HOW DO TEACHERS INFLUENCE CHILDREN'S EMOTIONAL DEVELOPMENT?

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OVERVIEW

Part 1 of this thesis is a literature review which examines theories of emotional development alongside studies of child development in schools. These together demonstrate the routes by which children's emotional development can be influenced by teachers. School is one of the primary contexts in which children learn to function independently of their families. Teachers play an important role in developing the child's capacity to regulate his or her emotions and to relate successfully to peers. Increasingly, teachers are also expected to intervene in children's emotional development by implementing emotional literacy programmes and delivering preventative interventions. The literature review presents a cross-section of these preventive school-based interventions. One such is the 'Nurture Group', which is a small, specialist classroom in which the putative mechanism of change is an increased level of attachment-security to teachers.

Part 2 of the thesis is an empirical paper which tests this hypothesis and examines the impact of nurture groups on children's emotional and behavioural difficulties. Significant improvements in measures of clinical difficulties and class-room behaviour were found, but only limited and non-significant changes in teacher-child attachment representations were detected. Small changes in levels of security-to-teacher were, however, associated with changes in levels of clinically significant behavioural difficulties.

Part 3 is a critical appraisal. The first section reflects on the research process and the choice of measures. The second offers some personal reflections on the research process; the last section outlines some of the wider research questions raised by this study.

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PART 1

Literature review

DO TEACHERS INFLUENCE CHILDREN'S EMOTIONAL DEVELOPMENT?

ABSTRACT

Children vary in their capacities to interpret other's emotional states and to understand, express and control their own emotional responses. Due to their role as significant adults in children's lives, teachers can be argued to play a critical role in the development of these capacities. A range of findings which support this premise, in educational and psychological literature, suggest that a child's emotional development can be affected by his or her experiences of teachers, both in the classroom and within the whole school environment. Several studies have documented cross-sectional and longitudinal associations between categories of teacher-pupil relationships and child outcomes; moreover, in recent years, numerous manualised and non-manualised school programmes posit teachers as active agents in preventative interventions which promote emotional development and emotional regulation. A selection of these is critically reviewed.

Keywords: - Child relationship; Teacher- Pupil relationship; Emotional Development; Emotional Intelligence; Emotional Regulation.

Search Databases: AMED, British Nursing Index, Cinahl, Embase, Inspec, Medline, MIDIRS, PsycInfo & Journals@Ovid., Blackwell-Synergy.com, Sage online, 1972-1982, 1982-2006, International Bibliography of the Social Sciences 1981-2000, 2001-2006, AMED, BNI, Institute of Education Library Catalogue. SAMHSA Web site: http://www.samhsa.gov/.

INTRODUCTION

The Green Paper 'Every Child Matters' (DfES., 2003) and the Children's Act (2004) identify a need for health authorities, schools and social services to work together to support children's social and emotional development. This target is defined particularly in relation to children from adverse home environments. To this end a number of school programmes which foster and utilise 'positive' (Ritchie & Howes, 2003) child-teacher relationships have been implemented in the UK. These programmes reflect an increased recognition of the importance, in child development, of relationships with non-parental adults (e.g. Pianta, 1992; Stroufe & Rutter, 1984; Howes, Rodning, Galluzzo, & Myers, 1988) and growing interest in the potential of preventative interventions in the early years (Battistich, Solomon, Watson & Schnaps, 1997; Felner, Favazza, Shim, Brand, Greenberg, Kusché, Cook & Quamma, 1995; Gu & Noonan, 2001; Lynch, Geller & Schmidt, 2004; Pianta, 2003; Terzian & Fraser, 2005). To date, however, the literature describing the actual and potential impact of teacher-pupil relationships on children's emotional development has not been critically reviewed.

As adults who form significant relationships with children, teachers have the ability to evoke attachment behaviour, and there is evidence that teachers can become attachment figures, particularly for children with problematic attachment experiences (Howes, 1999; Pianta, 1993). Sensitive teacher responses to troubled children can facilitate better adaptations to everyday learning experiences (Atwool, 1999; Bennathan & Boxall, 2000; Pianta, 2003), whilst conveying the value of attending to and making sense of problematic emotional states (Greenberg et al., 1995). Teachers also provide children with alternative models of adult authority

(Read, Gardner & Mahler, 1988) and can, like parents, shape a child's ability to regulate his or her emotions and to interpret other's emotional 'signals' (Denham, 1998; Kusché, 2002). Like parents, teachers facilitate children's explorations of their environment whilst playing a significant role in developing their verbal ability to reflect on their own beliefs (Yarlott, 1972).

Researchers investigating child-teacher attachment systems (Pianta, 1992; Lynch & Cichetti, 1997, Howes, Matheson, Hamilton & Claire, 1994) have focussed on relationships in early learning environments. Strong evidence was initially found for an enduring influence of different categories of child-teacher attachments, some findings showing an influence which continued into adolescence. Questions remain however about the impact of individual teachers on particular children at different stages of development, and the validity of separating out the influence of child-teacher relationships from other developmental factors.

Increasing numbers of school programmes aiming to promote children's socio-emotional development are delivered by teachers. However, with notable exceptions (e.g. Ashabi, 2000) few studies operating outside the attachment framework have focussed directly on the role of teachers in emotional development. A number have, however, examined associations between 'dimensions' of the teacher-child relationship and children's behavioural and social adjustment (e.g. Meehan, Hughes & Cavell, 2003; Birch & Ladd, 1997).

Some prominent educational researchers have focused on the development of emotional 'intelligence' (Brenner & Salvony, 1997; Gardner, 1993; Goleman, 1995)

which is claimed by many to underlie social competence and academic attainment (e.g. Greenberg *et al*, 1995). Proponents of emotional intelligence advance a series of arguments in favour of developing 'emotional literacy' through the use of specific curricula and through the promotion of thoughtful interpersonal interactions in schools (Battistich, 1997; Sharp, 2001; Kusché, 2002; Kam, Greenberg & Kusché, 2004). In terms of the teaching task, there is good evidence that children learn better when they are both cognitively and emotionally engaged in tasks (Goldstein, 1999; Siraj-Blatchford, Sylva, Muttock, Gilden & Bell, 2002).

In this paper a range of sources investigating the role of teachers in children's emotional development are reviewed. Whilst children's relationships with teachers have been found to significantly affect their motivation to attend school and learn, the motivational literature has largely been discarded because it is not centrally related to the question of emotional development. For the same reason, literature about the systemic factors affecting child/teacher-relationships has not been included.

In a search of the clinical psychology literature, very few findings linking teachers and emotional development were found. This paper therefore draws on educational theories and developmental research before finally reviewing the methods and results of key school based interventions. The data bases researched are summarised on page 7. The Keywords were entered into all of these data bases.

DEFINITIONS OF EMOTIONAL DEVELOPMENT

Emotional development is not easily defined, not can it be evaluated solely using external behavioural measures. It incorporates physiology, behavioural expressions,

cognitive and attitudinal components (the way feelings become intermingled with perceptions thoughts and values) and the development of control and coping mechanisms.

Theories of emotional development which focus on children's capacity to regulate and express emotions separately from their contexts, neglect the vital contribution of dyadic and social interactions in development (Bowlby, 1980, 1969; Bronfenbrenner & Morris, 1998; Dunn, 1988; Dunn, Brown & Beardsall, 1991; Hartup, 1989; Stroufe & Rutter, 1984; Stroufe, 1990). The development of internal regulation and the modelling of normative behaviour are associated with primary attachment figures; both are recapitulated however, in the child's relationships with teachers (Howes, 1999; Pianta, 1993; Garbarine, Dubrow, Kostelny & Pardo, 1992). Schools are, inherently, secondary care-giving environments (Howes, 1999) and offer an 'ecodevelopmentally based' (Felner et al., 2001, p. 178) opportunity to intervene with children at risk of developing emotional and behavioural problems.

A child's management of his or her responses to emotions and events involves a developing ability to co-ordinate expressive, motor, experiential and regulatory 'components' of the brain. This co-ordination has usefully been described as 'emotional processing' (Brenner & Salvony, 1997 p.170). Emotional processing is now recognised to be supported by particular areas of neuronal-development (Greenberg & Snell, 1997). As children develop, emotional processing is increasingly mediated by the use of language. The development of which is, in part, a function of schools and learning. A limited ability to process emotions and think about other's feelings makes children more likely to develop behavioural problems

and difficulties relating to peers (Greenberg *et al.*, 1995; Kam, Greenberg & Kusché, 2004). Aggressive behaviour and peer problems in turn, negatively influence other aspects of a child's functioning such as his or her school adjustment (e.g. Sharp, 2001; Stroufe,1990).

Summary

1. Emotional development takes place in the context of both dyadic and social interactions in the family, and with teachers and peers at school.
2. Emotional regulation is central to effective learning and affects children's relationships at school and their attentional capacities.
3. Teachers play a formative role in children's language development which is critical to the promotion of emotional regulation.

EMOTIONAL DEVELOPMENT AND LEARNING

The Concept of Emotional Intelligence

In a challenge to the concept of a standardised 'intelligence quota', Gardner (e.g. Gardner *et al.* 1996) advocated the recognition of seven different types of intelligence including intra personal and interpersonal intelligence. These were redefined by Goleman as 'emotional intelligence' (Goleman, 1996; Mayer & Salovey, 1997). In its linguistic and behavioural manifestations, emotional intelligence is synonymous with 'emotional literacy' (Goleman, 1996). This concept is now given increasing prominence in education, where curriculum advice for three to seven year olds (Foundation and Key Stage 1) specifies personal and social development as one of the six key curriculum areas (DfEE/QCA, 2000). The expectation is that, in routine teaching practice as well as special group times ('Circle Time') children in primary

schools will be encouraged to talk to teachers and to one another and about personal and interpersonal difficulties and positive behavioural changes are to be conspicuously rewarded (Mortimer, 2003).

Until the promulgation of emotional literacy, there was a pronounced de-emphasis on the role of emotions in schools in favour of cognitively based theories of learning. There is now evidence that the focus on raising academic standards can be at the cost of children's emotional development (Dowling 2000; Mashader, 2004; Sharp, 2001). A recent mental health foundation report found that one in five children suffer from psychological disorders and between 10% and 20% of children between the ages of 4-16 are estimated to have emotional and behavioural difficulties which significantly impair their social and educational development (Barnados, 2001). Several educationalists suggest that these problems partly result from a narrow focus on academic definitions of standards leading children to fail to 'thrive emotionally' (Mashader, p.17). Advocates of emotional literacy, (Mashader, 2001; Mayer & Salovey, 1997; Sharp, 2001) emphasise that teachers themselves need to develop an understanding of their own emotional needs and responses, arguing that such understandings improve teaching practice and sensitivity to children. This requirement, akin to clinical supervision, is addressed only to a limited extent in recent national curriculum advice.

Goleman (1996); Sharp (2002) and others (e.g. Mortimer, 2003) advocate emotional literacy as an important factor in the improvement of *overall* learning standards, arguing that it should be seen as a 'core competence' underlying young people's ability to develop self-awareness, empathy, impulse control, self discipline and

compassion. Promoting these qualities is claimed to raise school morale and decrease levels of aggression (Sharp, 2001). Numbers of 'emotionally literate' children in any school are now regarded as an indicator of school success and emotional literacy programmes are currently monitored by OFSTED (Office for Standards in Education). The efficacy, however, of methods by which emotional literacy is disseminated has not been systematically evaluated. A pilot study of a new Social and Emotional Aspects of Learning (SEAL) curriculum (Hallam, Rhamie & Shaw, 2006) concluded that overall improvements in emotional literacy resulting from implementing the curriculum were associated with improvements in child, parent and teacher morale. These findings require more systematic replication however.

Zone of Proximal development

The Zone of Proximal Development ('ZPD', Vygotsky, 1896-1934) is traditionally defined as the distance between a child's actual abilities and their potential ability given adult guidance (or in collaboration with more capable peers). The theory continues to be influential and is key to many if not most teaching strategies. From the perspective of this framework, learning takes place through the medium of the teacher and pupil relationship, and some educationalists emphasise definitions which incorporate 'inter-subjective' processes of negotiation, compromise, conversation and 'shared experience' (Goldstein, 1999). This connotation of an 'affectively toned' ZPD is supported by evidence from some reputable studies of child development in schools. A longitudinal project investigating features of 14 educational settings deemed 'good' or 'excellent' (REPEY[1] Siraj-Blatchford, Sylva, Muttock, Gilden & Bell, 2002) concluded that the *quality* of teacher-child interactions were the most

[1] Researching Effective Pedagogy in the Early Years.

salient feature of these settings. Better learning outcomes arose from a dual emphasis on cognitive and emotional development in optimal early years educational settings. They defined 'High quality' teacher-child relationships as those in which teacher and child appeared motivated to engage and grapple with one another's understandings, and there were opportunities for 'joint involvement episodes' (Brunner, 1964, 1975a). These researchers encourage teachers to observe children's developmental levels (Tymms, Coe, & Barmby, 2002; Siraj-Blatchford *et al.*, 2002) and to take into account prior learning experiences on the basis of which they can implement strategies to teach effectively and shape children's 'learning dispositions' (Dowling, 2000).

A number of factors such as home environment and socio-economic status are known to influence the diversity of children's pre-school emotional and developmental competencies and academic outcomes (Gibson & Sheena, 1997). Given the weight of these extra-school factors, it is striking that a large longitudinal study from which the Siraj-Blatchford sample was taken, involving 3000 children in 140 preschool settings, which controlled for these factors (Effective Provision for Preschool Education: EPPE) (Sylva, 1999), found that some schools and specific teachers made a much greater impact than others (up to 40 % of the variance) on children's progress. Similar research at the secondary level found the effects attributable to teachers accounted for 10 to 15 % of the variance (a smaller but still significant effect).

There are clearly numerous demands on teachers, affecting their ability to attend to children's academic developmental *and* emotional needs. The term 'Interaction and

caring' describes the concept of an 'ideal' teaching approach in which the teacher apprehends and 'receives the child into' him or herself (Noddings, 1992). Limitations on the application of this principle include large class sizes, teacher workload and rigid 'overfilled' curricula (Cooper, 2004). Other factors include teacher characteristics, which are discussed below, the behaviour and attitudes of particular children and the degree of teacher support within schools.

Summary

1. Emotional literacy is now believed to be a core component of social and academic success.
2. The importance of the affective dimensions of the ZPD to learning has found support in reputable studies.
3. Effective teachers need to assess children's developmental levels and emotional competencies in order to match these with appropriate teaching methods.

ATTACHMENT PERSPECTIVES ON EARLY CHILD TEACHER RELATIONSHIPS

Attachment and Emotional Development

I now summarise the implications of attachment theory in the school context and then examine early child-teacher relationships in more detail. These relationships have been the particular focus of attachment researchers.

Emotional development takes place at the confluence of social and individual developmental processes. The particular influence of dyadic interactions on

emotional development is most powerfully explained within the framework of attachment theory. This informs understandings of healthy emotional development as well of emotional disturbances which impact significantly on children's experiences in schools (Stroufe, 1988; Stroufe, 1990; Atwool, 1999).

Bowlby's theory of the experientially derived 'internal working models' (Bowlby, 1969, 1980) is now substantially supported by a large and robust body of evidence (e.g. Ainsworth, 1967; Ainsworth, Blehar, Waters & Wall, 1978; Cassidy & Shaver. 1999). Bowlby proposed that internal working models shape expectations of relationships through childhood and beyond. Categories of internal working models (IWM's) comprise secure, insecure (avoidant and ambivalent), and disorganised (Main & Solomon, 1990). These underpin the 'cognitive-affective systems' which underlie most areas of development, via their effects on a child's capacities to play and explore their levels of fearfulness, and their interpersonal relationships. In young children the 'attachment behavioural system' relates to biologically based exploratory and fear behavioural systems (Cassidy, 1999, p.7). Distress activates the attachment system (the need to maintain proximity with a 'secure base', Ainsworth, 1967); Bowlby, 1969/1982). Where a secure base is only intermittently present or is unavailable, heightened fearfulness, resulting from repeated exposure to anxiety provoking experiences, activates the 'defensive' cognitive and emotional structures which correspond with insecure/disorganised attachment representations.

A range of risk and protective factors operate in schools (factors which either enhance or reduce children's sense of security and resilience). These are associated with primary secure or insecure internal working models (Greenberg, Cicchetti &

Cummings, 1990; Rutter, 1987; Page & Bretherton, 2001; Cassidy, 1999; Stroufe, 1983). The sense of security is paramount to academic performance, in that when children feel safe they are able to play, to explore new arenas and therefore to learn (Piaget, 1955; Winnicott, 1971). Factors which mitigate the impact of insecure IWM's on the child's experiences in school include the quality of the school environment in terms of everyday interactions, teacher morale and, it is hypothesised, the level of security in the teacher-child relationship.

Attachment in Schools

Early research following children classified as secure, insecure ambivalent or avoidant as infants, indicated that there are predictable risk pathways which lead from insecure attachments to poor adjustment in nursery and beyond (Stroufe, 1983). There is also evidence that children's relationships with teachers vary as a function of their attachment histories (e.g. Greenberg, Cicchetti & Cummings, 1990; Page & Bretherton, 2001; Rutter, 1987; Stroufe, 1983; Stroufe, 1988). For example, insecure children seek 'psychological proximity' to their teachers (Lynch & Cicchetti 1992). Commesurately 'over-dependency' in the child-teacher relationship has been found (Birch & Ladd, 1997) to be a strong correlate of poor initial adjustment to school, poorer academic performance and more negative attitudes to school.

Many of the capacities associated with secure classifications (e.g. expectations that needs will be met; persistence in tasks), have sequale which in themselves are protective. For example, such children will be satisfying to teach and tend to progress (Stroufe, 1988). In contrast, the same study found anxious-avoidant children to be tense, impulsive and attention seeking, and to be the most frequent targets of teacher

anger, (Stroufe, 1988). There are also suggestions that as a result of their short attention spans and impoverished interpersonal skills, children with disorganised attachments are often labelled with ADHD (Perry, 1997).

Evidence of associations between early behavioural difficulties in school and later school adjustment problems (e.g. Birch & Ladd, 1997; Hamre & Pianta, 2001) has lead to a burgeoning of school interventions (see below), one of which focuses on utilising teachers as a 'secure base' (Bennathan & Boxall, 2000). There is a consensus however, that emotional and behavioural difficulties are not determined by the attachment system in isolation from the child's context and are a product of interactions between a child and his or her environment over time. Most researchers concur on the necessity for further longitudinal studies to ascertain the extent to which behaviour attributable to attachments is mediated by factors such as (for example), teacher behaviour, the quality of the teacher-pupil relationship and cultural differences between teachers and pupils.

Different Attachment Representations

It is clear that children strive to form new attachments even when faced with rejection (Crittenden, 1988; Rutter & Rutter, 1993). The quality of children's relationships with teachers may be particularly important in early childhood when children are likely to openly exhibit attachment related behaviours towards teachers. Because children can form different attachment representations in relation to different adults who care for them (Steele, Steele & Fonagy, 1995; Howes, 1999), those whose attachment organisations are in the dimensions of insecure or disorganised could, potentially, develop more secure relationships with teachers which could positively

affect their development (Howes, 1992; Pederson, Faucher & Eaton, 1978; Zionts, 2004).

Significant concordance between a child's attachment relationships with parents and their nursery teachers has mostly been found (Hamilton & Howes, 1992). Some children however form different attachment representations of their teachers (Mitchell-Copland, Jennifer & George 1996; Lynch and Cicchetti, 1992). In one study of 62 Children, those who were insecurely attached to their mothers but securely attached to a teacher were found to be more pro-social, with higher teacher-rated social competence and better 'affective balance' (i.e. better emotional regulation) than children who were insecurely attached to both teachers and mothers (Copeland-Mitchell, Denham & Demulder, 1997). Other studies of the relationship between different child-teacher attachments and nursery school children's socio-emotional functioning, using larger samples, have found that the quality of the child-teacher attachment is related to behaviour problems, social competence and positive school adjustment (Howes & Ritchie, 1999; Zlatka, 2003).

Longitudinal data on mother and teacher correlates of children's peer relationship competence in 94 children, in a fairly homogenous middle class sample, recruited in infancy and assessed as four year olds (Howes, Matheson & Hamilton, 1994) showed that maternal attachment security classifications were unrelated to the child's social competence, whilst attachment relationships with their teachers (using the Waters Attachment Q set, 1990), better differentiated their social competence. Another study involving 62 children found similar results, on the basis of which it was proposed that a secure attachment relationship with a preschool teacher could partially *compensate*

for an insecure relationship with a primary caregiver (Mitchell- Copeland, Jennifer, & George 1996).

Secure attachments to caregivers or nursery teachers have been linked with other factors associated with adaptive emotional development (Howes & Aitkins, 2002) such as improved problem solving and school adjustment (Bus & van IJzendoorn, 1988; Greenberg & Speltz, 1988; Pianta, 1992; Stroufe, 1989). Wider effects of the relationship in terms of improved ratings of academic achievement have also been found in children adjusting to their first year of school (Howes & Matheson, 1992; Lynch & Cicchetti, 1992; Mitchell *et al.*, 1996; Pianta & Steinberg, 2002).

One longitudinal investigation (over two years) of security in mother-child relationships and teacher-child relationships, in a sample of 55 four year old special needs children, did not however replicate all these associations (Pianta, Nimetz & Bennett, 1997). This sample comprised children of mixed ethnicity from low income families. Although *both* mother and teacher-child relationships had significant effects on early school outcomes (measured in terms of factors such as conduct problems and frustration tolerance), the observed qualities of child-mother relationships were more predictive of outcomes than affection, closeness or support in the child-teacher relationship.

In these studies the direction of effect is rarely examined in detail, therefore child factors, such as personal characteristics, gender and socio-economic status as well as cultural differences between children and teachers (Casteel, 2000; Saft & Pianta, 2001) could mediate or moderate the effects in teacher – child relationships. Given

the difference in findings between the Pianta *et al.* study and the Howes & Matheson study, it may be that unexplained variables include that of children with insecure attachments who have the capacity to develop good relationships with their teachers, perhaps because of other protective factors such as an 'easy' temperament (e.g. Thomas, Chess, Birch & Hertzig, 1963). These children also have better peer relationships, and better school adjustment, and that it is these latter factors which make some children more resilient.

Summary

1. Secure attachments to either teachers or parents or both, are associated with children's academic achievement, social competence and exploratory behaviour in the classroom.
2. There is some support for the hypothesis that children form alternative attachment relationships with their teachers which could be protective.
3. Doubt remains about the direction of effect between positive teacher-child relationships (in terms of the influence of within child factors, teacher factors and contextual factors).

TRAJECTORIES OF CHILD-TEACHER-RELATIONSHIPS

Dimensional Theories of Child-Teacher Relationships

When children leave nursery and start school (in early to middle childhood) their relationships with teachers remain critical to their classroom adjustment and orientation to learning (Birch & Ladd, 1997; Greenberg, Speltz, & Deklyen, 1993; Howes, Hamilton & Matheson, 1994; Howes & Matheson, 1992; Lynch & Cichetti, 1992; Pianta, Steinberg, & Rollins, 1995). The term: 'positive teacher-pupil

relationships' (Birch & Ladd, 1997) is widely used in the literature investigating this era of development. The definition of positive relationships connotes firstly, in a child, a balance between autonomy and appropriate help-seeking, secondly, it relates to the teacher's sensitivity to and liking for that child. Definitions of teacher-child relationships have "been an essential point of departure" (Birch & Ladd, 1998, p.936) in research in this area. Different groups of researchers have developed sets of dimensional categories to describe qualities of the relationship. Lynch and Cicchetti (1992) for example, identified features of the teacher-child relationship which reflect similar emotional qualities to those of attachment theory (optimal, deprived, disengaged, confused, and average). The most widely referenced formulation however is that of Pianta, *et al.* (1995) who, with colleagues identified three qualitative constructs (closeness, conflict and dependency) on the basis of which they developed the Student-Teacher Relationship scale (STRS). Items of this scale consistently map into subscales reflecting these three dimensions of the relationship.

Investigators of teacher-pupil relationships using the STRS have examined the premise that child factors will predict the quality of the teacher-child relationship. For example, emotional negativity and conflict in relationships between kindergarten teachers and children with antisocial behaviour appear to predict poor school adjustment in the 1st grade (Birch & Ladd, 1998). Other investigators emphasise the reciprocal nature of the child teacher relationship and have found, for example, that emotional support from teachers is important to children's emotional well being in middle school (Eccles & Roeser, 1998).

1.6.1 Middle Childhood to Adolescence

A detailed longitudinal study used the STRS (Hamre & Pianta, 2001), as the principle measure to investigate the trajectories of the child teacher relationships from nursery through to adolescence. Their sample of 179 children included a high percentage of ethnic minority and socially disadvantaged children (40%). Findings indicated that 'relational negativity' between children and teachers in nursery schools was a stronger predictor of poor academic and behavioural adjustment in adolescence than cognitive ability or classroom behaviour. Conversely, teacher-child relationships rated as 'close' in nursery and middle school were positively correlated with children's academic performance, school liking and self-directedness in the eighth grade. On the basis of this evidence, differentials in the *quality* of early child-teacher relationships seem to be predictive across a range of socio-economic circumstances although negativity appears to be more predictive of outcomes than closeness.

Howes & Aitkins, 2002 also carried out a longitudinal investigation of the extent to which the qualities of both present and historical affective relationships with teachers, parents and peers were predictive of children's emotional, social and academic competence. They drew on information from a sub-sample of 94 mostly middle-class white children, whose attachments to teachers had been previously studied in nursery and middle school (Howes, Matheson & Hamilton, 1994). The homogeneity of the sample had the advantage of limiting the range of extraneous variables but the disadvantage of not necessary being applicable in more culturally and socially diverse contexts. Results found variations in development associated with variations in the *relational* context of development. At all time points, (nursery, middle childhood and at 14) ratings of emotional self regulation and close peer relationships tended to be higher in girls than boys. In both boys and girls, teacher-child relationship quality in

kindergarten was related to the quality of the teacher-child relationship in middle school, and to friendship quality at 14, as was child-parent attachment security. Children with historically insecure histories (to mothers) but secure teacher attachment histories had higher levels of self-regulation than those with histories of secure relationships with mothers and insecure relationships with teachers. Howes and Aitkins therefore suggested that teachers play a more significant role than mothers in socialising self-regulation. Furthermore, support was also found for the hypotheses that boys at 14 who had experienced difficult home relationships, but had maintained positive child-teacher relationships between kindergarten and middle school (aged 9), were more capable of emotional self-regulation than boys without such relationships. Whereas, for adolescent girls with difficult home relationships, current close friendships with peers, rather than current positive relationships with teachers, were significant predictors of social adjustment. It seems, therefore, that for both girls and boys, having had a supportive relationship with a teacher in nursery may help children at risk to develop social competence and emotional regulation and that these relationships are particularly salient for boys. The notable strength of this study is that it followed the trajectories of secure and insecure child-parent and child-teacher attachments over time. The putative mechanism by which early secure relationships with teachers were associated with social competence was ostensibly early and subsequent attachment relationships. In fact, as Howes and Aitkins later discuss, the routes by which secure and insecure relationships affect children's development are mediated by wider systemic factors. For example, secure relationships may be associated with higher self esteem which may, in itself, have a positive effect on children's peer group relationships and social competence.

