ATTACHMENT, REFLECTIVE-SELF FUNCTIONING, AND INTERPERSONAL DIFFICULTIES IN ADOLESCENT IN-PATIENTS

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ABSTRACT

Developments in the field of attachment theory research in the past ten years have allowed for the detailed study of the impact of early childhood attachment experiences on the development of psychopathology in later life. In particular the Adult Attachment Interview has afforded researchers the opportunity to formally access the inner world of adults and adolescents, allowing for observation of the way in which both individuals may organise information crucial to social development. Psychopathology in adults is now recognised as being, in part, reflective of insecure patterns of discourse when discussing attachment related experiences. Such patterns in adolescence are less well established. The present study addresses this deficit in the literature, employing the Adult Attachment Interview in a cross-sectional study of 41 adolescents resident on a variety of tertiary care in-patient units. The study confirms the hypothesis that insecure attachment-related discourse is associated with high levels of psychopathology in adolescence, particularly when individuals are unable to resolve early experiences of trauma and abuse. The study further suggests that sexual abuse has a particular impact on the adolescents capacity to mentalise, or think about the thoughts of others, and that this in turn may influence the development of externalising disorders. The findings of the study are limited however, by the absence of an appropriate control sample, and relative sample size. Future research may usefully address adolescent attachment by studying the attachment patterns of those people who have experienced abuse but who do not later develop psychopathology. In addition this study highlights the need for outcome studies with adolescents, examining the impact of psychotherapeutic approaches on the organisation of attachment experiences, and in particular the process of mentalising. The implications of the study for clinical practice indicate the appropriateness of providing a 'secure-base' in order that adolescents resident on in-patient units may have the opportunity to explore both their inner and outer worlds. The task of containment is further highlighted as a crucial factor in the therapeutic treatment of young people who may have experienced early childhood experiences that fostered insecurity in social and

psychological functioning, particularly if this was accompanied by experiences of abuse and trauma.

INTRODUCTION

Adolescence and Psychopathology

The past twenty to thirty years have seen a dramatic increase in interest in the developmental phase of adolescence. This period can be defined in a variety of ways : chronological age might define adolescents as those in their teenage years; the physical changes that are an inevitable consequence of puberty may define the beginning of this life-stage; and changes in schooling, family relationships, or social position may help to define the nature of adolescence (Coleman, 1990). Although traditional notions that disturbance in adolescence is a natural phenomenon incumbent on these changes may not be entirely accurate, a variety of large scale studies have highlighted increasing levels of psychopathology in this age group e.g. Rutter, Tizard, Yule, Graham, & Whitmore (1976) and the Health Advisory Service (1995). These studies suggest that factors other than developmental changes may be influential in the emergence of psychological disturbance in adolescence. Enrico Jones (1996) recently highlighted the way in which Attachment Theory has sparked tremendous interest for clinical psychologists and those interested in the origins of psychopathology in adolescents. Attachment theory, through the development of the Adult Attachment Interview may help provide a formal quantitative means for examining the importance of early childhood experiences in shaping the development of personality, and in turn the aetiology of psychopathological disturbance in adolescence. The present research intends to further extend the literature on the importance of attachment processes on the development of psychopathology, specifically in adolescence, an existing literature which is still in it's infancy.

Traditionally many writers on adolescence have taken as their starting point a psychoanalytic approach to understanding the changes that take place during this time. Freud (1937) defined adolescence as a time of upsurge in instinctual drives that had been buried since early childhood. Puberty brought on an internal emotional upheaval, leaving the personality in a greatly vulnerable state. In particular the

adolescent's emerging sexual drives force him or her to seek appropriate 'love objects' outside of the family, and as such demands are made for the adolescent to sever ties with the family. He wrote that such a process inevitably leads to heightened anxiety, and thus proposed that the adolescent develops a set of defences to cope with the anxieties created by this transition, many of which are seen as maladaptive. Blos (1967) viewed the process of adolescence as analogous to the concept of separation-individuation proposed by Mahler (1968, 1983), to describe the transition made by the growing infant from seeing oneself as merged with ones mother to being seeing her as a separate entity. Blos conceived of adolescence as being a second separation-individuation stage whereby the increase in a variety of impulses, particularly sexual, shown by the young person, threatens the parent-child relationship, thus requiring the separation process. Interestingly both of these perspectives inherently suggest it is the changes incumbent on moving away, physically and emotionally, from one's caregiver that give rise to the challenge of adolescence.

However, the psychodynamic model has been criticised on a number of levels, as only focusing on individual maturation, but perhaps more importantly in it's suggestion the adolescence is generically a period during which psychological disturbance or anxiety is conceived of as the norm. Such a generalised account of adolescence is not reflected by increased morbidity rates during this period. Indeed epidemiological research has suggested that approximately 20% of adolescents will present with diagnosable problems during this period (Graham, 1979). Lewisohn, Hops, Roberts, & Seeley (1993) in a recent survey of a sample of 1,710 high school students in the USA examined numbers reaching DSM-II-R criteria for affective and other disorders. This study demonstrated that of the adolescents sampled 9.6% met the criteria for a current disorder, with more than 33% having experienced a disorder over their lifetimes.

As a life-stage adolescence is acknowledged as being a period of change, with concomitant effects on psychological functioning. However, as the rates of morbidity suggest, adolescence does not automatically signify psychological difficulty. Wilson

(1997) has described adolescence a period of 'disconnection's', a transitional stage where the individual finds themselves disconnected from the security of childhood, but not yet connected to the maturity of adulthood. Though some adolescents may respond to this uncertainty with difficulty, manifesting itself in disorder, for the large majority, Wilson suggests that this period represents a challenge, an opportunity to grow and develop in a whole range of arenas, including physically, socially, and psychologically.

Of increasing interest to researchers is the switch to focusing on developmental outcomes during adolescence, such that any given individual is viewed in relation to : (a) the social contexts for individual development and (b) the dynamic processes involved with development (Lerner, 1978; Belsky, Lerner, & Spanier, 1984). Firstly the context in which development takes place is viewed as crucially important, in particular the family environment, but also the influence of school and peer relationships. Development does not take place in a vacuum, but is influenced by a wide and complex array of social contexts. Secondly development is viewed as a transactional process. The individual is thus engaged in continuous interaction with these various social contexts (Sameroff, 1975). Social contexts may change over time, influencing the continuity or otherwise of developmental processes. Lerner and Spanier (1980) highlight the reciprocity of development in various contexts, thus for example, the adolescent invariably is both affected by, and affects relationships within the family context. Development within this framework is seen as a process acknowledging that : (a) there may be multiple pathways to a particular outcome, and conversely a variety of particular outcomes originating from similar pathways (Ogbu, 1981), (b) individuals are capable of change, and (c) the way in which we construe development at different ages may require that we adopt different markers for change at different stages, dependent on the qualitative and quantitative changes associated with that stage. Such concepts have been adopted by researchers studying psychopathology, leading to the emergence of the field of "developmental psychopathology" (Cicchetti, 1990).

In 1993 the National Institute of Mental Health identified a number of critical knowledge gaps in relation to adolescent psychopathology. These included research on adolescent depression, conduct disorder, and anxiety disorders. It is interesting that comparatively little work on adolescent psychopathology has been carried out, relative to that with children and adults. Ebata, Peterson & Conger (1990) have suggested a number of reasons for this : as suggested above traditional psychodynamic perspectives on adolescence have lead many to view difficulties during this period as a natural concomitant of the life stage; there is also a common myth that exists that when psychological problems do occur in adolescence, it is merely as a consequence of the stage and thus, as they move into adulthood adolescents will 'grow out of' these problems; in relation to definition, workers have been reluctant to view adolescence as a discrete life-stage, but rather either as an extension of childhood, or the beginning of adulthood. In addition within the study of adolescent psychopathology a number of problems exist in relation to diagnosis and classification. If adolescence is viewed as a period of developmental change, a transition during which fundamental structures of personality are formed (Erikson, 1968) it may be difficult, and indeed premature to attempt to classify adolescent problems, when such factors as stability of personality are in question. Cantwell (1996) has also highlighted a variety of methodological and epistemological issues relating to classification of adolescent psychopathology. These include : whether disorders should be seen as dimensional rather than categorical, thus allowing for changes in personality structure; whether classifications of disorders can be seen as both quantitatively or qualitatively different from normal; whether the classification categories presented in the DSM-IV and ICD-10 systems can be seen as discrete entities; how these classification systems accommodate the often observed difficulty of co-morbidity in adolescence.

Of those reaching diagnostic levels, adolescents experience a wide range of psychopathological problems including anxiety, depression, conduct disorders, substance misuse disorders, and eating disorders. Prevalence rates indicate interesting

sex differences, in particular that females are significantly more likely to present with anxiety, unipolar depression, eating disorders, and adjustment disorders, while males display significantly higher rates of conduct disorders (Lewisohn et al, 1993). As suggested both above and in Lewisohn et al's study, considerable overlapping of symptoms, and often multiple diagnoses are seen in adolescence, approximately 10% of the study sample experiencing concurrent disorders.

Attachment Theory

Of particular interest to both researchers and professionals working with troubled adolescents has been the application of Attachment Theory to understanding the origins of psychopathology. Attachment Theory adopts a developmental pathways approach to addressing psychopathology, suggesting that development is influenced particularly by the early environment in which it takes place, emphasising the importance of the transactional nature of relationships in the development of later psychopathology. Overton and Horowitz (1991) have pointed out how attachment theory views pathological development as an adaptive deviation from normal development.

If as Wilson suggests we accept that adolescence is a developmental period of 'disconnectedness', requiring the individual to negotiate a transition from gaining security within the parent-child relationship to developing security through ones relationship with peers, romantic attachment, and society as a wider entity, then it follows that during this period of transition, previous experience of attachment will play a central role in successful negotiation. A number of workers have observed the positive relationship between secure attachment with ones parents and successful negotiation of the separation-individuation task (Quintan & Lapsley, 1990; Rice, 1991), improving the adolescents ability to form meaningful peer relationships, and even, as Blustein (1992) suggests, improve commitment to career progress. In terms of the development of psychopathology therefore it follows that during adolescence in particular, earlier attachment to ones caregivers may play a central role. One may

predict that just as security of attachment may aid successful transition through adolescence, so difficulties in the attachment relationship with ones caregivers, may interfere with successful separation-individuation and result in psychopathology.

Attachment Theory was developed by John Bowlby. Bowlby was a psychoanalyst in the years leading up to the Second World War and became increasingly interested through work at the Tavistock's Child Guidance Clinic in the notion of 'transgenerational transmission of neurosis', whereby unresolved difficulties of parents may be passed on and perpetuate problems in their children. In his early work Bowlby was beginning to put forward the notion that environmental factors have a profound influence on development, his WHO commissioned work 'Maternal Care and Mental Health', providing evidence of the link between maternal deprivation and it's physical, social and psychological implications. Bringing together his own work with juvenile delinquents and studies of children brought up in institutional care, Bowlby was keen to empiricise his thinking, but also to demonstrate that the experience of maternal deprivation *per se* does not lead to psychological difficulties, but rather it is the way in which the infant experiences and gives meaning to a lack of care which may lead to later difficulty.

These notions laid the foundations for the development of Attachment Theory as it is now known. In outlining the theory it is perhaps useful to look at the way in which it may differ from existing psychoanalytic concepts. Freud and Klein represent perhaps the two central forces in psychoanalytic thinking, and yet Bowlby found both accounts of the mother-infant bond to be lacking. Freud's Drive Theory suggested that a primary role of the mother is to reduce internal anxiety within the infant by providing for it's physiological needs. The infant develops a model of mother as someone whose breast will be able to reduce internal discomfort, and thus fears loss of the mother. Klein extended this notion that the child develops a model of the mother as the person who reduces internal distress, within the framework of Object-Relations Theory. Here the infant is seen as developing internal structures from birth, linked intrinsically to the relationship with it's mother. The infant represents itself and

it's mother as internal objects, thus forming the basis of thinking. The child is not simply linked to it's mother as a vehicle to reduce physiological discomfort, but loss of mother may also be seen as a psychological threat.

Bowlby departed from these ideas by suggesting that the infant-mother relationship does not have to be conceived of as a vehicle for physical demands, but may be seen as a psychological bond in its own right, a 'primary motivational system'. Attachment thus is a term which applies to an experiential and theoretical concept (Holmes, 1993), the former pertaining to the infant or the adult's the experience of feeling safe and secure, the latter suggesting that one may hypothesise about the nature of an attachment relationship and the motivation of an individuals behaviour. For example 'to feel attached is to feel safe and secure'. Insecure attachment suggests that the individual has a mixture of feelings towards his/her attachment figure, of intense love and dependency, vigilance, and fear of rejection. One can hypothesise that individuals who are insecurely attached may experience their insecurity as arousing ambivalent feelings of excessive need to be close to ones attachment figure, with the concomitant desire to punish that figure at the slightest sign that they may be abandoned.

In addition to the term 'attachment', the theory also proposes the notion of 'attachment behaviour', that which results in a person 'attaining or retaining proximity to some other differentiated and preferred individual' (Holmes, 1993). Attachment behaviour is triggered by separation or the threat of separation from an attachment figure, and is assuaged when reunion is attained whether by physical, visual or emotional proximity.

Important in this latter conception of attachment behaviour is the notion that attachment security can be experienced not just in terms of physical closeness, but also in emotional terms. Thus the Attachment behavioural system pertains to an individuals blueprint or model of the world in which the self, significant others, and their interrelationships are represented, and defines the nature of the attachment

pattern shown by an individual. This notion of internal representations, or what Bowlby (1973) termed 'internal working models' will be discussed in detail below.

Weiss (1982) has further used three important characteristics to define the attachment relationships, which are equally applicable throughout the life-span, as for the developing infant. Attachment is firstly defined by the individuals tendency to seek the proximity of certain preferred individuals, usually for the infant this is the mother. However, it is important to note that attachment as a developmental acquisition takes place within the context of a two-person relationship (although there is a recognised hierarchy of possible attachment figures). Thus although the primary caregiver is usually thought of as the mother in attachment relationships, there is no reason why this primary figure should not be father, if the conditions exist.

The second important feature of attachment is what is known as 'the secure base effect'. This describes the capacity of the attachment relationship to provide the individual with a secure base, as a mainspring to exploration and curiosity. Thus for the infant, the attachment figure represents a 'base' to which it can return if danger is apparent. When danger passes, the presence of the attachment figure means that the infant can continue to explore, play, and relax, but only if he/she knows that the attachment figure will remain available if danger occurs again. If no secure base exists the individual does not have the safety in knowing that he/she can be supported and protected in dangerous situations, and thus he/she may resort to defensive gestures in order to defend against the pain of separation anxiety. Thus individuals without a secure base may be observed to inhibit their anger, inhibit their sexuality, or over-sexualise their relationship with the care-giver in an attempt to manipulate the caregiver, and maintain an approximation of a secure base.

Thirdly Weiss suggests that a common feature of attachment is that separation leads to protest on the part of the infant. Thus the child will engage in a variety of behaviours such as crying, screaming, kicking in order that separation is either avoided, or that the attachment figure is restored. Infant patterns of responses to separation have wide clinical implications, and have formed the basis for the

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development of a number of measures of attachment, in particular Ainsworths Strange Situation.

The Strange Situation

The development of the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978) has been a fundamental tool in the furthering of Attachment theory. Although Anna Freud had noted as early as 1944, that variations in infant responses to separation and reunion with their mother may impact on the 'inner' relationship between mother and child, such processes were not available for systematic study until the development of the Strange Situation. Thus it has been central in defining the differential quality of attachment in infants, and has sparked work attempting to further assess attachment processes throughout the life-span. The basic arrangement of the Strange Situation involves a twenty-minute session involving the mother and the one-year-old-child, the aim of which is to observe individual patterns in coping with the stress of separation. Initially mother and child are shown into a playroom with an experimenter, after which the mother is asked to leave the room for three minutes, thus leaving the child with the experimenter. Following her return the pattern of the re-union between mother and child is observed. The experimenter and mother then leave the room together for a further three minutes, leaving the child on its own. Following this separation, mother and child are then re-united once more. Four patterns of response by the child have been identified :

· Secure Attachment ('B') As the name suggests this pattern of behaviour represents what happens in the context of the 'ideal' attachment relationship. Thus the child is most often distressed by mothers departure, but on re-union greets mother, is accepting of mothers comfort, and is able to return to play happily.

· Insecure-Avoidant ('A') This pattern of response is characterised by a relative lack of distress on separation, ignoring of mother on re-union, especially the second re-union, having been left alone. Once mother has returned these children remain 'watchful' and find it difficult to return to contented play.

· Insecure-Ambivalent ('C') In contrast to category 'A', these children manifest the insecurity of their attachment, by responding in a highly distressed state to mothers departure, and showing difficulty in being easily comforted on mothers return. As such they may seek contact with mother, but often resist by kicking, turning away etc. The response continues to oscillate between anger and clinging to mother. Further play following re-union is inhibited.

· Insecure-Disorganised ('D') This recently identified group is characterised by responses which appear confused and diverse, such as 'freezing' or stereotyped movements, on re-union with mother.

Ainsworth's original study provided data on the distribution of attachment patterns in a sample if middle-class American subjects. 66% of that sample were judged to be 'B' (secure), 20% as 'A' (avoidant), and 12% as 'C' (ambivalent). Since this original study the Strange Situation has been widely adopted as a research tool, with high levels of reliability and validity found across studies. Cross-cultural studies have also demonstrated its robustness as a tool, supporting the notion that attachment is a universal developmental process. It is particularly interesting that where differences occur in the distribution of response patterns in the Strange Situation, these are more likely in comparisons of different levels of psychological disturbance than as an artefact of cultural difference.

Thus the Strange Situation raises a host of other related questions, regarding the meaning of the different response patterns, the stability of these patterns over time, how they might predict disturbed behaviour later in life, how these patterns of attachment may be consequent on mothers own experience of being parented. These are but a few questions that further research has attempted to address.

What kind of interaction between mother and infant develops as a consequence of these attachment classifications? It is observed that securely attached children, have caregivers who appear attuned (Stern, 1985), accepting and sensitive to their child's behaviour. This facilitates the child's sense that the attachment figure will

continue to be available. As such the child develops an 'internal working model' of attachment relationships which allows for relative freedom of attention for exploration, and the development of a coherent integration of information about the attachment figure.

The parents of children classified as insecure are often observed to be unresponsive, interfering, rejecting and insensitive to their child's behaviour and needs. As mentioned above such insensitivity may lead the child to develop what Main (1990) has called 'conditional' or 'secondary attachment strategies' which mean that the child remains in close proximity to it's care-giver. Thus children whose caregivers are consistently rejecting or unavailable show a marked lack of attachment behaviours such that they appear to have little need for the attachment figure, although they show anger and anxiety when faced with rejection. Parents who present as inconsistently available, elicit in their children a response characterised by an attempt to maximise attachment behaviour, presumably as the child fears the caregivers potential inaccessibility.

Internal Working Models and Metacognitive Knowledge

It is increasingly recognised that the study of differential behaviour patterns in mother-infant dyads may not be sufficient to explain how attachment patterns may persist and be transmitted across generations (Goldsmith & Alansky, 1987). Thus, in the past ten years attachment research has turned it's attention to examining the representational structures that underlie interpersonal behaviour, and may be central in the determination of attachment patterns across the life-span (Bretherton, 1985; Main, Kaplan & Cassidy, 1985). Within Bowlby's formulation of Attachment Theory the notion that the infant develops an internal model of it's attachment figure is central, in that it then allows the child to continue to explore the environment safe in the knowledge that it has a secure base. Thus research has attempted to address questions as to the kind of internal representations of the caregiver, as developed by children with differing attachment profiles, and most importantly in the context of

developmental psychopathology, how might this lead to difficulties throughout childhood and later in life?

Mary Main, one of the originators of the Adult Attachment Interview (discussed below), was one of the first workers to suggest that the quality of ones attachment relationship may have a profound effect on the development of central thought processes which guide relationships in later life. Her 1991 essay on metacognitive knowledge has been extremely influential in guiding development in thinking about how attachment may play such an important role in child development.

Bowlby (1973) used the term 'internal working model' to describe the 'individuals internal representation of the world, his/her attachment figures, him/herself, and the relations among them'. It is seen as central to the attachment system, a model that can be implemented in situations where action is necessary, which contains references to direct experience regarding ones attachment figure, and ideas of the self derived from these experiences. Thus it is seen as a model of how we may see ourselves in relation to others. With respect to the notion of 'action' it is necessary in order that individuals may plan and represent action to have a model of the world (Craik, 1943; Dennett, 1978; Johnson-Laird, 1983), thus avoiding the need in new situations, for individuals to continually rethink their relationship with the world. These models may in part be accessible to conscious manipulation, and in part unconscious processes.

