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UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL AND HUMAN SCIENCES

School of Psychology

**Supporting Children with Insecure Attachment in School: The Teacher-Child
Relationship as a Protective Factor Against the Development of Behavioural Difficulties
in Middle Childhood.**

by

Beth Turner

Thesis for the degree of Doctorate of Educational Psychology

June 2016

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL AND HUMAN SCIENCES

School of Psychology

Thesis for the degree of Doctorate of Educational Psychology

SUPPORTING CHILDREN WITH INSECURE ATTACHMENT IN SCHOOL: THE TEACHER-CHILD RELATIONSHIP AS A PROTECTIVE FACTOR AGAINST THE DEVELOPMENT OF BEHAVIOURAL DIFFICULTIES IN MIDDLE CHILDHOOD.

Beth Eloise Kim Turner

Internalising and externalising difficulties in childhood have been linked with negative outcomes in later life including criminal behaviour and mental health difficulties. Individuals who have insecure attachments to caregivers are at a heightened risk of developing such behaviours. A systematic literature search was conducted to investigate whether the teacher-child relationship could protect children with insecure attachments from developing into behaviour difficulties. A total of eleven studies were reviewed and nine indicate that the teacher-child relationship can protect students if they are at risk due to negative caregiving experiences or insecure attachments to caregivers. The methodological difficulties of multi-informant reports and low risk samples were explored. Evidence for a protective effect in early childhood was found in two studies however future research should explore whether this impact persists into middle childhood and adolescence and obtain the child's perception of relationship quality. Thus the current empirical study investigated whether this protection continues into middle childhood. Participants included 163 children (aged 7-12) and their teachers (N=41). Children completed measures of attachment security with a primary caregiver and relationship quality with their teacher. Teachers also reported on relationship quality and rated the children's internalising and externalising behaviours in school. Results indicate that there is a significant correlation between attachment security and externalising behaviours but not internalising. There is also a significant correlation between teacher-child relationship quality and attachment security. Teacher perception of conflict is the biggest predictor of behavioural difficulties. There was no evidence that the teacher-child relationship moderates the relationship between attachment security and behaviour difficulties in middle childhood. Implications for educational psychology and future research are discussed.

Key words: student teacher relationship, attachment, internalising/externalising behaviour.

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DECLARATION OF AUTHORSHIP

I, BETH TURNER, declare that this thesis '**Supporting Children with Insecure Attachment in School: The Teacher-Child Relationship as a Protective Factor Against the Development of Behavioural Difficulties in Middle Childhood**' and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signed:

Date:

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Definitions and Abbreviations

α	Cronbach's Alpha
B	B- value from linear regression
β	Standardised coefficient of Beta
Bca CI	Bias Corrected and Accelerated Confidence Interval
CI	Confidence Interval
df	degrees of freedom
IA	Insecure Attachment
IWM	Internal Working Model
LSAC	Less Securely Attached Children
M	Mean
N	Number of participants
NCP	Negative Caregiving Practices
Ns	Non significant result
p	Significance value
R	Correlation Coefficient
SD	Standard Deviation
SDQ	Strengths and Difficulties Questionnaire
SE	Standard Error
SES	Socio-economic status
STRS	Student-Teacher Relationship Scale
t	Statistic from a t- test
UK	United Kingdom
z	z score

Chapter 1: An exploration of teacher-child relationship quality, attachment to caregivers and the development of behavioural difficulties.

The current literature review investigates research into the relationship between security of attachment, teacher-child relationships and behavioural difficulties. The idea that teachers can act as a protective factor for children who have insecure attachment to their caregivers is explored. This review is conceptualised around attachment theory and ecological systems theory and a systematic approach was adopted for the selection of papers. As attachment is conceptualised and measured differently at different ages the research is presented in developmental sections to reflect this. Methodological criticisms are presented alongside suggestions for future directions of research. The implications for Educational Psychology are then discussed.

Specifically, this review focuses on literature that investigates the ability of the teacher to ameliorate the impact of insecure attachment on the development of externalising and internalising behaviour. Externalising behaviour is defined as problem behaviour that is directed outwards whereas internalising behaviours are directed towards the self. Hinshaw (1987) describes externalising behaviour as a child's negative reactions to his or her environment manifesting as delinquency, hyperactivity and aggression. For example, externalising behaviours within schools may often constitute aggressive behaviour towards peers or adults, vandalism of property or disruptive behaviour.

Conversely, internalising behaviour is often characterised by unhelpful coping strategies for dealing with negative emotions or stress which are directed at the self. Internalising behaviours may include self-harm, depression, difficulties concentrating, sleeping or eating and a withdrawal from social interactions. Both are similar in that they are ineffective responses or coping

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mechanisms to challenging situations and are behaviours that are characterised by emotional dysregulation and marked by low resilience. They could be considered to be different expressions of the same underlying difficulty with emotional control.

The long term outcomes of children who display externalising and internalising behaviours within school are of great concern. A clear trajectory is frequently observed from childhood externalising behaviour, to juvenile delinquency and into adult crime and violent behaviour (Betz, 1995; Farrington, 1989; Moffitt, 1993). There is also evidence that children who display anxiety and withdrawn behaviours when they are eight were at an increased risk for developing major depression and anxiety disorders in late adolescence, and into adulthood, even after controlling for family, social, and childhood influences (Goodwin, Fergusson, & Horwood, 2004). Therefore, understanding the intervening protective factors for children who are at risk of such trajectories is of interest to both policy makers and educators.

This review focuses on children's relationships with their primary caregivers and their teachers, examined within the context of Bowlby's and Ainsworth's theories of attachment, and Bronfenbrenner's ecological systems theory, to investigate whether these outcomes can be prevented.

1.1.1 Associations between attachment and behavioural difficulties in childhood

Attachment is characterised as a close bond between infant and caregiver that is driven by a biological need. Bowlby (1969) proposed that babies are predisposed to seek proximity to a caregiver when they require a need to be fulfilled e.g. warmth, food, or protection. If the caregiver fulfils these needs consistently and keeps the child safe from harm then they constitute a "secure base" where proximity seeking behaviour develops in the child. He purported that if these needs continue to be met by the caregiver over time a secure attachment would form. Therefore caregivers who are responsive, protective and sensitive to an infant's needs are more likely to develop secure attachments in their children. Securely attached children become

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confident to explore further away from the secure base over time as they believe their caregiver will remain reliable. This allows them to investigate the world and develop their social and emotional skills.

Conversely, when a child's needs have not been consistently met, or the child does not feel safe, this creates the conditions for an insecure attachment (IA). For example, in circumstances where a child has experienced abuse or neglect the child may be particularly at risk. Ainsworth and Bell (1970) proposed that there were three types of attachment style (ABC), namely secure (B), insecure-avoidant (A) and insecure-ambivalent/resistant (C), which outline different interactional patterns of children towards adults. She proposed that unresponsive care giving that was predictable would result in avoidant or ambivalent styles of attachment. Avoidant attachment styles are characterised by behaviour that seeks to reduce attachment and ambivalent styles increase attachment-seeking behaviours. Main and Solomon (1990) later added a "disorganised" attachment style that develops as the result of unpredictable caregiving whereby the child develops an ineffective and confused coping response.

Although the dominant assessment of attachment has been in the classic category form (ABC) outlined above this conceptualisation has more recently been contested. It has been proposed that attachment should be perceived as a continuum of emotional security (Fraley and Spieker, 2003, Cummings, 2003). This is where an individual lies on a security-insecurity continuum rather than in a distinct category. The categorical perspective has been criticized for being oversimplistic as individuals often do not fit into a discrete ABC category. It can therefore ignore individual differences in severity levels and can seem more fixed than a continuum approach. This debate also raises the question of whether attachment is a characteristic of an individual or a relationship (Ainsworth, 1990; Berlin & Cassidy, 1999; Kerns, Schlegelmilch, Morgan, & Abraham, 2005; Waters, 1981). How attachment is conceptualised and measured varies across a child's development. This is considered further in the analysis of the individual papers reviewed.

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Regardless of whether attachment is best understood as discrete categories or as a continuum there are clear links between IA and negative outcomes for children. Bergin and Bergin (2009) conducted a review focusing on academic success and they found that IA is linked to low achievement in school. They attribute this to these children being less able to accept challenges, poor social competence and emotional regulation and difficulties with attention, hyperactivity and delinquency.

1.1.2 Internal Working Models (IWMs)

There is a well established link between children who have IA to their parents and the development of externalising and internalising behaviours in childhood (Cohn, 1990; DeMulder, Denham, Schmidt, & Mitchell, 2000; Thompson, 2008; Weinfield, Sroufe, Egeland, & Carlson, 2008). The risk is particularly high for individuals identified as having disorganised attachment styles (Cassidy & Berlin, 1994, Weinfield et al., 2008). The mechanisms underlying this association need further investigation but one proposed means is via the development of an internal working model (IWM).

IWMs are schemas that children develop as a result of their early caregiving experiences that dictate their expectations of future interactions with adults, peer relationships and the way in which they view themselves (Bowlby, 1969/1982; Bretherton & Munholland, 2008; Moss, Bureau, Beliveau, Zdebik, & Lepine, 2009). Those who have experienced a positive, nurturing, responsive, sensitive and trusting relationship with a primary caregiver will expect this from subsequent relationships (for example, teachers). Similarly, those who have experienced warmth and attention will be more inclined to believe that they are worthy of others' time and affection. Therefore IWMs also influence self-worth as children learn their value through the way adults respond to them. So a child who has been ignored, through detached or neglectful parenting, will believe they are not worthy of attention. Similarly, children who have experienced negative interactions that have perhaps been traumatic, neglectful or abusive may become withdrawn, anxious or aggressive. Studies were therefore included in the review if they measured attachment

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security specifically but also if there was evidence of negative caregiving practices (NCP) such as rejection, conflict, harsh discipline, low levels of warmth or support or if there had been disruption to caregiving as these factors will likely impact on a child's IWM.