In longitudinal studies of teacher-pupil relationships, the direction of effect regarding the influence of particular child factors relative to the effects of particular teacher-child *relationships* will always be difficult to substantiate because of the multiplicity of external and internal variables operating within the relationship and its context. Taken together, although the effects found in these studies were relatively small, findings in longitudinal studies of children from early childhood to adolescence have supported the hypotheses that enhancing and building on child-teacher relationships could significantly impact on children's emotional development. These findings, in combination with evidence from school programmes discussed below, suggest that enhancing teacher child relationships may be particularly salient for children at risk because of antisocial behaviour and/or primary insecure attachments to main caregivers.

The Teacher-Pupil Relationship as a Preventative Intervention

A two year prospective investigation by Meehan, Hughes & Cavell (2003) of 140 second and third grade children who were in 'dual risk' of developing anti-social behaviour, tested the hypothesis that supportive child-teacher relationships could *moderate* certain risk factors, specifically those of child aggression, aversive home environments and minority ethnic status. Using the Network of Relationships Inventory (NRI, Furman & Buhrmester, 1985), two forms of sociometric assessment and the Weinberger Parenting Inventory (WPI, Feldman & Weinberger, 1994), Meehan *et al.* identified some limited associations between supportive teacher-child relationships and school adjustment. Overall, however, more support was found for a compensatory model of these relationships in which positive relationships with teachers were significant mediators of improved psychosocial adjustment in ethnic

minority children at risk. For aggressive Hispanic and Afro-Caribbean children, positive relationships with teachers may have been exceptional (perhaps because of previous experiences of discrimination: Casteel, 2000). The strength of these findings led Meehan *et al.* to suggest that recruiting and preparing teachers to establish supportive relationships with aggressive children from minority cultures could be a worthwhile form of preventative practice.

In addition to the differential effects of supportive relationships between teachers and children from ethnic minorities, gender differences have emerged unexpectedly as a influential variable in several studies. More boys than girls exhibit externalising behaviour before adolescence (Anderrson, 2002); concomitantly, nursery teachers report more 'conflict and over-dependence' in relationships with boys than with girls. When tracked in middle school conflictual and over dependent relationships are correlated with lowered academic and school adjustment (Hamre & Pianta, 2001). Howes and Aitkins (above) also found clear differentials between girls' and boys responses to supportive relationships with teachers (Howes & Aitkins, 2002).

Overall then, the impact of positive child-teacher relationships seems to be different in different groups (in terms of age, levels of aggression and gender). It appears that a positive child-teacher relationship can act as a preventative intervention for some children at risk. This becomes particularly salient in the light of longitudinal studies (Greenberg & Speltz, 1988; Rubin & Lollis, 1988) which demonstrate the routes by which the costs of behavioural dysregulation and social withdrawal diversify in school.

Adolescence

There are changes in the relative importance of different figures within a child's network of relationships as they get older. Peer relationships increase in importance as children approach adolescence (e.g. Lynch & Cicchetti, 1997); and a recent qualitative investigation of the importance of teachers to adolescents in the UK, found that teachers ranked very low in the list of people to whom adolescents would turn to for help (Baker, 2004). Nevertheless there is good evidence that children with problematic relationships who have a supportive relationship with at least one adult are more likely to show greater socio-emotional competence in their development (Hughes, Cavell & Grossman, 1997), and to resist repeating cycles of abuse in adulthood (Engeland, Jacobvitz & Stroufe, 1988).

A range of psychological risks are associated with the transition from primary to secondary school. Declines in self esteem, achievement, motivation and liking for school have been identified in a substantial minority of children after the first year in secondary school (Eccles & Midgley, 1989; Lynch & Cichetti, 1997; Simmons & Blyth, 1987). Biological and cognitive changes during the transition to adulthood mean that the child's capacity to organise his or her developing emotional capacities in these shifting circumstances is one essential determinant of whether or not they stay engaged in school (Roeser, Eccles & Sameroff, 2000).

Drawing on a large, economically diverse sample (Maryland Adolescent Development in Context Study: MADICS) Roeser *et al.*(2000) used a statistical 'person centred analysis' involving measures of academic and social competence which combined with interviews and surveys to examine relations between school and socio-emotional functioning during adolescence. Un-surprisingly they found that

emotional distress predicted problematic behaviour at school, increasing the risk of wider negative sequale, such as negative peer associations. Risk factors indicative of early 'maladaptation' (Stroufe & Rutter, 1984) were found in a substantial minority of adolescents. These included academic failure, poor motivation to learn, school misconduct and negative peer affiliation. Consequently Roeser *et al.* suggested that teachers could shape adolescents' motivation to learn in positive directions by re-enforcing their sense of competence, scaffolding skill development and providing emotional support and encouragement. They noted that children from ethnic or cultural minorities seemed particularly sensitised to perceived discrimination by teachers and suggested that systematic and consistent teacher support could, in itself be an intervention which might counteract the negative repercussions of perceived discrimination. These suggestions are lent authority by evidence of the efficacy of a number of targeted teacher interventions in high risk adolescents (see Table 2).

In reference to the general impact of teachers on adolescent's experiences in schools, a qualitative investigation of the impact of different secondary school organisational practices by Wrigley (2005) compared the approaches of Scottish and Norwegian schools to teaching adolescents. This study provided evidence that altering the networks of relationships surrounding teachers and pupils can give teachers the opportunity to positively influence adolescent's emotional well-being. In the Norwegian schools a team of five or six teachers was attached to a year group which co-ordinated provision for pupils' personal, social and academic development. When compared to Scottish secondary schools (and those in England and the USA) in which subjects are taught by different teachers who appear disparate and unconnected, the

Norwegian children were found to have greater levels of trust and connectedness with their teachers and reported higher levels of self-efficacy.

Summary

1. Associations between 'close and/or 'positive' relationships with teachers, improved school adjustment and academic outcomes have been identified in several studies.
2. Further studies of the mediating variables within child-teacher relationships are necessary to determine the factors which have the most potential to protect vulnerable children and adolescents.
3. The transition to adolescence and secondary school is a time of particular risk during which teacher support and reinforcement may be particularly important.

TEACHER FACTORS

Children enter into relationships with a succession of teachers, all of whose behaviour and teaching styles impact on their development in different ways and to varying extents. The influences between students and teachers are of course reciprocal. From the teachers' perspective, 'positive' relationships with pupils (Hamre & Pianta, 2001) can motivate both them and their pupils to spend extra time and energy working towards academic success. In contrast, conflictual relationships result in attempts by the teacher to control behaviour, which detract from teaching time and from the promotion of conducive classroom environments. Controlling behaviour by teachers has been found to correlate negatively with

children's liking for school, self-directedness and co-operation in the classroom (Birch & Ladd, 1997).

Interviews of children taught by unpopular teachers, allied with observations of unpopular teacher practices (Fierro-Evans, 2005) found that models of discipline based on the teacher's 'positional authority' reduced children's self esteem and limited their ability to reflect on situations 'objectively'. More behavioural problems were also identified in their classrooms. A separate study exploring a path analysis of the antecedents and effects of teacher 'burn out' (Sava, 2001), found that teachers who, either because of low morale, or because of poor teacher-training, used negative criticism, embarrassment and humiliation as strategies to control classrooms had pupils with lower educational outcomes, de-motivation and negative attitudes towards the subject (Gorham & Christophel, 1992; Sava, 2001). Psychosomatic reactions such as stomach aches and sweating palms have also been reported (Hyman & Snook, 1999; Sava, 2001). Neither the Sava nor the Fierro-Evans study controlled for pre-existing anxiety disorders, for the effects of differing socio-economic status, adverse home circumstances or for other difficulties which would impact on a child's behaviour.

In a study (unpublished) of implicit rather than overt behavioural influences on teacher pupil relationships, Zeller and Pianta (2004) examined the relationship between teachers' perceptions of their own attachment histories and their relationships with pupils, using interviews, self report measures and independent observations of teacher student interactions. Even when accounting for variance attributable to student characteristics, a teacher's personal qualities including

depressive tendencies and experiences of loss, independently contributed to the quality of the teacher-pupil relationship, echoing findings reported by Pianta and Steinberg, (2002) and Sutherland (2000). Equally, children's perceptions of the quality of their relationships with teachers have been found to vary as a function of teacher sensitivity and responsiveness, as rated by independent observers, but not as rated by teachers who can often be unaware of the impact of their behaviour in the classroom (Payne, 2003). One research group has targeted teachers' awareness in a focussed intervention for problematic teacher-pupil relationships (Students, Teacher's and Relationship Support System /STARS, Pianta & Hamre, 2002). This group provides consultations for teachers' which include the use of video play-back to help teachers assess and improve the impact of their interactions with problematic children.

Wider Effects of Teacher Behaviour

Studies of the ubiquitous 'teacher's pet' phenomenon in two samples of Israeli children (Tal & Babad, 1989) find it to be recognised and negatively perceived, as a 'preferential relation' from which others are excluded. Teachers displaying the phenomenon were perceived as susceptible and self interested. Children seem to have high expectations of teachers as social and moral arbiters (Mikula & Schlamberger, 1985), and there appears to be a tendency for children to remember incidences of perceived unfair treatment by teachers and for these memories to become formative of their 'emotional attitudes' (Sava, 2001; Yarlott, 1973) towards teachers and education.

Beyond their teaching role, classroom teachers regulate children's activity levels, verbal communication, and it seems, influence their contacts with peers. In the first study investigating the correlates of peer perception of teacher-student relationship quality, 933 pupils in the third and forth grade of schools were found to be profoundly influenced by their perceptions of a teacher's behaviour towards aggressive children (Hughes, Cavell & Willson, 2001). Both teacher support and teacher conflict with specific children were found to be independent predictors of other children's preferences for these children. For children who, because of aggressive behaviour, were behaviourally at risk of exclusion, teacher support predicted children's social preference scores after controlling for both peer nominations and teacher-rated pupil aggression. As Howes and Aitkins (2002) have suggested, teacher-pupil relationships seem to have a wider and perhaps incremental impact on a child's socio-emotional development above and beyond the intra-psychic dimensions reported in the attachment literature.

Summary

1. Controlling and punitive teacher behaviour is associated with lowered educational outcomes, lower self esteem and psychosomatic reactions in children.
2. Teachers' personal and attachment histories influence the quality of their relationships with pupils.
3. Certain classroom phenomena are ubiquitous across cultures and there are suggestions that children have expectations of teachers as moral arbiters.
4. Teacher behaviour towards pupils influences children's perceptions of others pupils and can thereby can affect peer group relationships.

ALTERING DEVELOPMENTAL TRAJECTORIES; TEACHER INTERVENTIONS

Introduction

Recent years have seen the increased application of theories of child development to inform teacher interventions in children's educational and emotional difficulties (Atwool, 1999; Boxall & Bennathen, 2000; Geddes, 2003, 2004; Greenberg *et al.*, 1995; Williams, O'Callaghan & Cowie, 2000). Psychological understandings can have implications for a teacher's behavioural management of particular children, leading to earlier psychological interventions or the application of 'Individual Education Plans' to accommodate children's learning styles (Geddes, 2004).

The intensity of dependence and frequency of teacher-pupil contact suggests that pupils can have experiences in school which mitigate environmental disadvantage. These can operate on many levels, from addressing core experiences of self and others to the modification of relational schemas (Crick & Dodge, 1994) as well as learning social skills and improving self esteem.

These claims have considerable face validity and are the subject of contemporary interest to educationalists. Emerging results of teacher interventions at the micro (individual and classroom) level, as well as at the macro (whole school) level, discussed below, support the potential of a close or positive child teacher relationship as an intervention which can positively affect children's emotional development.

SCHOOL INTERVENTIONS

School programmes to facilitate emotional development and social skills have burgeoned in recent years in both the UK and the USA, sometimes with limited cross-referencing and competing claims for funding. Programmes vary along three dimensions. The first is a focus on teaching specific cognitive and social skills, versus a focus on schools as a 'fundamental ecology' (Greenberg *et al.*, 1995, p. 120) for emotional development, and one that can become a locus of change. The second dimension is the extent to which parents are trained alongside the teacher interventions. All programmes encourage the fostering of a whole school approach and parental involvement to some extent. The third dimension is the degree to which programmes incorporate extra teacher support and consultation to enable them improve their teaching style and management of children with conduct problems. Table 1 (p.38) summarises the programmes mentioned most frequently in the literature on teachers and child emotional development (see page 9 for search strategy). It is therefore not a comprehensive over view of preventative school programmes. For this the reader is referred to Algozzine & Kay (2002). Table 2 (p. 50) summarises the programmes, the teacher's role, and the principle outcomes.

This chapter will review a cross-section of nine programmes which foster children's self awareness and promote the development of emotional regulation.

Table 1

Selection of Teacher Interventions in Pupil's Emotional Development

Name of Intervention	Acronym	Country
Child Development Project.	CDP	USA
Promoting Alternative Thinking Strategies in School-Aged Children	PATHS	USA
Second Step.		USA
High/Scope Perry Preschool Program.		USA
School Transitional Environment Project/HiPlaces.	STEP	USA
Al's Pals.		USA
Nurture Groups.		UK
Social and Emotional Learning Curriculum.	SEAL	UK

Two sets of programmes: the Child Development Project (CDP, 1988) and the School Transitional Environment Project (now called HiPlaces Project) aim to build comprehensive and developmentally tailored school communities. The CDP has been evaluated in several studies (Battistich, Solomon, Watson & Schaps, 1987; Strachota, 1996; Battistich, Schaps, Watson, Soloman & Lewis, *in press*). Proponents argue (Battistich & Solomon, 1995; Felner *et al.*, 2001) that improved outcomes in children's in academic *and* social development are mediated by a sense of school as community. HiPlaces and the CDP both involve intensive interventions which train teachers to promote social and moral development by developing a sense of school community and 'active caring' for children. In the CDP teachers are discouraged from using extrinsic control measures and encouraged to use "democratic teaching" (Fierro Evans, 2005) to foster literacy. Whereas the CDP draws on theories of child development, and is implemented from kindergarten onwards, STEPS/HiPlaces is based on transactional and ecological developmental

frameworks (Bronfenbrenner, 1979; Felner & Felner, 1989; Sameroff & Fiese, 1989) and implemented in secondary schools.

The CDP was first evaluated in a sample of children attending 24 intervention and comparison schools, these were not randomly allocated to the intervention, (Battistich, Solomon, Watson & Schaps, 1997). The integrity of the intervention was evaluated every year over four years by independent classroom observers. Adherence was also checked through questionnaires about the teacher's orientation to children, completed both by teachers and students. External assessments included standardized achievement tests, performance assessments and reviews of school records. In a follow up of individual children after four years, some of whom had transferred to different schools, those in whose elementary schools the CDP had been adopted most systematically, were found to have significantly greater improvements in relation to the comparison group on 59% of variables. These included improved self esteem, greater enjoyment of class, trust and respect for teachers, empathy and concern for others (Battistich, Solomon, Watson & Schaps, 1997). Moreover, in this and other studies the degree of adherence to the model co-varied with the degree of improvement on most variables. Later studies also found improvements in feelings of social competence, levels of misconduct, and levels of educational aspiration (Battistich, 1999).

Although the long term influence of the intervention was impressive, factors likely to impact on differences in children's performance such as children's socio-economic status (e.g. Dodge, Petit & Bates 1994) were only briefly examined (Battistich, Solomon, Watson & Schaps, 1997). When child-poverty was controlled for, the

correlations between the students' sense of community and his or her inductive reasoning skills disappeared. However, other associations such as task orientation and classroom involvement remained significant. Further analysis revealed (Solomon & Battistich, 1997) that the negative effects of poverty on attitudes to school were largely ameliorated when the intervention was adhered to most rigorously. Further research on the relationship between the sense of emotional security at school and academic achievement, in children from different cultural backgrounds is merited (Battistich, 1997). The CDP is the subject of a large ongoing longitudinal research project as it is still unclear which aspects of the programme contribute most to the improvements. It is possible that improved relationships with teachers *or* better peer relationships or generally improved interpersonal interactions contribute to the changes more or less significantly.

The HiPlaces project is another whole school intervention which has been investigated in a number of longitudinal and cross-sectional studies. Its central aim is to ameliorate the mismatch between adolescent developmental needs and the organisation and curricula that serve them (National Association of School Principles USA, 1996). Rather than focus on individual children, the programme seeks to facilitate all children's successful adaptation to secondary schools by reorganising the school environment to make it less complex, and by restricting demands on teachers (and other staff) so that they can provide more support for new students. Teachers operate in teams which meet ideally 4-5 days a week to identify any students who require home contact or additional support; teachers receive extra training in team building and student supervision skills. Adherence to the HiPlace model, as with the CDP, is associated with improvements in academic levels, teacher ratings of student

behaviour and student self reports of depression (fear, worry), anxiety and self esteem. These improvements appear to be stable over two years (Felner, *et al.*, 1997). The maintenance and generalisation of these effects over time and in different school contexts has yet to be demonstrated.

PATHS or 'Promoting Alternative Thinking Strategies' is based on an 'affective-behavioural-cognitive-dynamic' model of development (Greenberg & Kushé 1993) which specifically places emotional processing and regulation at the centre of behavioural and cognitive development. PATHS consists of a detailed curriculum taught in special needs and mainstream classrooms which focuses on teacher-child interactions and relationships (Greenberg & Kusche, 1996). Programme developers used psychological understandings of child development and integrated these concepts (some of which were derived from psychoanalysis), within a manualised curriculum for children between 7 and 11 years old (Kusché, 2002). Teachers, who volunteer to participate in the programme promote emotional literacy (the ability to talk about one's own and other's feelings), and aim to build social competence in order to reduce the emotional distress resulting in behavioural problems. Thoughtful responses by teachers to 'in-vivo' situations are key to helping children connect emotions to personal experiences. Teachers receive initial training and are observed in their classrooms, on the basis of these observations there are weekly consultations during implementation. The curriculum includes 'problem solving' and 'self control', and is delivered throughout most of one school year.

The programme has been evaluated in a number of randomised control trials in both mainstream and specialist schools. These have demonstrated its short and longer term

effectiveness (over two years). The main outcome measure is the Kusché Affective Interview (KAI, Kusché, Greenberg & Beilke, 1988) which measures children's emotional understanding at both an experiential and meta-cognitive level and the Social Problem-Solving Interview (SPSI; Greenberg & Kusché, 1988). The first Randomised Control Trial (Greenberg, Kusché, & Cook, 1995) found improvements in both low and high risk children in levels of fluency in discussing emotional experiences and self efficacy beliefs regarding the management of emotions (Cohen's $d = 0.54$). Greater improvements were found in some children exhibiting higher levels of psychopathology. Even when controlling for verbal intelligence, children with higher rates of externalising behaviour did less well on the emotion interview (KAI), supporting the hypothesis that children with emotional and behavioural dysregulation are less fluent in regulating their emotional experiences verbally. Special needs children who developed increased emotional fluency were rated as significantly improved in teacher ratings of frustration, tolerance, assertiveness, social skills and positive peer relationships (see Table 2 for measures) at one year follow up.

In a more recent randomised controlled study involving 12 special needs classes in which children were assessed pre and post intervention (Kam, Greenberg & Kusche, 2004) using both child interviews (KAI), teacher reports and independent classroom observers; children were followed up over two years. A growth curve analysis found stable reduced ratings of teacher-rated externalising and internalising behaviours and a sustained reduction in children's internalising symptoms on the CBCL-TRF (Achenbach, 1991) (statistics not quoted) relative to the comparison group. The children who had improved most on internalising behaviour scale had improved the most in KAI questions concerning self-efficacy regarding changing feelings (F(2,

259) = 3.0, $p < .05$, $d = .206$). The impact of the curriculum continues to be rigorously evaluated and has been investigated by neuropsychologists (Riggs, Greenberg, Kusche & Pentz, *in press*). These researchers, whilst supporting the effectiveness of PATHS, gave a series of recommendations for enhancing the intervention by attending to understandings of neuro-cognitive functioning and targeting interventions at key developmental stages.

Second Step, (see Table 2) and Al's Pals are two of many school-based intervention programmes which use manualised curricula to address children's emotional development and social skills to prevent the development of anti-social behaviour. These are, like those above, deemed 'model programmes' by the Substance Abuse and Mental Health Services administration, USA. Al's Pal's Kids Making Healthy Choices is termed a 'resiliency-based' early childhood curriculum with forty-six manualised interactive lessons delivered twice a week over one school year, alongside teacher training and, to an increasing extent, parent training. The programme aims to address key risk factors such as limited emotional regulation and aggressive behaviour, aiming to build on children's resilience and coping abilities within the context of a 'caring school ethos'. As with PATHS, the CDP, and HiPlaces, in Al's Pals and Second Step the teacher attempts to shape a caring environment in which children learn and practice positive ways to express feelings and relate to others. These lessons are followed by a nine week booster curriculum in the following year, also administered by teachers. This program was initially piloted in Head Start and other community based child development centres for economically deprived families and has been replicated in non-randomised experimental groups. In their evaluation of Al's Pal's, Lynch, Geller & Schmidt (2004) report on two studies using

experimental designs with control and comparison groups, to which children were allocated randomly, as far as was feasible. Measures, used in the Virginia Pilot study were the Child Behaviour Rating Scale-20 (CBRS-20), the Pre-School and Kindergarten Rating Scale, (PKRS) and the teacher Report of Child Coping. In this study, over a one year period, significant differences in groups on all measures were found, (e.g. CBRS-20, F (1, 133) = 38.55, p = >.001, d = 0.730). Notably, levels of aggressive behaviour were stable in the intervention group but increased in the control group, confirming hypotheses that children's coping abilities, inter-personal problem solving and pro-social behaviour would increase their resistance to developing antisocial behaviour. Caution is required in the evaluation of these findings as children attending the programme have not been followed up longitudinally (for more than one year) and the teacher report measures are subject to bias as no other informants were used. Unlike PATHS and CDP there is no use of child self report to evaluate change. The study cited, as with all the intervention studies discussed in this section, did not control for extraneous factors such as variations in pre-intervention school climate and levels of child and teacher support. In the absence of any form of child self-report, the generalizability of improvements in children's social understanding and levels of aggressive behaviour cannot be assumed.

A smaller scale project, which was designed specifically to intervene in minority preschool children at risk of developing antisocial behaviour, focussed on enhancing teacher-child relationships within high quality leaning environments, also shows promise. In the 'High/Scope Perry Preschool Programme (Weikart, 1961) teachers visit and support children's parents, giving them regular reports on their children's

progress and informing them about child development. Children aged between 3 and 4 were randomly assigned into intervention/non-intervention groups and 97 % of the 126 participants were followed up, most recently at the age of 40, with supporting data gathered from participant's school, social services and arrest records. In these groups, adults born into poverty were significantly less likely to have been arrested (36% vs. 55%), and were more likely to have committed marriages and higher earnings. Fewer women required treatment for mental illness (8% vs. 36%) or had to repeat a grade (21% vs. 41%). The intervention group also, on average, outperformed the non-programme group on various intellectual and language tests. These findings suggest that preventive teacher interventions in the early years have great potential. Limitations of the study include the smallness of the sample and the lack of analysis of which specific factors most affected the intervention (for example home visiting versus the consistency and stimulation of the nursery environment) however, the data has impressive ecological and external validity.

In the UK, partly in response to increasing evidence of child stress at earlier ages, the SEAL curriculum (see Table 2) was launched by the DfES in 2005 as a statutory curriculum for key stages one to four. This is another manualised curriculum which emphasises a whole school approach and is adaptable to different school contexts. The curriculum was developed to provide a practical framework and guidance to schools in the light of the "Every Child Matters" Green Paper (2004). Within the Personal Social and Health Education (PSHE) curriculum which SEAL is intended to operationalise, there are five targets which include self awareness, managing feelings and empathy. Head teachers are expected to identify gaps and improve their provision in relation to these. The curriculum pilot in 500 schools was evaluated

using interviews with teacher, head teachers, teaching assistants, children and parents (Hallam, Rhamie & Shaw, 2006). Teachers children and parents were also given questionnaires inviting them to feedback on the curriculum's effect on school attendance, on the overall school atmosphere, and on children's behaviour. Positive feedback by several teachers provided a basis for claims that the curriculum had a significant impact on these factors, however the rate of return of questionnaires was uneven; some schools responded more enthusiastically than others. Several schools reported that the majority of children's abilities to resolve arguments and discuss feelings had markedly improved, but that a small minority of children's behaviour had actually worsened, with some reporting increased numbers of exclusions. They attributed these changes to raising expectations of children's behaviour in ways with which some children were unable to comply. These tended to be children from particularly adverse home circumstances. The programme was not evaluated using a comparison group, nor was the allocation of pilot schools randomised; instead schools were able to choose whether or not to take part. Therefore conclusions about the benefits of the curriculum can only be tentative.

A more individually focussed intervention, also claimed to have significant benefits for the school community (Cooper & Lovey, 1999; Doyle, 2004) is the 'Nurture Group', (Bennathan & Boxall, 2000). There are currently over 500 of these small classes (of between 6 -12 children) in primary schools in the UK catering for children between the ages of four to eight. Modified forms of nurture groups operate for children of all ages. These aim to foster secure attachments within the child-teacher relationship and are based primarily on attachment theory (Bowlby, 1969, 1980). As in PATHS, children's behavioural problems such as aggression and social

withdrawal are seen as expressions of under-development, rather than as evidence of deficit. Accordingly, the groups are implemented by experienced and specially trained teachers and classroom assistants, in small classrooms which have home-like environments. In these classrooms, carefully planned routines, including play and teaching, appropriate to different children's hypothesised developmental needs, are routinely provided. This model emphasises continuity in the teacher-child relationship, for the period of group attendance and beyond. Children are re-integrated into their normal classrooms after two to three terms. An early study by Iszatt & Wasileska, (1997) found that 87% of children returned successfully to their normal classrooms within one year and 83% required no further special needs input. Nurture groups are supported by the majority of staff who work in schools which have them (Doyle, 2004). The central mechanism by which children begin to develop along adaptive developmental trajectories is that children alter their 'internal working models' of adults (Bennathan & Boxall, 1998), although this assumption has not yet been tested.

Preliminary findings in Nurture Groups were reported from a two year longitudinal study (Cooper, Arnold & Boyd, 2001) of three groups of children: one nurture group children and two comparison groups, with and without identified social and behaviour difficulties (respectively), matched for age and gender. Measures used by Cooper et al. included children's self reports, interviews with parents and teachers, pre and post teacher SDQ's (Goodman Strengths and Difficulties Questionnaire, Goodman, 1999; 1997) and items from teacher rated (Boxall & Bennathan, 1998) 'profiles' for nurture group children. These have not been subject to factor analysis as to their reliability and validity. The study did not clarify what determined

placement in nurture groups, nor did it specify if children were in different schools, or the range of children's problems in each group. Significant improvements were found using teacher SDQ's in nurture group children, when compared with the matched comparison group, with an increase in 'normal' SDQ's from 8% to 37% (pre to post-test) as opposed to an increase from 16% to 25% in the comparison children. Improvements were found on all other measures, although parent support for nurture groups differed with <5% of parents saying that their children had got worse. An unpublished two year follow-up of a small cohort of the original sample (N=12) found that many of the improvements had been sustained, although some children had relapsed (Cooper & Tiknaz, 2005). One weakness of the original study is that the teachers who completed the main outcome measures were not blind to the intervention and were therefore subject to bias. A second is that the differences between outcomes in different schools were not reported, so that the varying efficacies of different teachers in different contexts were not made public.