Main, Kaplan & Cassidy (1985) began to look at differences in the capacity of both children and adults who were securely attached versus insecurely attached, to represent their attachment experiences. These studies are described in more detail below, but the important conclusion drawn from this research was that whereas securely attached individuals appear able to 'integrate information relevant to attachment', those who were insecurely attached displayed marked incoherence, lack of integration and limited access to information regarding attachment experiences. Bowlby (1973) had himself hypothesised that one possible mechanism accounting for the difficulties shown by people with psychopathological problems, was that during

the critical period of formation of attachment related thinking, the insecurity of the attachment relationship may lead people to develop 'multiple models' of experience. This notion of 'multiple models' was not seen as descriptive of the multiplicity, complexity and hierarchical nature of those mental models which constitute normal mental life (Johnson-Laird, 1983), but rather a specific notion related to attachment experiences. In particular that insecurely attached individuals may be representing one aspect of reality in implicitly multiple and contradictory ways. Main gives a clear example of how this may manifest itself for the child displaying multiple models of an experience for which there should only be one model, in the conflicting propositions : 'I believe that mother is unfailingly loving and has always acted in my best interests/I believe that mother is ridiculing and rejecting and does not consider my interests'. These contradictory propositions are of the type displayed in individuals classified as insecurely attached

The notion that people may hold multiple models of their experience directly leads to the discussion of metacognitive knowledge, or how we might think about our own thinking. In the above example it is evident that there is a deficit in the ability to recognise that the two propositions are incompatible, and thus cannot be incorporated into a single experience of the mother. Thus Main suggests that those individuals presenting as insecurely attached, who in turn may have a tendency to represent experiences in terms of multiple models may have a deficit with metacognitive knowledge. The importance of this notion can be seen when addressing the development of thinking in a securely attached child. As Fonagy, Moran, Steele, Steele & Higgitt (1991) suggest if a child is able to represent thoughts or ideas as thoughts, or metacognitions, they are then not bound to an acceptance of for example a discrete experience of parental rejection as reflecting reality, but that it may be a result of transient interpretations by the infant. Thus, a child who is able to conceive of the mental states of others is able to conceive of the parents rejection as possibly being based on a false belief, and thus is able to regulate that experience of this event as negative. Through reflection on their own mental states and behaviour such

children are able to anticipate the behavioural reaction of their care-giver, through anticipation of the likely effects of their actions on the mental states of others.

Extended to attachment theory, the process of attachment becomes more than just the establishment of a secure base, from which the infant can then further explore it's environment, and becomes the basis by which the infant begins to develop an understanding of it's own mental state in relation to others, thus allowing for movement beyond the immediate reality of the world to the level of representation of thought. As Main (1973) has pointed out 'the child who does not have to monitor the physical and psychological accessibility of primary attachment figures may indeed have a greater attentional (or working memory) capacity than other children'.

The implications of these ideas have been studied extensively in children, employing some of the techniques derived from the more general investigation of the development of a 'theory of mind' (Baron-Cohen, 1992). At a very early age infants who are judged at 12 months to be securely attached to mother are observed 9 months later to be engaged in more extensive exploratory play than their insecure counterparts, in particular showing increased levels of concentration and undistractability (Main, 1973, 1981). In the same set of 21-month old toddlers studied above, Main found that self-directed speech was more common in those infants classified as secure, indicating a developing tendency to think about ones actions on a more than concrete level. Kaplan (1987) extended the work with 6-year old children who had been classified in the Strange Situation. When presented with a picture of child-parent separations and asked what the child would feel and do about the separation, those children judged as securely attached offered constructive solutions to the child's situation, acknowledging spontaneously that they may feel more than one thing at the same time, and in some cases offering clear representations of thinking.

Fonagy, Redfern & Charman (1997) have recently published a study demonstrating the link between attachment security and ability on theory of mind tasks in children aged between 3 and 6 years. In contrast to the above studies the

research employed a projective assessment of attachment quality, the Separation Anxiety Test (SAT) which was adapted by Klagsbrun and Bowlby (1976). The children were then asked to complete a theory of mind test, known as a belief-desire reasoning task (Harris, Johnson, Hutton, Andrews & Cooke, 1989). In their sample of 77 children a significant correlation was shown between attachment security and heightened ability on a theory of mind task.

Main and colleagues have recently extended the study of internal models during childhood, interviewing 10-11 year-olds with a short autobiographical interview, rating these on their coherence, with specific reference to evidence of metacognitive speech. Of the sample, those judged as securely attached showed the most coherence in their speech, with those judged as insecure showing more difficulty accessing spontaneous memories. With respect to metacognitive monitoring, secure 10-11 year-olds showed more evidence of reflectiveness in their speech than that of their insecure counterparts. There has been no work as yet examining the differential nature of metacognitive processes as related to attachment status in an adolescent population.

The Adult Attachment Interview (AAI)

Perhaps the most fundamental development within Attachment Theory research during the past 15 years has been the development of the Adult Attachment Interview. As Ainsworth had attempted to map the quality and type of attachment relationship shown by infants towards their mothers, the Adult Attachment Interview was developed as a method of assessing the nature and quality of adult representations of their early attachment relationships. Initially George, Kaplan and Main (1985) developed the AAI as a means of linking the findings of the Strange Situation, i.e. infant attachment patterns, with that of the parent/mother, thus providing evidence for Bowlby's notion of transgenerational transmission of neurosis. The AAI is also seen as a tool in it's own right, as a means of assessing the adults inner world or internal working model with respect to attachment. It is a semi-

structured interview which aims to 'surprise the unconscious', by asking questions about a range of attachment related topics i.e. separation, rejection, and loss, and enquiring as to specific memories that may support a persons story. However, analysis of the AAI does not involve careful consideration of apparent life histories provided in the interview, but rather detailed inspection of the narrative presented, with particular reference to the coherence and collaboration on the part of the interviewee. Such discourse analysis uses as a referent four conversational maxims (Grice, 1975, 1989), which are required for a narrative to be considered as coherent and collaborative :

· Quality - "be truthful and have evidence for what you say"

· Quantity - "be succinct and yet complete"

· Relation - "be relevant to the topic as presented"

· Manner - "be clear and orderly"

Thus analysis of interviews is considered in terms adherence to or violation of these maxims across a number of scoring systems e.g. violation may be judged when interviewees present vague discourse, insist that they lack memories about attachment related events, or fail to support or actively contradict descriptions given, when invited to do so by the interviewer. More detail regarding the specific coding of the AAI is given in the Methods section. The full list of questions is given in Appendix I.

The AAI provides a quantitative method of assessing the interviewees 'state of mind with respect to attachment', which can be classified in one of four ways (Table 1). However as Main (1996) points out although the classification system for the AAI is analogous to the Strange Situation in terms of categorisation of attachment, the AAI is not measuring stability or continuity of attachment patterns over time. Clearly there is no direct link between discourse with respect to attachment and the observable attachment behaviour displayed in the Strange Situation. The AAI is however accessing the predictability of discourse usage in life history narratives, believed to be linked to early attachment interactions.

Table 1. Classification systems for attachment style for the Strange Situation and the Adult Attachment Interview.

Strange Situation	Adult Attachment Interview
Secure-Autonomous (B)	Secure-Autonomous (F)
Insecure-Avoidant (A)	Insecure-Dismissing (D)
Insecure-Ambivalent (C)	Insecure-Preoccupied (E)
Insecure-Disorganised (D)	Unresolved/Disorganised (U)
	Cannot Classify (CC)

Secure-Autonomous (F) classifications are assigned to AAI's where the speaker, in presenting and evaluating life history, whether favourable or unfavourable, is internally consistent, providing clear, relevant and succinct responses. This classification is assigned to the majority of interviews conducted with a low-risk non-clinical population.

As with the Strange Situation two insecure classifications are distinguished with respect to AAI discourse : Insecure-Dismissing (D) and Insecure-Preoccupied (E). The D classification is assigned when there is clear violation of Grice's maxim of quality. For example the speaker may use positive terms to describe parents such as "excellent mother, very normal relationship", which are later either unsupported or actively contradicted i.e. "I didn't tell her I broke my arm; she would have been really angry". In addition such interviews often violate the maxim of quality with speakers insisting that they lack memories. This interview classification links to the Insecure-Avoidant category of the Strange Situation.

Preoccupied (E) classifications are assigned when the interviewee appears confused, angry or passively-preoccupied when discussing attachment figures, and shows active non-collaboration. In terms of Grice's maxims, such interviewees show violation of manner using psychological jargon or nonsense words, violate relevance, describing present interactions when asked for early accounts, and violate the maxim

of quantity by speaking far beyond the natural conversational turn. Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target & Gerber (1996) have identified a rare subgroup of E classifications where interviewees appear to be fearfully preoccupied by experiences of trauma. This sub-category is associated with the subjects presenting with Borderline Personality Disorder. The Insecure-Preoccupied category is linked to the insecure-ambivalent classification for the Strange Situation.

The additional classification of Unresolved-Disorganised (U) has recently been introduced to describe those interviews where the speaker displays lapses of reasoning or discourse when discussing potentially traumatic events. For example the interviewee may talk about someone important having died on a number of different occasions, or abruptly shift to talking in eulogistic terms. Interviews with clinically distressed subjects tend to show a greater number of these types of lapses. The U category is linked to the disorganised classification in the Strange Situation.

Hesse (1996) has recently written about those interviews which show no well-defined discourse strategy, with interviewees alternating between apparently incompatible dismissing and preoccupied states of mind. These interviews are assigned a rating of Cannot-Classify (CC), and are found in higher numbers in psychiatric samples and individuals who are either abusive, or have experienced abuse.

Reflective Self-Functioning

In response to Mains ideas on metacognitive knowledge, Bretherton's work on 'mental representations of mental states', and more recent developments concerning 'theory of mind' research, Fonagy et al (1991) have devised a new scale for rating the AAI. This is a significant move towards gaining further information about the mentalising capacity of adults, in both clinical and non-clinical samples. Thus it provides a mechanism by which the mentalising process, previously accessible only through presenting children with various hypothetical stories or situations, can now be assessed in an adult population. The development of reflective self may be seen as being marked by increases in self-descriptive speech (Kagan, 1981), increasing

awareness of others' mental states in emotional reactions of guilt and shame (Emde, 1990), the emergence of empathy (Zahn-Waxler, Cole, & Barrett, 1991), and the emergence of pretence in social interaction and play (Dunn and Brown, 1991; Fonagy and Fonagy, 1992). The scale as applied to the AAI is based on the hypothesis proposed above that environmental factors, particularly in relation to ones attachment experiences, will lead to differences in individuals capacity for mentalisation. Thus raters using the scale should be able to assess the extent to which the interviewee is able engage in a variety of speech indicating Reflective Self-Functioning (RSF).

A number of key elements are highlighted as particularly important in this respect :

1. Special mention of mental states by the interviewee - i.e. representing the self or other as thinking and feeling, making explicit statements as to the source of interpersonal knowledge, or anticipation of the reaction of another taking into account the other's perception of their own mental state.

2. Sensitivity to the characteristics of mental states - i.e. recognising the fallible nature of knowledge, explicit recognition of the limitations of wishes thoughts and desires with respect to the real world, or acknowledgement that the mental world is uncertain but has a causative effect on events.

3. Sensitivity to the complexity and diversity of mental states - i.e. reference to the possibility of diverse perspectives and points of view of the same event, recognition that causality in the social world may be complex, and not necessarily analogous to the world of physical causality, or recognition that social roles interact and the same person may hold differing, even contradictory attitudes in different relationships or contexts.

4. Special efforts at linking mental states to observed behaviours - i.e. recognition of a causal link between an underlying mental state and behaviour, recognition that people may express different emotions to the ones they feel, or recognition that people may intentionally wish to deceive by acting in self-serving ways

5. Appreciation of possibility of change in mental states, with implications for corresponding changes in behaviour - i.e. recognition that change is possible between the ideas of childhood and those of adulthood, or recognition of the possibility that attitudes may change in the future.

As noted above the Reflective-Self Functioning scale provides a means by which the internal mentalising processes of adults may be accessed. Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon, & Target (1996) have provided a cogent argument of how attachment may influence the development of mentalisation which is increasingly influencing the way in which researchers conceptualise the difficulties encountered by individuals presenting with various psychopathological disturbance. In essence this model proposes that, as suggested above, the mother-infant relationship provides the earliest environment for the development of thinking, particularly in the development of mentalising. In secure attachment relationships they suggest that the caregiver not only responds in behavioural terms in a way that provides the infant with an internal model that the caregiver too has an internal model of the infant, but is able to convey that they have an internal model of the infant as a thinking entity, with the capacity for mentalisation. Object-relations theory suggests that the child internalises a model of a containing caregiver, in order to develop in it's thinking. Fonagy et al (1996) extend this notion of internalisation, suggesting that it is not simply that the child internalises a model of the caregiver as containing, but rather internalises a model of the themselves as a thinking entity within the containing caregiver. Thus the child does not simply internalise the notion of the caregiver as capable of mentalising, and thus able to contain the child's distress, but rather perceives and further internalises a model of the caregivers stance with regard the child's own mentalising capacity.

In terms of differential attachment styles, Fonagy et al (1996) have argued that insecure attachment relationships are characterised by a deficit or absence in the caregivers capacity to convey to the infant that they have an internal model of the

child as an individual capable of mentalising. As mentioned above, if the child within the attachment relationship experiences itself in the other as non-mentalising, it may develop concrete forms of thinking based on physical reality. Those attachment relationships which are characterised by abuse, hostility or emotional emptiness in particular, may lead the child to deliberately turn away from the process of mentalising, as the consideration of the caregivers hostile, dangerous or indifferent thoughts may be overwhelming. The implications of this hypothesis as it may relate to specific psychopathological disorders is discussed below, but as Fonagy et al (1997) have argued, there may be a particular reason for considering adolescence as a developmental phase during which mentalising is especially crucial to the development of psychopathology. The notion that adolescence is a particular phase of identity formation (Erikson, 1963, 1968;) and particularly that of the ego development (Loevinger, 1976, 1979), is central to many theories of this life-stage. If adolescence is a period during which identity formation is precarious, or in the process of developing, those individuals who have been unable to acquire mentalising capacity through their attachment experiences, may encounter difficulties in self awareness. In successfully negotiating the transition from the family environment to that of social responsibility, self awareness may be seen as essential. Fonagy et al suggest that lack of self awareness, as influenced by deficits in mentalising capacity, may serve to reduce the individuals sense of responsibility for their actions, and in part influence the development of externalising psychopathology such as conduct disorders or violence. Thus mentalising capacity may seen to be intimately linked to the increased incidence of criminal behaviour and delinquency during adolescence.

Research With the AAI

As mentioned above the AAI was initially conceived as a means of examining the notion that attachment patterns may be transmitted across generations, from mother to child. Main and Goldwyn demonstrated impressively that 75% of infants classified as secure in the Strange Situation, had mothers who were rated as Secure

on the AAI. With infants classified as insecure-avoidant, mothers tended to be rated as Dismissing-detached (D) on the AAI, while insecure-ambivalent infants, had mothers who tended to rate as Preoccupied-entangled (E) parents. These findings have been replicated on a number of occasions, by Ainsworth herself, and Grossman and Grossman (1991). Of even more interest is the finding of Fonagy et al (1991), who demonstrated a 75% concordance between pregnant mothers ratings on the AAI and their child's subsequent classification in the Strange Situation at one year. Thus 80% of secure mothers had securely attached infants, while 73% of insecurely rated mothers, had infants classified as insecure. The implications of this study indicate perhaps more clearly than before the traditional notion that early childhood experience has a profound effect on determining ones future attachment. This impressive demonstration of transgenerational transmission of attachment quality has paved the way for further research into the role of fathers with respect to development of attachment, and extensive longitudinal work examining the robustness of these initial findings using the AAI.

In it's proposed capacity to access an individuals current 'state of mind with respect to attachment', researchers have also been interested in the AAI as a tool for collecting normative data from various adult populations regarding distribution of attachment patterns. Recently van Ijzendoorn and Bakermans-Kranenburg (1996) carried out a meta-analysis of 33 studies, on more than 2,000 AAI's, collected from non-clinical fathers, mothers, adolescents, samples from different cultures, and clinical samples. In many studies numbers have been relatively low but patterns have emerged suggesting a consistent pattern of attachment distribution within non-clinical samples. Thus 58-62% of mothers and fathers are classified as Secure-Autonomous (F), 22-24% as Dismissing (D), and 16-18% as Preoccupied (E).

As indicated earlier, Jones (1996) has highlighted the growth in interest in applying the AAI with clinical samples. Early research in this area began by examining differences in attachment as determined by the AAI, with respect to major diagnostic categories for psychiatric disorders. For example Dozier (1990) used that

AAI to study 42 clients identified as having serious psychopathological disorders that significantly interfered with social functioning. 12 subjects in the sample met DSM-II-R criteria for schizophrenia, 25 for manic-depression, 3 for major depression, and 2 for atypical psychosis. This early study primarily looked at two dimension of attachment Security vs. Insecurity, and whether this attachment was Dismissing (D) or Preoccupied (E). The sample was split into a primarily thought disordered group, and a primarily affective disordered group. The study demonstrated that those in the affective disordered group were more securely attached as measured by the AAI, but that there was no distinction between groups as to whether insecure attachment was Dismissing or Preoccupied in quality.

In a further study Dozier, Stevenson, Lee & Velligan (1991) examined the relationship between attachment style as assessed using the AAI in a sample of 40 adults with serious psychopathological disorders, and familial over-involvement or Expressed Emotion. A clear link was demonstrated between insecure attachment styles and familial over-involvement, further suggesting the strength of parental and familial relationships in determining the development of psychopathology.

Of particular interest has been the recent work of Fonagy et al (1996) in examining the distribution of attachment classification in a sample of hospitalised adult psychiatric patients. Their study employed the Adult Attachment Interview to assess attachment representation in 82 patients presenting with a variety of psychiatric symptomatology. The aims of the study were threefold : to examine the relationship between AAI classification and Axis I disorders, as determined by the DSM-III-R, particularly that insecure attachment patterns are more common amongst a psychiatric population, than in a control sample; to examine how particular Axis II disorders may strongly link to certain attachment classifications, and specifically address the hypothesis that Borderline Personality Disorder represents, in terms of attachment, a fundamental difficulty in the process of reflecting on the mental states of others; and finally the study used additional measures of outcome to examine how determining attachment classification prior to a period of in-patient psychotherapeutic treatment

may predict outcome at follow-up. The results of the study provide some of the most recent evidence that the way in which adults represent their early attachment relationships, links closely to the development of psychopathological disturbance. In particular that representations of insecure attachment patterns are significantly more apparent in a psychiatric sample as compared to 'normal' controls. In the study only 18 of the sample of 82 were rated as Secure-Autonomous on the AAI, as compared to 53 in the non-clinical sample of 85.

With respect to examining how attachment classification relates to BPD, the study demonstrated that on the Reflective Self-functioning scale, as applied to the AAI, those subjects meeting criteria for Axis II Borderline Personality Disorder, displayed a significantly lower capacity to reflect on either their mental states or those of others. This appeared to be particularly the case when these subjects reported having experienced physical or sexual abuse. Thus it seems that the experience of trauma associated with abuse may impact on a persons ability to reflect on mental states.

The final aspect of the study examined that way in which classification on the AAI may predict outcome from psychotherapy. Using a variety of measures, including the Beck Depression Inventory, The Symptom Checklist - 90, and the Eysenck Personality Questionnaire, and the State Trait Anxiety Inventory, subjects were assessed as to their Global level of functioning on admission and at discharge. 40% of the sample showed significant symptomatic improvement following a period of in-patient treatment. Of those who improved, the proportion of those classified as Insecure-Dismissing on the AAI, was highest at 93%, as compared to 41% for the Insecure-Preoccupied group and 33% for the Secure-Autonomous group. This finding suggests that the AAI may be a useful way of classifying those people who will benefit most from psychotherapeutic in-patient treatment. Fonagy et al have proposed that those people who present as Insecure-Dismissing, through previous avoidance of making links between current functioning and past events, may be more

accessible to psychotherapy, than those Insecure-Preoccupied individuals, who already have a set of firmly held perceptions about past events.

Studies of Adolescents Using the AAI

The Adult Attachment Interview was initially designed as a means by which the internal representations of adults with respect to their past attachment could be accessed. However, soon after it's development, Kobak and Sceery (1988) applied the AAI with a non-clinical sample of adolescents. Their study of 53 older adolescent college students, provided normative data on the distribution of attachment in late adolescence, illustrating that 28 of the total sample were classified as Secure-Autonomous (F), 17 as Insecure-Dismissing (D), and 8 as Insecure-Preoccupied (E). Larger sample studies have replicated these general findings (Hesse, van Ijzendoorn, & Main, 1993; Sagi, van Ijzendoorn, Scharf, Koren-Krie, Joels & Mayseless, 1994), demonstrating that approximately half those adolescents in a non-clinical sample show Secure-Autonomous patterns of attachment on the AAI. For the other half it would appear that approximately two-thirds display Insecure-dismissing attachment styles, while the remaining third are classified as Insecure-Preoccupied.

From studies of non-clinical samples, research has moved, as with AAI studies in adults, to examining adolescent clinical populations. There has been consistent evidence from a variety of sources that attachment insecurity may link to increased levels of psychopathology in adolescence. Armsden and Greenberg (1987) and Armsden et al (1990) for example have shown that insecurely attached adolescents are more likely to engage in problem-drinking, while Kwakman, Zuiker, Schippers, & deWuffel (1988) and Hughes, Francis, & Power (1989) have shown a link between insecurity of attachment and substance misuse. Cole and Kobak (1996) have also demonstrated the link between depression and Insecure-Preoccupied attachment, and eating disorders and Insecure-Dismissing attachment in young adults.