Whether IWMs are malleable or stable over time is often debated. Some suggest that IWMs are relatively constant and stable (Main, Kaplan, & Cassidy, 1985; Fraley, 2002) and others propose that they can change over time due to subsequent caregiving experiences (Buyse, Verschueren & Doumen, 2011) or major life events (Thompson, Lamb, & Estes, 1983; Vaughn, Egeland, Sroufe, & Waters, 1979).

Collins & Read (1994) propose that IWMs are more complex and we actually develop a hierarchy of WMs. They suggest that we have a general model and there are different sublevels of IWMs (i.e. parental, peer, romantic) that contribute to it. They posit that different IWMs become active in different contexts. This is particularly important in this review as it suggests that the teacher-child relationship could create a positive sub IWM, even if a child has developed a negative general IWM. This would create different expectations of interactions in different contexts thus impacting on the level of externalising and internalising behaviours observed in school.

1.1.3 Teachers as important secondary caregivers

Ainsworth (1989) suggested that later relationships with adults, in particular teachers, have the potential to support and protect insecurely attached children and youths. Resnick et al. (1997) found that adolescents who reported secure relationships with their teachers had decreased risk for substance misuse, alcohol, violent behaviour or attempting suicide. Teachers are well placed to become secondary caregivers for children with IA as a great deal of time is spent in their care throughout the day. Teachers have opportunities to contain children emotionally and offer close and nurturing relationships. Teachers can meet the same needs as parents throughout the day offering a secure base or safe haven for children (Howes, & Ritchie, 1999).

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Teacher-child relationship quality is often operationalised by the level of conflict, closeness and dependency (Pianta, 1992). A positive relationship is often perceived as being low in conflict, high in closeness and with low levels of dependency. However as McGrath & Van Bergen (2015) notes “dependency is not negative in all cultures (Solheim, Berg-Nielsen, & Wichstrøm, 2012), at all ages, or with all attachment histories” (pg.3). They also argue that it is possible for a teacher and a child to see the relationship as positive even if it is conflictual and suggest that it is more important that the relationship is mutually beneficial and not harmful to either person. McGrath & Van Bergens’ (2015) review outlines the characteristics of students that can place them at risk for a poor teacher-child relationship. They identify that gender, age, academic ability, attachment security, temperament, behaviour, SES and ethnicity are factors that can place children at risk of a negative teacher-child relationship. Their review solely focuses on child characteristics and risk factors rather than protective factors. More research is needed on the characteristics of teachers that allow a positive teacher-child relationship to develop. For example, this could focus on factors such as the level of teaching experience, self-efficacy of teachers to manage behaviour, being trustworthy and approachable, temperament or the teachers’ own attachment style. The focus of the current review is to ascertain whether teachers, specifically through the relationship that they develop with those in their care, can protect children from the adverse risk they face for the development of externalising and internalising behaviours if they have experienced NCP. The review will consider whether teachers could help to alter these children’s negative IWMs through offering a trustworthy and caring interaction with an adult. Teacher-child relationship quality has been shown to replicate and reproduce the same patterns of interaction and quality as parent-child relationships. Sroufe & Fleeson (1986) found that children often develop a similar quality of relationship with teachers as they have with their mothers. This suggests that the IWM of the child evokes an adult reaction that perpetuates such interactions. Although it is recognised that teacher-child relationships may mirror parent-child attachment, teacher-relationships will be considered an independent moderation variable in this paper as it has been shown that when adults consciously alter their level of responsiveness that they can alter a child’s level of

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attachment security (Grossmann and Grossmann, 1991; Howes et al. 1998; Weinfield et al. 2000). Therefore the focus of this literature review, and subsequent empirical paper, is to see if teachers can counteract the impact of early NCP, rather than just reproduce or perpetuate negative interactions, by providing children with a nurturing approach that may alter these interactional blueprints.

1.1.4 Ecological systems model and the bi-directionality of teacher-child and parent-child relationships

As well as taking an attachment perspective this review also draws on the ecological systems model (Bronfenbrenner, 1979). The proximal and distal features of home and school relationships, and the interplay between the two, on children's behavioural outcomes are considered. Cause and effect can be difficult to establish when studying relationships as by their very nature relationships are interactive and dynamic. There is a bi-directionality in both teacher-child and parent-child relationships. Variables about the child such as their behaviour, temperament and attachment style will naturally impact on the teachers' perception of them and thus impact on the teacher's response particularly if they find the child difficult to manage. Teacher variables including their own attachment style, self efficacy, temperament and level of experience (McGrath & Van Bergen, 2015) will also impact on their interactions with a child and the child's resultant behaviour. The same is true of parent-child relationships with each one bringing to the interaction their own behaviours that may perpetuate and maintain the other's problem behaviours or difficult relationships. Within the context of Bronfenbrenner's model (1975) this paper takes an interactionist perspective which considers behaviour to be the result of a complex interplay between environmental, relational and individual factors. It is not suggesting that the teacher or the child is responsible for the behaviour but that each is merely being responsive to the other or a situation. The term behavioural difficulties or externalising/internalising behaviour is used throughout the paper. This is with acknowledgement that the behaviour is seen as the result of a complex systemic interplay of all of the factors within

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Bronfenbrenner's model (1975) and is not intended to be interpreted as a within-child factor. This means that the behaviour is seen to be changeable and not the trait of the child but rather a response to their environment or a situation. It has been shown that levels of exhibited behavioural difficulties can change over time (Silver, Measelle, Armstrong & Essex, 2010). It is also known that environmental factors such as school transition (Boyce, Jensen, Kessler, Nelson, & Steinberg, L., 1998), amount of time spent in child care (Belsky, 2001), coercive, negative, hostile, harsh and inconsistent parenting practices (Hill, 2002; Patterson, Reid, & Dishion, 1992; Shaw, Gilliom, Ingoldsby, & Nagin, 2003) and peer relationships (Dodge & Pettit, 2003) are all associated with the amount of observed externalising behaviour at different stages of a child's development. The salience of different relationships (e.g. teachers, parents, peers) to behavioural outcomes also can change over time (Boyce et al., 1998). Therefore behavioural difficulties are not seen as a trait or a stable within child factor in this review but it is a combination of child, family, school and environmental factors and a complex interaction of these factors over time. The word difficulty is used to reflect the notion that the behaviour is difficult and possibly distressing for both the child and those around them.

This review has chosen to focus on the ability of the teacher to moderate the association between IA and behavioural difficulties. As the adult in the relationship they will hopefully have the personal resources and a developed sense of self-awareness to be able to break a negative cycle of interaction. Therefore this could be a source of intervention to support less securely attached children (LSAC). Previous reviews, such as McGrath & Van Bergen (2015), have focussed on within child factors that put a child at risk of a difficult teacher-child relationship. This review, and the subsequent empirical paper, is instead focussed on whether relationships with teachers can ameliorate the impact of IA or NCP.

The next section will outline the method used for this paper. The results are then considered in terms of the ability of the teacher-child relationship to moderate the impact of IA and NCP at different ages. Externalising and internalising difficulties are considered separately

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and the methodological difficulties of the research to date are then outlined. Finally, the implications for practice and future directions for research are discussed.

1.2 Method

This review used a systematic search method in order to provide a comprehensive assessment of research, reduce bias when selecting papers and aid replication. Two databases were used for the search, namely PsychINFO and Web of Science, which were accessed through EBSCOhost. Search terms were generated (see appendix A for full list of search terms) using the key words and subject terms from seminal papers. The thesaurus database tool was then used to generate further related search terms. For example, *attachment behaviour*, *teacher-student relationships* and *externalising behaviours* were some of the search terms used. An initial search, filtered for peer reviewed articles, in the English Language and excluding dissertations and books, retrieved 1173 papers. These abstracts were then scanned for relevance using clear exclusion criteria (outlined in Appendix B) with 29 articles then selected for full text analysis. After reading these 29 papers, applying the same exclusion criteria and omitting any duplications 11 papers were included in the final review. One of these papers was found through inspection of the reference list of the papers where the full text was retrieved. A flow diagram to illustrate the selection process is provided (Appendix C). The final review below considers the results, methodological strengths and limitations of each of the papers extracted alongside any emerging themes. A table outlining the pertinent details of the eleven studies is in Appendix D.

1.3 Results

Eleven original pieces of research were identified that examined the ability of the teacher-child relationship to moderate or ameliorate the impact of NCP and IA on problem behaviours. This review will critique the research to date in the areas of i) the ability of the teacher-child relationship to protect children with IA from developing *externalising* behaviours, ii) the methodological difficulties of multi-informant research, iii) the ability of the teacher-child relationship to protect children with IA from developing *internalising* behaviours and iv) research that is aimed at improving the teacher-child relationship and the impact this has on behaviour. The chapter then concludes with a discussion of the implications for practice and possible future directions for research.

1.3.1 Can the teacher-child relationship moderate the impact of care-giving experiences on externalising behaviours?

The next section reviews eight papers that investigate the protective influence of teacher-child relationships for LSAC or those who have experienced NCP. This section considers the ability of the teacher-child relationship to protect children as they develop from early childhood to adolescence, as well as critiquing the research in terms of methodological factors such as sample characteristics and the difficulties of multi-informant research. There are few instruments by which to measure attachment that span a wide age range (Kerns & Seibert, 2014) therefore comparing the attachment of different ages can be problematic as measurements may vary in sensitivity. Also the way that attachment is conceptualised and measured varies across age groups. Patterns and functions of attachment orientated behaviour change over an individual's development. It is for these reasons that the research in the next section is divided into early years and transition to school, middle childhood and adolescence. How attachment is conceptualised and measured at each age is explored.

1.3.2 The impact of the teacher-child relationship at different ages

This section examines the research across a child's development and considers whether the timing of a protective teacher-child relationship is important.

1.3.2.1 Early years and transition to school (<6 years old)

Attachment at this age is governed by the ability of the adult to be responsive, warm and sensitive to the infant's needs. Attachment in infancy is often measured through observational methods. One such method is the strange situation (Ainsworth and Wittig, 1969) which assesses how much a child will seek proximity in times of distress (i.e. being left and reunited with a caregiver) demonstrating the safe haven and secure base principles. It might be expected that early secondary care-giving experiences may be able to buffer younger children more than older children, as young children will have less fully formed IWMs.