This programme differs from others in that it particularly stresses the importance of continuity of a relationship with a particular teacher. With the exception of PATHS and Nurture Groups, effective school programmes do not view *particular* child - teacher relationships as contexts for emotional development, perhaps because children seem to generalise from early experiences and develop schematic representations of teachers (Crick & Dodge, 1994, Howes & Aikins, 2002). Arguably, however, given other evidence of the developmental importance of particular relationships with adults for children at risk, neglecting attention to the effects of individual child-teacher relationships could weaken effects on longer term outcomes for children.

Programmes which measure change behaviourally and through academic improvement, neglect to assess the impact of changes in the child's perceptions. Of particular interest are changes in the way children think about adults and about their lives at schools as a result of school interventions. Changes in procedural models of relationships or 'internal working models' of teachers are likely to be more durable than short term behavioural change (e.g. Greenberg, *et al.*, 1995; McConaughy, 2000), although the impact of behavioural change on children's lives should not be underestimated.

Thus, future studies should investigate the contribution of teacher continuity since considerable effort, extra training, time and supervision are necessary to enable teachers to intervene skilfully in children's emotional development. Additionally, discriminating between the negative and positive effects of particular versus general child-teacher relationships on children's emotional development is a task yet to be undertaken.

Summary

1. Numerous teacher and school interventions in the UK and USA use a variety of approaches to facilitate children's emotional development.
2. Evaluations of these programmes range widely in the degree to which they include children's self reports as a measure of change.
3. The impact of changes in children's mental representations of teachers resulting from teacher interventions has yet to be evaluated.

Table 2: SUMMARY OF TEACHER INTERVENTIONS IN SOCIAL AND EMOTIONAL DEVELOPMENT *

Intervention Description	*Country*	*Teacher Role*	*Aims of Intervention*	*Evaluation Design and Main Findings* * *	*Longest Length of Follow up*	*Age of Children*
Al's Pal's Kids Making Healthy Choices *** (Geller,1993)	USA	Implements Programme via 46 interactive lessons. Manualised Curriculum, & social skills training. Fostering caring classroom environment. Encouraging Parent support and involvement.	Socio-emotional development, problem solving, independent thinking, prosocial behaviour. Substance Abuse Prevention.	Pre and post-test matched comparison group design $N = 218$ (1997). Significant improvements on: Child Behaviour Rating Scale-20 (CBRS-20) Pre-School and Kindergarten Rating Scale, (PKRS) Teacher Report of Child Coping. Levels of aggressive behaviour stable in the intervention group & increased in the control group.	I Year	3-8 Years
Child Development Project, *** (Battistich, Solomon & Schaps, 1989)	USA	Implements program Re-enforces thoughtful interpersonal behaviour Adherence and performance Checked by outside evaluators.	Aim to create a supportive and caring school community. Increasing levels of behavioural & emotional regulation, improving literacy.	Pre and post-test matched comparison group design $N = 600$ (1997). Improvements found in: Self esteem Enjoyment of class, Respect for teachers Concern for others Levels of misconduct Levels of educational aspiration.	2 years	5-12 years

Project Fast Track (Conduct problems Prevention Research Group, 1999)	*USA*	Implements Manualised Curricula. Academic tutoring, utilises PATHS (below) Runs Social Skills Groups	As children enter school a set of interventions are instigated which aim to prevent chronic antisocial behaviour in a sample of children selected as high-risk at school entry because of conduct problems in nursery.	*RCT* N = *891* Significant improvements in: Teacher ratings of child behaviour Peer ratings Child Nominations Child self report of response to groups. .	4 years	5-7 years
Family Links Nurturing Programme (Bavolek, R. 1974)	UK (Has been widely trialled in USA)	Implements programme in combination with multi-agency staff and families. Works to create 'nurturing community'	Parents supported to use emotional literacy concepts (talking about feelings) and given behavioural 'toolbags'. Parent involvement and family education + whole school approach to emotional literacy	M.A. Dissertation (Unpublished) Proponents cite studies of effective parenting programs run by teachers. Parent interviews: parents cited support and feedback from other parents was the most helpful aspect. Course enabled them to re-establish a sense of control; increased capacity to think calmly; increased sense of empathy with their children, and a better understanding of the factors which motivate their children.	No longitudinal studies in the UK.	1 Year.

Nurture Groups (Bennethan & Boxall, 2000 – first stated in the 1970ies.)	UK	Implements small classroom home like environments. Promotes child security and sense of safety, assesses children's developmental levels and needs. Provides affection and nurturing approach. Evaluates Progress.	Socio-Emotional Development, Positive School adjustment.	Intervention + 2 comparison groups matched for age and gender. *N* = 342 SDQ Total score: significant decreases relative to comparison groups. Boxall Profile – improvements in classroom behaviour. Teacher perceptions of academic outcomes - improved. Post intervention: semi-structured interviews with Parent, other teachers & Child. Other teachers found groups improved whole school atmosphere.	2 years (*N* = 11)	4- 8 years
High/Scope Perry Preschool Program *** D. P. Weikart (1962)	USA	Specialist high quality nursery. Promoting language development and literacy, initiative taking, social skills, 'Plan & Do review'. Supports parents.at home.	Preventing development of antisocial behaviour, drug use and school drop out.	Intervention and control group. 123 African Americans Levels of literacy improved. Criminal records: 68% less arrests for drug dealing. No's of home owners 50% more. No's married increased. Rates of mental illness decreased.	27 years	3 -5 years

PATHS *** (Promoting Alternative Thinking Strategies, Greenberg & Kusché, 1993)	USA	Teaches manualised curriculum. Receives weekly consultation on the basis of classroom observations.	Emotional Literacy, social and emotional development.	RCT. *N*=133 Significant improvements on: Kuché Affective Interview. CD1:(Child Depression Inventory). Cohen's CBCL TCRS	3 Years	4-8 years
Lions-Quest Skills for Adolescence*** Susan Keister, (1982).	USA	Teach manualised Curriculum. 102 lessons. Providing 'positive' school climate. Parent meetings, encouraging parental involvement in school activities. Promoting involvement in community.		RCT NIDA study. N = 7, 426 Postest data from 6,239 7th graders. Decreased levels of drug abuse. Delayed progression to marijuana use and binge drinking, did not delay onset of cigarette smoking.	I year	10-11 years

Reconnecting Youth (RY) *** Beth McNamara (1990).	USA	Involved in partnerships with peers and parents. Provides self esteem enhancement strategies, decision making, personal control strategies.	Preventative intervention for children at risk of multiple behaviour problems	Repeated measures Quasi-Experimental Design. *N* = (Intervention) = 190 (Control) = 98 Numbers of school dropout lower. Academic grades higher. Levels of drug use down 54%. Levels of depression & Suicide decreased. Aggression and anger 48 % decrease. Self efficacy 23% increase.	5-7 months	14-18 years High Risk groups.
Responding in Peaceful and Positive Ways-RiPP *** Wendy Northup, (1980)	USA	Manualised Curriculum containing social conflict resolution strategies. Teaches relationship between self-image and group.	Violence prevention Promoting conflict resolution Strategies & Skills Problem solving	Within school evaluation: control and comparison group. No's of violations for carrying weapons decreased. Improved knowledge of curriculum. Decreased anxiety. Levels. Peer drug pressure decreased.	6 months	8 – 18 years

STARS (Students, Teacher's and Relationship Support System, Pianta & Hamre, 2002)	USA	Consults on problematic relationships with individual children. Ha regular times of 5-15 minutes with 'target' child. Observes video tapes of self in consultations.	Changing teacher's representations of Relationships with 'problem' children. Helping teachers become more aware of their Interactions with Children	None cited Not published.	Not published.	3 - 7
STEP/ HiPlaces ***	USA	Teaches smaller Classes. Meet twice weekly to discuss children. Instigate early intervention of emotional and behavioural difficulties. Guidance for parents.	To provide more secure, personalised And supportive learning environments. To identify and support children with problems at an earlier stage. And promote Socio-emotional competence	Experimental Design. Adherence fidelity monitored. *N = Approx* 1 Million. Child adjustment to school improved. Academic outcomes improved.	7 years	11 – 18 years old

* This list describes the most frequently cited school-based interventions in the literature on schools and emotional development.

** Design of the most recent trial, all have had multiple trials, except where stated.

*** Deemed a Model Program by Substance abuse and mental health services administration, (SAMSHA) USA.

REFERENCES

Achenbach, T. M. (1991,b.). Manual for the Teacher's Report Form and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry.

Ainsworth, M. D. S. (1990). Some considerations regarding theory and assessment relevant to attachments beyond infancy. In M.T. Greenburg, D. Cicchetti, & E. M. Cummings (Eds), *Attachment in the preschool years: Theory research and intervention* (pp. 463-488). Chicago: University of Chicago Press.

Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love.* Baltimore: John Hopkins University Press.

Ainsworth, M.D.S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of Attachment.* Hillsdale, NJ: Erlbaum.

Algozzine, B. & Kay, P. (2002). *Preventing problem behaviors: A handbook of successful prevention strategies.* Thousand Oaks, CA, US: Corwin Press

Andersson, H. W. (2002). Gender Differences amongst children with externalising behaviour disorders in a clinic population. *Childcare in Practice, 8,* 283-290.

Ashiabi, G.A. (2000). Promoting the Emotional Development of Preschoolers. *Early Childhood Education Journal. 28,* 79-84.

Atwool, N. (1999). Attachment in the school setting. *New Zealand Journal of Education Studies, 34,* 309- 322.

Baker, J. A. (1999). Teacher-Student interaction in urban at-risk classrooms: differential behaviour, relationship quality and student satisfaction with school. *The Elementary School Journal, 100,* 59-70.

Barnardos (2001). What are social, emotional and behavioural difficulties? Towards a definition of a unique problem. In (unnamed author), *We can work it out:*

What works in educating pupils with social emotional and behavioural difficulties outside mainstream classrooms (pp. 14-98). London: Barnardos.

Battistich, V., Solomon, D. Watson, M., & Schaps (1997). Caring School Communities. *Educational Psychologist, 32*, 137-151.

Battistich, V. & Solomon, D. (1995). *Linking Teacher Change to Student Change.* (In E. Schaps. Why restructuring must focus on thinking and caring: A model for deep, long term change through staff development). Symposium conducted at the meeting of the American Educational Research Association. San Francisco.(personal communication).

Battistich, V. & Solomon, D. (1995). Schools as communities, poverty levels of student populations and student's attitudes, motives and performance. *American Educational research Journal, 32*, 627-658.

Battistich, V., Watson, M., Solomon, D..& Schaps, E. (1999). Beyond the role of the three R's: A broader agenda for school reform. *The Elementary school Journal, 99*, 415 - 429.

Bennathan, M., & Boxall, M. (2000). *Effective Interventions in Primary School: Nurture Groups.* David Fulton.

Berk, L. E., & Landeau, S. (1993). Private speech of learning disabled and normally achieving children in classroom academic and laboratory contexts. *Child Development, 64*, 556-571.

Birch, S. A. & Ladd, G. W. (1997). The Teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61-79.

Birch, S. A. & Ladd, G. W. (1998). Children's Interpersonal behaviour and the child-Teacher relationship. *Developmental Psychology 34* (5), 934-946.

Bowlby, J. (1944). Forty-Four Juvenile Thieves: Their Characters and Home Life. *International Journal of Psychoanalysis*. 25, 19-52, 107-127.

Bowlby, J., (1969/1982). *Attachment and Loss: Vol.1. Attachment.* New York: Basic Books.

Bowlby, J., (1988). *A secure base.* New York: Basic Books.

Bretherton, I & Mulholland, K.A. (1999). *Internal working models in attachment relationships: A construct revisited.* In: Casssidy, J., & Shaver, P.R. (1999). *Handbook of Attachment. Theory, Research and Clinical Applications.* The Guildford Press: New York, London.

Brenner E. M. & Salovey, P. (1997). Emotion regulation during childhood, developmental, interpersonal, and individual considerations. In P. Salovey & D.J. Sluyter (Eds.), *Emotional development and emotional intelligence: educational implications.* (pp.168 - 193). New York: Basic Books.

Bronfenbrenner, U. & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Ed.), *Handbook of Child Psychology*, Vol. 1, (pp. 993 – 1028), New York: Wiley.

Brunner, (1964). The course of cognitive growth. *American Psychologist, 19*, 1-15.

Bruner, J. S. (1975, a). From communication to language – A psychological perspective. *Cognition, 3*, 225-287.

Cassidy, J. (1999). The nature of the child's ties. In: J. Casssidy, & P. R. Shaver, (Eds.) *Handbook of Attachment. Theory, Research and Clinical Applications* (pp. 3 -20). The Guildford Press: New York. London.

Casssidy, J., & Shaver, P.R. (1999). *Handbook of Attachment. Theory, Research and Clinical Applications.* The Guildford Press. New York. London.

Casteel, C. A. (2000). African American students' perceptions of their treatment by Caucasian Teachers. *Journal of Instructional Psychology, 27*, 143-148.

Conduct Problems Prevention Research Group (1999). Initial impact of the Fast Track prevention trial for conduct problems: II. Classroom effects. *Journal of Consulting and Clinical Psychology, 67*, 648-657.

Cooper, P. & Lovey, J. (1999). Early intervention in emotional and behavioural difficulties: the role of nurture groups. *European Journal of special needs Education, 14*, 122-131.

Cooper, P. & Tiknaz, Y. (2005). Progress and challenge in nurture groups: evidence from three case studies. *British Journal of Special Education, 32*, 211-222.

Cooper, P. & Whitebread, D. (2002). The effectiveness of nurture groups. Leicester: University of Leicester, School of Education.

Cooper, P., Arnold, R. & Boyd, E. (2001). *The Effectiveness of Nurture Groups: Preliminary Research Findings*. University of Leicester, School of Education.

Cooper, B. (2004). Empathy, interaction and caring: teacher's roles in a constrained environment. *Pastoral Care, 2004, 9*, 12 -21.

Crick, N. R. & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101.

Crittenden, P. M. (1992). Treatment of anxious attachment in infancy and early childhood. *Development and Psychopathology, 4*, 575-602.

Davis, H.A. (2001). The quality and impact of relationships between elementary children and teachers. *Journal of Contemporary Educational Psychology, 26*, 431-543.

Davis, H.A. (2003). Conceptualizing the role and influence of student-teacher relationships on children's social and cognitive development. *Educational Psychologist, 38*, 207-234.

Denham, S. A. (1998). *Emotional Development in Young Children.* The Guilford Series on Social and Emotional development: The Guilford Press.

Department for Education & Skills (2003). Green Paper: *Every Child Matters*. Retrieved from DfES web site: September 20th 2005: http://www.everychildmatters.gov.uk/publications/.

Department for Education & Skills, (2000). Personal Social & Health Education, Curriculum guidelines. Retrieved from DfES web site, December 7th 2005: http://www.parentscentre.gov.uk/educationandlearning/whatchildrenlearn/curriculumandassessment/personalsocialandhealtheducation/.

Dodge, K.A., Pettit, G. S. & Bates, J.E. (1994). Socialisation mediators of the relation between socio-economic status and child conduct problems. *Child Development, 65*, 649-665.

Doyle, R. (2004). A social development curriculum: applying nurture group principles and practices to support socially and emotionally vulnerable children within mainstream classrooms. *British Journal of Special Education, 31*, 24 -30.

Dowling, M. (2005). *Young Children's Personal Social and Emotional Development.* Paul Chapman: Sage.

Dunn, J., Brown, J. R. & Beardsell, L. (1991). Family talk about emotions, and children's later understandings of others' emotions'. *Developmental Psychology, 27*, 448 -555.

Dunn, J. (1988). *The beginnings of social understanding.* Oxford, Blackwell.

Easterbrooks, A.& Goldberg, W. (1987) *Consequences of early family attachment patterns for later social-personality development.* Paper published at the biennial meeting of the society for research in child development, Baltimore.

Eccles, J. S. & Midgley, C. (1989). Stage-environment fit: Developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.) *Research on motivation in education, Goal and cognitions* (pp. 139 -186). San Diego, C.A.: Academic.

Engeland, B., Jacobvitz, D., Stroufe, L.A. (1988). Breaking the cycle of Abuse. *Child Development. 59*, 1080-1088.

Erickson, M.F., Stroufe, L.A. and Engeland, B. (1985). *The relationship between quality of attachment and behaviour problems in Preschool in a high risk sample.* Bretherton & E. Waters (Eds.), Growing points of attachment: Theory and research. Mongraphs of the society for research in child development, (Vol.. 50). Chicago: University of Chicago Press.

Felner, R.D., Favazza, A., Shim, M., Brand., Gu, K. & Noonan, N. (2001). Whole School Improvement and Restructuring as prevention and promotion, lessons for STEP and the project on high performance learning communities. *Journal of School Psychology, 30*, 177-202.

Fierro Evans, C. (2005). Values in the practice of teaching, and questions for quality and equity in schools. *Improving Schools, 8*, 59 – 77.

Gardner, H., Mindy L., Kornhaber, W. & K. Wake. (1996). *Intelligence: multiple perspectives.* Fort Worth, Texas: Harcourt Brace, 1996.

Gaberdine, J., Dubrow, N., Kostelny, K. & Pardo, (1992). Children in danger. San Francisco: Jossey-Bass.

Geedes, H. (2003). Attachment and learning. Part II: The learning profile of the avoidant and disorganised attachment patterns. *Emotional and Behavioural Difficulties, 10* (2), 79-93.

Geedes, H. (2003). Attachment theory and the 'dependent' child. *Emotional and Behavioural Difficulties, 8*, 231- 242.

George, C. Kaplan, N & Main, M. (1984). Adult Attachment Interview. Unpublished Manuscript, University of California at Berkley.

Gibson, A., Sheena, A., (1998). School performance, school effectiveness and the 1997 White Paper. *Oxford Review of Education, 24*, 195-210.

Goldstein, L. S. (1999). The relational zone: the role of caring relationships in the co-construction on mind. *American Educational Research Journal, 36*, 647-673.

Goleman, D. (1996). *Emotional intelligence: why it can matter more than IQ.* : London: Bloomsbury.

Greenberg M.T. & Speltz, M. (1988), Contributions of Attachment theory to the understanding of conduct problems during the preschool years. In Belsky J., & T. Nezworski (Eds.), *Clinical Implications of Attachment.* Hillsdale, N.J. Erlbaum.

Greenberg, M. T., Kusché, C.A., Cook, E. T., & Quamma, J. P. (1995). Promoting emotional competence in school-aged children: the effects of the PATHS curriculum. *Development and Psychopathology, 7*, 117 – 135.

Greenberg, M. T., Cicchetti, D., Cummings, M.E. (1990). *Attachment in the pre-school years: Theory, research and intervention.* University of Chicago Press.

Greenberg, M. T. & Kusché,C. A.(1993). *Promoting social and emotional development in deaf children: The PATHS project. Seattle*: University of Washington Press.

Gresham, F. M, Elliot, S. N. (1990). *Social skills rating system.* Circle Pines, MN: American Guidance Service.

Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P. Y., Asher, K. N., Beland, K., *et al.* (1997). Effectiveness of a Violence Prevention Curriculum Among Children in Elementary School: A Randomized Controlled Trial. *Journal of the American Medical Association, 277,* 1605–1611.

Hallum, S. Rhamie, J. & Shaw, J. (2006). *Evaluation of the primary behaviour and attendance pilot.* Department for education and skills. Research Report, RR. 717. Institute of Education, University of London. Retrieved February, 23, from DfES web site: http://www.dfes.gov.uk/.

Hamilton, C. E. & Howes, C. (1992). A comparison of young children's relationships with mothers and teachers. In R. C. Pianta (Ed.), *Relationships between children and non-parental adults: New directions in child development* 57. (pp. 41- 60). San Francisco: Jossey-Bass.

Hartup, W.W. (1989). Social relationships and their developmental significance. *American Psychologist, 44*, 120-126.

Hamre, B. J. & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child development, 72*, 635-638.

Hodges, J., Steele, M., Hillman, S., Henderson, K. Kaniuk, J. (2003). Changes in attachment representations over the first year of adoptive placement: narratives of maltreated children. *Clinical Child Psychology and Psychiatry*, *8*, 1359-1045.

Howes, C. & Aitkins, J. W. (2002). Peer relations in the transition to adolescence. *Advances in Child Development and Behaviour, 29*, 195-230.

Howes, C. (1999). Attachment relationships in the context of multiple caregivers. In: Casssidy, J., & Shaver, P.R. (Eds.). *Handbook of Attachment. Theory, Research and Clinical Applications.* (pp. 671 – 687). The Guildford Press. New York. London.

Howes, C., Hamilton, C. E., Philipsen, L. C. (1998). Stability and continuity of child-caregiver and child-peer relationships. *Child Development, 69*, 418 - 426.

Howes, C., Matheson, C., Hamilton, C. E. (1994). Maternal, teacher, and child care history correlates of children's relationships with peers. *Child Development, 65*, 264-273.

Howes, C. & Matheson, C. (1992). Contextual constraints on the concordance of mother-child and teacher-child relationships. In Pianta, R.C., (Ed.) Beyond The parent: The Role of other Adults in Children's lives. *New Directions for Child Development, 57.* (pp. 25-40), San Francisco: Jossey-Bass.

Howes, C. & Ritchie, S. (1999). Attachment organisations in children with difficult life circumstances, *Development and Psychopathology, 11*, 251-268.

Howes, C., Rodning, C., Galluzzo, D. & Myers, I. (1988). Attachment and childcare: relationships with mother and caregiver. *Early Childhood Research Quarterly, 3,* 403-416.

Howes, C., & Smith, E. (1995). Relations among child care quality, teacher behaviour, children's play activities, emotional security and cognitive activity in childcare. *Early Childhood research Quarterly, 10.* 381- 404.

Howes, C., Rodning, C., Galluzzo, D., & Myers, I. (1988). Attachment and Childcare: relationships with mother and caregiver. *Early Childhood Research Quarterly, 3*, 403-416.

Hughes, J. N., Cavell, T. A. & Willson, V. (2001). Further support for the developmental significance of the quality of the teacher-student relationship. *Journal of School Psychology, 39*, 289-301.

Hyson, M.C. (1994). *The Emotional Development of Young children: Building an Emotion Centred Curriculum.* Teacher's College, Columbia University, New York, London.

Kniverton, B. H. (2004). Adolescent perceptions of the importance of teachers as a therapeutic support in coping with their problems. *Emotional and Behavioural Difficulties, 9*, 239-248.

Kam, C., Greenberg, M. T., & Kusché, C. A. (2004). Sustained Effects of the PATHS Curriculum on the Social and Psychological Adjustment of Children in Special Education. *Journal of Emotional and Behavioural Disorders, 12*, 66-78.

Knoff, H, M. Project ACHIEVE Effectiveness Study: National Longitudinal sites (unpublished-personal communication).

Koomen, H. M.Y., van Leuwen, M.G.P. & van der Leij, A. (2004). Does well being contribute to performance? Emotional security, teacher support and learning behaviour in Kindergarten. *Infant and Child development, 13*, 253-275.

Kusché, C. A. Greenberg, M. T. & Beilke, B. (1988). *The Kusché affective interview.* Unpublished Manuscript. University of Washington, Department of Psychology.

Kusché, C. A. & Greenberg, M. T. (1994). *The PATHS Curriculum.* Seattle: Developmental Research and Programs.

Kusché, C.A., (2002). Psychoanalysis as prevention: using PATHS to enhance ego development, object relationships & cortical integration in children. *Journal of Applied Psychoanalytic Studies, 4*, 283-300.

Kam, C. M., Greenberg, M.T. & Walls, C. T. (2003). Examining the Role of Implementation Quality in School-Based Prevention Using the PATHS Curriculum. *Prevention Science, 4*, 55-63.

Lambert, S., Folasade, M. (2000). Children's relationships with parents, teachers and peer: linkages with internalising and externalising behaviour. *Dissertation-Abstracts-International-Section-B-The sciences-and-engineering.* Vol. 60 (9-B): 4894. Retrieved 22 Sept 2005 from Ovid.com. http://www.il.proquest.com/umi/

Lemerise, E. A. & Arsenio,,W. F. (2000). An integrated model of emotion processes and cognition in social information processing. *Child Development, 71*, 107-118.

Lynch, M. & Ciccehetti, D. (1992). Maltreated children's reports of relationships to their teachers. In Pianta, R.C., (Ed.) Beyond The parent: The Role of other Adults in Children's lives. *New Directions for Child Development, 57.* (pp. 81-107). San Francisco: Jossey-Bass.

Lynch, M. & Cicehetti, D. (1997). Children's relationships with adults and peers: an examination of elementary and junior high school students. *Journal of School Psychology, 35,* (1), 81-99.

Lynch, K. B., Geller, S. R. & Schmidt, M. G. (2004). Multiyear Evaluation of the effectiveness of a resilience based prevention programme. *The Journal of Primary Prevention, 24*, 335 – 353.

Lyons-Ruth, K. (1996) Attachment relationships among children with aggressive behaviour problems: The role of disorganised early attachment patterns. *Journal of Consulting and Clinical Psychology, 64*, 572-585.

Main, M. & Weston D. (1981). The quality of the toddler's relationship to mother and to father: Related to conflict behaviour and readiness to establish new relationships. *Child development, 52*, 932-940.

Main, M., Kaplan, N. & Cassidy, J. (1985). *Security in infancy in childhood and adulthood: A move to the level of representation.* In I. Bretherton & E. Waters (Eds.). Growing points of attachment theory and research. Monographs of the society for research in child development. 50, (1-2, Serial No 209), 66-104.

Main & Solomon (1990). Procedures for identifying infants as disorganised/disorientated during the Ainsworth strange situation. In M/ T. Greenberg D. Cicchetti & E. M. Cummings (Eds.), *Attachment in the pre-school years* (pp.121 -160). Chicago, University of Chicago Press.

Meehan, B. T., Hughes, J. N. & Cavell, T. A. (2003). teacher-student relationships as compensatory resources for aggressive children. *Child development, 74*, 1145-1157.

Marvin, A. (1997). Ethological and general systems perspectives on parent-child attachment during the toddler and pre-school years. In N. Segal, G. Weisfeld, & C Wiesfeld (Eds.). *Genetic, ethological and evolutionary perspectives on human development* (pp.189-216). Washington D.C.: American Psychological Association.

Mashader, M. (2004). *Positive childhood: educating young citizens: a resource book for teachers and parents of primary school age children.* London: Green Print.

Mayer, J.D. & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-31). New York: Basic Books.

McConaughty, S., Kay, P, `Fitzgerald, M. (1999). The achieving, Behaving, Caring project for preventing ED: Two-year outcomes. *Journal-of-Emotional and Behavioural Disorders, 7*, 224-239.

McConaughty, S. (2000). How long is long enough? Outcomes for a school-based prevention program. *Exceptional Children, 67*, 21-34.

Mikula, G. & Schlamberger, K. (1985). What people think about an unjust event: toward a better understanding of the phenomenology of experiences of injustice *European Journal of Social Psychology, 15*, 37-49.

Mitchell- Copeland, J. & Jennifer, R., George, M. U, (1996). *Child teacher attachment and social competence.* Dissertation –Abstracts-International-Section A: humanities and social sciences. Sept. Vol. 57, (3-A): 1018.

Mitchell- Copeland, J., Denham, S. A. & DeMulder, E. K. (1997). Q-Sort assessment of child-teacher attachment relationships and social competence in the preschool. *Early Education and Development, 8* (1), 27-39.

Mortimer, H. (2003). *Emotional literacy and mental health in the early years.* Lichfield: QEd.