Adam, Sheldon-Keller & West (1996) have recently reported a study carried out with 133 adolescents in psychiatric treatment, looking at the relationship between

suicidal behaviour and attachment. There has long been a proposed link between the influence of family background and the aetiology of adolescent suicidal behaviour (Adam, 1990; Spirito, Brown, Overholser, & Fritz, 1989). Adam (1994) has presented a developmental model of suicidal behaviour based on attachment theory. This suggests that current suicidal behaviour is an :

'extreme attachment behaviour occurring in response to current attachment threat, signalling distress and expressing anger toward an unresponsive or unavailable attachment figure'

It is hypothesised that one may be able to determine the probability of engagement in suicidal behaviour, by analysing the discourse patterns of the AAI. Adam et al (1996) suggest that adolescents presenting with suicidal behaviour may represent the most insecure with respect to attachment, with high sensitivity to loss, disappointment and rejection. In particular they hypothesise that such adolescents may display a higher propensity to be classified as Unresolved-disorganised (U). As described above this classification applies to people who appear unable to maintain coherence when discussing traumatic experiences such as loss or abuse. They show lapses in their continuity of thought, express illogical or unusual beliefs, and show evidence of extreme behaviour at times of trauma

The study recruited 69 adolescent presenting with histories of suicidal behaviour and severe suicidal ideation, and 64 adolescents to a comparison group, who had never experienced suicidal behaviour or ideation. All subjects were interviewed with the AAI, with particular interest being focused on questions relating to trauma and resolution of loss. The hypotheses of the study were that adolescents in the case sample i.e. presenting with suicidal behaviour would be more likely to show responses that were unresolved-disorganised with respect to attachment-related trauma, and be classified overall as insecurely attached, as compared to those in the clinical comparison group.

The results demonstrated that the dominant attachment pattern in the case sample was unresolved-disorganised with an underlying assignment of insecure-

preoccupied. 41% of males in the case sample and 30% of females in the case group showed this pattern. In the comparison group, males tended to be classified as dismissing with no associated unresolved-disorganisation (45%), while females tended towards autonomous patterns with no associated unresolved-disorganisation (27%). In total participants classified as Unresolved-disorganised dominated the case group, 64% as opposed to 34% in the comparison group.

In this study both groups had a similar prevalence in terms of history of exposure to attachment related trauma, yet the AAI appears able to distinguish those with a history of suicidal behaviour within a clinical sample. The finding that suicidal adolescents present as more Unresolved-disorganised with respect to those traumatic experiences, links to the suggestion by Main (1991), and Fonagy et al (1991) that there are profound implications for the development of thinking, in particular metacognition, as a result of disturbances in early attachment relationships. The ability to reach some kind of resolution with respect to early attachment related trauma and organise this in a coherent way distinguishes those who do not engage in suicidal behaviour from those who have high levels of suicidal ideation. There is an interesting similarity between the incoherence of discourse in the study sample, and the lack of reflective-self functioning or ability to mentalise displayed by those with BPD (Fonagy et al, 1996).

Rosenstein and Horowitz (1996) recently published a study of 60 adolescent psychiatric in-patients, 32 males and 28 females, with a wide variety of reasons for admission. They excluded from their study those adolescents presenting with floridly psychotic symptoms or developmental delay. In addition 27 of the adolescents mothers participated in the study. All participants were interviewed using the AAI and asked to complete a battery of tests including the Structured Clinical Interview for Diagnosis, The Millon Clinical Multiaxial Inventory, The SCL-90, The Rorschach Inkblot test, the Thematic Apperception Test, the Sentence Completion Test, the Minnesota Multiphasic Personality Inventory. The main hypotheses from this study were :

- That differing patterns of insecure attachment as measured by the AAI should relate to specific forms psychopathology. In particular it was hypothesised that those disorders defined as 'externalising' such as conduct disorders are closely associated with an Insecure-Dismissing attachment style, and that those labelled as primarily 'internalising' or affective disorders will co-occur with an Insecure-Preoccupied attachment style.

- Similarly to the Fonagy study, above, there was also an interest in looking at how personality disorders may be seen as representing a particular case with respect to attachment. Rosenstein and Horowitz in particular hypothesised that those personality disorders where effectively repressive defences are apparent should relate closely to Dismissing attachment style, and those characterised by affective lability should co-occur with Preoccupied attachment.

The overall results of the study show a distribution of classifications on the AAI, clearly distinct from that found by Kobak and Sceery (1988) in their non-clinical sample. Two analyses were carried out, the first including the three traditional categories on the AAI i.e. Autonomous (F), Preoccupied (E), and Dismissing (D), the second including the recently included Unresolved (U) category. In the first analysis 3% of the sample were classed as Secure-Autonomous, 47% were Insecure-dismissing, and 50% were Insecure-Preoccupied. When the Unresolved category was included 2% were classed as autonomous, 38% as dismissing, 42% as preoccupied, and 18% as unresolved. These high levels of insecure attachment are consistent with distributions found in adults populations (Dozier, 1990).

The results of the study provide clear support for the hypothesis of a distinction between adolescents presenting with primarily Conduct disorder or Substance Abuse, and those presenting primarily with an Affective Disorder, with respect to AAI classification. Thus those adolescents presenting with a primary Conduct disorder were more likely to be classified as Insecure-Dismissing, while those presenting with Affective Disorders were classified, as predicted, as Insecure-

Preoccupied. The sample also included subjects who presented with co-morbidity, thus either both affective, conduct or substance misuse disorders, in varying combinations. The study found that those adolescents presenting with concurrent conduct and affective disorders were more likely to be classified as Dismissing in their attachment style, as were those presenting with all three disorders.

Interesting gender differences were also observed in the study with respect to distribution of attachment styles. Thus from the male sample there was a strong tendency towards dismissing attachment style, (66%) as opposed to preoccupied (34%). In the female sample 68% showed a preoccupied attachment style as opposed to 25% showing a dismissing classification.

The study also employed Millon Clinical Multiaxial Inventory as a measure of personality characteristics of the sample. Interesting associations were found with respect to attachment classification and particular personality traits. Thus those classified as dismissive differed significantly from the preoccupied group, showing higher levels of antisocial, narcissistic and paranoid personality characteristics as measured by the MCMI. Those classified as Insecure-preoccupied on the other hand, showed high levels of avoidance, anxiety and dysthymia on the MCMI.

Although numbers were not large enough in the study to examine statistically the relationship between attachment classification and specific personality disorders, the results obtained did confirm the initial hypothesis that particular personality disorders will be more associated with one type of insecure attachment style than others. Thus those presenting with obsessive-compulsive, histrionic, and schizotypal personality disorder were classified as having preoccupied attachments, whereas those presenting with narcissistic personality disorder were classified as dismissing with respect to attachment. 14 subjects in the sample met criteria for a Borderline Personality disorder. Of these 64% had a preoccupied attachment style, as opposed to 29% with a dismissing classification.

Attachment and Interpersonal Difficulties

As highlighted by the above study, and in line with Jones (1996) suggestion, an important area of future attachment research would be to examine the relationship between that AAI and other clinically relevant measures of interpersonal behaviour, role expectations and repetitive emotional structures. Attachment theory is primarily about relationships, and interpersonal communication, therefore it would seem reasonable to further examine of the validity of the AAI, by examining how classification relates to a measure of interpersonal difficulties. In particular the recent work of Fonagy et al (1996, 1997) suggests that examination of the interpersonal consequences of deficits in individual capacities for reflective self functioning, as measured by the AAI, would be extremely important in further exploring the link between mentalising and psychopathology.

The notion that people will continue to act in ways, sometimes maladaptive, in an attempt to maintain a psychological tie with an earlier attachment figure forms the basis of Interpersonal Theory (Sullivan, 1953; Leary, 1957). Thus an individual will continue to enact interpersonal styles that are similar in some representational or actual way to that of their earliest attachment relationship. Although this may often be painful in itself and cause difficulties in current relationships, it is hypothesised that these patterns of interpersonal relating serve to reduce the anxiety produced by relating in a different manner and thus protect the self-image. A current account of interpersonal theory suggests a number basic postulates :

That every interpersonal behaviour can be described along two axes -

- A dimension of affiliation of nurturance that ranges from hostile behaviour to friendly behaviour
- A dimension of power, control, and dominance ranging from submissive behaviour to dominating behaviour
- That two interacting people reciprocally influence each others behaviour as they interact. Thus one person's actions elicit, evoke or invite a particular class of

action from another person. These often occur in complementary forms, such that each person assumes ways of behaving that fall at opposing ends of the axes i.e. one person is dominant in an interaction, whilst the other is submissive. It is proposed that conflict in relationships occur when two people interacting attempt to behave in the same way e.g. both dominating.

Difficulties with interpersonal relationships are among the most commonly problems reported in clinical settings, and therefore Horowitz and Rosenberg (1988) developed the Inventory of Interpersonal Problems as an instrument to measure such problems. Much of the research using this instrument has so far focused on validation studies. However, Horowitz and Rosenberg (1993) themselves produced an important piece of work examining the link between interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy. This work bridged the gap in the research literature between the long hypothesised link between attachment relationships and the later development of interpersonal difficulties. Horowitz and Rosenberg hypothesised that an individual's interpersonal style is intimately linked to his/her interpersonal learning history, and in part this must include that person's attachment history. Thus for example, people whose earliest social experience with their caregiver was disappointing, or insecure, may develop a distrust of other people, avoid intimate contact, or dogmatically retain control in relationships. A different set of experiences in ones early attachment relationship, such that the caregiver serves to underscore ones incompetence and dependence on others, may lead one to become submissive within adult interpersonal relationships.

Horowitz and Rosenbergs' study employed 36 subjects, 8 male and 28 female, who had been accepted for 20 sessions of brief dynamic psychotherapy. The initial part of the study involved examining the type of interpersonal problems that people presented with, using the 127-item Inventory of Interpersonal Problems. Unfortunately figures are not given for the number of people presenting with particular interpersonal problems. The next part of the study was to determine each

participants hypothesised attachment style. In contrast to the development of the AAI described above, Bartholomew (1990) and Bartholomew and Horowitz (1991) have devised an alternative way of classifying individuals' attachment style. The notion that the child internalises his/her experiences into a working model of attachment is still adopted, but also conceptualised in terms of the interpersonal problems with which they are associated. Four categories, three very similar to those proposed by the AAI, are generated :

· Secure - where the individual is judged to be comfortable with intimacy and autonomy

· Preoccupied - where the individual is preoccupied with relationships

· Dismissing - where the individual is dismissing of intimacy, and is thus counter-dependent

· Fearful - where the individual fears intimacy, and is thus socially avoidant

It is interesting that in this study, Horowitz and Rosenberg adopt a very similar method for assessing attachment style, as in AAI research. Thus they use a semi-structured interview asking questions about the importance of close relationships, their experiences with loneliness and shyness, their trust of others, their impressions of other people evaluations of themselves, and their hopes for change in their social lives. These interviews are tape-recorded and then assigned to of the above classifications by a team of three raters. Of the sample in the study, 47% were judged as secure, 18% as dismissing, 14% as preoccupied, and 21% as fearful.

Although the sample size was relatively small interesting associations were shown when self-reported interpersonal difficulties were correlated with the attachment classification system. Those judged as securely attached demonstrated interpersonal profiles reflective of the whole array of interpersonal styles, but more clearly within the nuturant, warm domain. Those judged to be dismissing in their attachment style tended to be cold and introverted in their interpersonal styles. The

preoccupied group showed elevated levels of over-expressiveness, dominance and autocratic interpersonal styles. Finally, the fearful group reported interpersonal problems relating to submissiveness, introversion, and social inhibition.

Fonagy et al (1996, 1997) suggest a strong link not simply between an individuals attachment history and later interpersonal functioning, but how this may manifest itself as a consequence of the development of mentalising capacity. Thus the differences in interpersonal difficulties observed between those individuals rated as Dismissing and Preoccupied with respect to attachment, may reflect more their respective capacities for mentalising. It may be hypothesised that those individuals presenting as Dismissing, with associated interpersonal difficulties of coldness and introversion, may have a lower capacity for reflecting on the mental states of others, thus through their deficit in understanding the others perspective, tend to alienate people in interpersonal situations. By contrast individuals presenting as Preoccupied in their attachment style may show higher capacities for mentalisation, but through constant engagement, rumination, or preoccupation with the thoughts of other people, behave in ways which mediate anticipated threat, and thus show interpersonal styles of submissiveness or over-dependency.

For adolescence as a developmental phase during which identity formation is central, interpersonal functioning may be seen as a crucial arena in which to test out, revise, and further develop ones identity. Thus interpersonal problems that develop through attachment relationships, in those individuals presenting with psychopathology, may have serious consequences on identity formation during this period.

THE PRESENT STUDY

From the current state of research it would seem that there is a need to further develop our understanding of adolescent psychopathology, with respect to attachment theory. The existing studies of adolescence employing the Adult Attachment interview have examined the link between adolescent representations of attachment experiences and the development of specific forms of psychopathology. However, aside from the Fonagy et al (1996) study, which focused on adult pathology, no study as yet has examined the relationship between adolescent psychopathology and the capacity to use reflective-self functioning. Thus the present study aims to bridge the gap between work with younger children examining links between attachment security and capacity for mentalising (Main, 1973, 1981; Kaplan, 1987; Fonagy et al, 1997), and the recent Fonagy et al study. With particular reference to the process of mentalising, Fonagy et al (1997) have highlighted a particularly interesting area of research which the present study aims to address, i.e. the link between decreased reflective self-functioning as measured by the AAI, and the presentation of externalising or conduct disorders in adolescents.

In addition few studies as yet have attempted to examine the association between the Adult Attachment Interview and other clinically relevant measures of interpersonal difficulties. It would seem, as Jones (1996) has commented, that such a study would provide useful data on the further construct validation of the AAI.

HYPOTHESES OF THE STUDY

The current study aims to address a number of hypotheses, and extend the existing literature with respect to attachment processes in adolescence.

- To replicate the distribution of AAI classifications demonstrated by Rosenstein and Horowitz (1996), particularly with respect to presenting psychopathology. Thus the current study hypothesises that for adolescents requiring inpatient treatment, those presenting with Internalising type disorders will be more likely to be classified as Insecure-Preoccupied with respect to attachment, while those with Externalising Disorders, will be more likely to be classified on the Adult Attachment Interview as Insecure-Dismissive

- That specific classifications on the AAI will be associated with differing capacities for reflective self-functioning. Thus those classified as securely attached will show a higher capacity for RSF then those rated as insecurely attached, and that in particular those classified as Unresolved with respect to trauma or loss will display the most difficulty with mentalising.

- That there will be specific associations between adolescent psychopathology and difficulties with the capacity for reflective self-functioning. Thus in line with the Fonagy et al (1997) work, those adolescents presenting with conduct or externalising disorder will be more likely to present with difficulties in mentalising capacity.

- To examine how attachment style may relate to self-report symptomatology and interpersonal problems, and further to explore whether, specific interpersonal difficulties may relate to problems with RSF.

- That experiences of trauma or abuse will be associated with lower capacity for reflective self-functioning, particularly in relation to being classified as Unresolved-Disorganised on the AAI.

METHOD

Participants

41 adolescents, aged between 13 and 20 participated in the study. All participants were either resident on, or had been resident and were now attending as day-patient, an in-patient treatment unit. The sample included participants with a wide range of reasons for admission, the majority presenting with emotional and behavioural disturbance. The range of psychiatric diagnoses within the sample are outlined below. Those people presenting as either actively psychotic or with significant developmental delay were not included in the study.

Participants were selected at varying stages of treatment from a variety of adolescent in-patient settings throughout the North Thames Region. These were as follows : Brookside Young Person's Unit (n=13), The Cassel Hospital Adolescent Unit (n=9), Simmons House Adolescent Unit (n=3), The Northgate Clinic (n=14), and The Regional Adolescent Unit at Cell Barnes Hospital (n=2). All these settings provide in-patient and day-patient services for adolescents presenting primarily with emotional and behavioural disorders. Patients on all units receive a variety of input from psychiatrists, psychologists, nursing staff, occupational therapists, and social workers. Individual psychotherapy is provided at all settings usually by psychiatrists and psychologists, along with group work and family therapy. Nursing interventions are based on the model proposed by Flynn (1993), of using the therapeutic relationship as a mechanism for change. Medication is rarely used on all these units. The units involved in the study are tertiary care centres receiving the majority of their referrals from other mental health professionals, often accepting those adolescents who have been unsuccessful in their response to treatment in other settings. No control group was recruited for the study, for a variety of reasons including financial, resource and time constraints. However, the discussion includes a section exploring how this particular population relates to an existing control data set.

Clinical professionals at each site were reluctant to assign diagnoses to any of the participants, (this issue will be discussed in more detail later). Thus classification of psychiatric diagnosis was established through careful examination of subjects medical notes, in conjunction with the Diagnostic and Statistical Manual of Mental Disorders 4th Edition, American Psychiatric Association (1994). For the purposes of the present study diagnoses were then initially classified into three types : Affective Disorders, Conduct Disorders, and Substance Misuse Disorders. This follows the system adopted by the Royal College of Psychiatry for classifying adolescent psychiatric problems (Scarth, 1993). However, when co-morbidity was accounted for numbers in respective groups (excepting Affective Disorders) were too small for further analysis. Thus diagnosis was further categorised by assigning each participant to either an Externalising disorders group (Conduct disorders, Substance Abuse), or Externalising Disorders Group (Affective disorders). For those participants presenting with co-morbidity, the primary presenting difficulty was taken into account in assignment to diagnostic group. This yielded two groups.

The average age of the sample was 16, with ages ranging from 13 to 20. 29 females and 12 males were recruited to the study, based on availability of participants at each sample site. Although not formally assessed, examination of participant medical and historical notes indicated that the sample reflected backgrounds of all social/occupational classes I-V. Formal assessment of intelligence was not carried out, but again further examination of participant notes, showed an even distribution in terms of educational achievement.

Design and Procedure

Before any participant was approached to take part in the study, their suitability for inclusion was discussed with clinical professionals at the respective unit. The author then approached residents either individually or in groups, providing information both verbal and written (Appendix II), and leaving each person a consent form to complete. If participants were under the age of 16, written consent was also

sought from their parent or guardian. Copies of these consent forms are shown in Appendix (III). Once the appropriate consent had been received participants were seen for approximately one and 1/2 hours, to carry out the interview and pscyhometric measures.

Measures

The Adult Attachment Interview - AAI (George, Kaplan & Main, 1985). As described above the AAI is a semi-structured interview, the aim of which is to access an individuals current representation of their childhood experiences with respect to attachment. A variety of attachment related topics are covered in the interview including the general quality of the early child-caregiver relationship, experiences of early illness, separation, rejection. loss, and maltreatment. For each topic area the interviewer probes the interviewee for specific memories in support of general statements made, in addition to a number of further standard probe questions. Interviews last approximately 30-75 minutes each, being audiotaped and then transcribed, before rating.

Coding system for the AAI. The interviews in the current study were assessed by an experienced rater (Howard Steele), who was trained in conducting the coding by M.Main and E.Hesse in 1987, and again in 1994. This rater has extensive experience of both using and rating the AAI. The rater was unfamiliar with the sample having no knowledge or access to demographic information.

The coding system for the AAI examines eight scales on which an overall rating is based. These concern the experience and state of mind of the interviewee as reflected in the interview narrative. Interviews afford the rater the opportunity to examine the following areas :

Probable Experience	State of Mind
• Loving parents	Idealisation of parents
• Rejecting parents	Derogation of parents
• Neglecting parents	Involving anger with parents
• Role reversal with parents	Quality of recall
• Pressure to achieve	Coherence of narrative
• Overprotection	Passivity of thought
	Fear of loss of child
	Reflective self

With reference to the above categories the interview is assigned an overall rating of the interviewees state of mind with respect to attachment experiences. Theses categories are outlined above. The three main categories can be classified into subtypes of F, Ds, and E interviews. Fonagy et al (1996) give the example of subtypes of Preoccupied (E) interviews : E1 is assigned when interviews given the overall rating of E indicate a passive stance in relation to an ill-defined experience of childhood; E2 classifies an interview characterised by high levels of current anger concerning past experiences; E3 classifies interviews characterised by fearful preoccupation with previous traumatic events.

Lack of Resolution of Trauma. As described above a recent development, in terms of AAI classification, is the introduction of a sub-classification which can be applied to Ds, E, or F interviews, with respect to apparent lack of resolution of mourning over the loss of an attachment figure, or other traumatic events, particularly childhood abuse. The classification of Unresolved (U) is thus assigned to those interviews where respondents show continuing disorganisation during discussion of the attachment figure or trauma. This disorganisation is characterised by lapses in monitoring of reasoning, and discourse. In the present study resolution of trauma was examined in relation to the hypothesis that in the sample population rates of the

Unresolved category would be high. The assignment of the unresolved category depends on consideration of particular passages in the AAI which ask about experiences of loss and/or abuse. If the respondent replies that he/she has experienced loss or trauma the rater assigns a score on a nine-point scale regarding the degree to which the respondent appears to have resolved this experience. Scores of five or below are reflective of resolution. Scores above five indicate that the individual is currently unresolved with respect to that experience. Respondents can obtain ratings of lack of resolution for loss, sexual abuse, and/or physical abuse. The following are guidelines suggested by Main (1994) for the scoring of lack of resolution of trauma. (Although obviously pertaining to a different set of experiences passages pertaining to loss are rated in a similar fashion). They indicate which areas of discourse qualify for ratings of resolution and give indications of how to score lack of resolution of trauma.

Trauma is indicated by any of the following :

- Participants remembers being badly hit, enough to be frightened of the physical situation at the time, even if now he/she doesn't regard it as necessarily being abuse.
- Any striking of the child which leaves marks.
- Parent goes into rages directed at the child, gets out the belt etc. and these are frightening.
- Subject was locked into closets, punished in bizarre ways.
- Parent threatens to harm or kill participant, and it is clear that this is not joking, simple exasperation, etc.