Buyse, Verschueren & Doumen (2011) looked at the ability of secondary caregiving to moderate the impact of IA on behavioural difficulties within this age range. They conducted a longitudinal correlation with 127 children and their mothers and teachers from 19 schools in Belgium. The children were followed from kindergarten into pre-school ($M =$ four years and 11 months, $SD = 4$ months). Early attachment to mother was assessed through observing the mother-child interaction in the family home. Interactions were coded using the Attachment Q sort (Waters & Deane, 1985) cards which have an emphasis on "secure base" behaviour. When the child was in preschool the teacher-child relationship and levels of externalising behaviours were assessed using the Student Teacher Relationship Scale (STRS; Pianta, 1992) and Child Behaviour Scale (CBS; Ladd & Profilet, 1996). They found that low levels of mother-child closeness predicted high levels of aggression in kindergarten when there was also a low level of teacher-child closeness ($\beta = -.50, p < .001$). However this association ceased to exist when there was a high level of teacher-child closeness ($\beta = -.01, NS$). This suggests that a close teacher-child relationship protected children against the risk of developing externalising behaviours as a result of insecure early maternal attachment. As part of the same research Buyse et al (2011) also observed the

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level of teacher sensitivity using the Teacher Sensitivity Subscale of the Classroom Assessment Scoring System (CLASS, La Paro, Pianta, & Stuhlman, 2004). They found that with high levels of teacher sensitivity the LSAC were no more at risk than their securely attached peers for low closeness in the teacher-child relationship. Therefore teacher sensitivity may enable insecurely attached students to adapt negative IWMs. Although a strength of this study is its longitudinal design it only looks at children at an early age. Therefore we cannot establish whether the protective influence of a close and sensitive teacher-child relationship persists and indeed how it interacts with subsequent teacher-child relationships. This study offers an objective view of relationship quality through the use of observation; this, however, ignores the lived experience of the child and the teacher and their perception of relationship quality.

Similarly Lipscomb, Schmitt, Pratt, Acock, & Pears (2014) looked at this early age group (three to four year olds) using data from the Head Start Impact Study (U.S. DHSS, 2010). Participants were 215 American children who lived in non-parental care (Kinship care or fostered) that had experienced an average of 1.27 transitions ($SD = 1.14$) between families. Disruptions and transitions in caregiving will likely decrease attachment security. These participants were compared to children living in parental care ($n = 2814$). They measured classroom “process quality” which consists of factors such as teacher-child interactions and the quality of the instruction in classrooms. Children’s behaviour was rated using the Arnett Scale of Teacher Behaviour (Arnett, 1989) and the quality of teacher-child relationship was measured with the Student–Teacher Relationship Scale (Pianta, 1992). They found that there were significant differences for levels of teacher–child conflict ($t(2577) = -2.27, p = .02$) with those in non-parental care being more at risk for conflictual relationships with their teachers ($M = 13.65$ for parental care and $M = 14.75$ for non-parental care sample). Teacher–child closeness and conflict, and pre-kindergarten quantity of child care were significantly correlated with kindergarten behaviour problems. They found that those in non-parental care were more at risk for conflictual relationships with their teachers than those living with parents. Most importantly, a close teacher–child relationship predicted fewer externalising behaviour problems in kindergarten for

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children living in non-parental care but not for children from similar socio-economic backgrounds.

This demonstrates the importance of an early close teacher-child relationship for children who have experienced disrupted care giving. It is possible that the teacher-child relationship may fulfil attachment functions for LSAC that they may not for securely attached children. Bergin & Bergin (2009) suggest that “maltreated children have a special need for attachment to teachers, and may be particularly prone to seek psychological proximity to teachers.” (p. 156) Therefore it cannot be assumed that these findings can be extrapolated to the general population.

Runions et al. (2014) also supported the finding that early teacher-child relationships are important at protecting students. They found that over time the teacher-child relationship becomes relatively more important to the level of children’s aggressive behaviour. They used a two part growth modelling and cross-lagged panel analysis to assess the intervening importance of parent-child and teacher-child relationships. The sample consisted of 374 pre-kindergarten (4 years old) Australian children who were followed into first grade (across two years) from 12 randomly selected schools with high, middle and low SES areas. They found that early aggression was negatively correlated with levels of parental warmth. They concluded that parenting is the most important influence on aggression levels on school entry. However they found that the teacher-child relationship becomes more important than the parent-child relationship to behaviour over time. This design represents a transition towards recognising the complexities and intervening influences of home and school influences and how these change over time. Although not looking at whether teachers can moderate or buffer children from the impact of IA it does suggest that relationships with teachers become increasingly important throughout development to levels of aggression. It should be noted that aggression was measured through parent report and so it is not clear if the observed levels of aggression can be applied to the school setting.

Silver, Measelle, Armstrong & Essex (2010) used a growth mixture modelling technique to identify trajectories of externalising behaviours from kindergarten to fifth grade in 241 American children. The average child was 4.6 years old (range= 4.5 to 5.1). They identified three trajectories

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of externalising behaviour denoted: 'chronic high', 'low', and 'low increasing'. Those in the chronic high group were more likely to have experienced increased maternal negativity, decreased closeness and increased conflict with their childcare provider, decreased closeness with their teacher, and decreased peer acceptance. High levels of teacher-child conflict were associated with increased odds of a child being in either the 'chronically high' externalising behaviour trajectory or the trajectory where externalising behaviour started low and increased over time. Therefore this study again emphasizes the interaction of parent and teacher-child relationship quality on the long term behavioural outcomes for young children. This research only focuses on the risk factors for the development of externalising behaviour and ignores potential protective factors. Future research could look at both the risk and protective factors of both parental and teacher-child relationships and the interplay between the two.

It appears that a close teacher-child relationship is associated with a decreased likelihood of negative behavioural outcomes in the early years and there is also some evidence that it can moderate the impact of IA on behavioural difficulties in early childhood.

1.3.2.2 Middle childhood (7-12 years)

Middle childhood is conceptualised for this essay as 7 to 12 years of age. The variety of measures increases in this age group as children can now report on their own attachment. The various measures at this age include: autobiographical narratives, story stem measures, verbal responses to pictures of separation, questionnaires and behavioural observations. There is limited validity data for each of these measurements due to the sparse amount of research conducted in this age range (Kerns & Seibert, 2014). Attachment in middle childhood is conceptualised differently from infancy and early childhood as the need for dependency on caregivers decreases and attachment becomes more reciprocal, where each person will try and meet the other's needs rather than the child relying solely on the adult (Kerns, Tomich, & Kim, 2006; Lieberman, Doyle, & Markiewicz, 1999). Maccoby (1984) described this as a shift from supervision to co-regulation between the child and caregiver. Bowlby (1987) proposed that the goal of attachment changes at

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this age from proximity to the caregiver to availability. Also moving into middle childhood attachment bonds diversify to other important figures such as grandparents, teachers and day care providers whereas in early childhood the child is thought to generally have one or two primary caregivers (Howes, Cassidy & Shaver, 1999; Schaeffer & Emerson, 1964). This, Collins & Read (1994) suggest, is the development of an attachment hierarchy of IWMs.

One study that includes participants in middle childhood is by O'Connor, Scott, McCormick, & Weinberg (2014) who followed children through the first, third and up to the fifth grade (6-11 years old) in school. Participants were 1364 mothers and children in America obtained from data from the NICHD Study of Early Child Care and Youth Development. Early maternal attachment was measured using the attachment Q set (Waters & Deane, 1985) and a modified strange situation procedure (Cassidy, Parke, Butkovsky, and Braungart, 1992). Children's behaviour was assessed through the parent version of Child Behaviour Checklist (CBC; Achenbach, 1991) and the teacher reported on relationship quality using the Student Teacher Relationship Scale (STRS; Pianta, 1992). They found that concurrent teacher-child conflict, mother-child conflict, mother-child closeness and lagged mother-child conflict and lagged teacher-child conflict significantly predicted externalising behaviours in middle childhood. However they found that there were no significant interactions between early attachment security and subsequent caregiving experiences on internalising and externalising behaviours. They explain that the lack of an interaction may be related to the low risk nature of the sample. Further research that looks at a more representative sample or indeed a sample of LSAC within this age range would be useful to ascertain whether the teacher-child relationship as a protective factor persists into late childhood. They also observed parent attachment and only focused on the teacher's perspective of the relationship thus ignoring the child's perspective. As the IWM is an important mechanism in both child behaviour and their relationships with the adults the child's perspective is of great importance. The adjoining empirical paper therefore focuses on child perception of their relationship with their teacher and to their parent.

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Meehan, Hughes, & Cavell (2003) also did not find a significant moderator effect of the teacher-child relationship for those who had experienced NCP. They investigated whether high quality teacher-child relationships could protect aggressive children from becoming more aggressive who had experienced harsh parenting and discipline. Participants were 140 second and third year children (Mean age= 8.18) identified by teachers (N= 39) as aggressive across fifteen schools. They conducted a two year prospective experiment using hierarchical multiple regression in America. They found no overall significant moderator effect. They did however find that positive teacher-student relationships were more beneficial for ethnic minority students than Caucasian. This inability to find a significant moderator effect may be due in part to parents rating their own levels of harsh parenting and discipline in the study. This may also have influenced the fact that the teacher-child relationship appeared to buffer certain ethnic groups and not others as there may have been cultural differences in the social acceptability of harsh parenting and discipline. The influence of who reports on the parent-child or teacher-child relationship is considered in more detail in a later section and is addressed in the attached empirical paper.