Noddings, N. (1992). *The challenge to care in schools: an alternative approach to education.* New York, London: teachers College Press, c1992.

Page, T. & Bretherton, I (2001). Mother- and father-child attachment themes in the story completions of pre-schoolers from post-divorce families: Do they predict relationships with peers and teachers? *Attachment-and-Human-Development. 3*, 1-29.

Payne, A. L. (2003). Measuring preschool children's perceptions of teacher-child relationship quality: Developing and testing the "feelings about my school and teachers" instrument. Dissertation-Abstracts-International-Section A:-Humanities-and –social-sciences. Vol. 64 (2-A): 391. Retrieved on: 22.09.05. http://www/.il.proquest.com/umi/ from Ovid.com.

Pederson, Faucher & Eaton, (1978). A new perspective on the effects of first grade teachers on children's subsequent adult status. *Harvard Educational Review, 48*, 1-31.

Perry, B. (1997). Incubated in terror: Neurodevelopmental factors in the "cycle of violence". In J. D. Osofsky (Ed.). *Children in a violent society,* (pp.124-140). New York, Guilford.

Pianta, R. C., Hamre, B. H. & Stuhlman, M. (2003). Relationships between teachers and Children. In G. E, Miller, W, M, Reynolds. (Eds.) *Handbook of Psychology: Educational Psychology,* Vol. *7*, (pp. 199 – 234). New York: Wiley.

Pianta & Hamre, (2002). *Students, Teachers and Relationship support: STARS.* Odessa, FL: PAR, Inc.

Pianta, R.C. Steinberg, M, (1992). Teacher-child relationships and the process of adjusting to school. In Pianta, R.C., (Ed.) Beyond The parent: The Role of other Adults in Children's lives. *New Directions for Child Development, 57.* (pp.61-80). San Francisco: Jossey-Bass.

Pianta, R.C. (1992). Beyond the parent: The role of other Adults in Children's lives. *Relationships between children and non-parental adults: New Directions for Child Development*, 57, (pp. 41- 60). San Francisco. Jossey-Bass.

Pianta, R.C. Steinberg, M, & Rollins, K.B. (1995). The first two years of school: teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology, 7*, 295-312.

Pianta, R. C., Nimetz, S.L. & Bennett (1997). Mother-child relationships, teacher-child relationships and school outcomes in preschool and kindergarten. *Early Childhood Research Quarterly, 12,* 263-280.

Piaget, J. P. (1955). *The language and thought of the child.* New York: Meridian Books.

Read, K. Gardner, P., Mahler, B. (1998). *Early Childhood Programmes.* Harcourt Brace Jovanovich.

Renken, B., Egeland, B., Marvinney, D., Mangelsdorf, S., & Stroufe, L. A. (1989)

Early Childhood antecedents of aggression and passive-withdrawal in early elementary school. *Journal of Personality, 57*, 257-281.

Riggs, N. R., Greenberg, M. T., Kusche, C. A., & Pentz, M. A. (in press). The mediational role of neurocognition in the behavioural outcomes of a social-emotional prevention program in elementary school students: Effects of the PATHS Curriculum. *Prevention Science.*

Riley, J. (2003). *Learning in the early years, a guide for teachers of children 3-7.* Paul Chapman Publishing: London.

Ritchie, S. & Howes, C. (2003). Program practices, caregiver stability and child-caregiver relationships. *Applied Developmental Psychology, 24*, 297 -516.

Roeser, R. W., Eccles, J. S. Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: a summary of research findings. *The Elementary School Journal, 100*, 443-471.

Rubin, K. & Lollis, S.(1988). Origins and consequences of social withdrawal. In J. Belsky & Nezworski (Eds.), *Clinical implications of attachment* (pp. 219 -252). Hillside, NJ: Erlbaum.

Rutter, M. (1990). Psychosocial resilience and protective mechanism. In Rolf J. E. & A. S. Matsen, Cicchetti, D. Nuechterlein, K. H., Weintraub, S. (Eds.)*Risk and Protective Factors in the development of psychopathology* (pp. 181-214). New York: Cambridge University Press.

Saft, E. W. & Pianta, R. C. (2001). Teacher's perceptions of their relationships with students: Relations with child and teacher characteristics. *School Psychology Quarterly, 16*, 125-141.

Sava, F. A. (2001). Causes and effects of teacher conflict-inducing attitudes towards pupils: a path analysis model. *Teaching and Teacher Education, 18*, 1007-1021.

Substance Abuse and Mental Health Programmes (SAMHSA) Web site: http://www.samhsa.gov/.

Schweinhart, L.J., Barnes, H.V. & Weikart, D. P. (1993). *Significant benefits: The High scope/Perry preschool study through age 27.* Ypsilanti, MI: High/Scope Educational Research Foundation.

Shure, M.B. & Spivack, G. (1980). Interpersonal problem solving as a mediator of behavioral adjustment in preschool and kindergarten children. *Journal of Applied Developmental Psychology, 1,* 29-44.

Sharp, P. (2001). *Nurturing Emotional Literacy. A practical guide for teachers, parents and those in the caring professions.* David Fulton Publishers Ltd.

Simmons, R. & Blyth, D.A. (1987). *Moving into adolescence: The impact of pubertal change and school context.* Hawthorne, New York.

Siraj-Blatchford, I., Sylva, K., Muttock, S. Gilden, R. & Bell, D. (2002). *Researching effective pedagogy in the early years.* Nottingham : DfES, 2002. Research Report No.: RR356. Electronically retrieved November 9th 2005 from: http://www.dfes.gov.uk/research/data/uploadfiles/RR356.pdf

Shure, M.B. & Spivack, G. (1982). Interpersonal problem-solving in young children: A cognitive approach to prevention. *American Journal of Community Psychology, 10,* 341-356.

Shure, M.B. (1992). *I Can Problem Solve (ICPS): An interpersonal cognitive problem-solving program: Intermediate elementary grades.* Champaign, IL: Research Press.

Stanley, J. (1994). What is therapy: What is Teaching? In: *National Reports Collection.* Account of conference on the Assessment of work for children with emotional and behavioural difficulties.

Steele, H., Steele, M. & Fonagy, P. (1996). Associations among attachment classifications of mothers, fathers and their infants. *Child development, 67*, 541-555.

Steele, H., Steele, M., Croft, C. & Fonagy, P. (1996). Infant-mother attachment at one year predicts children's understanding of mixed emotions at six years. *Social Development, 8*, 161- 178.

Strachota, (1996). On their side: Helping children take charge of their learning. Greenfield, M.A: Northeast Foundation for Children.

Stroufe, L. A. & Rutter, M. (1984). The domain of developmental psychopathology. *Child Development, 55*, 17-29.

Stroufe, L. A. (1983) *Infant care-giving attachment and patterns of maladaption in pre-school: The roots of maladaption and competence.* In M. Permutter (Ed.) Minnesota Symposium on Child Psychology. 16, (pp. 41-81). Hillsdale, NJ: Erlbaum.

Stroufe, L. A. (1988). The role of infant-caregiver attachment in development. In J. Belsky & T. Nezworski (Eds.), *Clinical Implications of Attachment* (pp.3 -17). Hillside, NJ: Erlbaum.

Stroufe, L. A. (1990). Relationships and relationship disturbances. In A.J. Sameroff and R. N. Emde, (Eds.). *Relationship Disturbances in Early Childhood: A developmental Approach* (pp. 97-124). New York. Basic Books.

Sutherland, J. R. (2000). Expressing affection to pre-school children in group case: An exploratory study of early childhood teachers' personal life experiences, beliefs and professional practices. *Dissertation-Abstracts-International-Section-A*: Humanities and social sciences. Vol. 61 (6-A): 2180. Retrieved August 31, 2005 from Ovid.com. http://www.il.proquest.com/umi/.

Sylva, K., Sammons, P., Melhuish, E., Siraj-Blatchford, I. & Taggert, B. (1999). Techincal Paper 1. *An introduction to the EPPE project: a longitudinal study funded by the DfEE*, 1997-2003, University of London, Institute of Education.

Tal, Z. I. Babad, E. (1990). The teacher's pet phenomenon: rate of occurrence, correlates and psychological costs. *Journal of Educational Psychology. 82*, 637 – 645.

Terzian, M. A. & Fraser, M.W. (2005). Preventing aggressive behaviour and drug use in elementary school: Six family oriented programs. *Aggression and Violent Behaviour, 10*, 407-435.

Thomas, A. Chess, S., Birch, M.G. & Hertzig, M. E. (1963). *Behaviour individuality in early childhood.* New York: New York University Press.

Tymms, P. Coe, R. & Barmby, P. (2002). *Primary Quality Mark research.* Module 1 Summary. London: Basic Skills Agency, 2002.

van IJzendoorn, M. H., & Sagi, A. (1999). Cross cultural patterns of attachment: universal and contextual dimensions. In: *Handbook of Attachment. Theory, Research and Clinical Applications* (713 – 734). The Guildford Press, New York, London.

Waters, E. (1990). *The Attachment Q - Set.* Stony Brook: State University of New York.

Walker, H. and H. Severson, H. (1990). *Systematic screening for behaviour disorders* (SSBD). Longmont, CO: Sopris West.

Wrigley, T. (2005). Schools as social and learning communities: Scotland and Norway. *Improving Schools, 8*, 23-45.

Virginia Commenwealth University Intellectual Property Foundation (1997). Child Behaviour Rating Scale. Richmond, VA: Wingspan LLC.

Vygotsky, L. (1978). *Mind in society*. Cambridge, Mass.: Harvard University Press. 1978.

Winnicott, D. (1971). *Playing and reality*. New York: Basic Books, 1971.

Yarlott, G. (1972). *Education and children's emotions: an introduction.* London, Weidenfeld & Nicholson.

Young Minds, (1999). *Survey of Young People's Mental Health Needs*. Retrieved on 20.06.06 from: http://www.youngminds.org.uk/press/YoungMinds.

Zaltka, C. (2003). Social behaviours of children with different types of attachment towards their kindergarten teachers. *Studia Psychologica. 45*, 323-338.

Zeller, J. & Pianta, R. (2004). Teachers' childhood attachments and teacher-student relationships. (Unpublished study). University of Virginia. Dissertation Abstracts International, vol. 65.

Ziontis, L. T. (2005). Examining relationships between students and teachers: A potential extension of attachment theory? In Kerns, K.A. & Richardson, R.A. (Eds.) *Attachment in Middle Childhood* (pp. 231-253).

PART 2

EMPIRICAL PAPER

An Investigation of Changes in Children's Attachment Representations of Teachers in Nurture Groups

An Investigation of Changes in Attachment Representations of Teachers in Children Attending Nurture Groups

ABSTRACT

This exploratory study investigates the effects of Nurture Groups on attachment representations of teachers in school children aged between 4 and 8. The study was part of a larger project investigating the outcomes of nurture groups, upon which two other studies are based[2]. Nurture groups are school-based preventative interventions for children with emotional and behavioural difficulties. These are implemented by teachers in small classrooms within mainstream schools, who are specifically trained to promote the development of child-teacher security. The investigation included 83 participants in primary schools, their school years ranging from reception to year 2, of whom 43 formed the Nurture group cohort and 39 the comparison group. Children were assessed pre-test and after a mean of 23 months of the intervention. Attachment representations were examined using the Story Stem Assessment Profile. Other outcome measures included a measure of emotional and behavioural difficulties (SDQ), of classroom behaviour (Boxall Profile) and of academic attainment. No significant changes in attachment representations were found, although some associations between changes in emotional and behavioural difficulties and changes in security and insecurity to teacher were identified. Nurture Group children improved significantly on SDQ and Boxall measures. On some factors greater improvements were found in boys. The discussion focuses on the possible mechanisms of change in this intervention, on the limitations in effects resulting from the heterogeneity of the sample and the short period between test

[2] The two other researchers were: Levi, N. Assessing the impact of school nurture groups: do they change children's attachment representations of their parents? An investigation of attachment representations of parents in nurture group children and Pratt, R.: Do nurture groups increase children's security and self worth?

points, and on limitations to validity arising from informant biases affecting pre and post measures.

INTRODUCTION

A range of psychological and developmental difficulties exhibited by children in mainstream primary schools are categorised as "emotional and behavioural difficulties" (EBD). Although the definitions of this category are imprecise, (Evans, Harden & Thomas, 2004; Poulou, 2005), the term is widely understood to encompass difficulties which range from social 'maladaptation' to emotional withdrawal. To meet criteria, difficulties necessarily result in behaviours which are problematic across settings and teaching staff (Mental Health Foundation, 2002). Difficulties are often multiple and may become apparent through "withdrawn, passive or self injurious tendencies" (DfES, 1994, p.7). They include social withdrawal, aggressive behaviour; hyperactivity, emotional symptoms, and poor peer relationships. The category thus encompasses a range of emotional difficulties and early onset neuropsychiatric disorders such as attention deficit disorder with hyperactivity (ADHD) and developmental language disorders, both of the latter being more prevalent in boys than girls (Rutter, Caspi & Moffitt, 2003). Boys are also more likely to exhibit aggression and anti-social behaviour in early to middle childhood (Hay, Payne & Chadwick, 2004). Children exhibiting EBD are often involved in conflictual relationships at school, and can become a focus of resentment by teachers and other pupils (Barnardos, 2001). Indeed they constitute the category of pupils who form the greatest challenge to teachers' professional and personal sense of competence (Poulou, 2005). The systemic repercussions of their difficulties are incremental (Stroufe & Rutter, 1984). Some, but not all are at risk of

maladaptive developmental trajectories (e.g. Stroufe & Rutter, 1984; Rutter *et al.*, 2003) including psychiatric illness, drug abuse (e.g. Loeber, .Farrington, Stouthamer-Loeber & Van Kammen, 1998) and anti-social behaviour.

School Based Interventions

A number of school programmes aim to intervene in emotional and behavioural difficulties at an early stage. These programmes and curricula, which generally focus on the development of children's 'emotional intelligence' (e.g. Kam, Greenberg & Kusché, 2004) or social skills (Lynch, Geller & Schmidt, 2004) have burgeoned in recent years in both the UK and the USA, often with limited cross-referencing. The programmes vary in their emphasis on enhancing the impact of schools as a general context for *all* children's social and emotional development and the degree to which they intervene with individual children. A range of evidence from the USA has provided considerable support for various programmes' potential to influence children's development in positive directions (e.g. Lynch, Geller & Schmidt, 2004; Terzian & Fraser, 2004) although analysis of the factors which mediate or moderate their effectiveness has rarely been undertaken.

The most recent systematic review of strategies to support pupils with EBD in mainstream primary schools in the UK (Evans, Harden & Thomas, 2004) describes a number of programmes, based on a variety of theoretical frameworks, currently being implemented. The review, which summarised the results of a number of small scale cognitive, behavioural and systemic school interventions, highlighted a dearth of good quality research on intervention effectiveness, and pointed to a need for better quality research in this area.

Mechanisms of Change

In the related clinical field of Child and Adolescent psychological treatment, Kazdin & Nock (2003) acknowledge recent advances in outcome research, including accumulating evidence from randomised controlled trials with clinic samples, but critique the use of treatment effects as justification for the widespread implementation of therapies, before the putative mechanisms of why or how an intervention works are properly understood. They propose that the mechanisms of change or 'mediators' in child and in adolescent therapies need to be carefully investigated, in order to maximise treatment effectiveness and argue that it is important to understand which factors, or interactions between factors within therapy processes contribute most powerfully to change.

One putative mechanism of change is attachment theory (Bowlby, 1969, 1980) which, incidentally, offers a powerful explanatory model linking various behavioural difficulties manifested in the school context to different 'internal working models'. A variety of evidence from studies of young children's attachment relationships with nursery teachers (e.g. Howes, 1999) and longitudinal studies of teacher pupil relationship patterns, (Ladd, & Birch, 1997; Hughes, Cavell & Willson, 2001; Pianta, Hamre & Stuhlman, 2003) demonstrate the inherent potential of teachers to influence children's emotional and social development. Positive relationships with teachers seem to be particularly beneficial for children with insecure or disorganised (D) attachments who are at risk, for example, of accruing incremental levels of peer rejection and attentional difficulties (e.g. Lyons-Ruth, Easterbrooks & Cibelli, 1997). However the impact of teacher-pupil attachments within *school interventions* has yet to be demonstrated.

Changing attachment representations

Zionts, (2004) summarises the potential of the teacher-pupil relationship as a form of attachment relationship, particularly for children who demonstrate high risks of aggression, psychopathology and externalising behaviour disorders. She highlights the work of Walters and Cummings, who expanded upon familiar infant and toddler attachment constructs to propose that different caregiver and peer relationship contexts can be forums for different developmental periods and tasks. Elaborating on understandings of the changing topography of the "secure base" throughout the lifespan, these authors introduced the concept of the "secure base figure of convenience" to denote the serial use of teachers (and others) as attachment figures. The potential of this relationship is underscored by findings that secure attachments to teachers in preschool children are associated with higher ratings of academic achievement, acceptance within peer groups and adjustment to nursery (Howes *et al.*, 2002; Mitchell & Jennifer, 1996; Lynch and Cicchetti, 1992). These associations have also been found by Pianta and Steinberg (2002) in children adjusting to their first year of school. In the long term (up to the age of 14), these associations have emerged as being particularly salient for boys (Howes & Aitkins, 2002).

Nurture Groups: Methods and Aims

Only one school intervention, the "Nurture Group" (Bennathan & Boxall, 2000) explicitly aims to harness the potential of the teacher-child relationship to act as a "secure base" for children with EBD. Teachers in these groups act in "loco-parentis" in small classrooms (of between 6 – 12 children) within mainstream primary schools, which children attend for part or all of the school day, for two to four terms. Two

teachers (one experienced teacher and a teaching assistant) run the groups together. Although nurture group teacher training is informed by attachment theory, during their four day training there is a practical emphasis on social learning, in that the teachers are taught to model a functional adult caretaking relationship in which planning and discussion take place openly and disputes (which may be faked) occur and are resolved. These teachers employ developmental understandings of children's attachment needs and maladaptive behaviour. They allow children to enact some behaviours belonging to earlier developmental periods, aiming to understand and to meet their emotional needs at the level at which they are expressed, whilst tailoring their teaching approaches accordingly. Nurture group teachers also provide support for self-esteem and affiliation needs (Cooper *et al.* 2001), guided the theory of a 'hierarchy of needs' (Maslow, 1970), which argues that, before children are able to learn, their most basic needs for safety and security need to be met. The teachers create a home-like atmosphere with set routines, including meals and group activities, which model optimal homelike environments. They set appropriate boundaries within which considerate interpersonal behaviour and 'emotional literacy' (Goleman, 1997) are encouraged. One of the two teachers is allocated to each child throughout the period of the group and beyond, as children are re-introduced into their mainstream classrooms.

Thus Nurture groups are a prime example of a school intervention in which the putative mechanism of change is a new and secure relationship with one teacher. Nurture Groups are now widely implemented in primary schools in the UK. However, despite extensive investment of public resources, the efficacy of these

groups, with regard to their long term impact on children's social and emotional development, has yet to be established.

Preliminary findings (Cooper, Arnold & Boyd, 2001) are that Nurture groups appear to be highly effective in terms of their impact on children's behaviour. Using Teacher Version Strengths and Difficulties Questionnaires (SDQ, Goodman, 1997:1999) in nurture group children and a matched comparison group, Cooper *et al.* found increases in 'normal' SDQ's from 8% to 37% (pre to post-test) over two terms as opposed to an increase from 16% to 25% in the comparison group. Although there are higher numbers of boys than girls in nurture groups, this study did not examine any gender differences in effects. An unpublished two year follow-up of a small cohort of the original sample (N=12) found that many of the improvements had been sustained, although some children had relapsed (Cooper & Tiknaz, 2005). One reason that the attachment component of nurture groups has yet to be tested is the difficulty of constructing reliable measures of attachment in early to middle childhood. Consequently, for children attending these groups, neither the impact of their attachment organisations on their experiences in schools, nor the impact of any changes in their attachment representations, have been investigated.

Aims of Study

The overall aim of this study is to explore the extent to which behavioural improvements in nurture groups are explained by changes in the attachment system, specifically linked to the teacher-child relationship. In this context the study has the following specific aims: firstly investigating attachment representations of teachers before and after five months of nurture group intervention, to examine whether improved child-teacher attachments are part of the mechanism of change in nurture

groups. Secondly, investigating the degree to which improvements in children's behaviour towards teachers are consistent with changes in their attachment representations. Thirdly, given the vulnerability of boys to psychopathology at this stage, a secondary aim is to investigate any gender differences in response to the intervention.

Hypotheses

1. That improvements will be found in measures of emotional, conduct, and peer difficulty and in teacher ratings of child interactions in the classroom, in association with the nurture group intervention.
2. That boys and girls attending nurture groups for at least five months will develop increased levels of attachment security in relation to their teachers relative to the comparison group.
3. That the quality of representation of the teacher in terms of attachment security at time one is associated with the likelihood of change as a result of being in a nurture group (the more secure this representation at the start of the intervention the more likely it is that the child will benefit from the intervention).
4. That the degree of improvement in variables of emotional difficulties, behaviour, peer group and educational adjustment of children will be positively associated with the degree of change in attachment representations of teachers, indicating that change in teacher representations might mediate the behavioural changes observed.

METHOD

Design

This is a longitudinal, non-randomised design with one intervention and one comparison group who were assessed at two time points, before and after five to six months of the intervention. The experimental (intervention) group of children were a cohort starting in nurture groups; because of the tentative nature of the researcher's relationships with the schools, the entry of children (meeting nurture group criteria) to nurture groups could not be randomised. Comparison group children, for the same reason, were also not randomly allocated to the group. The independent variable was attendance or non-attendance of Nurture Groups. The primary outcome variable was behavioural change on the SDQ. The assumption was that the variable mediating change would be attachment to the teacher assessed independently.

Participants

A total of 83 children participated. The children comprised two groups who had been identified by at least two teachers as having social emotional and behavioural difficulties, and thus as being at risk of incremental difficulties at school. The intervention group who were in one of 10 schools (NG: $N = 44$), were identified by Head teachers, in consultation with their classroom teachers, nurture group teachers, and Special Educational Needs Co-ordinators (SENCOS), as to their suitability for their school's nurture group. The main criteria for selection were that children need to have already been identified as having *at least* one social and emotional difficulty and to have 'School Action' or 'School Action Plus' status (see Appendix 1 for list of selection criteria; Appendix 2 for definition of terms). After potential children had been identified, meetings took place between involved teachers, the Head teacher and an Educational Psychologist (see Appendix 1 for procedures) and parents were informed of the school's concerns. Membership of the school's nurture group was

then reviewed in terms of gender and identified difficulties to see whether the new child would fit comfortably with the existing group. If so, parents were then informed about the groups; children were only joined nurture groups after parental consent had been obtained. The comparison group (CG: $N = 39$) consisted of children in five schools without nurture groups who had been designated by the SENCO and Head teacher as having difficulties such that they would benefit from attending a nurture group, should the school have had one. It should be noted that comparison children were not subject to the same planning and selection procedures as children who actually did attend nurture groups. Children in the comparison schools were provided with services "as usual" being also either placed on 'School Action' or 'School Action Plus' (that is having received some input from agencies external to the school) and all had individual education plans. The five comparison group children on school action plus had been assessed by either an Educational Psychologist or a Behavioural Support teacher. Levels of additional support from trained teachers or classroom assistants ranged from 0 to 3 hours per week. It should be noted that that the emphasis of this support was educational rather than social and emotional.

Participants were aged between 4 and 7 years (NG: Mean age 66 months; $SD = 8.2$, CG: Mean age 72 months; $SD = 12.5$). The mean length of time between starting and testing was 1.2 weeks.

Because of practical constraints, particularly the need for the researchers to develop working relationships with Head teachers in order to proceed, researchers were not able to precisely specify the demographic and risk status of children who were

entering into nurture groups, or were nominated as part of control groups. Accordingly, they ensured that children in each group were in similar positions according to variables of suburban or outer-city locality and gender. Post-hoc analysis revealed that the groups consisted of similar numbers of children living with both parents, living with other family members or fostered. However, more nurture group children (NG: 39 %) were living with single parents compared with the comparison group (CG: 28%). There were no significant differences in gender or ethnicity between the groups. Both groups contained higher numbers of boys than girls (NG: 64 %; CG: 67 % boys). In a measure of socio-economic status (free school meals), the intervention condition comprised 23 (52 %), the comparison group 17 (44 %). Post-hoc analysis also found equivalent numbers of significant life events for children between each time point in each group (see Appendix 6 for list of significant life events). No significant differences were found in total SDQ scores [$t(80) = .467, p = .642$] prior to the intervention. Although the differences between groups in terms of their school years were not significant [χ^2 (2) = 3.530, $p = 0.171$], when children's ages in months were examined, nurture group children were found to be significantly younger than comparison group children [(-2.501): t (64) = -2.50, $p = .015$]. They were also achieving academically at below their expected levels, at the start of the evaluation period, when compared with expected norms for their age groups and when compared with control group children [t (54.7) = 5.34, $p = <.001$]. Between the first and second test points, three NG children and three CG children left schools and could not be traced.

The variation in selection procedures for each group comprises some threat to internal validity because the groups could not be matched and therefore possible

effects on findings due to variance in problems and to demographic factors could not be controlled for.

The Nurture Groups

Nurture groups were in 10 different schools in one UK County. The groups were run as 'classic' nurture groups (see Appendix 3 for definition) in that children attended for 80 – 90 % of the school week, usually for between two to four terms.

The Schools

Nurture group and comparison group children were in state Primary schools, all of which served socially, but not ethnically, diverse populations in semi-rural and outer-city geographical areas with high levels of social and economic deprivation. Numbers of pupils ranged from 119 – 125 (see Appendix 5). Criteria for funding of nurture groups stipulate that schools must be situated in an area of deprivation, as defined in the Department of the Environment Index of Conditions and the Child Poverty Index, also, that there are a high percentage of 'Children in Need', based on the Children in Need Survey of 2002 (see Appendix 4 for LEA criteria for nurture groups). Comparison group schools also met these criteria for the establishment of nurture groups, but lacked space, funding or staff (see Appendix 5 for comparative demographic information about each school). As this information demonstrates, some schools, for example comparison school 4 and nurture group school 4 had high levels of deprivation as identified in the Index of Multiple Deprivation, whilst holding middle ranking in terms of their results at key stage one, suggesting a relatively successful school in relation to expectations predicted by the local demographic variables. Schools with nurture groups had, broadly speaking, generally

well kempt, well organised environments, of which the provision of nurture groups was, in part, evidence. Comparison schools varied in the degree to which they were able to provide conducive and nurturing environments. Comparison school 2 had no Head teacher at the start of the project, and many classes lacked permanent teachers. In contrast, Comparison schools 3 and 4 had strong leadership from committed Head teachers, the effects of which were clearly identifiable, in terms of school morale, to visitors of the school. Comparison schools 1 and 5 were functioning well educationally relative to level of deprivation within their pupil set, with comparison group 1 ranking very highly in the Index of Multiple Deprivation. This variation impacted on the degree of support for children available within the ordinary school environment. However, due to low numbers of participants from each school, schools could not be entered as a variable in the statistical analysis.

Teachers

Nurture Group teachers are qualified teachers and classroom assistants who are nominated by their schools or specifically appointment to run a nurture group. The trained teachers had all undergone a four day training in nurture groups run by one of four accredited institutions (see Appendix 6 for further details of training).