The following are discourse patterns which indicate lack of resolution :

- Unsuccessful Denial - Alternating clear reports of abuse with denial that it was abuse. This is particularly indicated by confused, irregular speech patterns as well as more direct examples of attempted denial.

- Feelings of being causal in the abuse and deserving of it in a personal sense.

- Psychologically confused statements and incoherencies, where speech about the incident(s) become incoherent, odd associations arise, the respondent seems irrational, is unable to finish sentences, or suddenly with apparent confusion moves away from the topic.

- Respondent harbours fears of being like the abusive attachment figure in some way, and these go beyond what is reasonable. In particular the respondent seems to experience a continuing fearfulness of the parent (or other abusive figure), manifested now in the fear of being taken over by the parent in his/her own mind.

The Reflective-Self Function (RSF) Scale. As discussed above Fonagy et al (1991) have developed an additional scale for the AAI, aiming to assess the capacity of the interviewee to understand mental states, and think about these in a coherent manner. Ratings are made particularly in relation to so-called 'demand' questions on the AAI, shown below :

> Why did your parents behave as they did during your childhood?
>
> Do you think your childhood experiences have an influence on who you are today?
>
> Are there any things that happened during childhood that you would consider to be a set-back in your development?
>
> Did you ever feel rejected as a child?
>
> In relation to loss, how did you feel at the time and how have your feelings changed over time?
>
> Have there been changes in your relationship to your parents since childhood?

These are judged to be different to those questions which 'permit' the interviewee to demonstrate their reflective-self capacity. Rather these particular questions place interviewees in the position such that they are required to show their

capacity for RSF. The subject response to each of these questions is rated, according to six levels of RSF :

O or negative RSF : refers to interviews where the interviewee is either systematically resistant in response to the notion of RSF (0/A), expressed through hostility or dismissal when faced with 'demand' questions, or appears confused in their attempts at RSF (0/B), responding in a bizarre or inappropriate manner.

1 : is used to rate interviews where reflectiveness is either totally or almost absent. Again subjects may respond in one of two ways to attain this rating by disavowing the existence of their own RSF (1/A), or presenting distorted explanations in terms of their own or others motives with respect to RSF (1/B)

3 : refers to interviews where there is evidence of consideration of mental states throughout, but at a fairly basic level. Thus the interviewee shows a naive or simplistic appreciation of the intentions of others (3/A), presents partial information regarding RSF which may have to be inferred by the interviewer (3/B), or gives responses which appear as over-analytical (3/C).

5 : is assigned to interviews where there is evidence of a considerable level of RSF. Interviewees, show the capacity to understand their experiences in terms of thoughts and feelings, indicating an underlying model of their own and others mental states. However, such interviewees may show inability to apply such a model of RSF to more complex aspects of interpersonal relationships, such as conflict and ambivalence (5/A).

In other interviews subjects may show high levels of RSF in response to some questions but not others (5/B)

7 : refers to interviews containing numerous statement indicative of full RSF, displaying evidence that the interviewee understands the nature of mental states, and can link these to underlying behaviour. The interviewee is able to take a developmental perspective with regard to RSF, and shows across the interview a fairly consistent application of RSF in relation to at least one context in their life, e.g. relationship with mother.

9 : is rarely assigned, and is given for those interviews that show a consistent application of RSF across all important contexts. Thus interviewees may within one passage display several types of RSF and the capacity to integrate these into a new perspective.

Thus each interview was rated with respect to RSF. Two raters (Howard Steele and the author) assigned independent judgements of RSF for 12 interviews, attaining satisfactory inter-rater reliability reflected in the co-efficient of 0.72

Self-Report Measures. Three self-report questionnaires were used in the present study, administered following the AAI.

The Symtom Checklist 90 - Revised (SCL-90-R) (Derogatis, 1977). The SCL-90-R is a self-report inventory consisting of 90 items examining a range of psychological symptoms, requiring participants to rate their distress with respect to each symptom during the past week on a five-point scale. The 90 items are clustered into symptom dimensions : somatization, obsessive-compulsive disorder, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism interpersonal difficulties. The scale has been widely used with adolescents, and has been validated for use with in-patient adolescents (McGough & Curry, 1992).

The Beck Depression Inventory (BDI). The BDI is a widely used 21-item measure of the severity of a participants current level of depression (Beck, 1983), which has been validated for use with adolescents (Carter & Dacey, 1996). In particular it assesses participant complaints, symptoms and concerns about depression, highlighting such factors as hopelessness and suicidal ideation.

The Inventory of Interpersonal Problems - 32 (IIP-32). This 32-item measure was adapted for the 127-item Inventory of Interpersonal problems, developed by Horowitz and Rosenberg (1988). The original measure has been widely used and validated with both clinical and non-clinical samples, including adolescents (Hansen and Lambert, 1996; Gurtman, 1995). The revised 32-item self-report measure (Barkham, Hardy & Startup, 1996) was developed as a more user-friendly form of the original inventory,

with the specific aim of inclusion in a battery of screening measures for psychotherapy services. In a non-clinical sample the revised measure loses little fidelity as compared to the original full-scale, but has not yet been used in clinical populations, particularly in-patient adolescents.

The items on the shortened version were derived from a factor analytic study of those original items loading highest on eight subscales (Barkham, Hardy & Startup, 1994). These subscales are proposed as measuring eight distinct facets of interpersonal difficulty : hard to be sociable, hard to be assertive, too aggressive, too open, too caring, hard to be supportive, hard to be involved, too dependent. In completing the IIP-32 subjects are required to rate the first 19 items on a five-point scale, with respect to how hard they find them, for example the first item is 'It is hard for me to join in on groups'. The following 13 items are again rated on a five point, and are phrased as behaviours that the subject engages in 'too' frequently i.e. item 24 'I open up to people too much'.

An overall score can be obtained of the degree of interpersonal difficulty, a high score indicating a greater number of interpersonal problems. Scores are also obtained for each subscale, indicating the degree of specific interpersonal problems.

Ethical Considerations

Before any research was carried out at any of the sites sampled in the study, ethical approval was sought from the respective Regional Ethics Committee. These were as follows : Camden and Islington NHS Trust, Riverside Mental Health Trust, West Herts Community Health Care Trust, Barnet Health Care Trust, and Redbridge Community Health Care Trust. Copies of approval letters are shown in Appendix IV.

RESULTS

Overview

The results section begins by examining the overall aim of the study, in addressing the distribution of attachment patterns shown in the sample. The section then proceeds to address the hypotheses outlined at the end of the introduction, examining the link between attachment status and diagnosis, the impact of childhood trauma on attachment processes, and the relationship between reflective self-functioning and various attachment variables. In addition later sections of the results address the relationship between attachment and self-report symtomatology, and outline analyses carried out to examine the associations between attachment and interpersonal problems. The results end with a number of tables illustrating qualitative data obtained in the present study, in particular showing the differential discourse strategies of those participants identified as unresolved vs. resolved with respect to past loss and/or trauma, and low vs. high in terms of capacity for reflective self-functioning.

Adolescent Attachment Patterns

The AAI classification system assigns a rating of unresolved (U) to an interview on the basis of that particular portion of the interview pertaining to the discussion of loss or traumatic events. However, those individuals assigned the (U) category also display an underlying secondary attachment classification of the existing types. Thus it is common to split the analysis of attachment data into examination of the traditional three categories, and a four-category system involving the (U) category. Including the (U) category in the analysis, 22% (n=9) of the sample were dismissing (D), 10% (n=4) secure-autonomous (F), 7% (n=3) preoccupied (E), and 51% (n=21) unresolved (U). In terms of the traditional three category system the distributions are slightly different, with 12% (n=5) secure-autonomous, 51% (n=21) dismissing, and 27% (n=11) preoccupied. In both these classifications four subjects

were assigned the Cannot Classify category, but because of their small number, were excluded from further analysis. Figure 1 shows graphically the distribution of attachment patterns in the sample, again on the basis of the traditional three way split, the more recent four-way split shown in Figure 2 (these charts include the cannot classify category). The high rates of attachment insecurity in the sample are in line with previous studies both of adolescents and adults (Rosenstein & Horowitz, 1996; Dozier, 1990). Given the relatively small sample size in the present study however, further analyses were carried out with respect to a number of two-way splits in the data, including dismissing vs. preoccupied, resolved vs. unresolved, secure vs. insecure.

Figure 1. Illustrates the distribution of attachment patterns in the traditional three-way split (including the cannot classify category)

cannot classify
10%

insecure-preoccupied
27%

secure-autonomous
12%

insecure-dismissing
51%
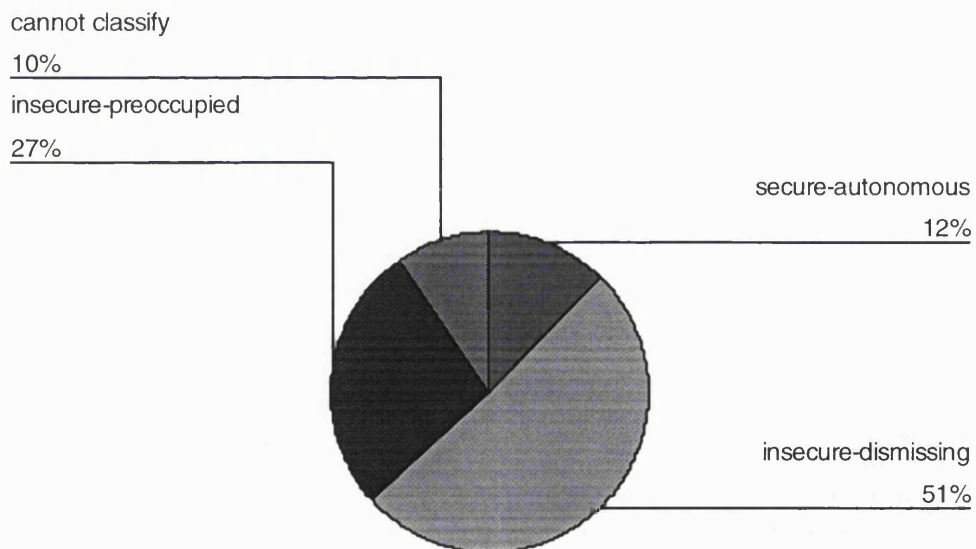
Figure 2. Pie chart illustrating the distribution of Adult Attachment Classifications in the sample when the Unresolved category is included.
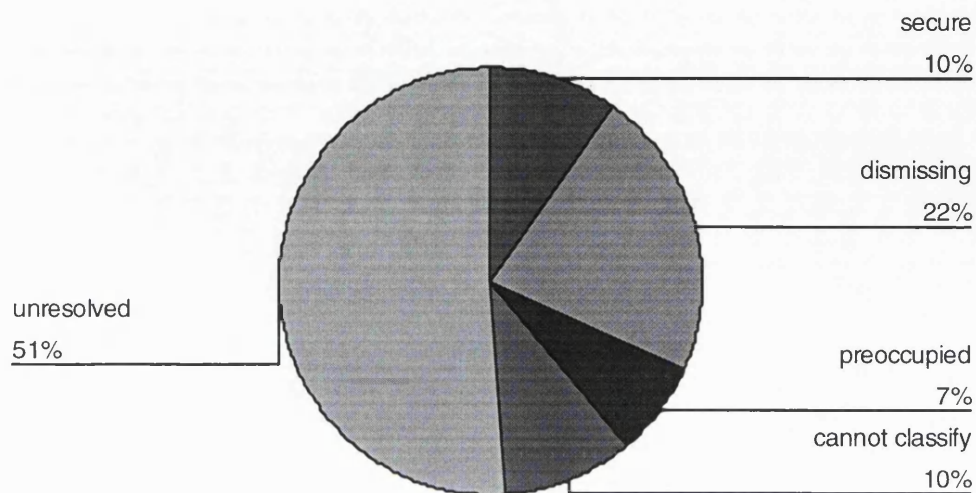
Attachment Insecurity - Dismissing and Preoccupied Styles

The initial analysis of distributions of attachment classification was carried out by way of chi-square tests, examining dismissing and preoccupied classifications in terms of age, gender, and the presence of sexual abuse. However the results of these analyses did not indicate any differences between the two classification of attachment insecurity in terms of age ($\chi^2 = 0.26$, ns), gender ($\chi^2 = 0.006$, ns), or the presence of otherwise of sexual abuse ($\chi^2 = 0.03$, ns).

Attachment and Resolution of loss, abuse and trauma

To look at the way in which the category of unresolved attachment status, when included in the sample, relates to other variables in the study a number of chi-square analyses were carried out comparing type of attachment insecurity, diagnostic category, reflective self-functioning, abuse/non-abuse, gender, and age. The only significant difference with respect to the unresolved category was evident between those individuals presenting with high and low levels of Reflective Self-functioning

(RSF), those individuals with high RSF more likely to be resolved regarding traumatic experiences (χ^2 =5.53, df 1, p<0.05). Attachment status appeared to have no significant impact overall on whether individuals were able to resolve trauma or loss.

As outlined in the methods section, assignment of the unresolved category depends on ratings given to three scales concerning resolution of loss, physical and sexual abuse. Table 2 gives demographic information on the distribution of individuals actually reporting experiences of loss, and/or physical and sexual abuse, as well as numbers of participants displaying lack of resolution regarding these experiences.

Table 2. Summarises demographic information regarding those participants reporting loss and/or abuse, and those assigned the unresolved classification.

Type of Trauma/Abuse	No. of participants reporting experiences	No. of participants receiving unresolved classification
Loss	13	3
Physical Abuse	2	1
Sexual Abuse/Loss	4	2
Physical Abuse/Loss	6	6
Sexual/Physical Abuse	2	2
Loss/Sexual/Physical Abuse	7	6
Total	34	22

Note : Lack of resolution is rated on a nine-point scale - five is the cut-off point, above which an individual is considered to be unresolved with respect to the particular trauma.

Table 2 indicates that 34 out of the 41 participants had experienced some form of childhood loss or abuse, either alone or in combination with another form of trauma. No participant reported sexual abuse in isolation. The table demonstrates that for those experiencing loss (n=13) alone, only 3 received the classification of unresolved. This indicates that these three individuals scored above the cut-off point of 5 on the resolution of loss rating scale. By contrast if this loss was accompanied by physical abuse the table suggests that these participants would be far less likely to resolve the combination of trauma, those reporting (n=6), those receiving unresolved classification (n=6). Numbers were too small to fully examine statistically whether

this effect was due alone to the presence of physical abuse, or whether it is dependent on the experience of loss in combination.

Further analysis of these sub-scales examined the effects of attachment patterns on resolution of loss, sexual abuse, and physical abuse. For this analysis each type of trauma was considered in isolation, in contrast to considering the overall unresolved category. Chi-square analyses were carried out to look at whether there were differences between secure vs. insecure, and those rated as dismissing vs. preoccupied individuals in their capacity to resolve loss, sexual, or physical abuse. The only significant result of these analyses indicates that those individuals rated as insecure-dismissing are more able to resolve loss than those who present preoccupied discourse (χ^2 = 10.4, df 1, p<0.001). No differences were observed between the capacity of secure vs. insecure individuals to resolve the various types of trauma or loss.

Adolescent Attachment and Diagnosis

In line with the work of Rosenstein and Horowitz (1996) participant diagnoses were initially split into those presenting with Affective, Conduct and Substance Misuse disorders. In addition co-morbidity was considered, thus combinations of Affective, Conduct and Substance misuse were assigned. However, as discussed above (See Methods), numbers in all but the Affective category were low. Thus for the purposes of further analysis it was decided that classification of diagnosis should be changed into a simple two-way split of those individuals presenting with a primary Internalising disorder (n=27) and those displaying a primary Externalising disorder (n=14). Further analysis thus considered differences in attachment style, lack of resolution, sexual abuse, and the factors of gender and age, in relation to whether individuals internalised or externalised their distress. This was done by a series of chi-square tests. Results of these tests indicate significant differences with respect to internalising vs. externalising disorders, associated with the presence of sexual abuse (χ^2 = 3.87, df 1, p<0.05). Thus a significantly higher number of individuals diagnosed

as externalising their distress had also been sexually abused, than those diagnosed as internalising. It would be interesting to examine whether specific resolution of this sexual abuse affected diagnostic category. Given the small numbers of participants who reported sexual abuse (n=13), it was not possible to investigate this statistically. However, four of the thirteen participants who had been sexually abused had managed to resolve this trauma. Of these four two presented with an externalising disorder, the other two with an internalising disorder. The only other significant result suggests that individuals over the age of 16 in the sample were more likely to present with an internalising disorder than those under 16 ($\chi^2 = 4.94$, df 1, p<0.05). No significant results were found in relation to attachment classification, whether this was secure vs. insecure, or in terms of the type of insecurity shown. In addition the overall classification of resolution of trauma and/or loss did not relate significantly to diagnostic category.

Adolescent Attachment and Reflective Self-Functioning

To examine how reflective self-functioning may be associated with attachment classification and in particular the hypothesis that difficulties with RSF may be related to the presence of externalising disorders, a number of planned t-tests were carried out comparing various sub-groups. Differences in RSF between secure and insecure categories were not examined as RSF is a subscale score used in the determination of security. Thus one would automatically assume that there would be a significant difference between secure and insecure attachment with respect to reflective self-functioning. The categories of dismissing and preoccupied attachment were compared yielding no significant difference. Further planned t-tests were carried out comparing diagnostic categories, the presence or otherwise of sexual abuse, and age and gender variables.

Table 3.
Reflective Self-Functioning and it's relation to attachment classification, diagnostic category, sexual abuse, age, and gender.

Comparison Group	Mean RSF			t-value
Dismissing (n=21) vs. Preoccupied (n=11)	1.04	vs.	1.54	0.82
No CSA (n=26) vs. CSA (n=15)	1.92	vs.	1.06	1.32
Internal (n=27) vs. External Disorder (n=14)	2.11	vs.	0.64	2.32*
Under 16 (19) vs. Over 16 (n=21)	1.21	vs.	2.0	1.23
Male (n=12) vs. Female (n=29)	1.08	vs.	1.82	1.07

Note : All comparisons were planned. All comparison variables were normally distributed.
*p<0.05

The only analysis reaching significance is that comparing RSF across diagnostic categories, with those presenting with Externalising disorders showing significantly lower capacity for reflective-self than those presenting with an Internalising disorder (t=2.32, df 39, p<0.05). This is the first study employing the AAI with adolescents that has demonstrated the link between diagnostic category and the capacity of the individual for RSF.

Self Report Measures

Demographic information regarding the Beck Depression Inventory shows that the mean BDI score for this sample is 29, s.d.13.3. This score indicates Moderate-Severe depression, suggesting, as would be expected, that high levels of mood disturbance are common in in-patient adolescents. Self-reporting as measured by the SCL-90, shows high levels symptomatology in the sample (mean 163, s.d. 79.8), the mean scores for each subscale indicating Moderate levels for particular symptoms. Correlation between the BDI and SCL-90 was high (r=0.83), suggesting that the two measures are both accessing the same construct, i.e. participant self-reporting of disturbance.

Table 4. Mean and standard deviations of total scores on the BDI, SCL-90, and the nine subscales of the SCL-90.

	No.of Cases	Mean	S.D.
Beck Depression Inventory	36	28.9	13.3
Symptom Checklist-90	35	163.0	79.8
Anxiety	35	1.99	1.14
Depression	35	2.14	1.00
Interpersonal Difficulties	35	2.09	1.06
OCD	35	1.90	0.98
Phobic anxiety	35	1.31	0.99
Paranoid Ideation	35	1.67	1.03
Psychoticism	35	1.59	0.96
Hostility	35	1.89	1.19

Attachment and Self-Report Symptomatology

The two self-report measures of symptomatology were analysed in terms of their relationship to the two-way splits outlined above. Independent samples t-tests were initially used to look at differences between total scores with respect to the comparison groups. To indicate that total score comparisons were part of the planned analysis, BDI and SCL-90 analyses are shown in bold. Further post-hoc investigation of the nine subscales of the SCL-90 was carried out to look at specific differences between the two-way splits. For these post-hoc multiple comparisons the effects of Type I errors were accounted for by employing Dunn's t (bonferroni) correction as the cut-off criteria (except for those employing non-parametric statistics). Out of the nine comparisons between the Secure and Insecure group, four of the variables were non-normally distributed. Thus for these four variables Wilcoxon Rank Sum analyses were carried out. As demonstrated below in Table 5, the secure and insecure groups did not differ significantly in terms of reporting of symptoms, either in total or on subscales, except for Hostility (Ws=33.5), the insecure group reporting higher levels of distress for this problem. Within the insecurely attached group, no significant differences were demonstrated for total BDI and SCL-90 scores, or individual subscale scores, between those rated as dismissing versus preoccupied.