In contrast to these studies, Hughes, Cavell, & Jackson (1999) did find a protective influence of a positive teacher-child relationship in middle childhood. They conducted a longitudinal prospective correlation over three years in America involving 61 second and third grade students (7-9 years old) who had been rated as aggressive, i.e. above the 84th percentile on The Child Behaviour Checklist- Teacher Report Form (CBCL-TRF; Achenbach, 1991), by teachers across five schools. They found that a positive teacher-child relationship played a protective role by significantly lessening subsequent aggression in students with rejecting parenting histories compared to those without rejecting parenting histories (Fishers $Z = 1.62$, $p = .10$). There appear to be less support for a moderation effect in middle childhood than early childhood, however, there are many methodological difficulties with these pieces of research. Who reports on the different variables appears to influence the findings. The absence of the child's voice is notable at an age where children are able to report on their own experiences. The difficulties of multi-informant research are considered in more detail later in this section. Also the samples which are

used and whether they are children who have experienced NCP or not appears to influence the results again this criticism is addressed in more detail later.

1.3.2.3 Adolescence

Attachment networks change again as children move into adolescence. Hazan and Zeifman (1994) found that young people started reporting that they approached peers for proximity and safe haven needs whilst maintaining parents for secure base functions. They also noted that older adolescents who had romantic relationships were less likely to approach their parents for attachment functions. This change in the range and number of relationships overtime and the importance of extra-familial social relationships is well recorded (Buhrmester & Furman, 1987; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996).

Despite this, the importance of the teacher-child relationship could be suggested to be diminished as a child moves into adolescence as they frequently move from a dyadic relationship to having multiple teachers throughout the school day. Interestingly the ability of the teacher-child relationship to buffer the impact of IA on behavioural outcomes is still observed in this age group, although there is little research to date.

Wang, Brinkworth, & Eccles (2013) investigated the influence of teacher-child relationships on effortful control. Effortful control is the ability to disinhibit a response and purposefully focus attention on something else (Rothbart & Bates, 1998). Effortful control enables students to focus on tasks rather than distractions in the classroom and so is linked to disruptive or externalising behaviours (Eisenberg et al., 2009; Eisenberg & Fabes, 1992). They found that a positive teacher-child relationship, that was high in warmth and trust, could protect those at risk of misconduct through early low effortful control and high parental-conflict. Like many of the other studies in this review this study used a correlational design so we cannot establish whether the teacher-child relationship caused this decrease in externalising behaviour or if another variable is responsible. For example, teachers who may be able to provide a positive relationship may possess certain characteristics that produce less externalising behaviour in class through good

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classroom management e.g. calm, fair, understanding. There may also be environmental and situational changes that may impact on the child's behaviour. Therefore we cannot be certain that it is the relationship that is causing the difference.

To summarise, there is evidence that the teacher-child relationship can lessen the impact of the development of externalising behaviours for LSAC in early childhood and there is evidence to suggest that this impact persists into adolescence. More research is needed in middle childhood and adolescence particularly utilising the young person's perspective on relationship quality. The empirical paper in chapter two seeks to redress both of these areas.

1.3.3 Concurrent, interactive and additive effects

The timing of relational support is also of importance when considering whether teachers can ameliorate the effects of IA on behavioural outcomes. As seen above some research focuses on current relationships and some on the moderation of IA by subsequent relationships. There is also the difficulty of changing relationships within schools. Children may have positive relationships with a teacher one year followed by a negative experience the following year and vice versa. There may therefore be a cumulative influence over time. However some research has shown teacher-child relationships to be relatively stable over time and across teachers (Howes, Phillipsen, & Peisner-Feinberg, 2000). Others have suggested that early teacher-child relationships are more important for setting the tone for future teacher- child relationships (Pianta, Steinberg, & Rollins, 1995).

As discussed earlier Runions et al (2014) tried to address this interaction over time through utilising a two part growth modelling and cross-lagged panel analysis to look at the concurrent and interactive effect of both parent and teacher-child relationship quality on behaviour over time. However there is the possibility that teachers may communicate about a child's behaviour which may create expectancy effects. Runions et al (2014) note that annual ratings may be too sparse a timescale and that more time points would be beneficial. This is a step in the right

direction but more research using such techniques is needed in order to fully understand these complex competing influences on children's behavioural trajectories.

1.3.4 Difficulties of multi-informant research

A reoccurring methodological criticism of the research in this review is the over reliance on self-report from teachers, parents or peers rather than observational data collected from independent observers or self-report from the child. Buyse et al. (2011) were one of the few studies to employ observational methods by researchers as well as using teacher report. A significant moderation of behavioural outcomes by the teacher-child relationship for children with IA was found. This overcomes some of the possible social desirability in teacher and parent ratings improving validity and allows for triangulation. However they still used teacher report but only for measures of child behaviour. Independent measures of children's aggressive behaviour would further increase the objectivity of the data. That said it could be important to have the teachers perception of the behaviour and the relationship as they have the lived experiences of these factors that independent researchers cannot replace.

Although having more than one informant can be seen to be beneficial in terms of triangulation of evidence and providing information across different settings and contexts, the research with multiple informants has often reported poor inter-rater reliability (Hughes, Cavell & Jackson, 1999) This could lead to a possible reduction of the effect size of results as different informants may be more conservative or generous in their ratings leading effects to be cancelled out. Also researchers could be left to make the decision of which informant's ratings to prioritise over another's in the analysis which could lead to bias.

Hughes, Cavell & Jackson (1999) found there was no significant relationship between teacher and child reports of the quality of the relationship across all three years of the study; Year 1 ($r = .23$), Year 2 ($r = .15$) and Year 3 ($r = .11$) indicating that the choice of informants of the

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research are an important consideration. Similarly, they found that peer and teacher ratings of aggression were also in disagreement.

Runions et al (2014) collected parent ratings of aggression rather than teacher, peer or self ratings. They found that parents were less likely to complete the questionnaires than the teachers in the study and this lower response rate creates potential bias in the findings. Observational methods would help to ensure that incomplete data does not impact the results. Also for the purposes of this review parent rating of aggression is perhaps not as applicable to the educational setting.

Youngstrom, Loeber, Stouthamer-Loeber, (2000) found consistent disagreement on the CBCL checklist (Achenbach, 1991) across home and school settings for externalising difficulties. Teachers significantly rated less externalising problems than parents across 394 dyads. Therefore the accuracy of parental report of aggression to measure behaviour within the educational setting is questionable. Children may behave differently across different settings and contexts so behaviour seen at home is not indicative of behaviour in the classroom. Also the parent-child and teacher-child relationship is likely to influence the behaviours seen in each location.

Meehan, Hughes, & Cavell (2003) also asked parents to rate themselves in terms of harsh discipline and conflict by completing the harsh discipline subscale of the Weinberger Parenting Inventory (WPI, Feldman & Weinberger, 1994). They found that a positive teacher-child relationship did not moderate the influence of NCP on behavioural difficulties. The author's note a positive response bias from parents, perhaps giving socially desirable responses, and thus confounding the results. As a moderator effect is seen in studies that utilise independent observation, it may well be that reporting biases in teacher or parent reports mask this moderation (Van IJzendoorn, Sagi & Lambermon, 1992; Buyse et al. 2011).

Another recurrent criticism is that maternal attachment is often given precedence with fathers or other primary caregivers being absent from the research. For example, both Buyse et al. (2011) and O'Connor et al (2014) only investigated maternal attachment. Fathers can be the

preferred attachment figure in up to 20% of children and so should not be ignored by research (Ainsworth, 1967). Relationships with other caregivers (professionals or extended family) may also be more relevant in families where the mother is absent or otherwise not available to form an attachment.

Pertinently, the child or young person's perspective on their relationship to their teacher, parent or on their behaviour has been found to be absent in much of the literature consulted for this review. The accompanying empirical paper seeks to redress this. It is thought that the IWM of a child is likely to influence the child's perception of their relationships with teachers and parents and this, in turn, may affect their schema of interactions and resultant behaviours. Therefore, the children's views of their relationships with both parents and teachers will be taken into consideration in the research study described in chapter 2.

1.3.5 The importance of the teacher-child relationship for LSAC

It appears that research that has a sample of children who have experienced NCP show more benefit of a close teacher-child relationship than those who use a sample who have experienced positive caregiving. Hughes, Cavell, & Jackson's (1999) study that found that teachers played a significantly more protective role for students with rejecting parenting histories, with regard to lessening aggressive behaviour, than those without rejecting parenting histories. However, they used an indirect measure of attachment assuming that parents' own parenting history will dictate the quality of their relationship with their child. Replication of the research with children reporting on their attachment quality to their parents would be useful as this is likely to be a more sensitive measure of parent-child attachment.

Similarly, Lipscomb et al (2014), as discussed in the previous section, used children who experienced NCP. The participants were in non-parental care and had experienced multiple transitions between caregivers. Disruptions and transitions will likely challenge the IWMs of children as they will have experienced discontinuity of relationships. They found that a close teacher-child relationship led to fewer externalising behaviour problems in kindergarten for

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children living in non-parental care but not for children from similar socioeconomic backgrounds that lived with their parents. This demonstrates the importance of teacher-child relationship for those with disrupted caregiving experiences as those in non-parental care benefitted most from positive teacher-child relationships. Children in non-parental care were more sensitive than children living with parents to the effects of both overall classroom process quality and teacher-child closeness, but not teacher-child conflict on the development of externalising problems. Process quality was defined as a combination of positive interaction, cognitive support/language reasoning, classroom organisation, and behaviour management. Observers rated teachers from 1 (adequate) to 7 (excellent) using items from the Early Childhood Environment Rating Scale—Revised Edition (ECERS-R; Harms, Clifford, & Cryer, 1998) and the Arnett Scale of Teacher Behaviour (Arnett, 1989) including the subscales of detachment, independence, sensitivity, harshness, and punitiveness. Interestingly, the direction of the findings was opposite to expected. Children in non-parental care who had prekindergarten classrooms with higher process quality showed more externalising behavioural problems in kindergarten, even when controlling for their earlier levels of externalising behaviour problems. Conversely, fewer externalising behavioural problems were demonstrated in this sample when they attended classrooms that had lower process quality. The authors attribute this to low process classrooms involving adult-guided interactions rather than child-guided and being very structured which may be helpful for children with behavioural dysregulation but not for those without these difficulties. Therefore a close relationship coupled with a structured teaching approach is best for these children.