The teachers had run their groups for varying lengths of time with the modal group lifetime being slightly less than 2 years at the first testing point (see Appendix 2). Two teachers and one teaching assistant left between the first and second testing points.

Ethics

Ethical approval for the study was given by the UCL Graduate School Ethics committee, (see Appendix 8). Prior to this the local educational authority serving a large, socially diverse geographic area, had given ethical approval for schools within the county to participate in the study (see also Appendix 8). Researchers then approached the Head teachers of 10 primary schools with nurture groups and five schools who were seeking funding for nurture groups. With their agreement, nurture group teachers and, in control schools, special needs co-ordinators were approached and their permission and support obtained. Before testing began, the Educational psychologist, supporting this project obtained feedback from Head-teachers about the information sheets and, as a result, suggested that the information sheet for parents was too long and complex. On her suggestion, a simpler letter was created (see Appendix 9 for information sheet and copy of shortened consent letter). The first information sheet was available to parents, should they request further information. Permission was then sought and granted by the UCL ethics committee before proceeding to using this letter.

Procedure

As this is part of a wider study (Pratt, 2006; Seth Smith, 2006), data collection was equally shared between three UCL Trainee Clinical Psychologists, all investigating the separate areas of interest identified above and analysing different features of the data. Each of the three researchers were allocated to equal numbers of schools, and undertook contact and liaison between their allocated schools throughout the research process, except when expedience necessitated the sharing of responsibility in three schools.

The consent letter was sent by Head teachers to parents of all children in the classrooms of participating children in control schools. A similar letter was given to all parents of new nurture group children by the nurture group teachers. This gave parents information about the study including the opportunity to telephone the allocated researcher for further information. Parents were offered the opportunity to opt *out* of letting their children participate. Researchers were aware of children's group membership and of the testing time point during testing. Before the first test point, individual researchers spent an hour with the nurture group children and teachers in their allocated schools so that they would become less unfamiliar to them. The researchers did not seek permission to visit comparison group children before the testing date, because, outside of the nurture group context, preliminary contact with individual children might have been confusing and was therefore deemed inappropriate. At the point of testing every child participant was given verbal information about the procedure (see Appendix 9) and told that they could withdraw at any time. All measures were administered to both groups at two time points by the allocated researcher or one of the other two researchers.

Interviews took on average, one hour. There was a mean time of 23 weeks between testing at time one and time two (T1 and T2). At each testing point the children's classroom teachers or in nurture groups, nurture group teachers, completed measures of emotional, conduct and peer difficulty, and of classroom behaviour and academic attainment. At the second time point information was collected about any significant life events in the children's lives between T1 and T2.

Measures

Apart from the attachment measure, all measures were completed by nurture group or classroom teachers. This form of single informant measurement comprises a significant bias, and therefore, the researchers also collected Parent Strength and Difficulty Questionnaire's (Goodman, 1997), from parents of nurture group children at T1 in order to add a second informant to the battery of measures. However, despite all efforts, resistance to distributing and returning these measures led to a low rate of completed forms (approximately 50% at T1). The researchers therefore decided to drop the parent data from the analysis rather than lose a large proportion of the sample.

Strengths and Difficulties Questionnaire: Teacher Version (SDQ: Goodman, 1997, 1999). The SDQ is a brief behavioural screening questionnaire administered to teachers of 4-16 year olds. This has 25 items describing positive and negative attributes which are divided between 5 scales. These are: emotional difficulties, conduct problems, hyperactivity, peer relationship problems and prosocial behaviour. The total of the first four of these is added together to create a 'total difficulties' score. Norms have been developed for each of the five scales so each score falls into one of three categories: 'normal', 'borderline' and 'abnormal'.

Boxall Profile (Boxall & Bennathan, 1998). This is a diagnostic teacher measure of children's emotional, behavioural and interpersonal functioning in classrooms. The Profile is comprised of 68 statements which are rated on a four point scale (see Appendix 8 for more detailed description of measure). The profile contains a 'Diagnostic' and a 'Developmental' strand containing twelve 'factors' into which the items are aggregated. The first strand contains items relating to the child's ability to

engage effectively with the learning process and the second strand concerns behavioural characteristics that may inhibit or interfere with the child's social and academic performance. The factors are aggregated into five clusters: 'Organisation of experience', 'Internalisation of controls' (Developmental strand), 'Self-limiting features', 'Undeveloped behaviour' and 'Unsupported development' (Diagnostic strand). Analysis of the validity of each of these clusters found that standardised item alphas were high for 'Organisation of experience', 'Internalisation of controls' and 'Unsupported development' (>0.84). The standardised item alphas for 'Undeveloped behaviours' were acceptable [0.666]. For 'Self-limiting features' the standardised alpha was 0.25, as a consequence 'Disengaged' and 'Self negating' items, aggregated within this factor were examined individually.

Measures of Academic Attainment. Each child's national curriculum, foundation stage, or 'p' levels in maths, speaking and listening, writing and reading were collected at each time point. These were aggregated into an overall academic level on a 14 point scale for each child at each time point. See Appendix 11 for table of equivalent levels.

Story Stem Assessment Profile (Hodges, Hillman & Steele, 2004). This form of narrative assessment is an implicit measure of attachment using doll-play in combination with story completion tasks. In order to elicit attachment representations, children are given the beginning of stories containing everyday family scenarios, within which there are dilemmas which the child will need to resolve in order to continue the story. The researcher begins the story, and then the child is asked to "show me and tell me what happens next". Each child's narrative

displays aspects of their most basic 'scripts' for human relationships (see Hodges & Steele, 2000, for further details). The narrative assessment technique maximises the communication of responses by using verbal and non verbal channels. Before beginning the stem set, children are asked to name the main protagonist and are discouraged from using their own names. This form of assessment enables children's expectations and perceptions of children and adult's roles within family and school relationships based on their histories of repeated experiences with caregivers (or, for the purpose of this study, teachers) to be assessed, without causing anxiety by directly asking them about their own experiences (Woolgar,1999). This makes the instrument appropriate for use with clinical populations, as demonstrated by a number of studies (Robinson *et al.*, 1999; Hodges & Steele, 2003). In total thirteen stories were used. This paper reports on the results of the three new stories designed to elicit attachment representations of teachers. These were created by this researcher in collaboration with the first and third author (Hodges & Hillman). These three stories were trailed in pilots with nine children who were already in nurture groups. Subsequently, after consultation with a third author of the SSAP and other members of the research team, these were amended and inserted into the story stem set, replacing three stems which were not relevant to this research question. Please contact the author for details of the teacher stems.

Each interview was video taped and transcribed.

Coding System

Each set of stories was blind coded by one of the three researchers, or by one of two MSc. research students, all of whom achieved coding reliability and were blind to the

child's name, school and testing point. Each stem was coded using 39 SSAP response codes (see Appendix 12 for coding sheet). The codes are clustered into 'Secure, Insecure, Avoidant and Disorganised' attachment aggregates. These clusters have good internal validity (Hodges, 2006) and face validity. Initial research has found ratings on both narrative themes and construct scores correlate significantly with total and subscale scores on other measures such as the Child Behaviour Checklist (Hodges, 2006). Further evidence of validity is in development. The items comprising each security cluster are summarised in Appendix 14.

Two additional clusters were created for this study. A "Positive Adult" cluster (Adult help/ protects, Adult provides comfort, Adult shows affection and Pleasure in school life) and a "Negative Adult" cluster comprised of: Adult Unaware, Adult actively rejects, Adult shows aggression, Physical punishment and Adult injured or dead.

Teacher Codes

This researcher developed an additional theme of "teacher Fair" for the purpose of this study. This code captures children's representations of teachers dealing fairly with children's transgressions. These representations were hypothesised to augment the SSAP 'secure cluster' by tapping into children's expectations of teachers as moral arbiters described in the educational literature (Mikula & Schlamberger, 1985; Sava, 2001). New criteria for "Pleasure in domestic life" were also developed so that an equivalent code of "Pleasure in school life" could be coded. Similarly the "Parent Childlike" code was redefined as "Adult Childlike" to include either parent or Teacher childlike (see Appendix 13) for details of new codes.

For each story, each theme was rated on a three point scale from 0 = not present to 1 = present, and 2 = definitely present. Prior to commencing, each coder's ratings were matched against ratings of a 'Gold standard coder'. Coders trained on this system achieved 85 to 95 % inter-ratter reliability. Every interview was blind coded. Eleven sets of stems were coded by 5 coders, the rest were single coded.

Statistics

Power calculation

The primary outcome variable was the teacher version of the SDQ. In a large scale validation of this measure with a representative sample of 5 to 10 year old children, a total mean score of 6.7 and a standard deviation of 5.9 was elicited (Meltzer, Gatward, Goodman & Ford, 2000). A study using the SDQ with clinical populations has demonstrated a total mean score of 16.3 (Becker, Woerner, Hasselhorn, Banaschewski & Rothenberger, 2003). Thus, the difference between normal and clinical group means found in the literature is 9.6, with a pooled standard deviation of approximately 6.5. Given that it is unlikely that the functioning of nurture group children will reach the level of normal children, a change of approximately 4 points could be considered a significant improvement. Using Cohen's (1992) formula for calculating effect sizes with independent means, for an improvement of 4 points on the SDQ with a population SD of 5.9 to be detected 80% of the time (at $p < .05$), a sample size of 35 was needed (Dupont & Plummer, 1990).

Statistics were analysed using SPSS version 11.5. Firstly the distributions for each variable were examined in order to check for normality. As relevant variables were normally distributed, no transformations were performed and parametric analyses

were used to analyse attachment quality and the main effects of the intervention. All tests were performed at the two tailed level. As the differences between the intervention group and the comparison group in age in months and academic ability were significant, these effects were partialled out by entering them as co-variants. Because a secondary aim of the study was to examine differentials in effects between girls and boys, gender was entered as a second between groups factor.

RESULTS

The results are organised in three sections. The first examines the changes in emotional and behavioural difficulties associated with the nurture group intervention, and the second the changes in children's attachment representations. The last section reports on associations between the quality of teacher representations and changes in the measures of clinically significant behaviour and classroom behavioural difficulty.

Data Analysis

Using a series of two-way and three-way repeated measure ANOVAs, mean scores in the SDQ and Boxall Factors were analysed to examine Time by Group effects on measures of emotional, conduct, peer problems and child classroom behaviour and interactions. The first between subjects factor was Group (Nurture group versus comparison group) and the second was Gender; the within subjects factor was Time. Because a major purpose of this study was to examine the effectiveness of the Nurture Group as a preventative intervention, interaction effects involving Group x Time were of the most interest. Although no prediction was made of the direction of effects in relation to gender, on the basis of literature describing differences in effects of teacher pupil relationships between boys and girls, significance in pairwise

comparisons contrasting T1 and T2 means for boys and girls are reported. In this case, Bonferroni corrections for α levels were applied to reduce to likelihood of chance findings.

Teacher Ratings of Child Interaction and Behaviour

The section reports the results of the teacher measures of children's classroom and playground behaviour. Firstly, the differences in teacher ratings (at each time point) of clinically significant emotional and behavioural difficulties (SDQ) are examined. Secondly, teacher ratings in the Boxall Profile of children's approaches to teachers, tasks and peers are reported, followed by the changes in academic attainment for both groups. In the case of significant or close to significant Time x Group x Gender interactions, analysis of Time x Group effects for each gender examining the T1vsT2 contrasts in nurture or comparison group children are reported below. In this case, α is adjusted to take account of multiple comparisons (α = .0125) because the contrasts were not predicted.

Strengths and Difficulties Questionnaire.

Mean scores and significant findings obtained for the 'Total score' and five subscales of the SDQ for the intervention and comparison group (and for girls and boys) are displayed in Table 3 (p. 100). A significant interaction was found between Time x Group in the SDQ 'Total Score' for Nurture group children: [Λ (Wilks'Lambda) = .937; F (1, 69) = 4.619, p = .035, d = .504]. Further exploration of Time x Group effects for each gender examining the T1vs T2 contrasts showed that boys in nurture groups improved significantly, [Mean difference (boys) = 5.41 (95% CI: 2.24-8.57), p=.001], girls improvements were not significant at the .0125 level [Mean difference (girls) = 3.56 (95%

CI: -.451- 7.58), p =.081]. In 'Emotional difficulties' a significant Time x Group x Gender effect [Λ (Wilks' Lambda) = .914; $F(1, 69) = 6.59$, p = .013, d = .601] was investigated by examining the T1vs T2 contrasts for each group and gender, these showed that nurture group boys but not girls improved somewhat in 'emotional difficulties' [Mean difference (boys) = 1.43 (95% CI: .004 – 2.89), p = 0.049 (*ns* at the .0125 level)]. There were no improvements in nurture group girls whose scores actually increased (non-significantly) [Mean difference (girls) = .329 (1.43 (95% CI: -1.47 – 2.13), p = .718]. In contrast, emotional difficulties increased somewhat at post-test in boys in comparison group children [Mean difference (CG boys) = 1.24 (95 % CI: .004 – 2.85), p = .077]. No significant Group x Group effect was found for 'conduct problems', although further exploration of Time x Group effects for each gender, examining the T1vs T2 contrasts, found close to significant declines in conduct problems for boys but not girls in nurture groups [Mean difference (boys) = .782 (95 % CI: -.087 – 1.65) p = .077]. On the 'hyperactivity' scale, the Time x Group interaction was not significant, although further exploration of Time x Group effects for each gender examining the T1vs T2 contrasts found somewhat larger effects for boys in nurture groups than for girls or boys in the comparison group [Mean difference (boys) = 1.72 (95 % CI : .425 -3.016) p = .013 (*ns*)]. In the 'Peer problems' scale there was a significant Time x Group interaction [Λ (Wilks' Lambda) = .919; F (1, 69) = 6.07, p = 0.016, d = .577] showing that nurture group children improved significantly on this measure of peer relationships. Further exploration of Time x Group effects for each gender examining the T1vs T2 contrasts showed that improvements in nurture group girls were close to significant [Mean difference (girls) = 1.32 (95 % CI:-.116 – 2.76) p = .071] whilst the effects on boys in nurture groups were more significant [Mean difference(boys) = 1.72 (95 % CI: .588 – 2.857) p = .003]. On the 'Pro-social behaviour' scale a significant Time x Group interaction indicated a significant

improvement in Nurture group children relative to the comparison group [Λ (Wilks' Lambda) = .926; $F(1,69) = 5.53, p = .022, d = .551$] . Further exploration of Time x Group effects for each gender, examining the T1vs T2 contrasts showed that boys in nurture groups improved particularly significantly on this measure [Mean difference (boys) = 2.83 (95 % CI: 1.61-4.04) p <.000]. For girls in nurture groups the differences were not significant. [Mean difference (girls) = .740 (95 % CI: -.800 – 2.28) p = .341].

In order to examine the percentage of children in both groups whose total SDQ scores for each clinical category between T1 and T2 changed, the proportion of children above the borderline cutpoint at T1 and T2 were compared and a Hierarchical Log Linear Model was fitted to the observed frequencies (see Table 4, p.101). Results showed that 16 out of the 23 of children in Nurture Groups who scored in the abnormal range at T1 had scores which fell in the normal range at T2 (69.6 %) whereas only 7 out of the 18 children in the comparison group whose scores were in the abnormal range at T1 had scores which fell in the normal range at T2. (38.9 %). These relative differences in each group between each category at each time point on the 'total SDQ scale' were reflected in a significant T1xT2xGroup interaction which needed to be retained in the model in order to ensure an appropriate fit [Likelihood ratio χ^2 for 3-way interaction= 4.10, $df = 1$, $p < .05$]. These findings confirm that children attending nurture groups over a period of two terms are more likely to move out of clinically defined 'abnormal' range of the SDQ than a comparison group of children.

Table 3. ***Mean SDQ Scores and standard deviations at Pre-test and Post test***

	Intervention Group						Comparison Group					
	Pre M *Total*	Pre M *Girls*	Pre M *Boys*	Post M *Total*	Post M *Girls*	Post M *Boys*	Pre M *Total*	Pre M *Girls*	Pre M *Boys*	Post M *Total*	Post M *Girls*	Post M *Boys*
Total Difficulties	17.46 [17.95] (4.74)	18.00 [18.16] (5.21)	17.16 [17.73] (4.53)	13.85** [13.46] (6.18)	15.14 [14.59] (6.40)	13.12 [12.32] (6.05)	17. 33 [16.89] (6.67)	17.54 [16.93] 5.57	17.24 [16.84] 7.20	16.69 [17.01] (8.18)	14.72 [15.87] (10.01)	17.56 [18.16] (7.29)
Emotional Difficulties	3.87 [4.35] (2.67)	4.00 [4.38] (2.11)	3.80 [4.31] (2.97)	3.54 [3.80] (2.53)	4.64 [4.71] (2.92)	2.92 * [2.89] (2.10)	3.50 [3.60] (3.60)	5.90 [5.14] (3.59)	2.44 [2.05] (3.11)	3.50 [3.63] (3.11)	4.00 [3.96] (2.75)	3.28 [3.29] (3.28)
Conduct Problems	2.77 [2.77] (2.33)	2.43 [2.46] (2.44)	2.96 [3.08] (2.30)	2.26 [2.16] (1.96)	2.07 [2.02] (1.98)	2.36 [2.30] (1.98)	3.17 [2.89] (2.57)	2.54 [2.41] (2.66)	3.44 [3.35] (2.53)	3.19 [2.96] (2.86)	2.09 [2.18] (2.47)	3.68 [3.73] (2.92)
Hyperactivity	6.46 [6.36] (2.48)	6.43 [6.27] (2.59)	6.48 [6.44] (2.47)	5.30 [4.87] (3.42)	5.43 [5.01] (3.84)	5.24 [4.72] (3.24)	7.25 [7.14] (2.78)	6.45 [6.63] (3.14)	7.60 [7.65] (2.48)	6.94 [7.28] (2.93)	6.00 [6.80] (3.95)	7.36 [7.76] (2.32)
Peer Problems	3.97** [4.20] (2.06)	4.07 [4.22] (2.09)	3.92 [4.18] (2.08)	2.74** [2.68] (2.09)	3.00 [2.90] (1.70)	2.600 [2.45] (2.29)	2.83 [2.48] (2.27)	2.54 [2.20] (2.58)	2.96 [2.77] (2.17)	2.72 [2.86] (2.13)	2.64 [2.85] (2.84)	2.76 [2.87] (1.81)
Prosocial Behaviour	4.10 ** [4.71] (2.56)	5.93 [6.13] (1.82)	3.08 [3.29] (2.36)	5.69** [6.49] (2.29)	6.28 [6.87] (2.64)	5.36 [6.12] (2.06)	5.00 [5.09] (2.86)	6.18 [5.83] (3.60)	4.48 [4.31] (2.36)	5.28 [4.92] (3.18)	7.09 [5.94] (3.42)	4.48 [3.90] (2.77)

Note: Scores are for mean scores in each category of Teacher version Goodman's Strength and Difficulties Questionnaire (1997, 1999)
Intervention = Nurture Group, Comparison = Comparison group. Means adjusted by covariates = square brackets.
Standard Deviations are in parentheses.
**Significant interaction effect for Time x Group. * Significant interaction effect for Time x Group x Gender.

Table 4. *Time by time by group effects on the SDQ 'Total Scores' within the 'abnormal' or 'normal' range at Time 1 & Time 2.*

GROUP		Categories of SDQ 'Total Score' at Time 2		
		Normal*	Abnormal	*N*
Nurture Group: Time 1	Normal*	10 62.5 %	6 37.5%	16
	Abnormal	16 69.6 %	7 30.4 %	23
	Total	26 66.7%	13 33.4%	39
Comparison Group: Time 1	Normal*	14 77.8%	4 22.2%	18
	Abnormal	7 38.9%	11 61.1%	18
	Total	21 58.3%	15 41.7%	36

**Normal = Borderline with Normal.*

Boxall Profile

Results of the Boxall Profile (teacher measure of classroom behaviour and interaction) are reported below. Table 5 (p. 104) displays the mean scores obtained for the four factors and two individual items of the Boxall Profile for the intervention and comparison groups.

A significant interaction was found between Time x Group in 'Organisation of Experience' (Developmental cluster), [Λ (Wilks' Lambda = .926; $F(1, 71) = 5.65, p = 0.02, d = 0.550$]. There was also a significant Time x Group interaction in 'Internalisation of Controls' (developmental strand) [Λ (Wilks'Lambda) = .938, F(1,

71) = 4.77, $p = .032$, $d = 0.505$]. Nurture group children therefore improved significantly more than controls in 'developmental' factors.

In the 'Diagnostic Strand' of the Boxall Profile, on the 'Disengaged' factor there was a significant Time x Group interaction showing that nurture group children improved significantly more than comparison group children [Λ(Wilks' Lambda) = 0.941; F(1, 71) = 4.484, $p = 0.038$, $d = .490$]. Levels of 'Self Negation' (also a factor) decreased in nurture group children and increased in comparison group children; the interaction between Time x Group was somewhat significant [Λ(Wilks' Lambda) = .999; F(1, 71) = 0.72, $p = 0.79$] and the Time x Group x Gender interaction was highly significant [Λ (Wilks'Lambda) = .877; F(1, 71) = 9.93, $p = 0.002$, $d = .729$]. Analysis of Time x Group x Gender effects examining the T1vsT2 contrast showed nurture group boys, but not girls improving significantly in ratings of 'self negation' [Mean difference (boys) = 2.289, (95% CI: .889 - 3.69) $p = .002$]. There was no significant Time x Group interaction for the 'Undeveloped Behaviour' cluster.

Analysis of Time x Group x Gender effects examining the T1vsT2 contrast showed more changes on this variable for boys [Mean difference (boys) = 1.34, (95% CI: .175 – 2.51) $p = .025$ (*ns*)] but not girls. For the 'Unsupported Development' factor, nurture group children improved marginally, whilst comparison group children remained at the same level, the Time x Group interaction was close to significance [Λ (Wilks'Lambda) = .959; F(1, 71) = 3.074, $p = 0.084$, $d = 0.406$]. Analysis of Time x Group effects for each gender examining the T1vsT2 contrast showed that both boys and girls in nurture groups improved significantly in 'unsupported

development', respectively:[Mean difference (boys) = 2.16, (95% CI: .932 – 3.38) p =.001] and [Mean difference (girls) = 2.25, (95% CI: .705 -3.79) p = .005].

Academic Levels

In both groups academic levels improved as would be predicted, between T1 and T2. Boys in both groups improved more than girls [Λ (Wilks'Lambda) = .935; $F(1, 77)$ = 4.997, p = .028, d = .517]. Nurture group children, whose academic levels relative to expected levels for their age were low, improved significantly more than comparison group children [Λ (Wilks'Lambda) = .919; $F(1, 77) = 6.31$, p = .014, d = .581].

Attachment Measure

This section examines children's attachment representations. Firstly differences in the attachment clusters between T1 and T2 are examined (see Table 6, p. 104). Secondly, differences in the negative and positive adult clusters are described (see Table 7, p.107). Finally significant changes in individual codes are presented. Although no prediction was made about the direction of effects in attachment representations (for individual codes) in relation to gender; significance in pairwise comparisons contrasting T1 and T2 means for boys and girls are reported. In this case, Bonferroni corrections for alpha levels were applied to reduce to likelihood of chance findings.

Table 5. ***Mean Boxall Profile scores and standard deviations at pre-test and post test***

	Intervention Group						Comparison Group					
	Pre Mean *Total*	Pre Mean *Girls*	Pre Mean *Boys*	Post Mean *Total*	Post Mean *Girls*	Post Mean *Boys*	Pre Mean *Total*	Pre Mean *Girls*	Pre Mean *Boys*	Post Mean *Total*	Post Mean *Girls*	Post Mean *Boys*
Organisation of Experience	8.02 [8.39] (2.23)	7.92 [8.30] (2.78)	8.08 [8.47] (1.90)	10.08** [10.56] (2.64)	10.00 [10.48] (2.99)	10.11 [10.63] (2.47)	8.94 [8.40] (2.09)	8.84 [8.14] (2.62)	8.99 [8.66] (1.87)	9.63 [9.08] (2.56)	10.04 [9.15] (2.98)	9.45 [9.01] (2.40)
Internalisation of Controls	7.34 [7.45] (2.23)	7.32 [7.44] (2.40)	7.35 [7.45] (2.18)	9.03** [9.28] (2.65)	9.24 [9.45] (2.52)	8.90 [9.10] (2.76)	7.91 [8.02] (2.05)	8.84 [8.63] (2.35)	7.50 [7.42] (1.80)	8.57 [8.65] (2.26)	9.85 [9.46]] (2.44)	8.01 [7.83] (1.97)
Disengaged	6.10 [5.73] (3.77)	6.67 [6.15] (4.80)	5.77 [5.31] (3.09)	3.51** [3.17] (2.93)	4.47 [3.99] (3.54)	2.96 [2.34] (2.42)	4.61 [5.41] (3.34)	5.18 [6.07] (4.37)	4.36 [4.75] (2.84)	4.47 [5.02] (3.65)	3.82 [4.79] (4.24)	4.76 [5.26] (3.42)
Self Negation	5.27 [5.64] (3.08)	4.27 [4.79] (2.28)	5.85 [6.49] (3.37)	4.20 [4.43] (2.97)*	4.47 [4.65] (2.72)	4.04* [4.20] (3.14)	5.33 [5.06] (3.34)	7.18 [6.14] (2.52)	4.52 [3.99] (3.58)	4.47 [4.11] (3.25)	4.00 [3.68] (2.97)	4.68 [4.54] (3.41)
Undeveloped Behaviour	4.11 [3.97] (2.72)	4.12 [3.97] (2.88)	4.10 [3.96] (2.68)	2.83 [2.47] (2.35)*	2.95 [2.85] (2.78)	2.77 [2.62] (2.12)	3.72 [3.88] (2.73)	3.60 [3.87] (3.42)	3.77 [3.89] (2.45)	3.46 [3.30] (3.35)	2.27 [2.49] (3.36)	3.99 [4.10] (3.27)
Unsupported Development	5.76 [6.03] (3.22)	5.79 [5.99] (3.24)	5.75 [6.07] (3.27)	3.86 [3.83] (2.60)*	3.76 [3.74] (2.97)	3.93 [3.91] (2.43)	5.19 [4.98] (3.76)	5.73 [5.26] (3.78)	4.96 [4.70] (3.81)	4.64 [4.25] (4.06)	3.14 [3.18] (3.96)	5.30 [5.32] (4.00)

Note: Scores are for mean scores for each factor of the Boxall Profile (Bennathan & Boxall, (1998).
Intervention = Nurture Group Children, Comparison = Comparison group. Means adjusted by covariates = square brackets.
Standard Deviations are in parentheses.
**Significant interaction effect for Time x Group. * Significant interaction effect for Time x Group x Gender.

Table 6. ***Mean Teacher Attachment cluster scores at pre-test and post-test***

	Intervention		Control	
	Pretest	**Posttest**	**Pretest**	**Posttest**
	M	**M**	**M**	**M**
Secure	.252 [.286] (.180)	.272 [.308] (.189)	.326 [.335] (.213)	.336 [.356] (.231)
Insecure	.222 [.200] (.153)	.188 [.168] (.165)	.185 [.180] (.178)	.198 [.197] (.157)
Avoidant	.130 [.128] (.100)	.131 [.122] (.319)	.117 [.104] (.092)	.063 [.058] (.092)
Disorganised	.149 [.125] (.181)	.108 [.088] (.150)	.098 [.088] (.167)	.089 [.079] (.117)

Note: Scores are for mean scores in each attachment cluster of the SSAP (2004).
Intervention = Nurture Group Children, Control = Comparison Group. Means adjusted by covariates = square brackets.
Standard Deviations are in parentheses.