Table 5. T-test and Wilcoxon Rank Sum comparisons of secure vs. insecure classifications, and Dismissing vs. Preoccupied classifications with respect to self-report measures

Measure/Subscale	Secure (n=4)	vs. Insecure (n=28)	t-value	Ds (n=21)	vs. E (n=11)	t-value
BDI total	**26.0**	**30.2**	**-0.63**	**30.2**	**30.1**	**-0.03**
SCL-90 total	**106.3**	**176.0**	**-1.66**	**165.2**	**195.5**	**-0.94**
Anxiety	1.30	2.15	-2.45	1.95	2.53	-1.24
Depression	1.54	2.27	-1.39	2.14	2.52	-0.95
Interpersonal Difficulties			*Ws=42.5*	2.04	2.61	-1.4
OCD			*Ws=38.5*	1.99	2.17	-0.48
Paranoid Ideation	1.12	1.83	-1.27	1.72	2.03	-0.74
Phobic Anxiety	0.64	1.42	-1.50	1.33	1.6	-0.62
Psychoticism	1.05	1.71	-1.30	1.58	1.95	-0.94
Somatisation			*Ws=47.5*	1.44	1.93	-1.12
Hostility			*Ws=33.5**	2.12	1.92	0.41

Note : Planned comparisons are shown in bold. All distributions were normally distributed, except those indicated in italics, where appropriate Wilcoxon Rank Sum test values are given. Post hoc comparisons were judged with respect to appropriate Dunn's t criteria. Ds = Dismissing, E = Preoccupied.
* Significant Wilcoxon Rank Sum score at p<0.05.

Table 6 below summarises t-tests examining differences between those individuals rated as resolved vs. unresolved with respect of loss or trauma, and those who had been sexually abused vs. non-sexually abused, in terms of symptom reporting. The results indicate that in terms of resolution of trauma the only significant difference is for the post-hoc comparison between the two groups for the reporting of Phobic anxiety (t=3.11, df 33, p<0.05), being higher in the unresolved group. Table 6 also indicates that those individuals who reported sexual abuse had significantly higher total symptom reporting on both the BDI (t=2.09, df 34, p<0.05) and the SCL-90 (t=2.51, df 34, p<0.05). The clearest trends between groups in terms of the nine SCL-90 subsclaes (although non-significant), are also shown between those individuals who disclosed sexual abuse in the AAI and those who did not. Thus the abused group consistently reported higher levels of symptomatology on both the Beck Depression Inventory, and the Symptom Checklist-90.

Table 6. T-test comparisons of Resolved vs. Unresolved classifications, and the presence or absence of sexual abuse, with respect to self-report measures

Measure/Subscale	Res vs. (n=16)	Unres (n=19)	t-value	Abuse vs. (n=11)	Non-abuse (n=24)	t-value
BDI total	**27.7**	**30.9**	**0.94**	**35.1**	**25.8**	**-2.09***
SCL-90 total	**139.3**	**183.1**	**1.66**	**209.5**	**141.75**	**-2.51***
Anxiety	1.74	2.19	1.17	2.57	1.72	-2.16
Depression	1.89	2.34	1.31	2.62	1.91	-2.02
Interpersonal Difficulties	1.76	2.36	1.76	2.14	1.94	-1.24
OCD	1.73	2.04	0.95	2.4	1.68	-2.09
Paranoid Ideation	1.41	1.89	1.38	2.3	1.39	-2.63
Phobic Anxiety	0.8	1.74	3.11*	1.8	1.05	-2.35
Psychoticism	1.44	1.70	0.80	2.05	1.37	-2.05
Somatisation	1.2	1.74	1.62	2.15	1.16	-2.84
Hostility	1.69	2.05	0.87	2.38	1.94	1.74

Note : Pre-planned comparisons are shown in bold. All variables were normally distributed. Post hoc comparisons were judged with respect to appropriate Dunn's t criteria. Res = Resolved, Unres = Unresolved
*p<0.05

Table 7 shows the results of t-tests carried out to look at differences in self-report measures in terms of gender and age. Clear differences are demonstrated between male and female participants in their terms of levels of self-reported depression, females showing significantly higher levels in terms of total score on the Beck Depression Inventory (with female participants scoring on average within the moderate to severe range) (t=2.90, df 34, p<0.01). In addition females in the sample scored appreciably higher in terms of total symptom reporting (t=-2.15, df 33, p<0.05) Further subscale scores suggest a trend such that the female participants displayed higher (though non-significant) levels of self-report anxiety, depression and psychoticism. No differences were found with respect to age in terms of self-report symptomatology.

Table 7. T-test comparisons of gender, and participants under vs. over 16, with respect to self-report measures.

Measure/Subscale	Male vs. (n=10)	Female (n=25)	t-value	<16 vs. (n=16)	>16 (n=19)	t-value
Beck Depression Inventory	**19.5**	**32.5**	**2.90****	**27.2**	**30.5**	**-0.74**
Symptom Checklist - 90	**119.5**	**180.5**	**-2.15***	**151.3**	**172.9**	**-0.79**
Anxiety	1.4	2.22	2.02	1.9	2.06	-0.42
Depression	1.5	2.37	2.36	1.93	2.31	-1.12
Interpersonal Difficulties	1.56	2.30	1.97	1.66	2.44	-2.30
OCD	1.52	2.05	1.49	1.77	2.01	-0.74
Paranoid Ideation	1.35	1.81	1.19	1.55	1.78	-0.65
Phobic Anxiety	0.91	1.46	1.52	1.16	1.42	-0.76
Psychoticism	0.98	1.82	2.55	1.49	1.67	-0.55
Somatisation	1.04	1.65	1.57	1.49	1.46	0.09
Hostility	1.80	1.92	0.28	2.18	1.65	1.32

Note : Planned comparisons are shown in bold. All variables were normally distributed. Post hoc comparisons were judged with respect to appropriate Dunn's t criteria.
*p<0.05; **p<0.01

To further examine the above finding that gender appears to have a significant effect on total self-report symptomatology (and to a lesser non-significant degree on reporting of anxiety, depression and psychoticism), the post-hoc hypothesis that this difference may be mediated by resolution of trauma or loss, was tested with a series of Two-way analyses of Variance. This did not appear to be the case for either the BDI (F=0.002, df 1.32, ns) or SCL-90 (F=3.37, df 1,31, ns). In addition no significant effect of resolution was found for gender reporting of Depression (F=0.90, df 1,31, ns) or Psychoticism (F=3.49, df 1,31, ns). However resolution of trauma appeared to have a significant effect on gender reporting of Anxiety (F=4.47, df 1,31, p<0.05). As a further test of this hypothesis the sample was split into only those presenting as resolved, and those unresolved. T-tests were then performed on these discrete groups in terms of gender differences for the self-report measures found significant above. The results of this analysis are shown below in Table 8 This table

indicates that when gender differences are examined only within those individuals rated as resolved with respect to trauma, the significant differences found above do not remain. However, a second analysis of those individuals rated as unresolved, partially confirms the hypothesis that gender differences in self-report symptomatolgy are mediated by resolution of abuse, particularly for total SCL-90 scores, and subscales of Anxiety and Psychoticism.

Table 8. Summarises T-tests examining gender differences between resolved and unresolved individuals with respect to self-report symptomatology.

	Resolved			Unresolved		
	Male vs. (n=6)	Female (n=10)	t-value	Male vs. (n=4)	Female (n=15)	t-value
Beck Depression Inventory	18.7	31.1	1.75	20.7	33.6	2.12
Symptom Checklist - 90	134.5	142.1	0.18	97	206.1	3.10*
Anxiety	1.75	1.74	-0.02	0.87	2.55	3.38*
Depression	1.61	2.07	0.76	1.44	2.58	2.78
Psychoticism	1.28	1.54	0.48	0.52	2.02	3.81**

Note : All variables were normally distributed. Post hoc comparisons were judged with respect to appropriate Dunn's t criteria.

To illustrate the effect of lack of resolution on gender reporting of Anxiety Figure 3 shows clearly that when both males and females in the sample are resolved with respect to trauma and loss, their respective reporting of anxiety symptoms is almost equal (shown by converging lines). However, when individuals rated as unresolved are considered gender influence on reporting of anxiety is significantly different, with females reporting higher levels of anxiety (illustrated by divergent lines).

Figure 3. Line graph showing gender differences in self-reporting of Anxiety on the SCL-90, with respect to inclusion or otherwise on the Unresolved Category.
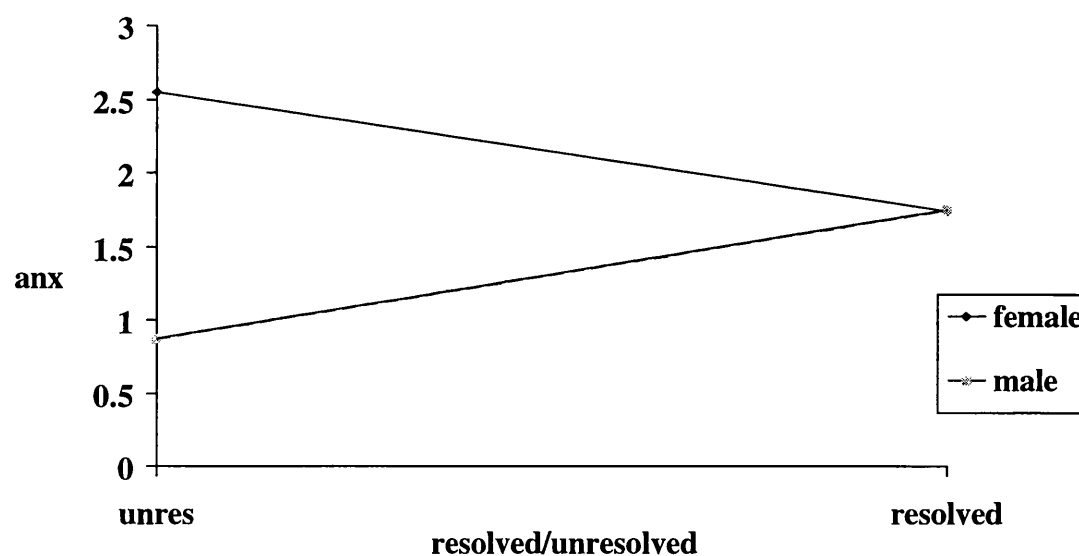
Note : Unres = Unresolved
Anx = Anxiety

One further analysis was carried out to look at differences in self-reporting of symptomatology between those presenting with externalising and internalising disorders. No significant differences were found, either for total symtom reporting or for SCL-90 subscales.

Table 9. Summarises T-test results examining differences between externalising and internalising disorders with respect to self-report symptomatology.

Measure/Subscale	External vs. (n=22)	Internal (n=13)	t-value
Beck Depression Inventory	**29.5**	**28.6**	**-0.18**
Symptom Checklist - 90	**171.8**	**157.8**	**-0.49**
Anxiety	2.04	1.95	-0.23
Depression	2.15	2.12	-0.10
Interpersonal Difficulties	1.89	2.20	0.82
OCD	2.17	1.74	-1.25
Paranoid Ideation	1.83	1.58	-0.69
Phobic Anxiety	1.28	1.32	0.11
Psychoticism	1.77	1.47	0.90
Somatisation	1.57	1.41	-0.43
Hostility	2.44	1.56	-2.25

Note : Planned comparisons are shown in bold. All variables were normally distributed. Post-hoc comparisons were judged with respect to appropriate Dunn's t criteria.

Attachment and Interpersonal Problems

As above the planned analysis examined total scores for the IIP using t-tests, in terms of their relationship to a number of two-way splits. Further post-hoc tests were carried out to investigate differences in subscale data between the two-way splits outlined above. Table 10 summarises the differences between secure and insecure attachment classification, in terms of total IIP score, demonstrating that those rated as secure report significantly fewer interpersonal problems ($t=-2.04$, df 31, $p<0.05$). Four out of the eight sub-scales were non-normally distributed, and as such Wilcoxon Rank Sum analyses were carried out. However all post-hoc comparisons for the IIP subscales indicated that there were no significant differences between the secure and insecure group. Table 10 also indicates that there were no significant differences in terms of total IIP and subscale scores between the preoccupied and dismissing groups.

Table 10.
T-test and Wilcoxon Rank Sum comparisons of Secure vs. Insecure classifications, and Dismissing vs. Preoccupied classifications with respect to interpersonal problems.

Measure/Subscale	Secure (n=4)	vs. Insecure (n=29)	t-value	Ds (n=19)	E (n=10)	t-value
IIP total	**43.5**	**63.4**	**-2.04**	**63.1**	**64.0**	**-0.12**
Involvement			*Ws=75.5*	1.92	2.17	-0.61
Supportive			*Ws=50.5*	1.89	1.55	0.76
Sociability	1.12	2.23	-2.14	2.09	2.50	-1.04
Openness	1.12	1.06	0.15	0.89	1.37	-1.59
Dependence	1.06	2.03	-1.86	1.97	2.15	-0.45
Caring			*Ws=43.0*	1.85	2.22	-0.94
Assertion			*Ws=47.0*	1.93	2.17	-0.60
Aggression	1.25	1.96	-1.18	2.15	1.60	1.22

Note : Planned comparisons are shown in bold. All variables were normally distributed except those indicated in italics. Appropriate Wilcoxon Rank Sum values are given. Parametric post-hoc comparisons were judged with respect to appropriate Dunn's t criteria. Ds = Dismissing, E = Preoccupied

Table 11 summarises further analysis of the relation between attachment status, abuse and interpersonal problems, revealing no significant differences in reporting of interpersonal difficulties between those individuals judged resolved and unresolved with respect to loss and trauma. In addition the presence of sexual abuse appears to have no effect on reporting of interpersonal difficulties.

Table 11.
T-test comparisons of Resolved vs. Unresolved classifications, and presence or absence of sexual abuse with respect to interpersonal problems.

	Res vs. (n=16)	Unres (n=20)	t-value	Abuse vs. (n=13)	Non-ab (n=23)	t-value
IIP total	**56.8**	**64.1**	**1.19**	**64.1**	**59.0**	**-0.81**
Involvement	1.86	2.32	1.31	1.96	2.4	-1.13
Supportive	1.62	1.76	0.38	1.59	1.88	-0.78
Sociability	2.10	2.03	-0.21	2.26	1.73	1.55
Openness	0.98	1.06	0.30	0.93	1.19	-0.97
Dependence	1.76	1.99	0.65	1.88	1.90	-0.07
Caring	1.47	2.07	1.82	1.55	2.25	-2.05
Assertion	1.76	2.19	1.35	2.0	2.0	0.00
Aggression	1.94	1.84	-0.25	1.68	2.23	-1.38

Note : Planned comparisons are shown in bold. All variables were normally distributed. Post-hoc comparisons were judged with respect to appropriate Dunn's t criteria.

Table 12 (see below) indicates that no differences were shown between the responses of male and females in the sample with respect to reporting of interpersonal difficulties. However, two significant differences were found when the sample was split into those under 16 and those over 16. Those over 16 reported significantly higher levels of interpersonal difficulty than their younger counterparts (t=-2.02, df 34, p<0.05), and particularly reported a greater tendency for Over-dependence (t=-3.48, df 34, p<0.01).

Table 12.
Summarises t-test comparing interpersonal problems with respect to age and gender.

	Male vs. (n=10)	Female (n=26)	t-value	<16 vs. (n=17)	>16 (n=19)	t-value
IIP total	**61.0**	**60.8**	**-0.03**	**54.6**	**66.5**	**-2.02***
Involvement	2.35	2.03	0.80	1.84	2.37	-1.51
Supportiveness	1.82	1.65	-0.43	1.64	1.75	-0.29
Sociability	2.25	2.00	-0.54	1.77	2.34	-1.77
Openess	0.75	1.13	1.37	0.97	1.07	-0.42
Dependence	1.70	1.96	0.70	1.35	2.37	-3.48**
Caring	1.35	1.98	1.70	1.60	1.98	-1.13
Assertiveness	2.1	1.96	-0.39	1.64	2.31	-2.24
Aggression	1.82	1.90	0.18	2.14	1.64	1.32

Note : Planned comparisons are indicated in bold. All variables were normally distributed. Post-hoc comparisons were judged with respect to the appropriate Dunn's t criteria.
*p<0.05 ** P<0.01

As with self-report measures of symptomatology differences in diagnosis were examined with respect to interpersonal difficulties, summarised in Table 13. As shown there were no significant differences between the two groups, although there is a clear trend suggesting that those individuals who externalise their distress may report more interpersonal problems related to Aggression.

Table 13.
Summarises t-test comparison with respect to internalising vs. externalising disorders

	External vs. (n=13)	Internal (n=23)	t-value
IIP Total	**61.4**	**60.6**	**-0.13**
Involvement	2.02	2.17	0.41
Supportiveness	2.02	1.52	-1.38
Sociability	1.73	2.26	1.76
Openess	0.96	1.06	0.39
Dependence	1.65	2.02	1.06
Caring	1.86	1.77	-0.26
Assertiveness	1.67	2.18	1.59
Aggression	2.5	1.5	-2.61

Note : Planned comparisons are shown in bold. All variables were normally distributed. Post hoc comparisons were judged with respect to appropriate Dunn's t criteria.

On the basis of the results shown in Table 13, it was clear that reporting of interpersonal difficulties on the IIP was such that analysis in terms of how attachment classification might relate to the traditional notion of poles of interpersonal difficulty would be difficult. However, a factor analysis was carried out on the data obtained to determine whether specific dimensions of problems were apparent in the data. The rotated factor matrix yielded three possible dimensions in the data : A factor where dependence was high, assertiveness was low, sociability was low, and difficulties with being too caring were evident. This factor was assigned the label of Exploitable, and may relate to the Submissiveness pole from interpersonal theory. A factor suggested a cluster of Aggression associated with Lack of Supportiveness, appearing to relate to the pole of Hostile/Cold. This factor was labeled Hostile. A final factor cluster suggested a grouping in the data of excessive lack of openess and low involvement. This factor was labeled Detached. Reliability analyses were carried out for each of these factors, with only the first factor of Exploitable attaining a significant Alpha coefficient of 0.76. Specific factor loadings and internal consistency co-efficients for the proposed factors are shown in table 14.

Table 14. Factor analysis of data obtained from the IIP, showing loadings on particular subscales and reliability coefficients.

	Factor 1	Factor 2	Factor 3	Reliability Coefficient
Dependence	0.86			Alpha = 0.76
Assertiveness	0.83			
Caring	0.71			
Sociability	0.61			
Aggression		0.84		Alpha = 0.59
Supportiveness		0.80		
Openess			-0.85	Alpha = 0.48
Involvement			0.71	

Given the relatively weak internal consistency of Factor 2 and 3, only Factor 1, that of Exploitable was used in further analysis. Thus as above a number of independent sample t-tests were carried out to ascertain if there were any differences between Secure vs. Insecure groups, Dismissing vs. Preoccupied, Resolved vs. Unresolved, Abuse vs. Non-abuse, Diagnosis, and gender and age factors, with respect to the cluster of Exploitable

Table 15. Summarises t-tests examining the association between attachment variables, abuse, age and gender with respect to the Exploitable factor.

			Mean			t-value
Secure	(n=4)	vs. Insecure	(n=29)	4.8	vs. 8.3	-2.17
Dismissing	(n=19)	vs. Preoccupied	(n=10)	7.8	vs. 9.05	-1.01
Resolved	(n=16)	vs. Unresolved	(n=20)	7.11	vs. 8.29	1.16
Abuse	(n=13)	vs. Non-abuse	(n=23)	7.88	vs. 7.69	0.18
Male	(n=10)	vs. Female	(n=26)	7.4	vs. 7.9	0.44
<16	(n=17)	vs. >16	(n=19)	6.36	vs. 9.01	-2.87*
Internal	(n=23)	vs. External	(n=13)	8.2	vs. 6.9	1.26

Note : All variables were normally distributed. Comparisons were judged with respect to appropriate Dunn's t criteria.
*p<0.05

As Table 15 suggests significant differences were found with respect to the cluster of Exploitable for only one of the variables examined. Thus with respect to the cluster of Exploitable those individuals over the age of 16 report significantly higher numbers of interpersonal problems in this cluster of Exploitable, than those under 16 (t=-2.87, df 34, p<0.05).

Qualitative Analysis

a) Resolution of Trauma and Loss

To further illustrate the differential impact of resolution of loss and trauma a selection of discourse samples are shown from a variety of the interviews obtained for this study highlighting the differences between those rated resolved versus those rated unresolved. The first two passages illustrate discourse reflective of resolution.

19-year-old female responding to question regarding experiences of physical and sexual abuse.

"Erm, now, erm I think , -- now that I have a reason why things happened, I mean we can't always understand why things happen as they do, but erm, for, forgiving is part of accepting it I believe, and I think I have a reason now why things may have happened, erm even though it was quite bad, erm -- you have to move on and accept things for what they are.....Just because my parents may not love me, it doesn't mean that I'm not loveable.

This passage reflects how the respondent has managed to achieve some level of forgiveness regarding her experiences of physical abuse, a process which is seen as central to successful resolution of trauma. In addition she indicates that she does not feel responsible for the events that happened, that she is able to retain a sense of self-worth despite the actions of her parents.

13 year-old male respondent answering question on impact of physical abuse.

"It hasn't really. No it's all -- in a way you get to build trust back up with people and er if it had been as bad as like I know some other people here like you know who get in big fights with their dad .....If it got to something like that I don't know if I would be able to forgive him, but because it was only like you know only little scampers if you like, we never used to seriously hurt each other, it was pretty easy to forgive him if you know what I mean, like I've forgiven him by now"

This passage also illustrates how the young person has been able to reach some form of forgiveness for what happened to him. In addition there is a recognition that this process is one that takes place over time.

The following two passages of discourse reflect lack of resolution of abuse experiences.

18-year old female responding to global question re. impact of sexual abuse.

