only be given to patients who have been treated by the student. Also to ensure that neither the student or clinical educators workload is increased only people who can fill in the questionnaire independently will be asked to complete it, ie. people who are unable to read / write will not approached. The questionnaire will be sealed in an envelope provided, handed back to the student and returned to the researchers.

The results of the AAI will be correlated with the scores from the questionnaires for each student and relationships between the two explored. The patient satisfaction information will be reviewed in relation to the speciality where they were collected, and progression through the course. All information will be confidential to the researchers.
The students and hospitals will be given analyses of the information collected but not in relation to any individual patient or student.

Virginia Jenkins, Middlesex Hospital School of Physiotherapy

Dr. Howard Steele, Department of Psychology, University College London

17. Consent Form for Physiotherapy Services Managers

I give permission for my staff to be approached in connection with the Physiotherapy / Client Relationships Study being conducted by Virginia Jenkins, Middlesex Hospital and University College
The usual insurance cover for patient treatment is in place.

I understand that any information collected by the students will be confidential to the researchers.

The information collected will be available to me when it has been analyzed.

Signature: .....

Name: .....

Title: .....

Address: .....

.....

.....

.....

18. Clients' Information Sheet

Middlesex Hospital School of Physiotherapy
Physiotherapists' Relationships Study

The information on this questionnaire is confidential - your name is not required.

This questionnaire has been designed for feedback from you about your experience with the particular physiotherapist who has been treating you. It is part of a study of physiotherapists and their relationships which we hope will contribute to a better understanding of physiotherapy practice. Please would you fill it out so that we can find out more about our relationships with the people we treat.

It is not a test for the student and **will not** be used as a mark towards their course.

The student physiotherapist will not see your individual answers only the overall results of **all** the questionnaires that have been given out, so you can answer the questions freely.

Please answer all the questions and be as honest as you can. If you have any queries or worries about the questionnaire you can ring me on **01273 643 657.**

Thank you for your help and co-operation.

Virginia Jenkins
Physiotherapy Lecturer

19. Clients' Consent Form

Physiotherapists' Relationships Study

Virginia Jenkins Physiotherapy Lecturer, Middlesex Hospital School of Physiotherapy

Dr. Howard SteeleLecturer in Psychology, UCL

1. I have read the attached information sheet concerning this study and I understand what will be required of me if I take part in this study.

2. The questions concerning this study have been answered by
.....

3. I understand that I may withdraw from the study at any time without a given reason. All materials collected would then be returned to me or destroyed.

4. I understand that any records which are made will be kept confidential, and that any reports arising from the work will be anonymous, and that I will not be identified.

5. I agree to take part in this study

Signed: .....

Date: .....

20. Number of Usable Patient Satisfaction Questionnaires collected by the Students

student number	orthopaedic patients	outpatients	student number	orthopaedic patients	outpatients
1	0	0	25	6	0
2	5	8	26	0	0
3	9	3	27	0	1
4	2	4	28	0	9
5	6	4	29	0	3
6	1	6	30	4	3
7	0	0	31	5	5
8	8	9	32	4	7
9	5	0	33	0	0
10	4	0	34	6	2
11	3	3	35	7	0
12	4	1	36*	0	6
13	2	6	37	7	0
14	2	0	38	8	11
15	2	0	39	9	6
16	0	0	40	0	8
17	7	7	41	10	9
18	2	2	42	5	4
19	0	7	43	0	0
20	7	8	44	0	9
21	0	0	45*	1	7
22	5	7	46*	2	0
23	6	4	47*	2	3
24	7	1	48*	8	4

* students who withdrew from the interview part of the study

21. Results of Student Examinations with the Adult Attachment Interview Results

participant number	exam result	AAI result	participant number	exam result	AAI result
1	59	F3a	25	66	F3
2	73.33	Ds3	26	67.66	F3
3	65.33	Ds3	27	51.33	F4
4	68	F4	28	59	F4
5	70.33	F3a	29	69.33	F3a
6	77	Ds3	30	65.66	F2
7	66.66	F3a	31	59.33	F3
8	64	Ud/Ds3	32	74	F3a
9	64	F2	33	76.66	F3a
10	56.33	F3	34	64	F2
11	61	Ud/E1	35	67	F4
12	64	F4	36	69.33	withdrew
13	65.66	F3b	37	48.33	F3b
14	64.33	Ud/F3	38	65.33	F4
15	60.33	F2	39	71.33	F5
16	71.66	F3	40	65	F2
17	46.66	Ud/Ds1	41	55	F4b
18	62.66	Ud/Ds3	42	67.66	F4
19	62.33	F3	43	63	F2
20	63.66	Ud/Ds2	44	62.33	F5
21	48.33	F4	45	65	withdrew
22	59.66	F2	46	62	withdrew
23	57.66	F3	47	75.33	withdrew
24	55.66	F5	48	63.66	withdrew