Attachment Clusters

Contrary to prediction, no significant Time x Group or x Time x Group x Gender interactions in scores on these clusters were identified, although levels of security increased slightly in the predicted direction in nurture group children. Mean scores for each attachment cluster are displayed in Table 6. Analysis of Time x Group effects for each gender examining the T1vsT2 contrasts also found no significant differences; therefore the means for girls and boys are not displayed.

Positive Adult and Negative Adult Clusters

The means for the positive and negative adult clusters are displayed in Table 7 (p. 104). For the "Positive Adult" cluster no significant interactions between Time x Group x Gender interactions were found [Λ (Wilks'Lambda) = .998; $F(1,69) = .144$, $p = .705$]. In the "Negative Adult" cluster, no significant Time x Group interactions were found however Analysis of Time x Group effects for each gender examining the T1vsT2 contrasts found that negative adult representations in boys in Nurture groups somewhat declined between T1 and T2: [Mean difference (boys) = .107, (95% CI: -.004 - .217) $p = .058$].

Table 7. ***Mean Positive and Negative Adult scores and standard deviations at pre-test and post test***

	Intervention Group						Comparison Group					
	Pre Mean ***Total***	Pre Mean ***Girls***	Pre Mean ***Boys***	Post Mean ***Total***	Post Mean ***Girls***	Post Mean ***Boys***	Pre Mean ***Total***	Pre Mean ***Girls***	Pre Mean ***Boys***	Post Mean ***Total***	Post Mean ***Girls***	Post Mean ***Boys***
Positive Adult Cluster	.331 [.396] (.290)	.423 [.455] (.290)	.280 [.338] (.282)	.395 [.436] (.260)	.547 [.547] (.275)	.310 [.324] (.211)	.435 [.443] (.333)	.672 [.599] (.301)	.330 [.288] (.295)	.477 [.530] (.348)	.697 [.688] (.384)	.381 [.372] (2.90)
Negative Adult Cluster	.279 [.257] (.206)	.195 [.193] (.162)	.325 [.322] (2.15)	.214 [.207] (.203)	.166 [.150] (.142)	.241* [.215] (.229)	.220 [.207] (.210)	.157 [.162] (.182)	.248 [.251] (.219)	.227 [.234] (2.26)	.151 [.188] (.155)	.261 [.281] (.246)

Intervention = Nurture Group Children, Comparison = Comparison group. Means adjusted by covariates = square brackets.
Standard Deviations are in parentheses.
* T1vsT2 contrast for boys in Nurture Group Boys: $p = .058$.

Individual Codes

For the sake of brevity only significant mean effects of Time x Group or Time x Group x Gender interactions in individual codes are reported here, using two tailed hypotheses. A table detailing the means for each code at each time point is available from the author on request. In the case of significant or close to significant Time x Group x Gender interactions, analysis of Time x Group effects for each gender examining the T1vsT2 contrasts in nurture or comparison group children are reported below. In this case, alpha is adjusted to take account of multiple comparisons (so α = .0125) because the contrasts were not predicted.

The 'Siblings help/comfort' code showed a significant Time x Group interaction in the predicted direction [Λ(Wilks' Lambda) = .915, F (1, 69) = 6.370, p = .014, d = 0.591]. For 'Realistic active mastery', the Time x Group interaction was close to significance [Λ(Wilks' Lambda) = 2.945, F(1, 69) = 2.945, p = .091, d = .042]. No other significant effects were identified in codes for representations of children. Representations of 'Adults providing help and protection' or 'adults showing affection' did *not* significantly increase in nurture group children, nor were there any significant Time x Group interactions for the 'Adult unaware' code. Analysis of Time x Group effects for each gender examining the T1vsT2 contrasts found that in nurture group boys, the number of representations of Teachers being unaware declined [Mean difference (boys) = .325 , (95% CI: .053 - .598) p = 0.020] although this was not significant at the .001 level. In the 'Adult actively rejects' code there was a close to significant Time x Group decline in the predicted direction for nurture group children [Λ(Wilks'Lambda) =, F (1, 69) = 3.567, p = 0.063, d = 0.442]. Analysis of Time x Group effects for each gender examining the T1vsT2 contrast

showed that this effect was stronger for nurture group boys [Mean difference (boys) = .250, (95% CI: .037 - .463) $p = 0.022$] this was not significant at the .0125 level. In contrast, boys in the comparison group showed somewhat higher numbers of representations of adults rejecting [Mean difference (boys) = .216, (95% CI: .010 - .423) $p = .040$]. Representations of 'Teacher Fair' increased non-significantly in the predicted direction in nurture group children relative to comparison group children [Λ (Wilks' Lambda) = .968; $F(1, 69) = 2.259$, p = .137, $d = 0.032$]. A Time x Group interaction showed that codings for 'Bizarre/atypical' declined somewhat for nurture group children relative to the comparison group although the interaction was not significant [Λ (Wilks' Lambda) = $F(1, 69) = 3.327$, p = .072, $d = .0427$]. No other significant changes in these codes were found. For the codes Adult (teacher) childlike and Pleasure in school life, which were developed for this study, there were no significant differences in means between T1 and T2.

In summary, the hypothesis that children in Nurture groups would develop more secure representations of teachers was not supported, although some Time x Group interactions in the direction of support for the hypothesis were detected.

Differential effects of Intervention on children with pre-test secure and insecure Teacher representations.

In order to explore the hypothesis that associations between Secure, Insecure, Avoidant and Disorganised attachment representations of teachers at T1 would be associated with the likelihood of change as a result of the intervention, associations between children's scores on these clusters at T1 and changes in ratings of classroom behaviour and of academic attainment were investigated in nurture group children

using Pearson correlations. Any significant associations were further explored for each gender; in these cases Bonferonni corrections were applied.

New variables were created for the differences in each of the classroom behaviour and academic variables at T1 and T2, by subtracting the score at T2 from the score at T1. A negative correlation was found between 'Secure' representations of teachers at T1 and change in 'Unsupported Development' [r = -.375, p = .05] suggesting that more secure children improved more on this variable. 'Avoidant' representations of teachers were negatively correlated with changes in 'Undeveloped behaviour' [r =-.316, p = .05] so that more avoidant representations of teachers were associated with less improvement in underdeveloped behaviour. 'Avoidant' representations were also positively correlated with changes in 'Internalisation of controls' [r = .451, p = .001] with higher ratings on avoidance at T1 appearing to predict the development of more 'Internalisation of controls'. There were no significant gender differences in any of these associations.

Because improvements in clinically significant scales on the SDQ were predicted to be a main effect of the intervention, six new categorical variables were created to indicate whether scores in the SDQ total and subscale scores shifted (from abnormal to borderline or normal, or from borderline to normal), or stayed the same between T1 and T2. *T* tests, examining associations between initial levels of insecurity, and security to teacher and clinically significant changes on the SDQ were then conducted. These found that 'insecure' children at T1 were more likely to experience improvements in emotional difficulties. There were no gender differences in these associations and no other significant associations were found.

Exploration of changes in attachment representations of Teachers and changes in SDQ, Boxall Profile and academic attainment.

Associations between changes in the quality of attachment representations of teachers and changes in Boxall ratings of classroom behaviour and academic attainment were investigated in nurture group and comparison group children (separately) using Pearson correlations. Associations between changes in attachment representations on clinical categories derived from SDQ scores were examined using *t* tests.

Firstly, associations were investigated in children whose levels of attachment security in representations of teachers had increased. Increased security to teachers was associated with changes in the 'total SDQ' norms [$t(35) = -2.327, p = .026$]. This association was found to be more significant for girls than for boys [$t(11) = -3.156, p = .009$ (significant at the adjusted α level = .0125)]. No significant associations with the other five SDQ subscales were found at the corrected α level. These associations were not present in comparison group children. No other effects in academic improvement or changes in Boxall Developmental or Diagnostic Strands were associated with this variable.

In nurture group children, small decreases in insecure representations of teachers between T1 and T2 (see Table 6) were associated with improvements in the emotional difficulties SDQ subscale, [$t(35) = 2.460, p = .019$]. Decreases in the hyperactivity subscale were close to significantly associated with decreases in insecure representations [$t(35) = 1.885, p = .068$]. These associations were not significantly different in boys or girls. No other significant associations were found

between decreased insecurity and the other SDQ subscales, in either group. Nor were any changes in Boxall Developmental or Diagnostic Strands or in academic achievement found to be significantly associated with this variable.

No associations were found between somewhat lower levels of avoidant and disorganised attachment representations of teachers in Nurture group children between T1 and T2 (see Table 6) and Boxall Developmental or Diagnostic Strands, academic improvements, or in changes in categories of the SDQ, or for either group.

Given that the degree of change in attachment representations of teachers between pre and post-test was not significant, these identified associations provided limited support for the hypothesis that the degree of change in attachment representations of teachers would be associated with the degree of improvement in variables of emotional and behavioural difficulties in the primary outcome measure.

DISCUSSION

Children with emotional and behavioural difficulties demonstrate problematic behaviours which are likely to become increasingly entrenched (Kam, Greenberg & Kusché, 2004). Preventative interventions such as nurture groups can be judged to be effective, at least in the short term, if children show clinically significant improvements in association with the intervention. Although this study is exploratory, if replicated, the improvements found here, particularly in peer relationships and prosocial behaviour are likely (although not certain) to be incremental and could counteract the negative impact of the multiple risk factors associated with emotional and behavioural difficulties.

The findings were of significant improvements in nurture group children, relative to the comparison group children in measures of emotional, conduct, and peer difficulty and in teacher ratings of child interaction in the classroom. These replicate the findings of Cooper *et al.* (2001) in a group of 57 nurture group children over a period of two to three terms. The nurture group children in this study progressed significantly more then comparison group children in teacher ratings of general academic progress. Given that one criterion for selection for nurture groups is poor academic progress, improvement on this variable could provide additional protection against the risk factors associated with of academic failure such as low self esteem. Ratings of academic improvement were based on an aggregation of each child's actual national curriculum or foundation level scores in each subject, between T1 and T2, this measure was more objective than that of Cooper *et al.* (2001), in which progress was evaluated using teacher ratings based on subjective impressions of a child's performance. These findings demonstrate that effects may be somewhat greater for boys than girls in SDQ 'total scores' and in the 'emotional difficulties' subscale (in which nurture group girls scores actually increased). Improvements on Boxall Profile diagnostic and developmental factors found in the Cooper *et al.* (2001) study were partially replicated, in that significant improvements were found on most factors, although, on a single diagnostic factor (self-negating) and on the 'underdeveloped behaviour' cluster, where overall improvements were not significant relative to the comparison group, boys improved more than girls. Results also demonstrated increasing levels of emotional difficulty and conduct problems in boys not receiving the intervention. The findings therefore provide tentative support for the hypothesis that nurture groups are an effective preventative intervention, (at least in the short term) particularly for boys who, when exhibiting difficulties at this

developmental stage, are in the long term, at high risk of developing psychiatric illnesses and antisocial behaviour (Rutter, 2003a & b).

In terms of the mechanism of change, the results of the attachment measure provided very limited support for the hypothesis that children with emotional and behavioural difficulties in nurture groups will develop increased levels of attachment security in relation to teachers. However, although significant changes were not found on this measure, levels of secure representations increased amongst nurture group children and insecure and disorganised representations decreased in the predicted direction. Avoidant representations in nurture group children stayed the same. In the comparison group, insecure and disorganised representations of teachers increased whilst levels of secure representations stayed the same or increased very marginally. Unexpectedly, however, levels of avoidance decreased in comparison group children. Exploration of associations between attachment classifications and changes in the measure of classroom behaviour suggested that nurture group children with avoidant representations of teachers appeared to make less change in 'undeveloped behaviour' (defined by factors such as 'inappropriate noises or remarks, or patterns of behaviour that are bizarre fragments of no obvious relevance'). This suggests that (covert or overt) avoidance of emotional contact with teachers, associated with the avoidant attachment classification, made children less likely to benefit from the intervention in terms of their 'undifferentiated behaviour'. Such a finding contradicts the prediction that avoidant children would become less avoidant as a result of the intervention. On the other hand avoidant children developed more 'internalised controls', a factor comprising items such as 'participates co-operatively'. This combination of unpredicted associations may be explained by the 'positive reinforcement' and

'social learning' components of the intervention, in which good behaviour is conspicuously rewarded, thereby encouraging avoidant children to have increased experiences of self control. This relates to similar findings in a longitudinal study (Howes & Aitkins, 2002) of current and historic secure relationships with teachers which suggested that, over time, teachers play a particularly important role in the development of self-regulation. This supposition does not, however, explain the decrease in avoidance found in comparison group children, which could, in the absence of a non-clinical control group, perhaps be assumed to be an effect of time. It may be that comparison group children become less avoidant in receipt of "services as usual". Therefore, nurture groups may have had the effect of increasing avoidant children's levels of self control so that they became more co-operative, but the groups may have been less successful in addressing the underlying emotional disturbances which are manifest in the behaviour described in the 'underdeveloped behaviour' factor.

More secure children improved more on the 'unsupported development' factor than did non-secure children. This was in line with predictions about the teacher-pupil relationship being the mechanism of change, but suggested that *prior* levels, rather than altered levels of security were most salient for children's progress. The predicted (non-significant) increases in secure teacher representations and decreases in insecure teacher representations in nurture group children did not correlate significantly with measures of change in maladaptive classroom behaviour. There was some tentative evidence, however, that these changes did mediate some of the clinical improvements, in that there were associations between increased security in relation to teachers and clinically significant improvement in the SDQ 'total score',

particularly in girls. Similarly, declines in insecurity correlated with declines in 'emotional difficulties' on the SDQ. Declines in boys on the 'negative adult' cluster suggest that, particularly in boys, nurture groups may pre-empt the development of negative 'internal working models' of teachers. This could, in itself, comprise an important intervention, as it might mitigate against incremental levels of teacher-child conflict. Overall, although the attachment findings lack significance, trends suggest that changes in attachment representations of teachers in nurture group children may merit investigation over longer periods of this intervention and beyond it.

The Children's Act of 2004, stipulates that schools, social services and child mental health services should develop improved provision at the Tier 1 (primary care) level, to intervene in children's psychological problems and to support the development of their mental health and resilience. Nurture groups, are a prime example of such Tier 1 provision. Findings of their effectiveness support the validity of preventive interventions at Tier 1 and suggest that further investigations of the key mechanisms of change are merited. That said, on the basis of these findings, claims about the effectiveness of nurture groups need be treated with caution. As noted in the methodology section, there were undoubtedly biases resulting from single informants completing outcome measures and anomalies in the selection procedures for each group. These together, allied to the researchers' awareness of each child's group membership, compromise limitations in the internal validity of the findings and therefore in the degree to which the results can be argued to be generalizable beyond the population under review. However, the naturalistic context of this study, in which both the experimental and comparison groups included children with a wide

range of difficulties including, frequently, co-morbid difficulties, lends the study a high degree of external validity. On this basis, tentative conclusions may be drawn, about the effectiveness of nurture groups and more focussed questions for future research, clearly identified.

One of the likely mechanisms of change suggested by these findings is that of improved peer group functioning. An element of the nurture group training focuses on the regulation of children's interpersonal behaviour through the use of increased emotional literacy, adult modelling of appropriate interpersonal behaviour, combined with the use of sanctions and rewards. Both significant improvements in the behavioural measure of peer problems and in children's *representations* of peer's helping/comforting in the SSAP measure were found in nurture group children. Additionally, prosocial behaviour (on the SDQ), which also increased in nurture group children, is known to predict peer acceptance (Dodge, 1983; Ladd, Price & Hart, 1988). This suggests that clinically significant improvements in nurture group children may possibly have been mediated by the closely supported interactions and daily small group contact with peers modelled and supervised by nurture group teachers. Supported interactions may enable children in nurture groups to develop social and friendship skills, underlying which are a specific and evolving set of social and cognitive capacities (Hay, Payne & Chadwick, 2004). Any improvement in peer group relationships could, in itself, have a protective function, if it generalises into children's lives in mainstream classrooms. This hypothesis could be tested by developing a manualised procedure for nurture group teachers (in order to ensure adherence) to provide extra support for children's interactions and prosocial behaviour over a given period, and, in a control group of nurture group classrooms,

again using a manualised approach, teachers could minimise the focus on enhancing and scaffolding child-child interactions. It should be noted that, in practice, this would be difficult to implement, particularly as the most effective nurture group teachers are reported to be those who are most able to be flexible and responsive to the particular needs of children (personal communication: Debbi Jaffey, Specialist Educational Psychologist; June 2006), and, therefore, may therefore resist any experimental manipulations of their interactions with children.

Gender differences in findings suggest that some mechanisms of change in nurture groups may be different for each gender. For boys, higher levels of individual attention from (mother-like) teaching staff and reduced child – teacher negativity, rather than increases in attachment security, may be the most salient component of the intervention. It may be that boys who are known to have higher levels of attentional problems and to manifest more aggressive tendencies than girls, from three or four years upwards (Hay *et al.*, 2004) find it more difficult to regulate their behaviour in the distracting and competitive environment of mainstream classrooms. Therefore, they may particularly benefit from the close attention of an experienced teacher in the nurture group environment. This supposition could also be tested by setting up experimental and control nurture groups; the experimental group teachers providing increased levels of behavioural support for boys and the control group teachers providing, support "as usual". Given that girls are less likely than boys to be manifesting neuro-developmental problems at this age, girls in nurture groups are more likely be manifesting emotional difficulties and it may be expected that they benefit more from the social and emotional support rather than the behavioural regulation offered by teachers. No evidence was found to support this hypothesis,

however, as nurture groups girls displayed somewhat higher levels of 'emotional difficulties' at T2. This anomaly, as with all findings, predicted or otherwise, may partially result from the degree of variability attributable to the heterogeneous nature of the sample.

Before discounting the hypothesis of increasingly security to teachers as a mechanism of change, it is important to consider the confounds which mitigated against significance in attachment findings. The first was the time limitation between entry to the group and the second assessment. Cooper and Whitebread (2002) found more improvements in emotional and behavioural difficulties in children who had longer associations with nurture groups. This suggests that follow up of the current cohort might find greater degree of change in both attachment representations and emotional difficulties. The second confound was the heterogeneity of the children's problems. Analogous with the general category of EBD and despite clear referral criteria (see Appendix 1), schools varied somewhat in the degree to which they adhered strictly to the criteria. Additionally some children considered for the nurture group were excluded due either to lack of parental consent or to consideration of a child's possible negative impact on the existing group. Occasionally, children who had social and behavioural difficulties were placed in groups with little confidence that they required a nurture group intervention, because their difficulties were not considered to be emotionally based. Instead, the child (whose problems were disrupting both their own and other's progress in mainstream classrooms) might be awaiting special needs assessment (personal communication from nurture group teacher: Jan. 2006). Therefore, although this use of nurture groups was far from prevalent, indications of heterogeneity in the sample indicate

that there may have been a somewhat limited section of the nurture group children with emotional difficulties or attachment disorders which would, theoretically, have made them more likely to respond to the intervention. Although the Boxall Profile and SDQ were collected prior to entering nurture groups, in the absence of a more detailed assessment of psychological functioning at the point of referral, it is only possible to speculate about the specific nature of nurture group children's difficulties. An additional confound is that, although children in the comparison group were nominated as potentially benefiting from the nurture group intervention, they had not been subject to the same tests of stringency as to their suitability than had children who actually attended nurture groups, for example their Boxall Profiles were completed *after* they had been selected as part of the comparison group rather than *prior* to being accepted in a nurture group and their difficulties had not necessarily been discussed with an Educational Psychologist. Future studies with additional funding and time, could include a more comprehensive profile of nurture group and comparison group children's functioning at Time 1, in order to ensure that the groups are matched, and, potentially, to observe the differing responses to the intervention in children of different ages with different problems.

A notable limitation of this study, as alluded to previously, is that all the observed effects in behavioural outcomes were obtained using teacher measures. Significant biases include that nurture group teachers are not only predisposed to observe small changes in children because they are providing the intervention, they are also more able to observe shifts in behaviour than teachers of larger mainstream classrooms who completed the comparison group measures. Nurture group teachers also become close to children, as a result of their long term involvement, and may

therefore have been reluctant to emphasise any remaining features of emotional and behavioural difficulties at Time 2. In relation to this, single informant SDQ's have been found to be much a less reliable research tool than multi-informant SDQ's (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). In future studies of nurture groups, the impact of teacher's subjective experiences of children and subsequent biases in their responses could be controlled for in a larger trial with multi-informants and more extensive measures (see below).

A second limitation of this study was the lack of measures to account for differences between the nurture group teachers themselves. Children from 10 different nurture groups were amalgamated for the purpose of this project. Nurture group teachers vary in the degree to which they are able to build and sustain close emotional contact with their pupils (Cooper & Tiknaz, 2006). This variance depends, in part, on two features, firstly the teacher's own attachment history and level of depression (e.g. Zeller & Pianta, 2004), secondly, the length of their experience as nurture group teachers. Cooper and Whitebread (2002) found that longer running established nurture groups with experienced teachers produced more statistically significant improvements in pupil's progress than newer groups. The differences in teacher responsiveness to children could be associated with their states of mind regarding attachment. Such influences may account for the associations between avoidance and increased internalisation of controls. The hypothesis that changes in children's representations and in their responses to the intervention are associated with particular teacher's attachment representations could be examined either using interviews, self report measures and classroom observations, as in the Zeller and Pianta study, or using the adult attachment interview (AAI: George, Kaplan & Main,

1985). This latter measure would render the study similar to that of Steele *et al.* (2003) who studied associations between the Adult Attachment Interviews of adoptive parents and the attachment representations of their recently adopted children.

To examine the question of teachers as sources of variance, with any degree of rigour, a larger sample of child-teacher dyads would be required than are available at any one time point, because of the small numbers of children in each nurture group. The study would need to be longitudinal and group assignment would need to be random. Furthermore, randomization should not be confounded with the school the child attends, due to the degree of variance attributable to schools. Ideally assignment to nurture and comparison group would made within each school, or if that were not feasible, then assignment should be randomly alternated between two schools so that sufficient numbers of children were available to include schools as a source of variation within the analysis. Any follow-up study should ideally deploy a randomised longitudinal design, using a more extensive battery, to include observer measures of child behaviour, pre-intervention identification of child difficulties using at least two different measures. Equally, social problems including emotional neglect and social deprivation should be specified at the outset, and careful attention to factors germane to particular schools should be paid, in order to provide a much more rigorous evaluation of effects of nurture groups.

A third, important limitation concerns the attachment measure itself. Responses to the teacher stories were not subject to factor analysis, nor was their reliability or validity examined by correlating them with other measures of child teacher

attachment. Future studies should pilot a larger range of potential teacher stories and include an analysis of their content validity, by comparing ratings on the SSAP clusters to other measures, adapted for the purpose of assessing child-teacher attachment (e.g. Attachment Q sort, Waters, 1990, Manchester Child Attachment Interview, Goldwyn, Stanley, Smith, & Green, 2000). These clusters could further be examined in relation to the teacher ratings, in order to explore links between children's internal representations of adults and their behaviour towards teachers.

A fourth and final limitation, in terms of the generalizability of these findings, is that the nature of children's experiences in their schools and the effects of different school environments, comprise an additional source of variance which was not accounted for in the analysis. There were some marked differences, as noted in the methodology section, between schools, in terms of the level of social deprivation in the areas they serve, their levels of academic success relative to their local demographics, and their sensitivity in identifying children's special needs. For example, one comparison group school (comparison school 2, Appendix 5) was understaffed and poorly led, whereas all the nurture group schools were well equipped and relatively well staffed. In the USA there are a number of whole school programmes which both implement and monitor adherence to improvements in the interpersonal environment, both inside and outside the classroom. Some of these have demonstrated robust, long-lasting effects on children, including sustained improvements in self esteem, enjoyment of class and trust and respect for teachers, (e.g. Battistich, Solomon, Watson & Schaps, 1997). These and similar findings (see also Siraj-Blatchford, Sylva, Muttock, Gilden & Bell, 2002) underline the degree to which differences in child outcomes may be attributable to factors within their school

environments. Improvements or declines on outcome measures attributable to school environments, have, in the current study, been confounded with changes attributable to nurture group attendance or non-attendance and so may have either augmented or detracted from the levels of significance detected in effects.

Given the impressive clinical, social and behavioural impact of nurture groups on significant numbers of EBD children, which has been found to extend over at least two years (Cooper & Tiknaz, 2005), these wider systemic factors have emerged as being worthy of detailed further investigation. In addition to the suggested investigations of the effects of peer group, behavioural regulation, and teacher representations, the effects of improvements in the interpersonal climate within the whole school environment could be more rigorously evaluated. These have been an extensively documented effect of nurture groups (Cooper *et al.*, 2002; Doyle. 2004). Mainstream teachers have described how the presence of nurture groups inspired them to facilitate a more nurturing environment throughout the school. Similar improvements in the quality of interpersonal interactions within school environments (Battistich, Solomon, Watson & Schaps, 1997) referred to above, support the validity of investigating the different factors which render a schools a nurturing environments. A study with larger samples in each school could use regular questionnaires about teacher's orientations to children, completed by both teachers and older children; independent classroom observers (to measure adherence to a 'nurturing environment' model) and parent report measures such as the Child Behaviour Checklist (Achenbach, 1991, b) as well as standardized achievement tests. In this way, the degree to which improvements in emotional and behavioural

difficulties can be related to the improvements in school climates could be assessed in schools, both with and without nurture groups.

In summary, the findings of this exploratory study suggest that nurture groups merit further detailed investigation. They appear to be a promising school based intervention which impacts positively on significant numbers of children and on the whole school environment. The results of this study suggest that increased teacher support, more focussed behavioural support, and, possibly, teacher modelling of appropriate interpersonal behaviour, lead to improvements in peer group functioning which may, at least in the initial stages of nurture group attendance, be the most significant mechanism of change. However, non-significant but predicted changes detected in children's attachment representations of teachers, suggest that a more longitudinal investigation of the ways children think about and perceive teachers, after attending nurture groups, would be merited.

REFERENCES

Achenbach, T. M. (1991, b.). Manual for the Teacher's Report Form and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry.

Battistich, V., Solomon, D. Watson, M., & Schaps, J. (1997). Caring School Communities. *Educational Psychologist, 32*, 137-151.

Bennathan, M. & Boxall, M. (1998). *The Boxall Profile: Handbook for teachers.* Maidstone: Association of Workers for Children with Emotional and Behavioural Difficulties.

Bennathan, M., & Boxall, M. (2000). *Effective Interventions in Primary School: Nurture Groups.* David Fulton.

Cooper, P. & Tiknaz, Y. (2005). Progress and challenge in nurture groups: evidence from three case studies. *British Journal of Special Education, 32*, 211- 222.

Cooper, P. & Whitebread, D. (2002). The effectiveness of nurture groups. Leicester: University of Leicester. School of education (unpublished).

Cooper, P., Arnold, R. & Boyd, E. (2001). *The Effectiveness of Nurture Groups: Preliminary Research Findings.* University of Leicester, School of Education.

Department for education and Employment (1994). *Code of practice for the identification and assessment of special educational needs.* London: DfEE.