"It's fucked up my life. -- Obviously. -- That's the most obvious thing anyone could say. -- It's made me have low self-esteem and erm . . . . { {20 seconds } } I don't know because for a long time I never thought it was that making me feel the way I did, -- erm but the only place the feelings come from are my childhood (The feelings you have now?) Yeah. Feelings I've had for most of my life, they're the same feelings. -- Except for now I act on them, that's the only difference."

The above response reflects clearly how the respondent remains unresolved with respect to her experiences of sexual abuse, unable to distance herself from the experiences. Although she does acknowledge the effect they have had on her, she is not able to reach a state of forgiveness or understanding that it may not have been her fault. Also characteristic of unresolved discourse are the long gaps where the respondent appears to be almost dissociating whilst talking of the experiences, reflecting current absorption and confusion surrounding them.

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16 year-old female responding to question re. childhood abuse

"It means that I don't trust anyone anymore . . . . . {{5 seconds}}Cos I'm always scared of being abused. I just don't see any way that it's ever gonna stop . . . . .
. . . . . {{10 seconds}} They made me hate my body and hate my mind.

Again the discourse pattern of the above respondent reflects lack of resolution in her difficulty in distancing herself from the effects of the abuse, unable to recognise that it will ever stop, and thus perhaps seeing herself as responsible for the things that happened. This feature is what Main has called the respondents continuing fearfulness of the parent (or other abusive figure), manifested now in the fear of being taken over by the parent in her own mind. The respondent seems to convey that she feels that she has no control over whether future experiences of abuse will occur, that earlier experiences have 'taken her over', such that she feels unable to stop these processes occurring in the present. In addition the pauses in speech reflect difficulties in thinking about the experiences in a coherent manner.

b) Reflective Self-Functioning

The following passages are included to further illustrate the differential capacities in the sample for reflective self-functioning.

14-year old male responding to question "Why do you think your parents behaved towards you as they did when you were a child?" (AAI rating - Cannot Classify)
RSF = -1

"What do you mean? I don't know, ask them."

18-year old female responding to question "Do you think your mum and dad realised they were making you feel rejected?" (AAI rating - Unresolved/Dismissing Experienced CSA)
RSF = -1.

My mum always put it down to my dad leaving, and not having a dad for everything. I mean you ..... I suppose you'd call it a psychiatric history back to when I was twelve and since then my mum's always put it down to my dad leaving.

The first response demonstrates the discomfort caused at being asked to reflect on the behaviour of others. The respondent seems actively to disavow the notion that he may have some idea of the underlying causes of his parents behaviour. The second response illustrates how the speaker is unable firstly to make sense of her experiences without resorting to an explanation given by her mother. Attributing his behaviour to a psychiatric disorder, without any qualification of how this may have influenced both his behaviour, and how this may have been experienced by the respondent as a child, mean that the passage is rated as being absent in terms of RSF.

15 year-old female responding to question "What effect do you think your childhood experiences have had on you now? (AAI rating - Unresolved/Dismissing. Experienced sexual trauma)
RSF = 1

'Erm, cos I used to think about them all the time, I couldn't concentrate on anything, that's I think, one of the reasons that my school work slipped, and erm, and I didn't talk to anyone about them, just used to keep it in, and then every little problem I had I just kept it in, and that's when I started cutting and shit like that. -- And that's all I used to think about all the time.

In this extract the respondent is talking in terms that suggest that she knows that events affected the way in which she behaved (distinguishing the discourse from the above rated RSF -1), but there is no indication of how the events might have done so. No consideration is given of how the thoughts of others may have guided their

behaviour, and thus influenced her experiences. The respondent indicates that she actively avoided reflection by cutting herself in the past, but the discourse is not suggestive of a reflective stance about these events with the benefit of hindsight.

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16 year-old female responding to question " Why do you think your parents behaved the way they did towards you as a child?" (AAI rating - Preoccupied) RSF = 3

"I think my dad was the way he was because, cos his dad abused him, and it's a bit of that showing, but that's also why he never physically touch, you know, hit us or anything, but that way he was, I think he got that from his dad. And my mum's like it because I think she's a bit scared of my dad and also she kind of worships him, and is really kind of, she's not strong at all and so she'll just agree with everything that he says, and everything that he does, and never stood up for us or anything. So that's why she is the way she was. And also cos she's not strong at all, and she's so kind of soppy and pathetic that's why she usually ended up hitting us because she didn't have any control, she couldn't control us"

The above passage qualifies for a rating of three (still low RSF), as some attempt is made by the speaker to link her father's behaviour to his own childhood. However, no clear understanding is given as to how these experiences may have guided his thinking in relation to his behaviour towards the speaker. In addition when attempting to understand the cause of her mother's behaviour the speaker does not appear to be referring to the mental state of her mother as a possible reason, but rather global attributes such as weakness or lack of control. A higher rating may have been given if the speaker had been clearer about why her mother lacked control.

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13 year-old male responding to question " Why do you think your parents behaved as they did towards you as child?" (AAI rating - Dismissing) RSF = 5

"Cos they didn't know better. Neither of them had parents to teach them how to be proper parents, so, my dad had a very difficult childhood, his dad was a preacher, so he didn't get to see much of him most of the time, he was off. His dad didn't have a dad, so he never really knew how to be a father, so his dad, his granddad, my granddad's dad left him when he was about one. He never actually saw him, so he never learned how to be a father so he never taught my dad how to be a father."

The speaker in this passage appears to recognise the impact that difficult childhood experiences have had on the capacity of his father to learn about parenting.

There is an understanding that underlying his father's behaviour is a reduced capacity for thinking about the role of parenting caused by a trans-generational deficit in the transmission of parenting skills. This differs from the above passage where the speaker does not make reference to the impact of difficult childhood experience on the capacity of another to parent.

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19 year-old female responding to question "Do you think your parents realised they were making you feel rejected?" (AAI rating - Unresolved/Secure)
RSF = 6

"No, I don't think my mother and my father did when my father was alive. I think after he died as I got older and I began to rebel more, my mum might have sussed. She knew, she said she knew what she was like doing, but she couldn't stop herself from doing it, from pushing inside, she doesn't know what happens between us for it to go so wrong. I don't think she intentionally did it to hurt me, but I still felt hurt. She was so close to my brother. I didn't feel that I got a look in, and she agrees that she once said to a doctor that she felt closer to my brother than me, and she loved him more than me, and that really hit home, that was when I was 18 last year, and I felt really bad -- because it just confirmed what I knew all along, that I wouldn't be anything great to her."

This final extract indicates a good level of RSF, where the speaker is able to make sense of her mother's behaviour as guided by internal mental states. Thus she is able to recognise that her mother may have acted in ways that were unintentional, that reflected her own internal confusions. There is an indication that the subject was aware that she was able to keep her true feeling hidden from her mother, but that her mother also held an element of suspicion about how the respondent felt, through her behaviour.

DISCUSSION

Overview

The present study aimed primarily to examine the internal working models of attachment in a sample of in-patient adolescents. Although such a broad aim has been addressed by previous studies, it was purpose of this study to extend that research by examining the impact of childhood maltreatment, particularly sexual abuse, it's effects on the organisation of central thought processes, and how this may influence the development of psychopathology. Central to the study was the hypothesis that childhood experiences of sexual abuse may have a profound impact on the individual's capacity to mentalise, or think about the thoughts of others, and in turn be associated with externalising psychopathology. This hypothesis was partially confirmed in the present sample. In addition the present study partially confirmed the hypothesis that there are higher levels of self report symptomatology and interpersonal problems in a sample of in-patient adolescents who had reported childhood sexual abuse as opposed to those who had not. The potential limitations of the study are then discussed, related to sampling, use of measures, and more theoretical problems associated with attachment research, along with possible future areas for research suggested by the present study. The discussion ends with a review of the clinical implications of the present research, highlighting the need for preventative programmes to address the impact of early attachment experiences, in addition to more traditional forms of intervention.

Main Findings of the Study

Attachment patterns in In-patient Adolescents

The overall findings of the study confirm the general hypothesis that is now becoming firmly established, that psychopathology both in adults and, as in this study, adolescents, is associated with greater insecurity in terms of one's state of mind

regarding attachment experiences (Dozier, 1990; Rosenstein & Horowitz, 1996). In both four-way and five-way analyses this was confirmed, such that only 10-12% of the sample were judged as secure with respect to attachment. These results are in general agreement with those found by Rosenstein and Horowitz (1996), who studied a very similar adolescent sample, and Adam et al (1996) in their study of suicidal adolescents. As expected the results are very different to those found in non-clinical samples. As discussed above Kobak and Sceery (1988), Allen and Hauser (1991), Hesse et al (1993), and Sagi et al (1994) all report that more than half of non-clinical samples are classified as secure-autonomous with respect to the Adult Attachment Interview. The implications of this finding suggest that differing attachment patterns during early childhood, may lead to divergent developmental outcomes, such that infant insecurity of attachment leads to the development of internal working models that influence behaviour in ways that may increase vulnerability to psychopathology. It would seem reasonable to suggest that disturbance observed during the developmental phase of adolescence is in part due to the way in which attachment experiences guide representations of the world and important others. In particular if this developmental stage is accepted as one during which important transitions are made requiring reorganisation of information pertinent to attachment to ones primary care-givers, (the process of separation-individuation), then existing disturbances in the way this information is organised may be seen as a contributing factor in the development of psychopathological problems in this age group.

Although there are similarities between the current study's distribution of attachment patterns and that found in the Rosenstein and Horowitz study, there are also distinct differences. Notably, within the four-way analysis of patterns of insecure attachment, the present study found that 27% of the sample presented with a preoccupied interview discourse, whilst 51% of interview discourses were dismissing. Rosenstein and Horowitz's study demonstrated a rather different distribution, with 47% dismissing, and 50% preoccupied. With a larger sample Rosenstein and Horowitz observed a far smaller percentage of individuals classified as secure-

autonomous, just 3%. Some of this variance may be related to the inclusion of the cannot classify category in the present study, but the differences in the findings may be more likely influenced by extraneous factors such as when the interview was conducted in the individual's stay. Thus at least 3 out of the 5 participants classified as secure-autonomous in the present study were reaching the end of their period of in-patient treatment. This may suggest that attachment security increases towards the end of treatment (one would hope as a result of therapeutic change). However, it was not possible to gain a complete set of data regarding length of stay for all participants, making such a suggestion tentative. Data are also unavailable from the Rosenstein and Horowitz study as to when participants were interviewed during their stay, although it is conceivable, as with many attachment related studies, that participants were recruited at the beginning of treatment (when insecurity would be presumed to be higher), whereas the present study examined a broad cross-section of adolescent at various stages in their treatment. This indicates the need for further examination of the present data to elucidate the patterns of attachment discourse as related to length of stay, and the implications of this for therapeutic change.

Resolution of Trauma and Loss

The present study took as one of it's main aims, that of examining the impact of lack of resolution of trauma and abuse on psychopathology (as rated through the AAI), particularly as it may relate to adolescents resident on in-patient care units. In terms of the inclusion of the unresolved category, there are further striking differences between the present sample and that of Rosenstein and Horowitz. The inclusion of the unresolved category in their study, yielded relatively low numbers displaying lack of resolution, those diagnosed with an affective disorder being more likely to be classified in this way. However, high numbers of dismissing and preoccupied attachment patterns remained. In the present study including this category reduces the number classified as solely dismissing to 22%, and those preoccupied to only 7%, with 51% of the sample judged to be unresolved. It must be remembered that in

assigning interviews the unresolved rating, three subscale scores are considered : resolution of loss, resolution of sexual abuse, and resolution of physical abuse. An individual interview is given an overall rating of unresolved when scoring is greater than five on one or more of these scales as it applies to those sections of the interview pertaining to experiences of loss and trauma. The results demonstrate that although over half the sample were classified as unresolved, this classification may have been assigned for a variety of reasons. Thus for example the overall classification can be assigned to those who have only experienced loss, not other forms of trauma. Interestingly in this respect, although thirteen individuals in the sample received a rating on the scale regarding resolution of loss, only three of these received an overall classification of unresolved. Thus out of the thirteen people in the sample who had experienced a loss of some kind, only three remained unresolved. This may indicate that loss has less of a impact for adolescents in terms of trying to make sense of the world, and such experiences may be encountered without leaving pervasive effects on central thought processes. In contrast, seven participants were rated with respect to all three subscales, i.e. loss, and sexual and physical abuse, (indicating the presence of these experiences). Out of these seven individuals six were given an overall interview classification of unresolved. This suggests that trauma involving sexual and physical abuse, along with the trauma of loss, will have severe effects on one's capacity to organise thinking and reflect adequately on these experiences in order to resolve them. This was also the case for those who displayed lack of resolution of physical abuse and loss together, with all six participants rated on these subscales attaining an overall unresolved classification. One may surmise from these findings that different forms of trauma may have differential effects on ones capacity to make sense, understand and ultimately come to terms with those experiences. As Fonagy et al (1996) have suggested differences for example between loss experiences and those of abuse, may in part be due to the impact that these experiences have on the individuals capacity for reflective self-functioning. Thus, forms of abuse that are physically and sexually invasive, may leave the individual with little choice but to disavow the process of

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thinking about the thoughts of others, as this is simply unbearable. The Fonagy et al work establishes a link between sexually abusive experiences and a reduction in capacity for mentalising, but not necessarily for physical abuse. However, as the present study suggests, for adolescents the pernicious effects of both physical and sexual abuse, may impact on the individuals capacity for mentalising, and lead to difficulties in later resolution of these experiences. Clearly experiences of multiple forms of abuse may increase this tendency. Unfortunately, numbers in the present study were too small to fully investigate the differential impact of various combinations of abusive experiences on capacity for mentalising and resolution. Thus although the data are suggestive that the cumulative effects of multiple abuse or loss experiences may be associated with greater difficulty in later resolution of these experiences, it is unclear from this study how sexual abuse alone may differ, for example, from physical abuse in terms of later resolution. Interestingly one participant who had experienced all three types of trauma did not attain an overall classification of unresolved, indicating that individuals may be able to come to some form of resolution with respect to pervasive traumatic experiences.

The discrepancy shown in the differences between the high numbers of unresolved participants in the present study and low numbers in the Rosenstein and Horowitz study, may be due to the application of criteria for the unresolved classification. As Adam et al (1996) highlight the Rosenstein and Horowitz study did not rate abuse or separation as variables influencing classification as Unresolved, factors included in the rating for the present study and that of Adam et al (1996). This strongly indicates the need for convergence of application of AAI classification systems if valid comparisons are to be made between studies. However, it may be that Rosenstein and Horowitz did not have access to the updated criteria for rating loss and abuse, as was used in the present study. Nevertheless the present study is the first to demonstrate the extent of difficulties with resolving trauma in a sample of in-patient adolescents presenting with an array of psychopathology.

The high numbers of adolescents classified as unresolved in the present study is more in line with that found by Adam et al (1996) with suicidal adolescents. That study suggested that lack of resolution was strongly associated with suicidal behaviour and ideation, particularly if trauma had taken the form of abuse (physical or sexual). If suicidal behaviour is considered reflective of an internalising psychopathology (Scarth, 1993), one may have expected to find a similar pattern in the present sample, i.e. those presenting with internalising symptomatology may show more difficulties resolving trauma than those with other disorders. However this was not supported in this study. Thus the high levels of unresolved classification did not appear to be associated with type of psychopathology, whether internalising or externalising. A possible explanation for this lack of significance, may in part be due to the diversity of the sample studied. Thus the high levels of lack of resolution would indicate high levels of disturbance throughout the sample, but the variety of presenting psychopathology, in particular co-morbidity (broad categories of internalising and externalising diagnosis were assigned but did not reflect the extent of co-morbidity in the sample), did not allow for specificity with respect to identifying clear associations between type of psychopathology and the Unresolved category.

In terms of attachment classification, as expected those presenting with a discourse reflecting security with regards to attachment experiences, showed a trend towards greater resolution with respect to trauma or loss, than those with insecure narratives. This may not be surprising as resolution scales may be used in assigning overall ratings to the AAI. What is important is the finding that even though individuals may experiences abuse it is possible to come to terms with what has happened. Thus three out of the five participants judged to be secure on the AAI, reported abuse experiences in their discourse, but provided narratives of these experiences that were coherent, and indicated that the individuals concerned did not blame themselves or take responsibility for what had happened. There are a number of possible reasons for why individuals may develop the capacity to resolve abuse experiences. Firstly it may be that they were actually securely attached in childhood

(actual childhood attachment status is not known for the current sample). Thus through the attachment relationship, a greater capacity for mentalising was fostered, making it possible to think more coherently about any subsequent trauma. Secondly it is possible that these individuals did not experience attachment security to their main care-giver, but were securely attached to another important figure. Fonagy et al suggest that the presence of security provided by a secondary attachment figure may mediate the effects of trauma that may occur. Thirdly however, there may be a variety of factors not directly related to attachment that mediate the effects of abuse and lead to resolution, including infant temperament, severity, type, and duration of trauma (Finkelhor, 1988).

By contrast discourse indicative of insecurity was associated with lower capacity for resolution of abusive experiences. Again as indicated above, conclusions cannot be drawn as to whether this is reflective of actual experience of infant attachment insecurity, but rather that the way in which such individuals construe the world currently leads them to present an insecure narrative, which in turn is associated with incoherence and disorganisation when talking about traumatic experiences. As posited above Main (1991) and Bowlby (1973) in their presentation of the notion of multiple models of experience, insecure attachment experiences may lead an individual to develop multiple narratives for singular experiences. When abuse occurs that individual is disadvantaged in attempting to resolve his/her experiences as existing representations of those experiences are incompatible and confusing. This may be further confounded by the disavowal of the mentalising process. The narrative responses outlined in the results section, highlight the very clear differences in the discourse patterns of resolved and unresolved individuals (notably those rated as unresolved were also given underlying ratings of insecure attachment), providing clear evidence of the incoherence in strategy of those rated as insecure, in attempting to make sense of traumatic experiences. However, the data does not suggest that insecure attachment in childhood directly influences ones capacity to overcome the effects of trauma.

Adam et al (1996) point out it is not necessarily the experience of abuse alone that may lead to lack of resolution and thus psychopathology, but how the individual is able to process and make sense of this information. Thus for adolescents who are actively suicidal it is suggested that it is their very lack of organisation of those experiences that causes so much distress, and potentially greater levels of psychopathology. However, as Fonagy et al (1996) have highlighted there may be a further mediating factor of capacity for mentalising which may influence both lack of resolution and subsequent psychopathology. Employing the Reflective Self-Functioning scale the present study demonstrated that experiences of abuse were associated with a trend (non-significant) towards a deficit in mentalising capacity. As outlined above this indicates that experiences of abuse, particularly sexual and physical, may lead the developing infant away from reflecting on the mental states of others, and make the task of resolving that abuse at a later age extremely difficult. By contrast the study demonstrated that resolution of trauma was associated, as expected with higher capacity for mentalising.

Figure 4 outlines a suggestive model on the basis of the present study. Although we do not have the data to determine infant attachment security, what the data does suggest is that current security with respect to attachment experiences is associated with greater resolution of loss and/or sexual and physical abuse, as expressed in AAI discourse in adolescence. In addition the study demonstrated a significant association between increased capacity for reflective self-functioning and resolution of trauma suggesting that it is through the acquisition of mentalising capacity that individuals secure in their narrative response are able to mediate the effects of trauma, and resolve these experiences later in life. By contrast adolescents who present with discourse patterns that are insecure with respect to attachment experiences have a decreased capacity for reflecting on mental states and thus find it more difficult to come to terms with earlier experiences of childhood trauma..

Figure 4. The proposed relationship between security of attachment, the development of mentalising capacities and resolution of childhood trauma.
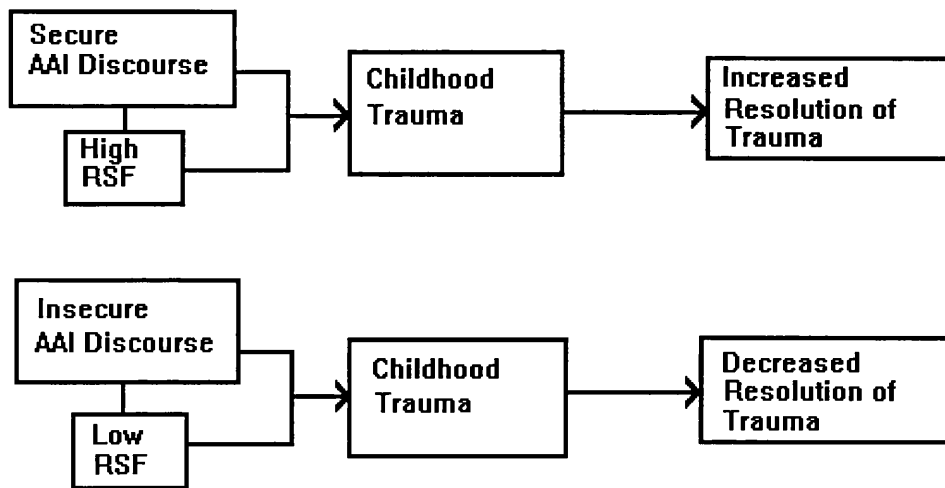
Note : RSF = Reflective Self-Functioning

Although the above model groups together the dismissing and preoccupied categories, the findings are suggestive of differences in the capacity of those individuals rated as insecure with respect to attachment experiences, to resolve trauma. In particular there appear to be differences in the capacity of individuals assigned the preoccupied as opposed the dismissing classification in terms of resolving experiences of loss. Thus those individuals who are classified as preoccupied with respect to attachment appear to have significantly more difficulty in resolving experiences of loss than those rated as dismissing. This may relate to the notion that preoccupied discourse strategies are associated with rumination, current anger or fear, and passive acceptance in relation to experiences. For those individuals where these processes are currently active, it may be difficult to distance oneself sufficiently from traumatic loss, to achieve a sense of resolution. In contrast, those individual presenting dismissing discourse, present a narrative often characterised by disavowal of emotional processes, and devaluing of attachment figures, giving no clear markers as to whether traumatic experiences indeed have had an emotionally engaging impact.