As well as samples consisting of children who experienced NCP generally seeing an increased protection through the teacher-child relationship it is also true that those studies who had very low rates of LSAC tended to not reach significance. Many of the studies were longitudinal and authors often cited a non-significant moderation to be the result of subject attrition possibly reducing the number of LSAC. O'Connor et al. (2014) had a very large sample size (N=1364) and the teacher-child and parent-child relationships were considered over a long period of time. However this led to increased subject attrition which resulted in changes to the demographics of

the sample. Mothers who left the study tended to be less educated and used less child care per week on average than those who did not leave. Authors note that the sample possibly contained relatively few LSAC children therefore perhaps reducing the associations between attachment and behaviour. Similarly, Runions et al (2014) used a sample that included pre-kindergarten children. This is not compulsory education so a section of the population could be absent from the sample. They noted that subject attrition was a problem as those who left the study had significantly higher levels of conflict and were less close to their teachers.

To summarise, there is evidence from two studies that the teacher-child relationship can protect those who have experienced NCP or have IA from developing externalising behaviours in the early years and transition to school. In particular, a teacher-child relationship that is non-conflictual, close, high in support and warmth appears to protect children with rejecting parenting histories, disrupted caregiving experiences and IA to parents from developing externalising difficulties. This moderation effect is more frequently observed in research that specifically looks at LSAC. There are methodological difficulties of multi-informant research that need to be addressed and given the nature of IWMs it makes sense that researchers obtain children's perspectives on relationships. There is currently a dearth of research in middle childhood and adolescence. The empirical paper in chapter two seeks to address this gap.

1.3.6 Can the teacher-child relationship moderate the impact of caregiving experiences on internalising behaviours?

There are comparatively fewer studies investigating the potential protective influence of teachers for *internalising behaviours* than for externalising behaviours. This could possibly be attributed to the relative invisibility and lesser nuisance level for educators, of this type of behaviour when compared to the more disruptive externalising behaviour. The repercussions for the child or young person however are just as serious. Interestingly however, the protective influence of teachers is more consistently supported in the literature as is demonstrated below. All four studies in this review found that the teacher-child relationship significantly protected

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children with IA to parents from the development of internalising behaviours. This was not true of the literature for externalising behaviours. Perhaps due to the nature of the difficulties, as the behaviour is potentially easier to manage in classrooms, teachers are more able to offer a positive nurturing relationship to these students rather than those who demonstrate more challenging behaviour. Similarly to the externalising section, the results are separated according to age. .

1.3.6.1 Middle Childhood

One study that investigated this moderator effect during middle childhood was O'Connor, Dearing, & Collins (2011). They conducted a longitudinal correlation of data collected at first, third and fifth grade of children in America (N=1,264) again using data from the NICHD Study of Early Child Care and Youth Development. To assess for internalising difficulties the CBCL (Achenbach, 1991) was completed to measure withdrawn, somatic and anxious/depressed behaviours. They found that a good quality teacher-child relationship (close and non-conflictual) protected those with IA from developing internalising behaviours in middle childhood. The same was not found for externalising behaviours. One flaw of this data set is that, as mentioned previously, the NICHD sample has relatively few high risk families due to excluding children who lived in dangerous areas, children with disabilities and children whose parents did not speak English. Only 11% of the sample included mothers without a high school education. McGrath & Van Bergen's (2015) literature review found that children with disabilities and those with low SES have increased risk of low quality teacher-child relationships. Therefore the impact may be even higher with a more generalisable sample.

Using the same data set a few years later O'Connor et al. (2014) found that concurrent teacher-child conflict ($B = 0.20, p < .05$), mother-child conflict ($B = 1.29, p < .01$) and mother-child closeness ($B = -0.35, p < .01$) significantly predicted internalising behaviours in middle childhood. They also established that an avoidant attachment style was most likely to predict internalising behaviours in middle childhood. Like many of the studies in this review both of these studies have

a correlational design. The authors call for intervention and experimental training studies to identify causality.

1.3.6.2 Adolescence

One study to investigate this moderator effect at adolescence was Davidson & Adams (2013). They conducted a longitudinal study using data from the Gansu Survey of Children and Families. Gansu is a rural area of North-western China that is characterised by poverty and due to economic migration one parent will often be absent from the family home. The study consisted of 1,659 adolescents (13 - 16 years). Both individual SES (mother's education and family wealth) and community SES (per capita village income and middle school graduation rate) and baseline rates of internalising behaviour at age 9-12 were controlled for. Each individual was given a cumulative adversity score based on many different factors such as bereavement, food scarcity, re-taking school years, poor grades, social exclusion and maternal depression. They found that the rate of internalising problems increased with age even when the cumulative adversity index score remained the same. They outline that adolescents' perceptions of teacher support and perceived parental warmth were compensatory factors for those most at risk as both of these factors were negatively associated with internalising problems. Those adolescents with higher levels of parental warmth (of the remaining parent) or teacher support had lower internalising problems. It is worth noting that children spend more time in school than in China than other cultures so teachers may be more likely to provide a primary caregiver role than in other geographical locations. Davidson & Adams (2013) identify a lack of research in the middle childhood age and point that most compensatory models focus on achievement outcomes and not emotional resilience factors. Both of which are the focus of the empirical paper in chapter two. This research highlights the importance of both family and school relationships as interactive compensatory factors for resilience against internalising problems in teenagers.

Contrary to the externalising findings, where those who experienced NCP benefited the most from teacher-child relationships, in this research those who had high levels of parental

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warmth benefited the most from teacher support. One possible explanation for this is that their IWMs allowed them to access and benefit from the teacher-child relationship more easily.

Wang, Brinkworth, & Eccles (2013), as mentioned in the externalising section, also investigated internalising behaviours. They conducted a longitudinal (5 years) study of 1,400 adolescents in America ranging from thirteen to eighteen years old. They investigated the impact of parent and teacher-student relationships and effortful control on depression and misconduct. As described in the externalising section, effortful control is the ability to re-focus and direct attention and as a result ignore any possible distractions (Rothbart & Bates, 1998). Oldehinkel, Hartman, Ferdinand, Verhulst, & Ormel (2007) suggest that among adolescents low effortful control may predict increased risk of internalising problems. They found that a positive teacher-child relationship was able to moderate the impact of low effortful control and parent-child conflict on depressive symptoms in adolescence. Adolescents who had lower effortful control and those who had conflictual parent-child relationships were more depressed aged 13-18. If these young people had a positive teacher-student relationship (increased closeness and trust) at age thirteen they were less likely to be depressed by the time they were 18. This even had a cumulative effect where depression decreased at a faster rate for adolescents with high effortful control, a less conflictual relationship with parents, and more positive relationships with their teachers at age 13. The moderation effect of the teacher-student relationship was stronger for boys than for girls and the authors attribute this to girl's using other forms of social support (peers) instead.

Given the age of the sample it is perhaps a missed opportunity to not have gained the young person's perspective on relationship quality as adult report was used throughout. As with many of the studies in this review this used a correlational design and so it is difficult to infer cause and effect. The authors propose that there is likely to be an interactive and dynamic effect and argue that parent conflict and teacher relationship should be measured at many time points

rather than just early in the analysis to see if there is a cumulative influence of changing relationships over time.

To summarise, it appears that the ability of a high quality teacher-child relationship to moderate the impact of IA on behaviour is observed more consistently on internalising than externalising behaviour. A possible reason for this is that teachers are more able to offer a close relationship to support such children as they are not receiving oppositional or challenging behaviour as is often true of externalising behaviours. This effect is also researched less than externalising difficulties. This could be attributed to the fact that internalising behaviours are less visible in the classroom and so may appear to be less of a priority to address from an educational perspective. However the long term outcomes for the young person are no less serious and for this reason both internalising and externalising difficulties are investigated in chapter two.

1.3.7 Establishing causality and intervention studies

Although children's attachment style tends to remain relatively stable over time (Main, Kaplan, & Cassidy, 1985) there is evidence to suggest that when adults alter their level of responsiveness that they can impact on a child's level of attachment security (Grossmann and Grossmann, 1991; Howes, Hamilton & Philipsen, 1998; Weinfield, Sroufe & Egeland, 2000). The majority of research appraised in this review has consisted of correlational studies where it is impossible to establish causality. A robust way to ascertain whether teacher-child relationships can indeed lessen the development of internalising and externalising behaviours for LSAC is through randomised controlled trials of interventions that target this relationship. If an intervention aimed at the teacher-child relationship can lessen the presentation of problem behaviours compared to a control group who receive no intervention then it can be inferred to be the cause of the improved behaviour. This may then indicate a way forward for improving outcomes for young children experiencing NCP or with IA.

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This literature search only retrieved one such study which was by Morrison Bennett & Bratton (2011). Although not specifically looking at children who have problem behaviours as a result of IA the children were part of the Head Start Programme in America where families are included as a result of a variety of NCP including alcohol, drugs, suicide, domestic violence and homelessness (Duncan, Brooks-Gunn, & Klebanov, 1994; Knitzer, 2000). It is likely as a result that many of the children would have experienced disrupted care-giving or possibly had negative, neglectful or absent parenting. This study looked at the impact of an intervention aimed at improving the teacher-child relationship for children identified as being at risk for long term development of externalising and internalising behaviours. The efficacy of Child Teacher Relationship Training (CTRT) was compared to an active control called the 'conscious discipline' intervention (Bailey, 2000). There was a relatively small sample size of 24 Head Start teachers and their teaching assistants who were randomly allocated to 22 preschool children who had been identified as having behavioural difficulties through teacher completion of the Child Behaviour Checklist (Achenbach, 1991). The study found a statistically significant reduction in total externalising behaviours in children in the CTRT intervention compared with children in the active control group. For internalising behaviours CTRT was not found to be significantly better than the control intervention however it did still demonstrate a large treatment effect over time when compared with the control group.