Dodge, K. A., Lansford, J.E. Burks, V.S., Bates, J. E. Pettit, G. S. Fontaine, R. *et al.* (1983). Peer rejection and social information processing-processing factors in the development of aggressive behaviour problems in children. *Child development, 74*, 374-393.

Doyle, R. (2004). A social development curriculum: applying nurture group principles and practices to support socially and emotionally vulnerable children within mainstream classrooms. *British Journal of Special Education, 31*, 24 -30.

Dupont, W. D. & Plummer, W.D. (1990). Power and sample size calculations: A review and computer program, *Controlled Clinical Trials*, *11*,116-28.

Evans, J. Harden, H, Thomas, J. (2002). What are effective strategies to support pupil with emotional difficulties (EBD) in mainstream primary schools? Findings from a systematic review of research. *Journal of Research in Special Educational Needs, 4*, 2-16.

Goldwyn, R., Stanley, C., Smith, V. & Green, J. (2000). The Manchester Child Attachment story task: relationship between parental AAI, SAT and child Behaviour. *Attachment and Human Behaviour. 2,* 71 -84.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, *38*, 581-586.

Goodman, R. (1999). The extended version of the Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. *Journal of Child Psychology and Psychiatry*, *40*, 791-801.

Goodman, R., Ford, T., Simmons, H., Gatward, R., Meltzer, H. (2000). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *British Journal of Psychiatry, 177*, 534-539.

George, C. Kaplan, N & Main, M. (1984). *Adult Attachment Interview.* Unpublished Manuscript, University of California at Berkley.

Green J., Stanley, C., Smith, V. & Goldwyn, R. (2000). A new method of evaluating attachment representations in young school-age children: The Manchester Child Attachment Story Task. *Attachment and Human Development, 2* (1) 48-7.

Hay, D. F, Payne, A. & Chadwick, A. (2004). Peer relations in childhood. *Journal of Child Psychology and Psychiatry 45*, 84-108.

Hodges, J, Hillman, S., Steele, M. (November 2004). Story Stem Assessment Profile. Anna Freud Centre/Great Ormond Street, London.

Hughes, J. N., Cavell, T. A. & Willson, V. (2001). Further support for the developmental significance of the quality of the teacher-student relationship. *Journal of School Psychology, 39*, 289-301.

Howes, C. & Aitkins, J. W. (2002). Peer relations in the transition to adolescence. *Advances in Child Development and Behaviour, 29*, 195-230.

Kam, C. M., Greenberg, M.T. & Walls, C. T. (2003). Examining the Role of Implementation Quality in School-Based Prevention Using the PATHS Curriculum. *Prevention Science, 4*, 55-63.

Kadzin, M. & Nock, M.K. (2003). Deliating mechanisms of change in child and adolexcent therapy: methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry, 44*, 1116-1129.

Ladd, G. W., Price, J. M. & Hart, C. H. (1988). Predicting preschoolers' peer status from their playground behaviours. *Child Development, 59*, 39-52.

Loeber, R., Loeber, D. P., Farringdon, M, Stouthamer-Loeber & Van Kammen (1998). *Anti social Behaviour and mental health problems: Explanatory factors in childhood and adolescence.* Laurence Erlbaum Associates, Mahwah, NJ.

Lynch, M. & Cicehetti, D. (1997). Children's relationships with adults and peers: an examination of elementary and junior high school students. *Journal of School Psychology, 35*, 81-99.

Lynch, K. B., Geller, S. R. & Schmidt, M. G. (2004). Multiyear Evaluation of the effectiveness of a resilience based prevention programme. *The Journal of Primary Prevention, 24*, 335 – 353.

Lyons-Ruth, K. (1996). Attachment relationships among children with aggressive behaviour problems: The role of disorganised early attachment patterns. *Journal of Consulting and Clinical Psychology, 64*, 572-585.

Mikula, G. & Schlamberger, K. (1985). What people think about an unjust event: toward a better understanding of the phenomenology of experiences of injustice *European Journal of Social Psychology, 15*, 37-49.

Poulou, M. (2005). Perceptions of students with emotional and behavioural difficulties. *Journal of Emotional and Behavioural Difficulties, 10*,137- 149.

Rutter, M. (2003a.). Commentary: Nature-nurture interplay in emotional disorders. *Journal of Child Psychology and Psychiatry, 44*, 934 – 944.

Rutter, M., Avshalom, C., Moffitt, T.E. (2003b.). Using sex differences in psychopathology to study causal mechanisms: unifying issues and research strategies. *Journal of Child Psychology and Psychiatry, 44*: 8, 1092-1115.

Maughan, B. & Rutter, M. (2001). Antisocial children grown up. In *Conduct Disorders in Childhood and Adolescence* (eds. J. Hill & B. Maughan), pp. 507 – 552. Cambridge: Cambridge University Press.

Pianta, R. C., Hamre, B. H. & Stuhlman, M. (2003). Relationships between teachers and Children. In G. E, Miller, W, M, Reynolds. (Eds.) *Handbook of Psychology: Educational Psychology,* Vol. *7*, (pp. 199 – 234). New York: Wiley.

Payne, A. L. (2003). Measuring preschool children's perceptions of teacher-child relationship quality: Developing and testing the "feelings about my school and teachers' instrument. Dissertation-Abstracts-International-Section A:-Humanities-and –social-sciences. Vol. 64 (2-A): 391. Retrieved on: 22.09.05. http://www/.il.proquest.com/umi/ from Ovid.com.

Siraj-Blatchford, I., Sylva, K., Muttock, S. Gilden, R. & Bell, D. (2002). *Researching effective pedagogy in the early years.* Nottingham : DfES, 2002. Research Report No.: RR356. Electronically retrieved November 9th 2005 from: http://www.dfes.gov.uk/research/data/uploadfiles/RR356.pdf.

Steele, M., Hodges, J., Kaniuk, J., Hillman, S. & Henderson, K. (2003). Attachment Representations and adoption: associations between maternal states of mind and emotion narratives in previously maltreated children. *Journal of Child Psychotherapy. 29*, 187-205.

Stroufe, L. A. & Rutter, M. (1984). The domain of developmental psychopathology. *Child Development, 55*, 17-29.

Waters, E. (1990). *The Attachment Q - Set*. Stony Brook: State University of New York.

Zeller, J. & Pianta, R. (2004). teachers' childhood attachments and teacher-student relationships. Unpublished study. University of Virginia. *Dissertation Abstracts International, vol. 65.*

PART 3

CRITICAL APPRAISAL

Introduction

This study was interested in the role of teachers in children's emotional development. As postulated in early studies of child-teacher attachment, some teachers may be critically important to children's development. Longitudinal studies of nurture groups offer an ideal opportunity to test the direction of effect in the associations between improved child outcomes and secure attachments to teachers. Nurture group teachers aim to foster more secure teacher-child attachments in small classrooms for children with emotional and behavioural difficulties. These have been found to be effective in a set of naturalistic matched comparison group studies, although their efficacy in the long-term has yet to be established. The putative mechanism of change in these groups is that of security-to-teacher which compensates for insecure attachments to main caregivers. Our findings demonstrated that, indeed, nurture groups are effective interventions for children with emotional and behavioural difficulties. However, an insufficient degree of change in attachment representations was found to support the hypothesis that attachment was the mechanism of change. With the caveat that the design was non-randomised and the outcome measures were subject to a degree of observer bias, the results suggested that improvements in peer group relationships and more focussed behavioural regulation by teachers may be the real mechanism of change in nurture group children.

The first section of this review reflects on the research process and the choice of measures, discussing the limitations of the empirical study and some potential methodological improvements. The second section presents some brief personal observations developed during the research process, and the third focuses on the emergent developmental and clinical issues, proposing ideas for future research.

Reflections on the Research Process

Strengths and Limitations of Attachment Measure

A central feature of this project was the use of a narrative 'Story Completion Task' to measure attachment at two time points. This is a relatively new measure, inviting children to complete stories using dolls and props, rather than relying on external observations of behaviour in the classroom or at home. It is therefore allied to other attachment assessment interviews such as the Adult Attachment Interview (AAI) (George, Kaplan & Main, 1985) in that it attempts to tap into attachment patterns at the 'level of representation' (Main, Kaplan & Cassidy, 1985). The measure has the advantage of assigning *dimensions* of security classification to children, rather than consigning children definitively to a particular classification. This measure was the best choice at the point of research design, and in application had several strengths which are discussed below. From the practical standpoint its use was, in some respects, problematic, as discussed later in this section.

Piloting in schools and amongst normal populations revealed the strength of the measure to be that children (generally) enjoyed participating; some even fought to be tested first at the second time point. Partly because of the popularity of the method the study did not suffer from recruitment difficulties. Several children made remarks such as "oh this one!" at the second time point, appearing to remember an aspect of the stem (a phrase or a particular prop), although none were observed to repeat any stories. Children's enthusiasm for the task resulted in teachers becoming more confident about assigning children to be assessed. Thanks to the support of the teachers and the specialist educational psychologist supervising the nurture groups, we eventually recruited more participants than initially planned.

Coding Issues

The particular strength of the Story Stem Assessment Protocol (SSAP) (Hodges, Hillman and Steele, 2004) is that the coding system incorporates information about the child's approach to the task (such as the degree of avoidance of conflict) and about the form of the child's narrative – for example, the degree to which a child presents disorganised or foreshortened narratives. This means that some conscious and unconscious features of the child's approach to a narrative are accounted for.

That is not to say that the coding system comprehensively accounts for every aspect of a child's narrative. When contrasted to observing and defining phenomena as they emerge from the material (as in qualitative studies), any coding system has the limitation of missing some notable features in individual narratives. During the coding process I reflected that a more detailed consideration of each child's set of stories might be garnered using the SSAP codes in tandem with a degree of qualitative analysis as reported in the Steele, Hodges, Kaniuk, Hillman and Henderson (2003) adoption study. The large size of the sample (necessary for sufficient statistical power) along with limited time, did not, however, permit such detailed investigation.

There were some recurrent responses (for example, a child displaying his or her picture to adults in the expectation that it would be liked) which were not accounted for within the coding system. Similarly, some bland, idealised stories were told by children from very disturbed backgrounds, suggesting an ability to create and sustain defensive idealised narratives. Previous research, however, suggests that the length

of the battery overcomes the child's strategy of presenting idealised narratives throughout the set. Indeed, it is true that the disturbance registered in many children's stories was found to increase during the course of administration, suggesting that disturbances in 'internal working models' and conflicts between understandings of social norms and personal 'scripts' were being accessed.

As with all semi-projective measures, ratings are inevitably subject to a degree of variation resulting from the coder's subjective responses to narratives. This means that the measure may be fairly culturally specific, and that coder's cultural background may create problems with inter-rater reliability. This factor impinged on the research process as each transcript was originally double coded using our own (blind) codings and those of four students, two of whom (albeit deemed reliable) were from non- western cultures. Discussions with these non-western coders about negative and positive adult and child codes showed that different societal norms regarding childcare made interpretation of the stories very difficult for them. Variations in their interpretations were, later, found to supersede expected error levels. Indeed, a sobering review of the database at a late stage of the project found these coder's ratings to be so compromised that they were removed and, as a result, most cases were single rather than double coded as we had originally planned.

There are few studies which use repeated measures of attachment in early to middle childhood. This partly reflects the difficulty of devising reliable measures based on child self-report which are applicable to children passing through different phases of cognitive development (Piaget, 1955, 1968). In this study phases ranged from pre-operational, through concrete operational, to the onset of the first stage of 'formal

operations'. Between the age of 5 – 7, children are beginning to think and reason, but their thinking tends be expressed in terms of the observable or the imaginable rather than as an abstract representation of reality. These developmental progressions create problems in the reliability and construct validity of any attachment measure between the ages of 4 and 8 (Solomon and George, 1999). Specifically, George & Solomon, (1996a) found that, in the Bretherton, Ridgeway & Cassidy procedure (1990) from which several stories in the SSAP are drawn, particular stories in the set elicited representations which were more effective in discriminating between secure/insecure classification in children of one age than another. Although a range of stories is normally administered to reduce the impact of such variation in effects, the current study is limited by drawing on data from the three teacher-specific stories.

In this study, the development and use of new teacher-specific stories to measure teacher-pupil attachments were a particular innovation. The stories followed directly from the logic of the Hodges and MacArthur stems in the SSAP (2003), and were developed in consultation with Hodges and Hillman (2006). Nevertheless, they had had no previous clinical applications and were of unknown utility as measures. During piloting they elicited a range of attachment representations in different children suggesting good face validity. Because elicited representations had not been subject to any analysis of reliability, their reliability and validity as measures of child-teacher attachment systems now merits further investigation.

The Attachment *Q* sort (Waters, 1990) or an adapted version of the MCAST

(Manchester Child Attachment Interview, Green, Stanley, Smith, & Goldwyn, 2000) which uses doll play, would have been alternative measures. However, the *Q* sort is normally used only in children up to the age of 5. The measure employs trained independent observers of secure-base behaviour in the classroom, and a card sort task on the basis of these observations. The MCAST, like the SSAP uses doll-play vignette completion, also applying methodologies from infant and adult attachment research, to identify a detailed classification of internal representations of attachment relationships in school-age children. Although this measure would have been suitable for our project we did not have access to it at an early stage in project development.

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Practical Problems

Given the short time frame the practical problems resulting from the choice of measure created difficulties for the researchers, which were, however, eventually overcome. These are described below.

Initially there were myriad pressures; organising sets of toys, ensuring they were comprehensive and finding sites to pilot the stems. Although the results of only three stories are reported in this study, in total thirteen were administered (two other studies report findings on the basis of this project). Assessments were lengthy and the ability to judge during administration, when to shorten a child's story, became a necessity because of limited time. At the outset the length of time spent testing a child resulted in the need to repair relationships with one or two teachers, who worried about our inflicting what they feared might be stressful experiences on a child. Furthermore, we at first underestimated the length of time it would take to see

each child. Initially we expected to see six or seven children a day. In practice it was only possible to see three to four.

The volume of detailed transcriptions necessary for coding purposes meant that we needed to use unpaid and later, paid transcribers. This led to the considerable administrative demands of ensuring transcripts were delivered on time and were of sufficiently high quality.

Methodological Limitations

Discussion of the results highlighted the fact that a more detailed assessment of each child's functioning prior to the intervention would have clarified to what extent nurture groups were effective for different problems. This focus was also lacking in Cooper et al.'s (2001) study. A more extensive set of measures could have encompassed information about levels of depression (using for example the (CDI, Kovacs and Beck, 1997) and autistic features (Autism Behaviour Checklist, ABC, Krug et al. 1980). Using such measures would have enabled researchers to ascertain the extent to which the intervention was effective for different categories of problem, and would have yielded more detailed information about the problems in the sample, so that groups could be more closely matched.

A third limitation of this study, as discussed in the empirical paper, was the use of teacher measures rather than multiple informants. Although parent SDQ's were initially collected for nurture group children and some comparison group children, the amount of co-operation we could expect from the parents of potential comparison group children was limited. Insisting therefore on collecting SDQ's could have

hampered the recruitment of control participants. Parent SDQ's were thus collected from very few parents of these children. The bias introduced by single informants is exacerbated by the fact that nurture group teachers completed measures of nurture group children whilst classroom teachers completed those of comparison group children. Classroom teachers, being concerned with the management of large groups, are more likely to notice behavioural transgressions than improvements. It was impossible to assess the reliability of the teacher measures in the absence of classroom observers or information from parents. The inclusion of either of these would enhance considerably the strength of any future studies of nurture groups.

Personal Reflection

The idea for this study stemmed from my longstanding interest in developmental psychopathology and attachment theory in particular, because of its integration of psychoanalytic developmental concepts with scientifically rigorous observation. This interest arose from a long clinical career in adult mental health, prior to training, during which attachment and psychoanalytic theories of development emerged as the most persuasive explanatory theory of the origin of various forms of psychological distress.

The research has comprised something of a journey, crossing boundaries between clinical psychology, and educational psychology, and this has highlighted the value of conversations across disciplines. These conversations in themselves have amounted to a kind of cross-cultural project, due to the fact that different languages are used within the two cultures to describe similar behavioural phenomena. Conversations with teachers have also revealed the extent to which they are expected

to identify and, increasingly, to intervene in difficulties which are often social in origin, with little or no clinical supervision. Sometimes it seems that the primacy of the teaching task is becoming increasingly burdened by an obligation on the teacher to also provide effective interventions in emotional and behavioural difficulties.

Nevertheless I have been impressed by the fact that within some of schools, teachers were able to make a difference to the children, despite the dual challenge of teaching and nurturing. In some of the comparison group schools, children had progressed markedly at the second time in spite of continuing adversity. In many of our variables (such as in the positive/negative adult clusters) this progress was responsible for insignificant findings in Time x Group interactions. It appears that the non-clinical school environment, offers great potential for emotional growth and change.

Emergent Clinical Issues

It should be remembered that during the intervention the children were still spending most of their lives in the home environment where, for many, aversive experiences were known to recur, thus decreasing the valence of changes in adult representations. Repeated negative interactions at home would consistently reinforce insecure, avoidant and disorganised working models. That said, the results of this study were rather disappointing from the point of view of a putative theory of changing attachment systems.

Investigators of multiple attachment representations have found evidence of both hierarchical and serial attachment representations (Howes, 1999). These findings

support the hierarchical model, as do those from a longitudinal study of the impact of relationships with teachers, peers and parents (Howes & Aitkins, 2002). Thus internal working models derived from relationships to main caregivers seem to be more predictive of emotional and behavioural outcomes (although effects found in the Howes and Aitkins study are only moderate) than those developed through different attachment relationships with teachers and other "secure figures of convenience" (Zionts, 2005). Given large scale studies describing the significant impact of teacher interventions, this conclusion does not detract from the potential of teachers to impact positively on the emotional and social development of children at risk, but again poses the question of which factors constitute the mechanisms of change.

On the surface of it, the findings also cast doubt on the validity of the theory of internal working models affecting behaviour. The small degree of correlation (not reported on in the empirical paper) found between attachment representations (in each of the four categories), and teacher ratings of child behaviour at Time 1 was disappointing. For example, the Boxall strand 'Internalisation of controls' contains the item 'turns to the teacher for help, reassurance or acknowledgement, in the expectation that support will be forthcoming'. This item is aggregated with other items also indicating security to teacher, but there were no associations between this factor and the SSAP 'security to teacher' cluster. This does not render the hypothesis linking children's internal working models of adults to their behaviour towards teachers completely null, but does throw it into question. Questions of the reliability and validity of the classroom measure and the attachment measure therefore come into focus. Whilst coders using the attachment measure had carefully vetted

reliability, variability between nurture group and classroom teachers may have been an issue. Given the number of studies which link attachment classifications to external behaviour, one interpretation of the low correlation between these measures may be the varying degree to which Boxall Profile ratings reflected children's actual classroom behaviour. This caveat however, cannot invalidate the conclusion that the relationship between the two phenomena may, in reality, be slight because of the number of mediating variables such as, for example, a teacher's interpersonal style (Payne, 2003) and the quality of the school environment (Battistich, Solomon, Watson & Schaps, 1987).

One clinical question arose from variations in the richness of children's narratives. To what extent does the capacity to imagine, even in the most disturbed of children, represent a form of resilience? Freud famously argued that certain forms of creativity can be linked to psychopathology, whereas researchers such as Slade (1987) have found that more secure infants manifest higher levels of symbolic play. In middle childhood, degrees of imagination (which may well be related to the quality of early relationships) may vary above and beyond benefits attributable of current attachment security or insecurity. Perhaps the capacity to imagine can in itself constitute a level of resilience, because it indicates that a child can have recourse to its own internal world as a means of coping with the exigencies and limitations of everyday life. To assess this would involve developing a measure to assess degrees of imaginative resource in children to see how this factor correlates with child outcomes. To do so would be a difficult, but perhaps not impossible task.

A final suggestion arises from the fact that Nurture group teachers have almost daily contact with parents of children attending the groups, offering in some cases monthly 'coffee mornings'. These give parents a chance to meet, and the opportunity to seek advice and support. The effects of parent-teacher interactions on parents' beliefs about their children's difficulties and their attitudes to school may be a significant by-product of nurture groups. In themselves they could compromise interventions which contribute to a child's improvement. If parents believe their child's behaviour is unmanageable and that school is a hostile place, these beliefs impact on how they behave towards their children as well as on their child's school attendance. If the support which nurture group teachers offer is partly psycho-educational, this could also help parents to feel less overwhelmed by their child's difficulties. The effects of nurture group teacher- parent interactions have been investigated in some small, unpublished qualitative studies. Future research could investigate the impact of such exchanges. A larger study could use structured or semi-structured interviews with parents (return of questionnaires could be very uneven) to assess parental attitudes to their child's difficulties at the time of children joining the groups, and assessing the degree to which they felt they could manage and support their child. Interviews could also evaluate parents' levels of hostility to teachers and schools prior to, midway and following nurture group interventions. The results of these measures could then be entered into a statistical model or path analysis to ascertain the degree to which they contribute to improvement in nurture group children.

Although attachment representations did not change significantly in children in nurture groups, it is arguable that any changes in the predicted direction were in fact remarkable over such a short period, given the known durability and resistance of

insecure attachment systems to change (Bowlby, 1969). Although this study allowed us to conclude that teacher-child attachments cannot be changed significantly over five and a half months, supporters of the child-teacher attachment hypothesis could point to the short period between testing and retesting. Assessments over the longer term might identify significant decreases in negative representations of teachers and increases in security towards teachers, so that these may in the long term be mediators of change in nurture groups. Overall, regardless of change or lack of change in child-teacher attachments, the nurture group intervention seems to help to prevent children from perceiving schools as sites of failure and isolation and offers a formative opportunity for children to experience teachers and schools as nurturing and enriching.

REFERENCES

Achenbach, T. M. (1991,b.). Manual for the Teacher's Report Form and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry.

Battistich, V., Solomon, D. Watson, M., & Schaps, J. (1997). Caring School Communities, *Educational Psychologist, 32*, 137-151.

Birch, S. A. & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61-79.

Bowlby, J., (1969/1982). *Attachment and Loss: Vol.1. Attachment.* New York: basic Books.

Bowlby, J., (1988). *A secure base.* New York: Basic Books.

Bretherton, I., Ridgeway, D. & Cassidy, J. (1990). Assessing internal models of the attachment relationship: An attachment completion story task for 3-year-olds. In D. Cicchetti, M. Greenberg & M. E. Cummings (Eds.), *Attachment during the preschool years: Theory, research and intervention,* (pp.272-308). Chicago: University of Chicago Press.

Crick, N. R. & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101.

Cooper, P., Arnold, R. & Boyd, E. (2001). The Effectiveness of Nurture Groups: Preliminary Research Findings. *Leicester.* University of Leicester, School of Education (unpublished),

George, C. & Solomon, J. (1996a). Assessing internal models of attachment through doll play. Paper presented at the biennial meeting of the international society for the study of behavioural development, Quebéc city, Quebéc, Canada.

George, C. Kaplan, N & Main, M. (1984). *Adult Attachment Interview.* Unpublished Manuscript, University of California at Berkley.

Green J., Stanley, C., Smith, V. & Goldwyn, R. (2000). A new method of evaluating attachment representations in young school-age children: The Manchester Child Attachment Story Task. *Attachment and Human Development, 2* (1) 48-70.

Hughes, J. N., Cavell, T. A. & Willson, V. (2001). Further support for the developmental significance of the quality of the teacher-student relationship. *Journal of School Psychology, 39*, 289-301

Howes, C. & Aitkins, J. W. (2002). Peer relations in the transition to adolescence. *Advances in Child Development and Behaviour, 29*, 195-230.

Howes, C. (1999). Attachment relationships in the context of multiple caregivers. In: Casssidy, J., & Shaver, P.R. (Eds.). *Handbook of Attachment. Theory, Research and Clinical Applications.* (pp. 671 – 687). The Guildford Press. New York. London.

Hodges, J, Hillman, S., Steele, M. (November 2004). Story Stem Assessment Profile. Anna Freud Centre/Great Ormond Street, London.

Main, M., Kaplan, N. & Cassidy, J. (1985). *Security in infancy in childhood and adulthood: A move to the level of representation.* In I. Bretherton E.(Eds.), Growing points of attachment theory and research. Monographs of the society for research in child development, 50, (1-2, Serial No 209), 66-104.

Kovacs, A. T. & Beck, M. (1997). Child Depression Inventory. *Pearson Assessments Ltd. USA.* Citation retrieved June 2006, from: http//www.pearsonassessments.com/tests/cdi.htmPearson.

Krug, D.A., Arick, J .R.& Almond, P. (1993). *Autism screening instrument for educational planning* (2nd Ed.). Austin, Texas: Pro-Ed. 1980

Payne, A. L. (2003). Measuring preschool children's perceptions of teacher-child relationship quality: Developing and testing the "feelings about my school and teachers" instrument. *Dissertation-Abstracts-International-Section A:-Humanities-and –social-sciences. Vol. 64,* (2-A): 391. Retrieved on: 22.09.05. http://www/.il.proquest.com/umi/ from Ovid.com.

Sava, F. A. (2001). Causes and effects of teacher conflict-inducing attitudes towards pupils: a path analysis model. *Teaching and Teacher Education, 18*, 1007-1021

Solomon, & George, (1999). The measurement of Attachment in infancy and childhood. In J. Cassidy & P. R. Shaver (Eds.). *Handbook of attachment* (pp. 287 – 316.

Steele, M., Hodges, J., Kaniuk, J., Hillman, S. & Henderson, K. (2003). Attachment Representations and adoption: associations between maternal states of mind

and emotion narratives in previously maltreated children. *Journal of Child Psychotherapy. 29*, 187-205.

Slade, A. (1987). Quality of attachment and early symbolic play. *Developmental Psychology, 23*, (1) 78 – 85.

Waters, E. (1990). *The Attachment Q-Set.* Stony Brook: State University of New York.

Ziontis, L. T. (2005). Examining relationships between students and teachers: A potential extension of attachment theory? In Kerns, K.A. & Richardson, R.A. (Eds.) *Attachment in Middle Childhood* (pp. 231-253).

THE APPENDIXES

APPENDIX 1

Nurture Group Admission Criteria
Nurture group placement will be considered for children who are underachieving for social emotional and behavioural reasons:

- Children who are very restless, cannot listen, behave impulsively, aggressively, or show inappropriate emotional responses to a range of situations.

- Children who are withdrawn and unresponsive and who have difficulty relating to others.

- Children whose known early or recent history suggests that they may be at risk.

- Children whose recent history suggests they may be vulnerable in the school setting due to difficulties in relationships at home.

- Children will be already identified at School Action or School Action Plus. Nurture group placement is a School Action Plus intervention.

- Parental agreement to nurture group placement is essential.

- Prior to group entry, children will be observed by nurture group teachers on at least two occasions.

Nurture Group Referral Procedures
Referrals will be made by class teachers on a standard form, following discussion with the nurture group teacher and/or SENCO.

- Assessment by an educational psychologist is not a pre-requisite for admission, but he/she should be involved in consultation and discussion of background factors.

- All referrals will be discussed at a meeting with the Head teacher, nurture group teacher, SENCO and educational psychologist.

- Maintaining a manageable, effective social mix in the group will be a consideration in all decisions.

- The class teacher and/or Head teacher, and nurture group teacher will discuss with parents the child's admission to the nurture group. Parental consent is essential.

- A Boxall Profile will be completed for each child on entry to the nurture group in order to obtain a more precise assessment of need, to plan interventions and to provide a baseline for measuring progress in the group.