Interestingly no significant differences were observed between dismissing and preoccupied groups in terms of their respective resolution of sexual or physically abusive experiences. There is a trend suggestive that dismissing individuals are more resolved in this respect, and one may suggest that given a larger sample size, such a difference would have been significant. This finding does however support the theory that insecurity of attachment regardless of whether it is preoccupied or dismissing, albeit as assessed by adult discourse, may influence one's experience of abuse, again through the development of multiple models of experience and impact on mentalising capacity, making resolution of these experiences extremely difficult. With reference to the two categories of insecure attachment discourse, limited capacity for reflective self-functioning may be shown through a disavowal of a reflective stance (probably associated with a dismissing stance), or an overly analytic, unintegrated or bizarre stance towards mentalising (probably associated with preoccupied discourse).

Attachment and Diagnosis

The relationship between category of diagnosis and lack of resolution of loss was addressed above. Examination of differences in diagnosis with respect to further attachment variables indicated that there was no difference between presentation of disorder in terms of secure versus insecure attachment. More interesting is the finding in the present study that there is no difference between those classified as dismissing or preoccupied in terms of presenting psychopathology. Rosenstein and Horowitz (1996) did show significant differences between these two forms of attachment insecurity and psychopathology, suggesting that individuals with a dismissing attachment discourse were more likely to present with externalising disorders, while those with preoccupied styles on the AAI presented with internalising psychopathology. As discussed above, the lack of specificity of diagnosis in the present sample may have meant that it was not possible to pick up subtle differences with respect to type of insecurity. Smaller numbers in the present study, coupled with high levels of co-morbidity may also mitigate against finding such differences. In

addition the Rosenstein and Horowitz study found high levels of both dismissing and preoccupied attachment patterns, even when the unresolved category was included. The present sample consisted of participants, of which more than half displayed attachment discourse which was markedly disorganised and incoherent. It may be that such discourse patterns are not associated with one particular developmental outcome in terms of pathology, but rather disorganisation of central thought processes leaves one vulnerable to a number of different pathological outcomes. As discussed below this may be compounded significantly by the experience of childhood sexual abuse.

With respect to diagnosis, there were significant associations between the presence or otherwise of sexual abuse and psychopathology. Those who were diagnosed as externalising their distress were more likely to have reported sexual abuse in their AAI discourse (it was not possible from the small sample size to determine whether this was mediated by resolution of these experiences). This suggests that those individuals in the sample who had not been sexually abused were more likely to internalise their distress. With respect to the existing literature, a variety of reviews indicate the link between experiences of abuse and later psychological difficulties adulthood (Cahill et al, 1991). Such reviews generally indicate the pervasive effects on psychological functioning that may be a consequence of sexual abuse, that can be manifested in a variety of ways, reflecting both internalising and externalising processes. However, as Finkelhor (1988) has highlighted the effects of sexual abuse may often lead to an increased propensity for externalising distress, including high rates of aggressive, impulsive behaviour, substance misuse, and self-destructive strategies..

In terms of hypothesising about the link between attachment, sexually abusive experiences and the development of externalising disorders, Fonagy et al (1997) suggest a developmental pathway consequent on abuse, which results in a deficit in mentalising, and a lower capacity for reflecting on the impact of ones behaviour. This it is hypothesised may account for the increase in externalising behaviour in this

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sample. However, further analysis of the differential capacity for mentalisation between those in the sample who had been abused and those who had not, did not indicate any significant differences. Despite this lack of significance there is a trend in the data suggestive of this link. Thus had the sample size been larger there is the distinct possibility that this hypothesis would have been confirmed. Figure 5 below illustrates the theoretical implications of the present study, showing the links between childhood maltreatment, capacity for mentalising, and differential outcomes with respect to diagnosis.

Figure 5.
Proposed model of relationship between abuse, capacity for reflective self-functioning and diagnostic category.
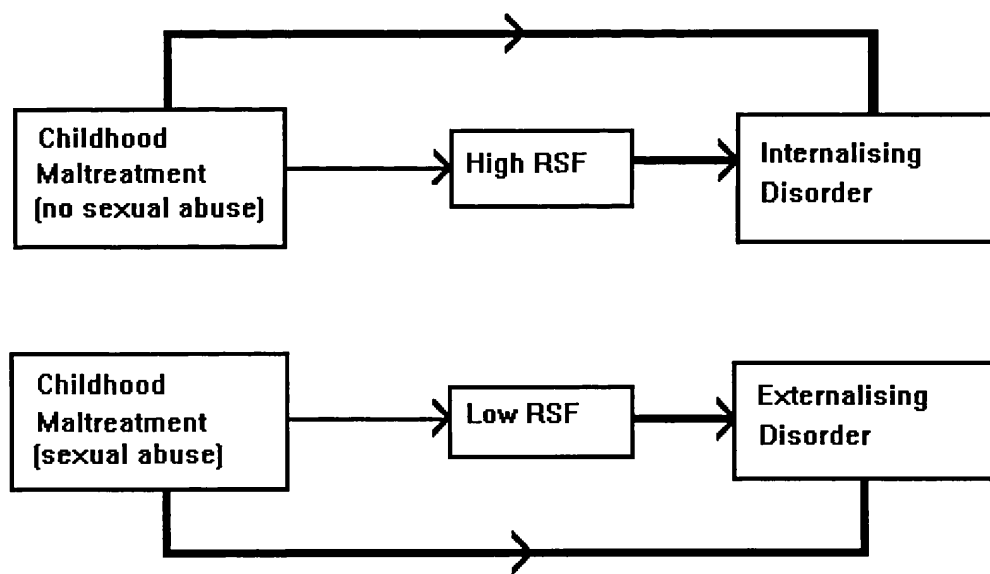
Note : RSF = Reflective Self-Functioning.
Significant associations are shown with thick black lines. Thin black lines suggest a trend.

The above model cannot be seen as fully explanatory in the pathway between abuse and psychopathology, as mediated by reflective self-functioning. However, it does provide support for the notion that early childhood maltreatment may have differential effects on the infants capacity for mentalising.

The other interesting finding of significance in relation to diagnosis, was that those individuals in the sample, above the age of 16 were more likely to internalise their distress than their younger counterparts, who tended more to externalising behaviour. This finding is suggestive of differential mechanisms for coping with distress as the adolescent moves through the developmental stage and appears to be in line with the notion that the development of adult-like internalising disorders may not become apparent until late adolescence (Weiner, 1975), and that younger adolescents (13-16) are more likely to manifest their distress in egocentric and non-internalising related fashions e.g. drug abuse and delinquency. Possible reasons for this shift in the expression of distress may relate to a number of factors, such that older adolescents may no longer be constrained by cognitive level, have further developed time perspective, and greater life experience (Bemporand & Wilson, 1978). In contrast the younger school-age adolescent may be more prone to adverse peer influences and delinquency, than the older adolescent entering the world of work and 'adult responsibility'. Further support for the hypothesis that younger adolescence is associated with greater egocentrism, and thus higher rates of externalising behaviour comes from the finding that although no significant differences were found in the capacity for mentalising between those under 16 and those over 16, there was a trend suggestive of increased mentalising capacity in the older part of the sample. This may account for the increase in the presentation of externalising disorders in the younger age group in line with the model presented by Fonagy et al (1997). This does not imply however that mentalising is necessarily lower in younger adolescence (although this issue will be discussed later), only that it may be lower in this sample.

Attachment and Self-Report Symptomatology

The relationship between the AAI and levels of self-report symptomatology revealed a number of interesting and complex issues. The initial hypothesis that security of attachment has an impact on the number of symptoms that individuals report was not confirmed by this study. Thus although trends appear to suggest that

secure attachment relates to decreased levels of symptom reporting these are not statistically significant. Only one significant difference was observed with respect to specific symptom reporting, with secure individuals showing lower levels of Hostility than their insecure counterparts. One may hypothesise that this is related to an internal model of relationships that follows from a secure state of mind with respect to attachment. If one takes the analogy of infant insecurity, the secure base provided by mother helps to reduce internal anxiety, and the need for secondary attachment strategies, e.g. hostility associated with the Insecure-Avoidant category. Thus in adolescence attaining a secure internal model of relationships may reduce hostility towards others. For this hypothesis to be fully supported we might expect to see significant reductions in symptom-reporting for secure individuals, with respect to all SCL-90 subscales. Although this is not the case, the data is suggestive of this trend.

Interestingly no significant differences were found for any of the self-report measures with respect to type of attachment insecurity. Thus whether an individual is dismissing or preoccupied in terms of their state of mind regarding attachment experiences appears to have no impact on levels of self-report symptomatology. Again as discussed above, the present study although containing participants who presented discourse strategies that were solely dismissing and preoccupied, was dominated by individuals who represented their attachment experiences in a disorganised and unresolved manner (albeit alongside dismissing or preoccupied secondary stance), and thus the differential specific impact of differing types of insecurity may not be discernible in this sample. Although non-significant, all the results for self-report measures, indicate a trend towards higher levels of self-report symptomatology in the unresolved group.

A further interesting finding within the unresolved group, suggests that those who are unresolved do report significantly higher levels of phobic anxiety, than their resolved counterparts. Individuals who are unable to resolve trauma present narratives that are often incoherent, with lapses of reasoning, and discourse. In addition many present narratives that indicate the presence of 'flashback' phenomena,

as if the speaker were re-experiencing the trauma. It may be that given the unresolved individual's propensity to experience these types of phenomena, they are more likely to develop a greater number of associations with events, people, or objects within their environment which evoke memories of past trauma, and thus symptoms of anxiety. This may in part account for increases in reporting of phobias in this sample.

Of interest in relation to reporting of symptomatology is the finding that those individuals who have been sexually abused show significantly higher total BDI and SCL-90 scores, and a non-significant trend indicative of higher symptomatology in almost all subscale domains on the SCL-90. This finding may not be surprising in the light of numerous reviews of the long-term adverse effects of sexual abuse e.g. Finkelhor (1988) and Cahill et al (1991). Further findings in relation to symptom reporting, however, suggest that gender plays a crucial role in determining levels of severity, particularly of depression and anxiety symptoms. These findings are in line with the long-held notion that females demonstrate substantially higher levels of depressive symptomatology, a ratio of 2 or 3:1 compared to males (Gilbert, 1992). Various reasons have been proposed as to why this may be the case, including biological differences, and social-role expectations (Harris, Surtees, & Bancroft, 1991). However, it was hypothesised (post hoc) that the gender differences observed in the present study may be more reflective of the impact of lack of resolution of abuse. The partial confirmation of this finding indicates that symptom reporting does not substantially increase as a function of gender, when individuals are resolved with respect to trauma. Although lack of resolution of such experiences does appear to lead to a significant increase in female symptom reporting as compared to unresolved males, it is not possible to draw clear conclusions about specific differences in the degree to which males and females manifest lack of resolution in symptom reporting. This is due to the fact that numbers of males presenting as unresolved was low (n=4), relative to females (n=15). However, it may be that differences in the response patterns of females and males in the sample, reflect two different ways in which abuse is rated as unresolved on the AAI. Thus an unresolved response which indicates

absorption and guilt with experiences may be hypothesised as a more likely response in females, whereas discourse indicating an unsuccessful denial of abusive experiences may be more likely in males. A larger sample size may be necessary to discern such differences with respect to sexual abuse.

Attachment and Interpersonal Problems

The present study attempted to establish a link between attachment processes as measured by the Adult Attachment Interview, and the development of interpersonal problems. This was in part guided by the work of Horowitz and Rosenberg (1993), and particularly aimed to assess the usefulness of the newly developed 32-item Inventory of Interpersonal Problems. In terms of the relationship between attachment security and interpersonal difficulties, the hypothesis that insecurity will be associated with increased interpersonal difficulty was partially confirmed, with overall scores on the IIP being higher in the insecure group. However, it must be noted that overall the sample showed almost universally high levels of interpersonal difficulties, many participants reporting the full range of difficulties covered by the IIP.

From the work of Horowitz and Rosenberg (1993) it was further hypothesised that there would be differences in interpersonal difficulties as reported by those with Dismissing and Preoccupied attachment styles. However, for this sample no such difference was found. In the study outlined above the sample studied had been one of adult out-patient referrals accepted for brief psychodynamic therapy. This may suggest that this sample were not presenting with global difficulties in many arenas of interpersonal functioning, but sought help with particular problems. Although for the analysis, as it relates to diagnosis, the current sample has been divided into those presenting with externalising and internalising disorders, this does not fully reflect the diversity of difficulty in the sample. Indeed as mentioned above, co-morbidity was common in the sample, indicating an array of interpersonal difficulty. Thus it may be

particularly difficult in such a disturbed sample to discern subtle differences on the basis of type of attachment insecurity.

This apparent lack of sensitivity to differences in the sample in terms of interpersonal problems is shown further with other variables in the study. Thus it may have been expected that those individuals rated as unresolved with respect to trauma may have displayed greater interpersonal difficulties than those who had resolved these experiences. However, no significant differences were shown either overall or on subscales. Again this may be attributable to the high levels of disturbance in the sample making such differences hard to discern. This lack of significance was also shown in the comparison between the abused and non-abused groups. It is interesting that the BDI and the SCL-90 are both able to pick up differences between these groups. It may be suggested that the IIP is measuring a markedly different construct to both these measures, thus this lack of concordance is unsurprising, but as Barkham et al (1994) indicate, especially with the SCL-90, particular subscales do correspond with the interpersonal domain, i.e. Interpersonal difficulty, and hostility, and thus higher correlations would be expected. This was not the case in this sample.

The IIP-32 did however highlight significant differences in the sample with respect to age. Thus those in the sample above the age of 16 did show significantly more interpersonal difficulties overall, and more problems related to being over-dependent. This finding may relate to that of diagnosis as it varies with age group. Those over 16 in this sample were significantly more likely to present with an internalising disorder. This being the case one might hypothesise that the interpersonal difficulties shown by this age group are mediated by their presenting disorder. It is well established that individuals with internalising or affective disorders may show marked over-dependence socially (Nietzel & Harris, 1990). However, further examination of differences between those with internalising and externalising disorders indicates no significant differences in interpersonal difficulties as mediated by diagnosis in this sample.

LIMITATIONS OF THE STUDY

Despite the positive findings of the study a number of limitations exist which, at least in part suggest caution in the interpretation of the results. Perhaps most obviously the present study lacks a clear comparison or control group. In order to fully establish firm conclusions from the results, particularly with reference to reflective self-functioning, it would be necessary to interview a non-clinical sample of adolescents, matched with the present sample on such attributes as age, gender, and socio-economic status. Within the time and resource constraints of the present study this was not possible, given the length of time needed to interview and transcribe AAI's. However, this does not limit the usefulness of the present study in terms of providing further important information on attachment patterns as measured by the AAI in a sample of in-patient adolescents. Although data does exist for non-clinical samples of adolescents (Kobak & Sceery, 1988), there are a number of problems with making direct comparisons. Firstly with respect to demographic variables, the age range in these studies has not included those adolescents as young as 13. As the present study suggests there may be particular effects on attachment distributions, and in particular capacity for mentalising dependent on the age of the sample used. Thus it would be crucial to examine patterns of mentalising capacity in non-clinical samples of adolescents, to further our understanding of normative changes in the capacity for mentalising as the young person moves through this developmental phase. In addition existing normative data was derived from populations in the USA and Canada, indicating the need for investigation of non-clinical British samples. A further methodological issue related to choosing an appropriate control group would seem to relate to the impact of abuse and trauma on the capacity for self-reflection. It may be argued, that for a valid comparison of this construct between clinical and non-clinical samples, one would need a control group of adolescents who had experienced trauma of some kind, but who did not present with any psychopathology. Clearly this would be an extremely difficult group to identify.

Further methodological issues relate to the way in which participants were selected for the study. Given the relatively small sample pool, i.e. adolescents resident on tertiary care in-patient units, the sample had to be drawn from five different sites. Clearly an assumption was made about the shared nature of the therapeutic approach adopted by each unit. However, there appears to be some slight differences in the context and nature of each unit, which may account for some of the variance in the sample. For example the Cassel hospital adolescent unit provides a therapeutic community approach to treating adolescents, exposing them to the influence of the adult population in the hospital. In a contrast Brookside Young Person Unit, accepts referrals for 13 to 18 year olds, to a unit exclusively for young people. Related to the selection process, there may be implicit gender selection factors such that the pool of possible participants is unusual. Thus on all the units studied there were clearly greater numbers of female than male residents. This may reflect differential expression of distress between male and females, such that females present their distress in such a manner that fulfils the criteria for placement at an in-patient unit for emotional and behavioural problems. In contrast it may be that their male counterparts are more likely to manifest distress in ways that will lead them into the judicial system, and placement at young offenders units i.e. delinquency and vandalism. Thus it may be that the clinical population resident on the units studied does not fully reflect the differential ways in which male and female adolescents manifest their distress. The implications of this for future research is discussed below.

An objection frequently raised with regards to the Adult Attachment Interview is the apparent differential effects of psychopathology on response during the interview itself. It has been argued that a disorder such as depression with it's concomitant effects on memory and attention may confound the classification given to an individuals AAI. However, this argument is only relevant if one thinks of the AAI as a means of assessing actual biographical memories. The AAI does not make claims to perform such a task, but rather provides a narrative which reflects the individual's

'state of mind' at that particular moment. The implications of this for the measurement of outcome will be discussed below.

As indicated above a further possible limitation related to the Adult Attachment Interview exists in using the Reflective Self-Functioning scale with a population of adolescents. Thus the developmental stage of the adolescent, particularly in terms of cognitive acquisitions may be intimately linked to apparent differential capacities in terms of mentalising. Although it is acknowledged that children beyond the age of 12 may acquire the ability for formal operational thought, or the capacity for abstraction and hypothetical thinking (Piaget, 1972), subsequent studies have demonstrated that many younger adolescents do poorly on standard tests assessing these abilities (Neimark, 1975). This suggests that mentalising skills in younger adolescents may not be as well developed as in older teenagers. This may have implications for the usefulness of the Reflective Self-Functioning scale with this sample. However, as the interview extracts demonstrate, some younger adolescents may show good levels of mentalising, further highlighting the need for normative studies employing the Reflective Self-Functioning Scale in non-clinical adolescent samples.

In the original conception of the current study, the author had planned to conduct the AAI along with relevant outcome measures, and follow-up subjects after a period of in-patient therapeutic treatment. This would have provided extremely useful data regarding the impact of in-patient treatment on adolescent capacity for self-reflection, and it's implications for improvement (discussed below). As part of the battery of measures selected to access information on outcome it was intended that the Child Behaviour Checklist (Achenbach, 1991) would be used to gain an objective measure from each adolescent's primary nurse, about their respective behaviour patterns. Clearly this would have been a useful addition in the current study. However, when this was presented to respective units as a part of the research, it was often difficult to ensure that checklists were completed near enough to the time

of the interview for valid associations to be made. Thus unfortunately it was not possible to a valuable objective measure to complement self-report measures.

With respect to self-report measures used in the study, all were limited in their capacity to discern differences between various sub-groups in the data. Although the BDI and SCL-90 have been validated in such populations their effectiveness may more appropriately lie in distinguishing psychological distress between clinical and non-clinical populations, not just within clinical samples. In particular the present study represents the first to use the revised IIP-32 in the context of a clinical sample of adolescents. Although the IIP-32 has been shown to correspond highly in terms of sensitivity to it's original counterpart, it may lack the specificity with a sample of young people with diverse psychological and social problems.

Related to this, the analysis of that particular set of results concerned with self-report measure subscales involved multiple comparison t-tests in order to investigate the relationship between symptom reporting and other attachment-related constructs. In order to mediate against the potential effects of Type I error, i.e. finding significant results that may have occurred by chance, Dunn's t (bonferroni) correction was employed to provide a more conservative cut-off point of significance. However, this may have limited the power of the comparison tests used, and although we can be more certain that those results found were actually significant, it highlights the potential limitations of carrying out large numbers of multiple comparisons. Having noted this limitation, the problem of Type I error only applied to this particular set of data and does not affect the other central findings of the study.

As suggested above there were difficulties associated with assignment of diagnosis. In particular it was not possible, given the numbers employed in the study, to distinguish substantial groups of conduct disordered participants for comparison with affective disorders, without making assumptions about co-morbidity i.e. the primacy of presenting complaint. In using what Cantwell (1996) has called 'higher order', or broad based patterns of diagnosis i.e. externalising and internalising

disorders, one may lose the complexity of co-morbidity, which particularly in adolescence may be crucial to understanding manifestations of distress.