The validity of this research could be questioned as it was the teachers who were involved in the study who rated the children's behaviour so the possibility of demand characteristics cannot be ruled out. However, as the authors note the active control group also rated their children's behaviour and there were still group differences found. It is not clear in the study whether the active control were blind to the purpose of the study and their position in the control group as this would limit the confounding influence of demand characteristics. It is possible that taking part in the training itself may have led teachers to reframe children's behaviour.

This is clearly a very small sample size ($N=24$) with specific characteristics and demographics of risk so may not be generalisable to other populations. However, it is consistent with the finding that populations who experienced NCP more often found a significant impact of the teacher-child relationship.

This begins to give evidence that improving the teacher-child relationship through intervention can decrease the expression of externalising difficulties for children experiencing NCP. More research is needed to establish if this is also the case for internalising difficulties.

1.4 Conclusions, implications and future research

Educational Psychologists (EPs) have a role to play in promoting an understanding of the communicative function of externalising and internalising behaviour within schools. If teaching staff do not understand attachment theory and the impact of NCP then they might attribute the behaviour to within child factors. For example, they see the behaviour as an attribute of the child's personality rather than being the result of their life experiences. This will likely result in different responses by teaching staff to the behaviour. It will be important to shift any beliefs of within child explanations of behaviour held by teaching staff about these vulnerable children. It will be the role of the EP to ensure that schools have an understanding of the strong link between attachment security and behavioural outcomes. This could start as early as the involvement of EPs in the training of new teachers on University courses in attachment theory and the links to behaviour at school. Within schools EPs could use tools such as the multi-element model (LaVignia & Willis, 1995) which focuses on the communicative function of externalising and internalising behaviours in school. This focuses on four elements to promote positive behaviour; environmental change, teaching skills, reinforcement and responsive strategies. This may provide a structure for EPs to have discussions around the quality of the teacher-child relationship and place the child's behaviour within the environmental systems in which it operates. It also provides opportunity to discuss the communicative function which may bring opportunities to discuss children's experiences of caregiving. EPs can be helpful to schools in designing positive

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behaviour management policies and procedures. The literature in this review found that the teacher-child relationship is strongly related to behavioural outcomes. EPs could therefore be used within schools to promote interventions aimed at improving quality of relationships between students and their teachers. Video Enhanced Reflective Practice (VERP) (Kennedy, Landor & Todd, 2015) is one such intervention where teachers film themselves working with students and then reflect on these interactions. VERP is aimed at empowering individuals to focus on what they are doing well during an interaction to increase these behaviours. It aims to improve verbal and non-verbal communication and increase attunement and relationship quality between teachers and young people. Brown and Kennedy (2011) found that using VERP decreased negative interactions between staff and young people in a specialist provision.

Another approach EPs could help to educate, train and integrate into schools' behaviour management strategies are restorative approaches (McCluskey, Lloyd, Stead, Kane, Riddell, & Weedon, 2008). The philosophy of such approaches is that relationships are paramount and it is designed to move away from sanctions and instead equips children and adults with techniques to repair relationships after incidents.

To conclude, a positive teacher-child relationship, characterised by warmth, closeness, trust, support and low conflict, appears to be able to compensate for the impact of IA and NCP, particularly low maternal warmth and harsh or conflictual parenting, on the development of externalising and internalising behaviours. Teachers appear to be able to protect students from developing negative behavioural trajectories through providing a close nurturing relationship. Conversely, a teacher-child relationship characterised by conflict can also increase the behavioural difficulties for those already at risk. The effect of teacher-child relationship quality was more often found in studies where participants experienced NCP or had IA. Studies using samples with low risk of IA provided less consistent evidence for an effect of teacher-child relationships on the target behaviours however the effect was still frequently observed. This suggests that the most vulnerable children are more likely to benefit from intervention and

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support from their teachers. This would make sense regarding the notion of IWMs. Those who have the most disrupted models through their early care-giving experiences will perhaps seek out caregiving opportunities to fulfil their needs through other available adults, in this case a teacher. Considering this within a hierarchical framework then perhaps for those who have less close relationships with parents, teachers may move up in importance within the hierarchy. However there is one study contained in this review that provides contradictory evidence. Davidson and Adams (2013) found that the more parental warmth adolescents experienced the more they benefited from teacher support. This suggests that perhaps they have developed less resistant or avoidant coping strategies and are therefore more able to access and benefit from subsequent caregiving relationships.

This literature review supports the notion that IWMs can be malleable, as subsequent caregiving experiences, namely a positive teacher-child relationship, appear to be able to adapt and change behavioural patterns that are a result of IA. This appears to be particularly true during early childhood suggesting that perhaps the IWM is more malleable at this age. This suggests that Educational Psychologists need to work with teaching staff to promote positive and sensitive relationships with children as early as possible. It could also be seen to support the notion of attachment hierarchies. It is possible that children hold several IWMs, therefore a close teacher-child relationship may trigger context specific behaviours, eliciting more positive behaviours in school than home. This demonstrates the importance of selecting who reports on behaviour, relationship quality and in which context.

It was interesting to note that the research contained within this review tended to conceptualise attachment along a security continuum. Researchers didn't tend to investigate attachment styles (ABC) separately so the evidence so far does not allow us to make conclusions relating to this model. Future research could investigate the relative impact of the teacher-child relationship on each style of attachment.

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Research also needs to establish what factors enable certain teachers to overcome the difficulties of teaching a child who maybe displaying externalising and internalising behaviours in order to create this buffering effect. It is important that teachers, through their awareness of attachment and children's IWMs do not merely replicate parent-child relationship quality but can instead try to adapt and change children's IWMs through developing positive relationships with children. Teacher sensitivity (Buyse et al., 2011) has been shown to be an important factor, but little else is known about the teacher characteristics that would enable a close relationship to develop in difficult circumstances. Perhaps qualitative research could help to elucidate the lived experiences of the children who have had positive relationships with their teachers. This would begin to inform us of the mechanisms by which these relationships are successful. This would enable teachers to gain understanding into the attributes and skills that they would need in order to improve their relationships with children. This would also help with the development of more teacher-child relationship interventions that can target this relationship as a source of protection for children. Clearly these interventions take a significant investment from schools and teachers so a rigorous evidence base is required for educational establishments to utilise them more frequently. Specialist provisions for social, emotional and behavioural difficulties or nurture groups (Bennathan, & Boxall, 1996) would be ideally placed for evidence for this type of intervention but mainstream schools would also benefit from teacher-child relationship training. Educational Psychologists could be involved in the development of this evidence base and the implementation and evaluation of these interventions in schools.

The extent of the moderation effect of teacher-child relationship quality on behavioural problems for LSAC appears to be greatly influenced by who the informant is for behavioural and relational measures. Specifically, whether there are independent observations conducted by the researchers or whether parents or teachers report on relationship quality for themselves. Sabol & Pianta (2012) also identify the need for a developmentally sensitive measure for relationship quality to improve research across development. Clearly, more research is needed that takes into account the child or young persons' perception of their relationship to their teacher and

caregivers. This is particularly pertinent given the underlying concept of IWMs. How the child perceives the interaction will no doubt influence their behaviour. The following empirical paper seeks to address this by having the child report on the teacher-child relationship quality and attachment security.

Longitudinal pieces of research have provided insights into behavioural trajectories and the associated risk and protected factors that may influence them. They have also begun to move beyond the dyadic relationship, where only one dyad is of particular importance in isolation, to investigate the relative impact and interactions between teacher-child relationships, parent-child relationships and externalising and internalising behaviours at school. For example, Runions et al. (2014) used two part growth modelling and cross-lagged panel analysis. This will help to aid our understanding of these dynamic and interactive systems of influence over an individual's development. The inherent difficulty with these longitudinal designs is that they often have high levels of attrition and possible intervening extraneous variables. Also the majority of research to date relies on correlational data making it impossible to infer cause and effect. Future research should utilise and expand on these techniques, and could consider the use of Randomised controlled trials of interventions that focus on improving the teacher-child relationship. Initial findings suggest that interventions aimed at improving the teacher-child relationship can reduce externalising behaviour (Morrison Bennett & Bratton, 2011) but more research is needed to see if this effect is helpful for LSAC.

The research reviewed focussed on teacher-child relationships and little research has investigated the impact of relationships with other adults that may be in the school. Future research could focus on the impact of teaching assistants, emotional literacy support assistants, learning mentors, lunchtime supervisors and other professionals in the school. Although there has been research in other settings e.g. youth clubs (Grossman & Bulle, 2006) the literature is fairly sparse in this area. The same is true for the home environment as paternal, and other caregiver influences have frequently been ignored in the existing literature. The following empirical paper

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takes this into consideration by asking children who looks after them the most, allowing them to choose who they count as their primary caregiver.

With regard to Bronfenbrenner's model (1979), it appears that the environments of home and school, and the interaction between these two systems, are necessary considerations when looking at behavioural outcomes and interventions. The focus of this literature review was to explore the research into the micro and meso-systems that influence behavioural difficulties. Wider systems of influence such as education and culture will need further exploration as this will influence the teacher-child relationships, behavioural expectations and discipline. There is currently a paucity of research carried out in the United Kingdom (UK). None of the studies included in this review were conducted in the UK. This is important as different educational systems may have an influence on the perception of the teacher-child relationship and how this dynamic functions. As children in the UK often start formal education earlier than other countries the potential impact of the teacher-child relationship on LSAC may be even higher.

There is also little research investigating the middle childhood age range. Many authors noted that this is an area for future research. Teacher-child relationships in this age range are of increasing importance (Howes, Cassidy and Shaver, 1999; Seibert & Kerns, 2009). Therefore the potential influence of teachers to provide a sub-IWM for children could help to counteract negative early experiences of care in this age range. The following empirical paper attempts to redress some of these concerns by focussing on the child's perspective of relationship quality, focussing on the middle childhood age range and considering this within the context of the UK educational system.

Chapter 2: An investigation into the impact of teacher-child relationships on behavioural difficulties in middle childhood for those with insecure attachment

This empirical paper investigates the relationship between security of attachment, teacher-child relationships and behavioural difficulties in middle childhood. The notion that teachers can play a protective factor for students who may have insecure attachment to their caregivers is explored. This paper is conceptualised around attachment theory and ecological systems theory. In particular it seeks to investigate whether teachers can help to lessen the impact of insecure attachment (IA) on the development of externalising and internalising behaviours. The implications for Educational Psychology and teaching practice are then explored.