- A baseline of National Curriculum attainment on entry will also be recorded.

APPENDIX 2

Definition of 'School Action & School Action Plus'

School Action takes effect when a pupil is identified within the school as having educational, social or emotional needs.

School Action Plus occurs when the child is referred by the school to an external agent from the LEA (such as an Educational Psychologist). In all cases an Individual Education Plan (IEP) is drawn up for the child although this does not necessarily imply additional support.

APPENDIX 3

Definition of 'Classic' Nurture Groups

The Characteristics of Nurture Groups (Taken from: Cooper, Arnold and Boyd, 1999). [With the Permission of Professor Paul Cooper]

These characteristics were developed by the Project team in consultation with the Nurture Group Consortium, teachers, learning support assistants and others who attended the four day course. Schools have found them helpful when setting up new nurture groups.

They are subject to further development and refinement as the Project and the training courses continue.

- A nurture group is integrated provision. It is an agreed part of an LEA/school continuum of special educational needs provision, either as an integral part of an individual school or as a resource for a cluster of schools.
- The curriculum includes the National Curriculum and takes full account of school policies.
- All staff work towards the child's full return into mainstream classes.
- Children attend the nurture group for a large part of each day or for substantial regular sessions. This can be on a short or medium term basis, but is usually two to four terms.
- Two adults work together modelling good adult relationships in a structured and predictable environment, where children can begin to trust adults and to learn.
- It supplies a setting in which missing or insufficiently internalised essential early learning experiences are provided.
- The emphasis is on supporting positive emotional and social growth and cognitive development at whatever level of need the children show by responding to them in a developmentally appropriate way.
- There is an emphasis on language development through intensive interaction with an adult.
- Social learning through co-operation and play with others is essential and the group is constituted with this in mind.
- Staff involve parents/carers as early and as fully as possible and have a positive attitude towards them.

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- The Staff involve parents/carers as early and as fully as possible and have a positive attitude towards them.

APPENDIX 4

Basic School Requirements for the Establishment of Nurture Groups

(Taken, with permission, from the Local Authority Operational Guidelines)

Nurture groups will be established and funded by the Authority in schools where the need for such provision is greatest and where schools are likely to be able to maintain a consistent nurture group roll of 10-12 pupils. The following criteria will be considered:

A minimum of two forms of entry, except in the 25 most deprived wards where the minimum size will be 1.5 forms of entry.

- High level of need as shown by non-statemented special educational needs funding and economic deprivation funding received by the school.
- Situated in an area of deprivation, based on the Department of the Environment Index of Conditions, Child Poverty Index.
  High percentage of Children in Need (Children's Act 1989), based on Children in Need Survey 2002.
  The percentage of pupils entitled to free school meals is high.

  Attainment of pupils on entry is low compared to other schools in .....

  School quality and stability as reported by SIAS and Ofsted.

  Accommodation available in Infant/Early Years part of the school to provide a nurture group room with floor area not less than 40 square metres.

  Predicted long-term need for nurture group provision based on the special educational needs of current and previous school cohorts, i.e. a minimum of 20 children in Key Stage 1 for whom nurture group provision would be appropriate, to be confirmed by the school's attached EP and/or the Quadrant SN team.

  Whole school commitment to educational inclusion and the establishment of nurture group principles and practice in the school.

APPENDIX 5: NURTURE GROUP & COMPARISON GROUP SCHOOLS

Demographic information and comparative information on Comparison group and Nurture group schools.

These figures are based on information compiled in 2006. The ranking system was applied to 123 infant and primary schools in the education authority that were eligible for nurture groups, based upon pupil intake (minimum admission limit of 45 children). In all domains reported, a low rank signifies a high level of need. A final ranking is given based upon the summed ranks in the five domains under consideration. See below for a description of these different domains. NB insufficient information was available on the rankings of NG schools 9 and 10. In these cases an estimated rank (*) has been given by the senior educational psychologist co-ordinating nurture group provision in the area, based on the ratings of other local schools.

School + Numbers of Children in [ ] (Total no. of schools eligible = 123)	Income deprivation affecting children (IDAC) rank (2004)	Index of multiple deprivation (IMD) rank (2004)	Free School Meals Entitlement (FSN) rank (2006)	Key Stage 1 Average point score (KS1 APS) rank (2006)	Foundation Stage Profile (FSP) rank (2006)	Final Rank
Comparison School 1[222]	8	4	2	48	29	7
Comparison school 2 [185]	17	20	5	13	46	10
Comparison school 3 [200]	38	48	14	27		18
Comparison school 4 [146]	5	6	10	65	64	20
Comparison school 5 [217]	59	69	27	18	18	26
Nurture Group school 1 [240]	10	8	9	3	2	1
Nurture Group school 2[378]	3	15	11	9	3	2
Nurture Group school 3 [265]	7	14	15	29	7	5
Nurture Group school 4 [178]	2	10	1	8	99	13
Nurture Group school 5[119]	40	50	21	1	16	16
Nurture Group school 6 [289]	50	40	3	4	61	21
Nurture Group school [325]	30	36	55	22	55	28
Nurture Group school 8[235]	37	24	13	102	101	54
Nurture Group school 9 [180]						8*
N.G. school 10[289]						11*

Appendix 5 (continued)

Indices of Need – summary of domains influencing over all school ranking

Income deprivation affecting children – measures the proportion of children aged under 16 years who were living in families in receipt of income support and other means tested benefits.

Index of multiple deprivation – provides an overall score of deprivation combining scores for 7 domains affecting people in a given areas. These are:

- Income
- Employment
- Health and disability
- Education, skills and training
- Barriers to housing and services
- Crime
- The Living Environment

Free school meals entitlement: Children, whose parents receive a range of social support payments, are entitled to free school meals.

Key Stage 1 average point score: The average score for pupils within each school in key stage 1 (ages 5-7 years) of the National Curriculum.

Foundation Stage Profile Rank: The foundation stage profile is a way of summing up each child's progress and learning needs at the end of the pre-school foundation stage (at 5 years old). Schools are ranked according to average pupil achievement at this point.

APPENDIX 6

Summary of Nurture Group Teacher Training & Supervision

This is a four day certificate course run from Cambridge University, The Nurture Group Network or the Institute of Education, London. teachers attend for two days before setting up groups or after being employed to work in one, and for two further days later in the school year. Each course varies somewhat in its curriculum; however the broad components of training which are similar are outlined below. Training is mainly didactic in nature with some very limited use of role play and puppetry. Participants are encouraged to be reflective about their own Professional (but not personal) development in their written assignments.

Theoretical Components

1. History of Attachment Theory; Richard Bowlby's work on attachment and learning; new findings from neuroscience; further insights in the ways children learn, attachment behaviour and learning.

2. Risk and Protective factors in families, schools and communities.

3. Responding to children's developmental needs, creating a 'developmental checklist'.

4. Relating and delivering the National Curriculum to both nurture groups, and the whole school, including the Social Learning Aspects of Learning (SEAL) curriculum. Linking learning in nurture groups to a whole school approach to the national curriculum.

5. Practical approaches to meeting the nurturing needs of pupils, schools and communities.

Setting up and Running a Nurture Group

6. Setting up the room: layout, vital components: sofa, kitchen, breakfast table, quiet area.

7. Providing a safe routine with clear structures to mark the progress of the day and create a sense of security.

8. Providing a set of rewards and sanctions which are linked to the whole school environment.

9. Appropriate and useful sharing of information about children with other school staff.

10. Selecting children for nurture groups; monitoring and evaluating progress; resettling children into the main classroom.

Approaches to Children

11. Teachers are encouraged to make considered responses to children's behaviour and requests, and to respond intuitively to children's emotional needs for comfort, etc., within appropriate limits.

12. Each set of Ts is coached in modelling functional adult behaviour including open discussions and sometimes fake arguments which are resolved.

Assignment (4000 words)

1. Child Study including the use of Boxall Measure.
2. Two child observations children in ordinary classrooms.
3. Reflection on child study and child observation in terms of professional development and theoretical understandings.

Teachers are supervised each month in regard to all the above factors. Supervision includes personal support for difficulties affecting their capacity to work and professional support, where children are presenting particularly challenging managerial and/or emotional difficulties.

APPENDIX 7

Summary of life events experienced by children between Time 1 and Time 2

Nurture Group	Comparison group
Divorce (n = 0)	Divorce (n = 0)
Birth of a sibling (n = 2)	Birth of a sibling (n = 2)
Parental separation (n = 3)	Parental separation (n = 2)
Moved schools (n = 3)	Moved schools (n = 9)
Onset of parental mental health problems (n = 0)	Onset of parental mental health problems (n = 1)
Illness of child (n = 1)	Illness of child (n =)
Father in prison (n = 1)	Father in prison (n = 1)
Social Services involvement because of concerns (n = 1)	Social Services involvement because of concerns (n = 1)
Disruptions to attendance, aggression reported at home, (n = 2)	Disruptions to attendance, aggression reported at home (n = 0)
Positive event (Parents getting married) (n = 1)	Positive event (Mum's depression resolved. Resumed contact with Dad, Returned to mother by social services) (n = 3)

Nurture Groups – Length of Existence

At the time of starting the data collection, nurture group teachers and classroom assistants had been running groups for the following lengths of time.

1. 5-6 terms.
2. 17 terms.
3. 2-3 terms.
4. 5-6 terms - teacher left and new teacher started between T1 & T2.
5. 2-3 terms.
6. 5-6 terms.
7. 5-6 terms – teacher left and new teacher started between T1 & T2.
8. 4-5 terms – teacher left just after assessment at T2.
9. 5-6 terms – teaching assistant left and replaced between T1 & T2.
10. 5-6 terms.

APPENDIX 8

Letters of Ethical Approval: original and amended.

The Graduate School
University College London
Gower Street London WC1E 6BT

Head of the Graduate School

25 January 2005

Professor Peter Fonagy
Sub-Department of Clinical Health Psychology
Torrington Place
University College London

Dear Professor Fonagy

Re: Notification of Ethical Approval

Project ID: 0407/001: Assessing the Impact of Nurture Groups

The above research has been given ethical approval following review by the UCL Committee for the Ethics of non-NHS Human Research for the duration of the project subject to the following conditions:

1. You must seek Chair's approval for proposed amendments to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form'.

The form identified can be accessed by logging on to the ethics website homepage: http://www.grad.ucl.ac.uk/ethics/ and clicking on the button marked 'Key Responsibilities of the Researcher Following Approval'.

2. It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. Both non-serious and serious adverse events must be reported.

   Reporting Non-Serious Adverse Events.
   For non-serious adverse events you will need to inform [illegible], Ethics Committee Administrator ( ), within ten days of an adverse incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair of the Ethics Committee will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

   Reporting Serious Adverse Events
   The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator immediately the incident occurs. Where the adverse incident is

unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. The adverse event will be considered at the next Committee meeting and a decision will be made on the need to change the information leaflet and/or study protocol.

3. The Committee thought that this was an extremely interesting piece of research and therefore look forward to receiving a copy of your brief final report (maximum of two sides of A4), which MUST be submitted on completion of the research. It would be helpful if you could comment in particular on any ethical issues you might wish to draw to the attention of the Committee.

Yours sincerely

Chair of the UCL Committee for the Ethics of Non-NHS Human Research

Cc: Sub-Department of Clinical Health Psychology, UCL

UCL Committee for the Ethics of Non-NHS Human Research

Amendment Approval Request Form

1. ID Number:	**Name and Address of Principal Investigator:** **Professor Peter Fonagy** **Sub Department Clinical Health Psychology** **University College London, Gower St** **WC1E 6BT**
2. Title of Project: ***Assessing the Impact Nurture Groups***	
3. Information about the amendment: **(a) Is the amendment purely administrative?** YES NO N/A **(b) Has the Participant Information Sheet/Consent Form been changed as a result of the amendment?** YES NO N/A **If yes, please enclose a copy.**	
4. Summarise the issues contained in the amendment. **The parent information sheet was reviewed by a number of Head Teachers who felt that it was too detailed (and potentially off-putting) and suggested a shorter version (attached). This indicates that should parents require further information it will be available at the school.**	
5. Please give any other information you feel may be necessary:	
Signature of Principal Investigator: **Signed hard copy sent on**	**Date of Submission:** **23.03.2005**
FOR OFFICE USE ONLY: **Amendments to the proposed protocol have been** approved **by the Committee for the Ethics of Non-NHS Human Research.** **Chair's Signature:** **Date:** 4/4/2005.	

Please return completed form to:

Secretary of the Committee for the Ethics of Non-NHS Human Research
Graduate School, North Cloisters, Wilkins Building

APPENDIX 9

Information sheet for parents, information sheet for children and consent letter sent to parents.

INFORMATION FOR CHILD PARTICIPANTS

(To be read out to children)

I am a researcher from London University investigating children's ideas about the world and about adults. I am hoping that you can help me in my investigation by helping me finish some stories. I will start the beginning of the story and I would like you to imagine what happens next.

You can imagine anything you think might happen.

If you do not wish to continue with the stories please tell me and we can stop. If you find the stories upsetting or worrying for some reason, please tell me and we can pause for a while and wait to see if you wish to continue.

After we have made up the stores, please feel free to ask me any questions.

I will keep the videos of the stories will be kept safe. I plan to study the stories to help me understand how children think about the world. Your name will not be used in anything we write about the stories and no-one will know that it is you that made up that particular story.

This means that what you tell me is confidential. As I say if you wish to change your mind about helping me today, please let me know, you can do so at any time.

PARENTS INFORMATION SHEET ABOUT NURTURE GROUP STUDY

Do nurture groups have a positive effect upon children's relationships?

Introduction

In the next six months, three researchers from University College London are planning to visit your child's school to look closely at a form of school support known as "Nurture groups". As you may know, Nurture groups aim to help children improve their relationships with adults, their concentration and enjoyment of school. Although Nurture groups have been shown to help children manage at school it is not known how they help. As part of the Nurture group the child develops a supportive relationship with one particular teacher. The study is interested in finding out how important this relationship is in helping children who have been part of the Nurture group. The researchers will seek to improve understanding of the way children think about teachers and other adults, to see how their views of adults influence their performance in school, both in the classroom and playground.

Who will participate?

Children aged between 4 and 8 years (Reception, Years 1, 2 and 3) will be selected from a number of schools in this area. Children will be selected who are due to attend a Nurture group. They will be assessed as they start the Nurture group and after 5 months of belonging to the group. In order to check whether any changes are indeed due to attending the Nurture group the study will also assess children from the same schools who do not attend Nurture groups. These children will also be tested on two occasions.

A small number of children will be selected for a pilot study before the main study begins and they will be assessed on one occasion.

What will be asked of the children?

Some time will be spent putting each child at ease and making sure they understand the activity. Verbal agreement will be obtained and the children will be informed that they can withdraw from the activity at any point. Children's views will be assessed with a simple story completion task. The story is introduced by using a set of dolls and the child is then asked to finish it in their own way. Each story involves imaginary figures. To give you an idea of the activity here is an example:

The child is shown some dolls or animal toys. The researcher shows the child the characters and sets up the story. For example: "A little pig goes away from the other pigs and gets lost." The researcher will say: "Show and tell me what happens next?"

In addition to the stories the children will be asked some general questions to get an idea of how they think about themselves. The activity will take place in a quiet area within the school environment and take less than one hour. In order to keep an accurate record of the stories the sessions will be video taped. The videos will be confidential and only be viewed by people helping with the study. The children's names and identities will be kept confidential.

We will also be asking the school to supply information about the children's academic achievement and peer relations.

Research Team

Netali Levi
Fiona Seth-Smith
Richard Pratt

Trainee Clinical Psychologists at the Sub-department of Clinical Health Psychology, University College London, Gower Street, London, WC1
The team can be contacted via a named teacher at your child's school or alternatively you can contact Richard Pratt on (mobile number)

Project Supervisor
Professor Peter Fonagy
Sub-department of Clinical Health Psychology, University College London, Gower Street, London, WC1

Risks, Discomforts and Benefits
Most children enjoy telling stories and welcome the opportunity to use their imagination. The time may well be thought of as a welcome break from the school routine. Most children are also happy to talk about themselves. In the unlikely event that a child should become upset during the activity it will be discontinued and appropriate support would be given to the child. Children have the right to withdraw from the study at any point. This study will increase understanding of how Nurture groups help children. In doing so, it may help children in the future get the support they need.

Confidentiality
Any information shared during the study will be treated with strict confidence and once completed, it will not be possible to identify individuals. Throughout the study only the researchers (see above) will have access to the information. The data (videos and written material) will be collected and stored in accordance with the Data Protection Act for 5 years, after which time it will be destroyed.

Request for Further Information
You or your child are encouraged to discuss any concerns regarding the study with one of the research team at any time, and to ask any questions that you might have.

Refusal or withdrawal
You or your child may refuse to participate. If you were to decide you did not want your child to continue with the study, then please contact one of the research team at the earliest opportunity. In the event of withdrawal, all information gathered in the study concerning your child will be destroyed.

Thank you for taking time reading through this information sheet. Please fill in the enclosed form if you <u>DO NOT</u> want your child to participate in this study.
Should you require any further information or wish to speak to a researcher they would be very pleased to hear from you.

NURTURE GROUP STUDY – University College London

IF YOU CONSENT TO YOUR CHILD PARTICIPATING IN THIS RESEARCH, PLEASE COULD YOU SIGN AND RETURN THIS SLIP TO THE SCHOOL.

I CONSENT TO MY CHILD PARTICIPATING IN THE NURTURE GROUP RESEARCH PROJECT

Childs Name:.....

Class:.....

Parents/Guardian Name: .....

Parents/Guardian Signature .....

Date.....

Letter sent by schools to parents

Dear Parents/Carers,

Re: School Involvement in nurture group research.

Our school has been selected to be involved in some research being conducted by a team from University College London. This is an exciting project looking at children's feelings about grown-ups in school.

It will involve some children working with a researcher on two occasions, using play materials and toys to tell stories. The sessions will need to be videotaped.

There will be just one copy of the all tapes made which will be held by the researchers for academic purposes only. They may be used as a basis for discussion in academic/research groups. Steps will be taken to ensure the anonymity of the school and the individual children. (Children may need to remove their school sweatshirts or reverse the logos when being filmed!) Children's names will be changed to ensure confidentiality in any written transcripts of the video recordings.

Please contact me by..... if you have any objections to your child's involvement in this project or if you have any further queries.

Yours sincerely,

Head Teacher

APPENDIX 10

Description of Boxall Profile
[From Cooper, Arnold & Boyd, with permission of Professor Paul Cooper]

The Boxall Profile (Bennathan and Boxall, 1998) is completed by nurture group teachers. It is a detailed normative, diagnostic instrument (Bennathan & Boxall 1998; 2000), which can be used to measure a child's level of emotional and behavioural functioning, as well as to highlight specific targets for intervention within a child's individual functioning. The profile is divided into two main parts, each divided into 34 statements. The first part deals with developmental factors underpinning the individual's ability to engage effectively in the learning process. Section two of the profile deals with the child's behavioural characteristics that may inhibit or interfere with the child's social and academic performance. Each of these items is broken down into a series of sub-items that take the form of descriptive statements which the respondent is required to rate.

Factors making up the Strands of the Boxall Profile:

Developmental Strands

1. Organisation of experience
    - Gives purposeful attention
    - Participates constructively
    - Connects up experiences
    - Shows insightful involvement
    - Engages cognitively with peers
2. Internalisation of controls
    - Is emotionally secure
    - Is biddable and accepts constraints
    - Accommodates others
    - Responds constructively to others
    - Maintains internalised standards

Diagnostic Strands

1. Self limiting features
    - Disengaged
    - Self-negating

2. Undeveloped behaviour
    - Makes undifferentiated attachments
    - Shows inconsequential behaviour
    - Craves attachment, reassurance

3. Unsupported development
    - Avoids/rejects attachment
    - Has undeveloped/insecure sense of self
    - Shows negativism towards self

- Shows negativism towards others
- Wants, grabs, disregards others

APPENDIX 11

National Curriculum equivalent scores.

Average levels: End of year 1 = Level 2, end of year R = Level 1c

Baseline	Stepping Stones/ELGs	Foundation Stage Profile	P scales	National Curriculum
		9	1a	1a
Reception Baseline 4 Maths/Language	ELG	8 (total score of 8)	1b	1b
Reception Baseline 3		5-7 (total score of 5-7)	1c	1c
		4 (total score of 4)	P8	Wa
Reception Baseline 2	Green Stepping Stone	Point 3	P7	Wb
Reception Baseline 1 Nursery Baseline 3			P6	Wc
Nursery Baseline 2	Blue Stepping Stone	Point 2	P5	
Nursery Baseline 1	Yellow Stepping Stone	Point 1	P4	

APPENDIX 12 – Coding Sheet

RELIABILITY 1 SSAP CODING SHEET+ Teacher Stems

Child Number: _____ Rated By _____

STORY STEM (Little Piggy)	CO	LP	SE	PS	SS	SP	SJ	MH	BH	LK	BD	EX	PH
1 No Engagement (with Story Task)													
2 Disengagement													
3 Initial Aversion													
4 No Closure													
5 Premature foreclosure													
6 Changing Narrative Constraints													
7 Avoidance within Narrative Frame													
8 Child seeks Help, Comfort													
9 Siblings/Peers Help, Comfort													
10 Realistic Active Mastery													
11 Child Endangered													
12 Child Injured/Dead													
13 Excessive Compliance													
14 Child 'Parents' or 'Controls'													
15 Adult Provides Comfort													
16 Adult Provides Help Protection													
17 Adult Shows Affection													
18 Adult Unaware													
19 Adult Actively Rejects													
20 Adult Injured/Dead													
21 Limit Setting													
22 Physical Punishment													
23 Child Shows Aggression													
24 Adult Shows Aggression													
25 Coherent Aggression													
26 Extreme Aggression													
27 Catastrophic Fantasy													
28 Bizarre/Atypical Responses													
29 Bad <-> Good Shift													
30 Acknowledgement Child Distress													
31 Acknowledgement Adult Distress													
32 Denial / Distortion of Affect													
33 Repetition													
34 Neutralisation/ Diversion Anxiety													
35 Pleasurable Domestic/School Life													
36 Throwing Away/Out													
37 Magic/Omnipotence													
Additional Themes													
H Adult Childlike													
20a Teacher Fair													

COMMENTS:

APPENDIX 13

New Codes and coding definitions for Teacher Stems.

ADDITIONAL RESPONSE CLASSIFICATIONS FOR NURTURE GROUP RESEARCH

7 AVOIDANCE CODES FOR TEACHER STEMS

Spoilt Picture	No reference to the child's spoilt picture
School Play	No reference the child's injury
Picture From Home	No reference to the child's picture

Rated **1** or **2** in the same way as other avoidance codes, according to need for and responses to prompts (see manual p.14)

Examples:

School Play: "*Teacher said get up and the Teacher goes why are laying on the floor? (gets the toys up...and sits her down) She said I was just sitting down and then I fell off. I was sitting on it and I just went (bang) down*".

Spoilt Picture:....*So that boy, he jumps over the board. He hurt his self. And the other boy jumps over the board. (rotates board so flat surface that he places characters on) And he's standing on the board, He ok (story continues with no reference to picture).*

35. PLEASURABLE REALISTIC REPRESENTATIONS OF SCHOOL LIFE

Representations of school routines and interactions where the child's affective tone in showing these representations is neutral or positive.

Examples of School Life can include:
The child looking forward to or actually receiving stickers/rewards for good work, behaviour etc.
Inclusion of two or more school routines such as circle time and getting into line (one would not be sufficient).
References to more than one friend in the narrative.
Playing together, playful interactions.

Rated 0 if the Child Uses the Props but does not create anything

Rated 1
If the child adds some slight classroom representation to the narrative (i.e. putting up picture on the wall.

Rated 2
. *...So she sat at her bit and then she was always writing her best. She got a star of the week certificate.*

H ADULT 'CHILDLIKE' (Analogous to Parent Childlike)

Parents or Teachers are depicted as children in the Narrative. The depiction may or may not also meet the criteria for 'Child Parents or controls'.

Examples: (Rated 2)

Mummy is very naughty she has to come to school today.

Spoilt Picture:...*and the teacher sits on her (child's) chair and she has the teachers chair and writes on the board*

School Play: *Yeah and they are playing. (making them do handstands, makes the teacher do handstands)...Yeah lie under there (puts under bench). And then he (puts figure near teacher) stands there and that little girl stands there (puts them lying near teacher).*

Picture from Home: *One of the little girls pretends to be the teacher and the teacher sits on the carpet, and the little girl giggles and the teacher likes to learn a bit more, she has to sit it up nicely because a new visitor was coming.*

I Teacher Control / Fair (New Code).

Teachers in the narrative are depicted as in control and fair in the narrative. This means that the teacher seems to exercise a balanced and appropriate response to the protagonist and non-protagonist children in the story.

In order to be coded 'Teacher Control/Fair', a teacher needs to administer reprimands which are appropriate to the misdemeanour and/or show a responsiveness to the child (through reward or praise).

NOTE:
'Fair' may be coded in addition to 'limit setting' if the behaviour is appropriate and not excessive. If it is unnecessarily punitive this should be coded under coherent aggression and not under teacher fair.

'Teacher Fair' should not be coded if the teacher is overly sympathetic and lenient towards all characters.

Rated 2: If the teacher shows a level of control/fairness to **all** children involved.

Rated 1
If prompted or if the representation seems to be limited, but it must be appropriate to all children directly involved in the narrative. If the teacher shows a sense of fairness but this is not consistent throughout the story it should be coded as a **1**.

Rated 2
Spoilt Picture:
Teacher shows mild discipline towards the protagonist child and also understanding towards the victim.

School Play
Teacher again shows disappointment/dismay/distress and disciplines appropriately but does not punish the child to the point of being excluded from the play. If the teacher only either administers reprimands or shows responsiveness to the child (and therefore only responds to one aspect of the dilemma) they should be coded a one.

Picture from Home
Teacher is aware and appreciative of picture but also doesn't allow the praise and attention to deflect from the rest of the class.

Examples:

...Ben got off his chair and telled the teacher and the teacher got up and walked to the new boy and told him off and he brang his chair and he had to sit next to the teacher...and gave Ben a new piece of paper...

...and the teacher said you shouldn't play around...and says you children stay there with the other teacher and I'll take Jack to the medicine room and be good, when I come back we will finish the practice.

. *..The teacher told that little girl off and said go and sit back down...and she gave Polly a new sheet.*

Examples of punitive teacher responses to be coded under limit setting but rated 0 under teacher fair:

...and then the teacher told them off again, and they both got detention.

APPENDIX 14

Attachment Composites

SECURE COMPOSITE:

- Child seeks help
- Siblings/peers help
- Realistic active mastery
- Adult provides comfort
- Adult provides help
- Adult provides affection
- Limit setting
- Acknowledgement of child distress
- Acknowledgement of adult distress

DISORGANISED COMPOSITE:

- Child parents/controls
- Catastrophic fantasy
- Bizarre/atypical
- Bad/good shift
- Magic/omnipotence
- Extreme aggression

INSECURE COMPOSITE:

- Child endangered
- Child injured/dead
- Excessive compliance
- Adult unaware
- Adult rejects
- Ault injured/dead
- Neutralisation/diversion anxiety
- Throwing away

AVOIDANT COMPOSITE:

- No engagement
- Disengagement
- Initial aversion
- Premature foreclosure
- Changing narrative constraints
- Avoidance in narrative framework
- Denial/distortion of affect