In previous studies, e.g. Rosenstein and Horowitz (1996), diagnosis was assigned both on the basis of Axis I disorders from the DSM-IV, and Axis II disorders. Thus participants were assigned a diagnosis of a specific personality disorder, in addition to whether there presenting problems were affective or conduct based. The present study did not assign Axis II diagnoses to any of the participants. Thus it is not possible to make comparisons between the two studies in terms of this dimension of disorders. In addition, as Fonagy et al (1996) have shown there is an established link between Borderline Personality Disorder (BPD) and a deficit in mentalising capacity in an adult psychiatric population. Indeed a number of the participants in the present study exhibited numerous symptoms of BPD, among other personality disorders, in particular in terms of highly impulsive behaviour, dissociative phenomena, and self-harm. However, although assignment of such diagnoses may have proved useful in further establishing the link between reflective self-functioning and BPD, it was felt inappropriate in the current study, given the lack of information for some participants on which to base such a diagnostic judgements, and the reluctance on the part of professionals to label young people with personality disorders, during a phase of developmental change.

DIRECTIONS FOR FUTURE WORK

The present study suggests a number of future areas of fruitful research. Of particular interest may be comparison studies of the current sample with other clinical populations. Although the sample population of the present study represents a diversity of psychopathology, the subjects used were all presumed as being emotionally or behaviourally disturbed, but with relatively low levels of violent or aggressive behaviour. Thus those individuals in the sample who presented with externalising disorders were assigned this diagnosis on the basis of conduct problems or substance misuse, not significant violent tendencies. If as Fonagy et al (1997),

those individuals who present with high levels of violent or aggressive behaviour manifest particular difficulties with the capacity to mentalise, it would be interesting to compare whether the low levels of RSF found in the current study are similar to those found in a sample of, for example, young offenders.

As indicated above the present study was initially conceived of as a follow-up, whereby attachment classification may be used to predict outcome from a period of in-patient treatment. As this has not been possible within the present time and resource constraints, it would be interesting to re-interview some of the sample at a later stage, either in their treatment or at follow-up intervals. This may help to establish how psychotherapeutic treatment may influence the individuals capacity for reflective-self functioning, and thus alter their state of mind with respect to attachment.

As indicated throughout the discussion the findings of the present study may be further supported by the use of a larger sample size. Thus although the present study demonstrated the extent of difficulty with resolving trauma in a clinical population of adolescents it would be extremely interesting to examine more closely the differential impact of various forms of abuse, and how these may relate to differences in mentalising capacity. A larger sample size may also help to discern the subtle ways in which attachment-related discourse patterns may influence interpersonal functioning.

Despite the positive findings of the study it must be remembered that there are a substantial proportion of those people who have experienced difficulties in their early attachment relationships, and others who have experienced abuse in their childhood, but who seem to develop with no specific psychological problems (Fergusson and Lynskey, 1996). This clearly suggests, as discussed above that attachment quality *per se* does not determine psychopathology, but rather it is the way in which the individual experiences and interprets these difficulties which determines outcomes in later life. This does deter from the findings of attachment research, or this study, but rather suggests that it may be important to further explore the

differences between those who manifest psychopathology as a result of abuse and attachment insecurity and those who do not. If as Fonagy et al (1996) and West (1997) suggest, the key to such differences in response to trauma may be related to the development of mentalising capacity, it would be extremely useful to examine reflective self-functioning between these groups.

CLINICAL IMPLICATIONS

Having acknowledged some of the limitations of the present study it is important to recognise however, the significance of some of the results found, particularly in relation to their potential usefulness in the clinical setting. The study was originally devised as a follow-up, whereby AAI classification could be established on admission, and the various outcome measures could determine the progress of treatment at varying intervals. Unfortunately, with the limitations of time and resources this was not possible at present. However, one can clearly appreciate the implications for the provision of clinical services if it becomes possible to determine effectively through the use of a pre-admission assessment interview, those adolescents who will benefit most from a period of in-patient care. Fonagy et al (1996) in their sample of adult in-patients found convincing evidence that those receiving the most benefit from this type of provision are those classified as dismissing on the AAI. Although there may be a variety of different reasons for individuals making improvement in psychotherapy, Fonagy et al suggest that those with a dismissing style of attachment may make the best use of psychodynamic approaches to treatment. Such individuals make these improvements as a direct consequence of how they process information relevant to important attachment relationships. As opposed to those classified as preoccupied, the endeavour of exploring early relationship patterns may be more accessible in those individuals who have not invested much of their time in constant rumination and preoccupation with past events. This finding in adults would need to be further investigated for adolescents but there is no particular reason as to why this should not also be the case, that dismissing attachment styles may be

related to greater therapeutic gains. The implications of this for adolescent in-patient work may have influence on the direction of specific therapeutic interventions. Within the milieu of treatments offered on many in-patient units, therapeutic gain may be seen as arising from a variety of sources, and it may be the case that those with differing attachment styles receive benefit from such units in differing ways.

Successful intervention with distressed adolescents must be seen as occurring on a number of different levels, which must be attuned to the individuals particular needs. If adolescence is viewed systemically then intervention should include individual, family and group approaches. In terms of the implications of attachment theory and in particular the findings of the present study, a milieu approach to treatment can be seen as being influenced by attachment at all levels. Importantly for adolescents, particularly those distressed enough to require intensive in-patient treatment, the process of separation-individuation is extremely difficult. Many such young people, as this and other studies suggest, have experienced early childhood interactions which have lead them to encounter their environment as insecure and often unsafe. The purpose of in-patient treatment is often to provide adolescents with a 'secure-base', the term originally used by Bowlby. Clearly, whatever the differential gains made by individuals with differing attachment insecurity, the main aim of in-patient units is to provide, both physically and psychologically a secure base from which the young person can begin to explore many of the intense psychological difficulties that have arisen as a consequence of their experiences. Thus although there are clearly implications for service provision consequent on identifying those individuals who may make most use of therapeutic units, it must not be forgotten that all such individuals require a secure base before they can begin to explore both their outer and inner worlds. Thus distressed adolescents, in particular, may represent a clinical population for whom containment, both physical and psychological, in a secure environment is necessary as they negotiate the process of separating from their childhood, entering the adult domain, and developing a sense of identity.

The implications of the concept of reflective self-functioning are also wide-ranging for the clinical setting, in particular individual approaches to treatment. If there are clear differences in the capacity of the individual to reflect on the mental states of others, this may provide an invaluable marker of improvement in therapy. For example, one may interview an individual with the AAI pre- and post treatment and gain measures of reflective self-functioning. If psychodynamic psychotherapy is a process of encouraging self-reflection, insight, and psychic reparation, then clearly the RSF scale represents a significant move towards providing an empirical measure of change in this respect. In addition adolescence has often been conceived of as the final stage where fundamental re-working of earlier traumatic experiences can take place (Blos, 1967). If this is the case, and the capacity for mentalising is such an important psychological tool for organising and making sense of the world, focusing therapeutic interventions on the fostering of reflective self-functioning, within a 'secure-base' environment, may be central to the process of change in adolescence.

Family therapists such as Byng-Hall (1993) have used many of the ideas of attachment theory in working with the family system. The traditional notion of the attachment dyad i.e. mother and child, may be extended to thinking about the family comprising a variety of attachment relationships interdependent on one another. Thus changes in the nature of the relationship between mother and teenage child may have direct impacts on the patterns of attachment related behaviour between mother and other siblings, or mother-father relations. These changes may be particularly important to explore when adolescents are in distress. For many families of such teenagers it has been difficult for them to adapt to the changes incumbent on the phase of separation-individuation. As the adolescent struggles to reorganise attachment related information, the parents and other siblings may also have difficulty in accommodating a family member who is experiencing this transition as distressing. Within in-patient settings, regular family therapy can assist families in recognising and adapting to the separation-individuation process. As the adolescent struggles with other therapeutic work (individually or with peers), the family may provide a context

in which transitions can be explored and stabilised. Indeed it is the family context to which many of the adolescents resident on in-patient units will return to once they have completed their stay, making such work crucial if individual gains are to generalise to have wider changes within the family context. This may be especially important in the case of adolescents who have experienced trauma or abuse. Given that the majority, if not all, of the adolescents resident on in-patients units were neither living with perpetrators of that abuse are no longer living with them, family work (whether with natural or foster parents) must focus on the task of fostering a secure family base, within which the individual can explore the effects of trauma without threat and risk to future attachment relationships.

The present study in it's suggestion that there may be differences in the manifestation of distress between adolescents, as a function of age may suggest that treatment approaches need to be carefully tailored to meet the needs of adolescents at different stages as they progress through the developmental phase. This interplay between development and the manifestation of distress may indicate the need for interventions in younger adolescents which emphasise containment of behaviour Individual therapy may be focused on creating an environment where the younger adolescent may learn to express distress in appropriate ways, that do not involve for example substance misuse or violence. In contrast for older adolescents, the task of physical containment may not be so important, and the focus of intervention may shift as distress becomes internalised. Individual therapy at this age may be more focused on emotional containment.

The present study demonstrates the pervasive influence of early attachment experiences, and has suggested the implications of differential response patterns to a structured attachment interview in adolescence. However it is also important to recognise that the crucial period in the development of attachment bonds takes place in early childhood. If such experiences have such lasting and detrimental effects in later life and especially, as this study indicates in adolescence, preventative interventions in the form of parent-training schemes may be central to modifying early

attachment interactions. Central to such parent training schemes, which already run in various parts of the country e.g. as outlined in Routh, Hill, Steele, Elliott & Dewey (1995), is not the task of telling parents how to raise their children, but rather the facilitating of parent's capacity to think. If as the present study suggests it is the parents capacity to be thoughtful, to convey to the child that they are contained as a thinking entity by the parent, and to provide a containing environment, both physically and mentally in which the child can think and explore themselves, then helping parents in this task may be one way to help mediate against the long-term effects of attachment insecurity, and the pervasive influence of trauma and abuse.

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APPENDIX I : Abbreviated protocol for the Adult Attachment Interview

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

2. I'd like you to try 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 mother. Pause to think. Memories, incidents for each.

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

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

6. When upset as child, what do? Pause. (a) Emotionally? -- incidents? (b) Physically hurt -- incidents? (c) When ill -- what would happen?

7. First separation? Others.

8. Felt rejected as child? How old? How felt? What did? 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 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?

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 (sibs) as a child? -- age? -- circumstances? -- how respond at time? -- sudden or expected? -- feelings at 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 separate from child? -- Ever worried about child?

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

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

Note : Question 16 may not be applicable when interviewing adolescents. 17 and 18 may be posed as hypothetical questions to this client group.

APPENDIX II : Copy of information letter given to participants prior to agreement to take part.

PRIVATE AND CONFIDENTIAL

Dear Participant,

I am currently training as a Clinical Psychologist at University College London. As part of this training I have to complete a piece of research work. I am interested in researching what is known as 'attachment' in adolescents who may require help at in-patient units such as the (Unit name). 'Attachment' is the bond that we all make to our parents when we are very young. It helps us to feel secure and safe to get on with the job of growing up. Different people develop different attachments to their parents. In particular people who encounter problems later in life either as adolescents or adults may have had a certain type of bond to their parents.

I would like to invite you to take part in a piece of research looking at 'attachment' in adolescents. It is possible to find out what type of attachment people had by interviewing them about their early experiences and how they feel these have affected them. The talking treatments used at the (Unit name) involve talking about a persons childhood. Therefore it is useful to know this information about attachment style as it can help you and your therapist to look closely at any important events that may have taken place during this time.

The study I am doing would involve interviewing you about your childhood, and also carrying out some other written tests, similar to ones you have probably already completed, which look generally at how you feel.

I would like to make it clear that if you do not wish to take part in this study this will in no way affect your current or future treatment at the (Unit name) or elsewhere in the NHS. In addition, if you do wish to take part, you are free to withdraw your consent from the study at any time without giving a reason for withdrawing. If you have any questions about the study before agreeing to take part, please feel free to approach myself or (unit clinician)

If you agree to take part you will be asked to complete a consent form which should be returned to (unit clinician).

With many thanks,

Paul Wallis
Clinical Psychologist in Training

APPENDIX III - Copy of the consent form given to participants for completion prior to taking part in the study.

CONSENT FORM FOR PARTICIPANTS

Title of Study : Attachment Style in Adolescents

Investigators name : Paul Wallis

To be completed by the participant :

1) Have you read the information sheet about this study?   Yes/No

2) Have you had an opportunity to ask questions and discuss this study?   Yes/No

3) Have you received satisfactory answers to all your questions?   Yes/No

4) Have you received enough information about this study?   Yes/No

5) Which person have you spoken to about this study?

6) Do you understand that you are free to withdraw
   your consent to take part in this study -

      * at any time
      * without giving reason for your withdrawal
      * without affecting your future care   Yes/No

7) Do you agree to take part in this study?   Yes/No

Signed...

Date...

Name in Block Capitals...

Investigators Signature...

Redbridge & Waltham Forest
Health Authority

Mr. Bruce Irvine
Head of Clinical Psychology & Child Psychology
Brookside Adolescent Unit
Barley Lane
GOODMAYES Ilford Essex

awjpc/eth/6d
12 June 1996

Dear Mr. Irvine

re: LREC (R&WF) 13
An examination of the relationship between attachment style and
psychopathology in inpatient adolescents

Thank you for attending the Redbridge & Waltham Forest Local Research Ethics
Committee meeting on the 6th June 1996.

I am pleased to inform you that the Committee were able to support the ethical
aspects of this study and approved the commencement of this trial subject to the
receipt of an amended Patient Information letter.

The Committee asked that the letter more specifically sought approval to participate
and provide reassurance that should the subjects decline they would in no way
jeopardise their treatment at the Unit or elsewhere in the NHS.

Subject to receipt of the revised Patient Information Letter, the Committee will be
happy for you to commence.

Yours sincerely,

LEONARD KNOX
Chairman LREC

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RIVERSIDE RESEARCH ETHICS COMMITTEE

Lower Ground Floor Pharmacy Offices.
Chelsea & Westminster Hospital
369 Fulham Road London SW10 9NH
Tel: 0181-846 6855   Fax: 0181-846 6860

Paul Wallis, Esq., BSc,
Clinical Psychologist in Training,
Flat 3,
60 Manville Road,
Balham,
London,   Your Ref:PW/---
SW17 8JL   My Ref:JNH-W/jnh-w

                                                  11th June 1996
Dear Mr Wallis,

   ATTACHMENT STYLE AND PSYCHOPATHOLOGY IN ADOLESCENT IN-PATIENTS.

              (Ethics submission No: 1092).

        Thank you for the letter of the 29th May 1996 and the
accompanying papers including the your C.V., the Submission, the
Information Letters, the Consent Form, your Proposal and the five
Questionnaires. I await The Child Behaviour Checklist.
        As all the participants involved in this study will be over
16years then they can give their own consent; the consent of the
parents is not an issue, but as a matter of politeness and tact
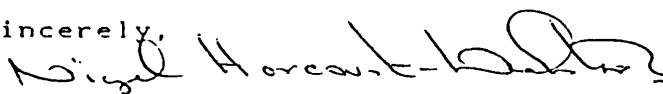perhaps you should keep them informed.
        I note your comments about anonymity and confidentiality and that
all tapes will be destroyed after completion of the research. Such
assurances which should be made clear to participanta are essential
for their cooperation; I am sure that you know that.
        I find no ethical problems and the study is approved; the formal
Letter of Approval will follow in a few days.
        Thank you for keeping us informed. I wish the project well; if
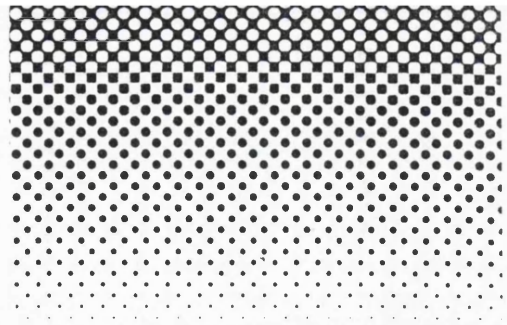any problems do arise please let me know.

   With kind regards.

        Yours sincerely,

        J.N. HARCOURT-WEBSTER, MD, FRCPath.

From the Chairman: Dr J N Harcourt-Webster MD FRCPath
Tel (H): 0181-460 5504

HEAD OFFICE
99 WAVERLEY ROAD, ST. ALBANS
HERTFORDSHIRE, AL3 5TL

Telephone: 01727 811888
Direct Line: 01727 897811
Fax: 01727 850879

**WEST HERTS COMMUNITY
HEALTH NHS TRUST**

LOCAL RESEARCH ETHICS
COMMITTEE

17 October 1996

Ref: WH019/96

Mr Paul Wallis
Flat 3
60 Manville Road
BALHAM
London SW17 8JL

Dear Mr Wallis

Attachment Style and Psychopathology in Adolescent Inpatients

I write to confirm that the West Herts Community Health NHS Trust's LREC approved the above
study at its meeting on 14 October 1996 subject to the following conditions:

(i)   It is the responsibility of the investigator to notify the LREC immediately of any
        information received or of which you become aware which would cast doubt upon, or
        alter, any information contained in the original application, or a later amendment
        application, submitted to the LREC and/or which would raise questions about the
        safety and/or continued conduct of the research.

(ii)   The need to comply with the Data Protection Act 1984.

(iii)   The need to comply, throughout the conduct of the study, with good clinical research
        practice standards.

(iv)   The need to refer proposed amendments to the protocol to the LREC for further review
        and to obtain LREC approval thereto prior to implementation (except only in cases of
        emergency where the welfare of the subject is paramount).

(v)   The requirement to inform the LREC should the research be discontinued or any
        subject withdrawn.

We wish you every success with the study and would be grateful if you could inform the Committee of
the progress of the research project (eg annually) and also the conclusion and outcome of the study.
Enclosed for your information is a list of LREC members.

Yours sincerely

Pauline Southworth

Pauline Southworth (Mrs)   115
Chairman
West Herts Community Health NHS Trust
Local Research Ethics Committee

BARNET HEALTH *Authority*

East Barnet Health Centre
149 East Barnet Road
New Barnet, Herts, EN4 8RB

Barnet Health Authority
Hyde House
The Hyde
Edgware Road
London NW9 6LH
Tel: 0181 201 4700
Fax: 0181 201 4701

Tel: 0181 440 7417
Fax: 0181 447 0126

Please ask for:

BARNET RESEARCH ETHICS COMMITTEE

Please note that it is essential to quote the protocol reference in all correspondence.

LMS/mas   13 November 1996

Mr. Paul Wallis,
Clinical Psychologist in Training,
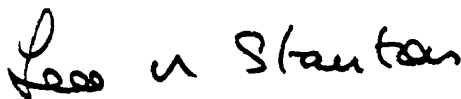Flat 3
60 Manville Road,
Balham,
London, SW17 8JL.

Dear Mr. Wallis,

Re: 96/40 - Attachment Style and Psychopathology in Adolescent In-patients

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This protocol was considered by the Barnet Research Ethics Committee at it's meeting held on Wednesday 6th November 1996. I am happy to issue approval for this study to commence at the Northgate Clinic and I should be grateful if copies of this letter of approval could be sent to both Mr. Jarvaid Khan, Acting Chief Executive, Barnet Health Authority, Hyde House, The Hyde, Edgware Road, London, NW9 and Mr. Murray Duncanson, Chief Executive, Barnet Healthcare NHS Trust, Colindale Hospital, Colindale Avenue, London, NW9 for information.

I should be grateful if you could let me know the date that this study commences and I should like to remind you that approval for this project expires in one year's time and will be reinstated upon receipt of a satisfactory Annual Progress Report.

Yours sincerely,

Dr. Linda M Stanton.
Chairperson.

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CAMDEN & ISLINGTON
Community Health Services NHS Trust
Your Partner for Health

LOCAL RESEARCH ETHICS COMMITTEE

Medical Directorate, Vezey Strong Building, 112 Hampstead Road, London NW1 2LT
Tel: 0171 530 3055   Fax: 0171 530 3018
E-mail: sue.rodmell@dial.pipex.com

14 October, 1996

Mr Paul Wallis
Clinical Psychologist in Training
Clinical Health Psychology
University College London
Gower Street
LONDON
WC1E 6BT

Dear Mr Wallis

Application No: 96/88
Title: Attachment style and psychopathology in adolescent in-patients

With reference to my letter dated 27 September, thank you for forwarding the signed approval for the study to proceed from Chris Baker, the general manager of Simmons House Adolescent Unit (and not Dr Vizard as previously advised).   The information letters to the participants and parents, which now include the full address and contact number, is satisfactory. Regarding the indemnity cover for the study, the Trust's own indemnity will apply to those patients of the Trust's services and I understand that you have informed Yvonne McCulloch that indemnity cover for non-Trust patients is in place.

I am pleased to say that the Local Research Ethics Committee is now able to approve this project. Please note that the following conditions of approval apply:

- It is the responsibility of the investigators to ensure that all associated staff including nursing staff are informed of research projects and are told that they have the approval of the Ethics Committee.

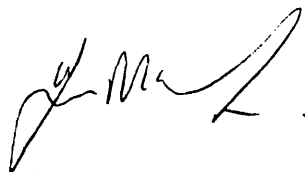Rabbi JULIA NEUBERGER: Chairman
LOUIS SMIDT: Chief Executive

- If data are to be stored on a computer in such a way as to make it possible to identify individuals then the project must be registered under the Data Protection Act 1984. Please consult your department data protection officer for advice.
  The Committee must receive immediate notification of any adverse or unforeseen circumstances arising out of the trial.
- The Committee must receive notification: a) when the study is complete; b) if it fails to start or is abandoned; c) if the investigator/s change and d) if any amendments to the study are made.
- The Committee will require details of the progress of the research project periodically (e.g. annually).

With best wishes.

Yours sincerely

Stephanie Ellis
Chairperson