2.1.1 Definition of externalising and internalising behaviours

Externalising and internalising behaviours are different manifestations of problem behaviours. Externalising behaviour is directed outwards, towards others or property, whereas internalising behaviour is problem behaviour that is directed towards the self. Hinshaw (1987) defines externalising behaviour as a reaction to the environment that can manifest as aggression or hyperactivity. In the school context it may present as aggressive behaviour towards peers or adults, inattention, vandalism of property or disruptive behaviour in class.

Internalising behaviour is often associated with emotional or relationship difficulties. It is often perceived as an ineffective coping strategy for dealing with stress or emotions which are, unlike externalising behaviours, directed at the self. Internalising behaviours may manifest in extreme cases as self-harm, depression, anxiety, and becoming withdrawn from social situations. Both internalising and externalising difficulties are similar in that they are ineffective responses to difficult situations. Perhaps unsurprisingly then, externalising and internalising difficulties often co-occur (McConaughy & Skiba, 1993). This suggests that they are best conceptualised not as opposing behavioural difficulties but as associated ones.

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Early externalising and internalising behaviours have been found to be early indicators of later mental health difficulties, poor academic achievement and negative life outcomes such as involvement with crime. Goodwin, Fergusson, & Horwood, (2004) found that children with anxious and withdrawn behaviours in middle childhood (eight years old) were more likely to develop major depression and anxiety disorders in adulthood. Also childhood externalising behaviour has been linked to subsequent juvenile delinquency, adult crime and violent behaviour (Betz, 1995; Farrington, 1989; Moffitt, 1993). Jokela, Ferrie, & Kivimäki (2009) found that children who were identified as having internalising and externalising behaviours had a lower life expectancy and increased mortality risk by the age of 46. Breslau et al. (2009) found that teacher ratings of internalising and externalising difficulties at age 6, significantly predicted maths and reading achievement at age 17 even when controlling for IQ, maternal education and inner city deprivation.

Therefore, early intervention is crucial to support children to develop appropriate coping strategies before problematic behaviour becomes entrenched. This study aims to explore one possible intervening protective factor for children, namely the teacher-child relationship. This paper focuses on children's relationships, with their primary caregivers and their teachers, examined within Bowlby's and Fraley & Spieker's ideas about attachment and ecological systems theory (Bronfenbrenner, 1979), to investigate whether these relationships could serve to protect children from adverse negative outcomes.

2.1.2 Ecological systems model

This study is underpinned by an ecological systems model (Bronfenbrenner, 1979) whereby the interaction of home and school environments are both considered. The focus is on proximal and distal features of parental and teacher-child relationships and their impact on behavioural outcomes. To the best of the author's knowledge this is one of the only pieces of research to investigate this phenomenon in the United Kingdom (U.K.) so cultural factors such as the education system are explored further in the discussion. Research to date has been conducted in

Belgium (Buyse, Verschueren & Doumen, 2011), China (Davidson, & Adams, 2013), Australia (Runions et al., 2014) and the United States of America (Hughes, Cavell, & Jackson, 1999; Lipscomb, Schmitt, & Pratt et al., 2014; Meehan, Hughes, & Cavell, 2003; O'Connor et al., 2014; Silver et al., 2010; Wang, Brinkworth, & Eccles, 2013; O'Connor, Collins, & Supplee, L., 2012) and to the author's knowledge no research has investigated this moderator effect in the U.K.

2.1.3 Associations between attachment and subsequent behavioural difficulties

This research also draws heavily on attachment theories from Bowlby and Fraley & Spieker throughout. Bowlby (1969) proposed that there is a biological drive to achieve a close bond between caregiver and child as this ensures survival. He proposed that babies are predisposed to seek proximity to a caregiver and that they do so to meet their needs for warmth, food and protection. If these needs are consistently fulfilled by the caregiver the child will begin to seek them out in times of stress or where they feel unsafe. This is a core tenet of a securely attached child that they see the caregiver as a "safe haven" and a "secure base" from which to explore the world. Therefore secure attachments are more likely to develop when caregivers are responsive and sensitive to an infant's needs. Over time securely attached children become confident to explore further away from the secure base as they trust that the caregiver will remain. This allows them to learn and develop social and emotional skills.

However when a child's needs have not been consistently met or the child does not feel safe with the caregiver this can create maladaptive coping strategies and likely results in an IA (Ainsworth & Bell, 1970). Particularly in circumstances where a child has experienced abuse or neglect a confused coping strategy can develop. The development of these unhelpful coping responses could be a possible explanation for the observed link between IA and the expression of internalising and externalising behaviours in children. The link between low attachment security and the development of problem behaviours is well supported (Cohn, 1990; DeMulder, Denham, Schmidt, & Mitchell, 2000; Thompson, 2008; Weinfield, Sroufe, Egeland, & Carlson, 2008). Bergin

and Bergin (2009) reviewed the research into attachment relationships and outcomes for children. They found that IA is linked to low achievement in school. They attribute this to less securely attached children (LSAC) being less able to accept challenges, and having less persistence, poor social competence, poor emotional regulation, and being more likely to have attention difficulties and delinquency.

It has been argued that categorical views of attachment style, such as those proposed by Ainsworth & Bell in 1970, can be too simplistic. Ainsworth proposed that individuals fit into distinct and discreet categories of attachment (secure, insecure ambivalent and insecure avoidant) however it is more recently argued that individual patterns of relating do not always fit neatly into one category. For this reason, variation in attachment is often considered to be a security-insecurity continuum rather than a categorical variation (Fraley and Spieker, 2003; Cummings, 2003). Much of the literature that focuses on the ability of the teacher to moderate the impact of IA conceptualizes attachment in this way so this is the approach adopted in this paper.

2.1.4 Internal Working Models

Internal working models (IWMs) could help to explain the development of externalising and internalising difficulties for those with IA (O'Connor, Collins & Supplee, 2012). Early caregiving experiences create a schema, called an IWM, which acts as a blueprint for future social interactions and perception of self. These early experiences create expectations of relationships that persist as a child develops (Bowlby, 1969/1982; Bretherton & Munholland, 2008; Moss, Bureau, Beliveau, Zdebik, & Lepine, 2009). Children who have received sensitive and responsive care-giving will expect future interactions in other relationships (e.g. teachers, peers, romantic relationships) to take the same form. If a child has received positivity and warmth they will begin to believe that they are worthy of these responses. Therefore IWMs not only affect interactions but also self perception as children learn their worth through the way adults respond to them. A child who has received neglectful parenting may believe they are not valued or deserving of

attention. Traumatic or abusive interactions may lead to avoidant or aggressive behaviour from the child towards adults as this has been their experience.

Sroufe & Fleeson (1986) found that there was a similar relationship quality between teacher-child relationships and parent-child relationships. This suggests that the child brings their experiences of care giving (IWM) and thus learned patterns of interaction that create the same relationship conditions with their teacher. Although it is acknowledged that teacher-child relationships may replicate parent-child attachment, teacher-relationships will be considered an independent moderation variable in this research. Evidence suggests that adults can change a child's level of attachment security through adapting their level of responsiveness to the child (Grossmann and Grossmann, 1991; Howes et al. 1998; Weinfield et al. 2000). Therefore the focus of this empirical paper is to see if teachers can protect children from developing problem behaviours as a result of IA and not just reproduce the interactions children have with their parents.

The degree of malleability of IWMs is often debated with some suggesting that they remain fairly stable (Main, Kaplan, & Cassidy, 1985; Fraley, 2002) and others suggesting that they can change over time due to major life events (Thompson, Lamb, & Estes, 1983; Vaughn, Egeland, Sroufe, & Waters, 1979) or subsequent caregiving experiences (Buyse et al. 2011).

Collins & Read (1994) proposed that we do not have only one working model but instead we develop a hierarchy of IWMs. They proposed that we have a general working model and there are different sublevels of IWMs (i.e. parental, mother, father, peer, romantic) that feed into this that can be more or less active in different contexts. This is particularly important in this research paper as if the teacher-child relationship creates a positive sub IWM, even if a child has a negative general IWM, this may help to create different expectations of interactions in different settings thus impacting on the level of problem behaviours observed in school.

2.1.5 Teacher-child relationship quality

Children spend a great deal of time within the education system therefore their teachers can become secondary caregivers assuming responsibility for safety and meeting their needs during the school day. Teachers have opportunities to provide compensatory caregiving experiences for those who have developed negative IWMs. The teacher-child relationship quality is often operationalised in terms of the degree of closeness and the amount of conflict. Closeness is characterised by warmth in the relationship and an ease of communication. This includes how comfortable the child is to approach the teacher and discuss their feelings and how much the teacher is a source of comfort when the child is upset (e.g. Birch & Ladd, 1997; Pianta, Hamre & Stuhlman, 2003; Pianta, Steinberg, & Rollins, 1995). Conflict is characterised by the amount of disagreement and negativity in the relationship. A high quality relationship would be characterised by high levels of closeness and low levels of conflict. This is how relationship quality is conceptualised in this study. The Student Teacher Relationship Scale (Pianta, 1992) was used to measure relationship quality as it assesses these two constructs. A high quality teacher-child relationship is also often described as being low in dependency. This is contentious, however, as dependency is not always viewed as negative across all cultures and ages (McGrath & Van Bergen, 2015) and therefore this was not measured in this study. Measuring any relationship is difficult as each individual may have a different perception of relationship quality. Also relationships are dynamic and bi-directional and are not stable over time (McGrath & Van Bergen, 2015). Both the teacher and the child's perspective were obtained to explore the interactive perception of the relationship. As found in chapter one often the child's perspective of the relationship has been absent from research. This research seeks to redress this by gaining both the child's and the teachers' perspective. O'Connor and McCartney (2007) found that children with IAs to parents who manage to develop a secure teacher-child relationship fare better academically, socially and emotionally. Similarly, Copeland-Mitchell, Denholm & DeMulder (1997) found that a secure teacher-child attachment seemed to partly compensate the risk of insecure parental attachments, because children were more emotionally positive and demonstrated more pro-social behaviours

than those children with an insecure relationship to *both* their teacher and their parent. This paper investigates whether the teacher-child relationship has the capability to protect children from developing externalising and internalising behaviours if they have IAs. Therefore it is hypothesised that teachers may moderate the impact of IA by offering a trustworthy and caring interaction with an adult.

2.1.6 Moderating affect of the teacher-child relationship on the association between insecure attachment and behavioural difficulties.

As outlined in Chapter One, research supports the idea that the teacher-child relationship can lessen the negative impact of IA. This moderation effect has been found and has been investigated frequently in early childhood and in the transition to school (Buyse et al. 2011; Lipscomb et al., 2014, Runions et al, 2014; Silver et al., 2010). A positive impact of teacher-child relationships for insecurely attached adolescents has also been found although this has been investigated to a lesser extent (Wang, Brinkworth, & Eccles, 2013; Davidson & Adams, 2013). However there appears to be relatively less research in the middle childhood age and the results are inconsistent. For the purposes of this piece of research middle childhood will be conceptualised as 7-11 years old. Only three pieces of research investigating this age range were identified in the literature review in Chapter One; O'Connor et al. (2014), Hughes, Cavell & Jackson (1999) and Meehan, Hughes, & Cavell (2003). This gap in the literature has been noted by previous researchers, who also proposed it should be an area of interest for future research (O'Connor, Collins & Supplee, 2012; McGrath & Van Bergen, 2015). The theoretical reasons why middle childhood may be of interest are explored in the next section.

2.1.7 Attachment in middle childhood

Attachment to teachers may be particularly important in middle childhood. In infancy attachment to the primary caregiver has long been recognised as crucial (e.g. Bowlby, 1988). By adolescence there is an increasing emphasis on the diversity in attachment figures with a proposed shift towards peers and romantic relationships (Buhrmester & Furman, 1987; Larson et

al., 1996). However it is suggested that teachers could act as attachment figures while children are in the middle childhood age range where these relationships have increasing importance (Howes, Cassidy and Shaver, 1999; Seibert & Kerns, 2009). Therefore it is possible that the teacher-child relationship may offer a potential sub IWM in this period that could counteract negative early experiences of care or IA.

Middle childhood is a time of change in attachment relationships where children begin to rely less on attachment figures for assistance (Kerns, Tomich, & Kim, 2006; Lieberman, Doyle, & Markiewicz, 1999) and the goal of the attachment shifts from proximity to the caregiver to availability (Bowlby, 1987). In early childhood the child is said to generally have one primary caregiver but moving into middle childhood these attachment bonds spread to other important people such as grandparents and teachers (Howes, Cassidy & Shaver, 1999; Schaeffer & Emerson, 1964). Collins & Read (1994) propose that this leads to a development of an attachment hierarchy which shifts over time. Hazan and Zeifman (1994) found that young people between eight and fourteen years started reporting that peers were approached for proximity and safe haven needs and parents for secure base functions. They also noted that slightly later (15–17 years) people who had formed romantic relationships were less likely to approach their parents for attachment needs. This increase overtime in the diversity and range of attachment figures, and the shifting importance of extra-familial social relationships, particularly friendships and romantic relationships, is well documented (Buhrmester & Furman, 1987; Larson et al., 1996). Peer relationships and romantic relationships have been reported to fulfil classic attachment needs of the safe haven, secure base and need for proximity during adolescence (Ainsworth, 1989; Fraley & Davis, 1997; Hazan & Zeifman, 1994). Therefore middle childhood is of particular interest as attachment networks appear to diversify and the teacher-child relationship appears to become more important during this period.

Attachment is conceptualised differently across a person's development and therefore the need for different measures across ages is required. This makes it difficult to compare research

across a person's lifetime as there is little continuity in methods (Kerns & Seibert, 2014).

Attachment as an infant is often understood in terms of the secure base, proximity seeking behaviour and separation anxiety so observational methods such as the strange situation (Ainsworth and Wittig, 1969) are often used to assess attachment quality. Story stem procedures similarly try to assess the child's reaction to various care giving situations to elucidate whether a child is securely or insecurely attached. Both of these approaches take a categorical view whereby the young person is considered to be either insecure ambivalent, insecure avoidant, disorganised or securely attached.

There are many methods of measuring attachment in middle childhood as the child is beginning to be able to report on their own attachment style. These include; story stem measures, verbal responses to pictures of separation, autobiographical narratives, questionnaires and behavioural observations. Due to the limited amount of research in this age group there is limited validity data for each of these tools (Kerns & Seibert, 2014). The Attachment Security Scale (Kerns, Klepac & Cole, 1996) is one such measure and this conceptualises attachment as the amount a child relies on their caregiver in times of stress. This very much relates to the secure base concept, but due to the later developmental stage, it also incorporates how much respondents feel able to communicate their feelings to their caregiver. Therefore this was chosen as the most appropriate measure for this age group for this research.

2.1.8 The present study

This study takes a critical realist epistemological approach. Critical realists endeavour to understand the true nature of psychological events but acknowledge that all measurements have error and are fallible. A scientific method was adopted for this study but the researcher recognises the difficulties and complexities of measuring the variables of attachment and relationships. These difficulties are explored further in the discussion section. There is a well documented association between low attachment security and problem behaviours (Cohn, 1990; DeMulder et al., 2000; Thompson, 2008; Weinfield et al., 2008). Children who are more securely

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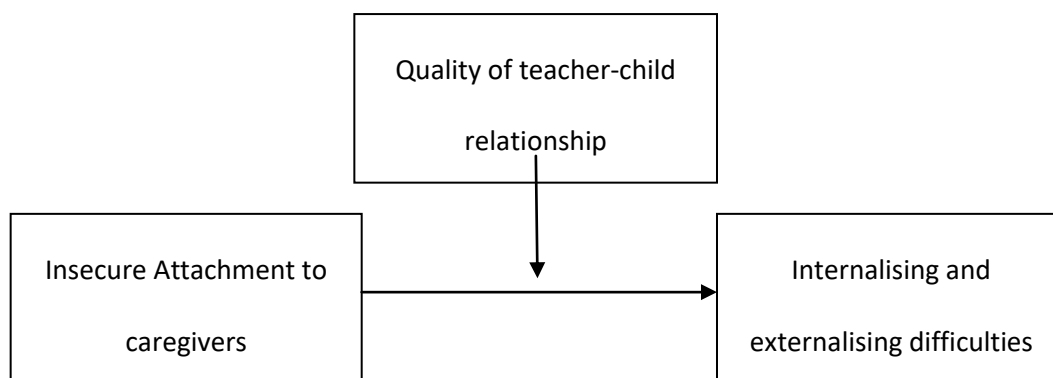
attached to their caregivers tend to have increased positive behaviours and are more pro-social whereas LSAC may more quickly rely on hostile or aggressive interaction styles (Cohn, 1990; Thompson, 1999). It was therefore hypothesised that there would be a relationship between a child's attachment security to their caregiver and the development of externalising and internalising behaviours, with those with low attachment security being the most likely to demonstrate problem behaviours (*hypothesis one*).

Previous research has also found higher levels of teacher-child closeness to be associated with lower levels of aggressive behaviour (Birch & Ladd, 1998; Howes, 2000; Hughes et al., 1999; Pianta & Stuhlman, 2004; Silver et al., 2005). As a result this study hypothesised that teacher-child relationships marked by a high degree of closeness and a lack of conflict would lead to a decreased risk of externalising and internalising behaviours (*hypothesis two*).

Hughes and Cavell (1999) found that teacher and child ratings of relationship quality were not consistent. The current study therefore hypothesised low inter-rater reliability between child and teacher relationship scores for the degree of closeness and conflict (*hypothesis three*).

The ability of a close teacher-child relationship to moderate the impact of IA on behavioural outcomes has been found in early childhood (Buyse et al. 2011; Lipscomb et al., 2014; Runions et al., 2014; Hughes et al., 1999; Silver et al., 2010). As children mature there is a diversification in their hierarchy of IWMs (Buhrmester & Furman, 1987; Larson et al., 1996). It was therefore hypothesised that teacher-child relationships would also moderate the relationship between IA to caregivers and the development of externalising or internalising behaviours in middle childhood. It was predicted that there will be less externalising/internalising behaviour seen in those with low attachment security if they have a relationship with low conflict and high closeness with their teacher. Therefore it is predicted that a high quality teacher-child relationship will act as a protective moderator against the development of externalising and internalising behaviours in children with insecure attachments (*hypothesis four*), this pathway is outlined in figure one below.

Figure 1. Diagram to show the moderation of low attachment security on behavioural outcomes by the teacher-child relationship



2.2 Method

2.2.1 Participants

Participants were recruited from eight primary schools from across two Local Educational Authorities (LEAs) in the South- East of England. Within these schools data were collected from forty one teachers and 171 students. Eight participants were not included in the final analysis as they had more than five items missing (33.3%) in a questionnaire making the final sample 163 seven to eleven year olds (*Mean age* =9.07, *SD*=1.13). The gender divide of the sample was 79 male and 84 female students and forty one female teachers. Given the nature of the research opt-in consent was considered the most ethical approach however this led to a low response rate from parents with only 7.5% returning consent forms.

2.2.2 Design

This study used a correlational design whereby the relationship between the co-variables of attachment security, teacher-child relationship quality and externalising and internalising behaviours were investigated.

2.2.3 Materials

Attachment Security Scale (SS) (Kerns, Klepac and Cole, 1996, Appendix E)

For the purpose of this study it was important to use a self report measurement of attachment as within the context of IWMs it is the child's perception of their relationship with their caregiver that is paramount. This is one of only a few self-report measures of attachment that can be used in middle childhood. Although it was designed to assess children's perception of attachment security to their mother, in the current study participants were asked to respond using the "*person who looks after you the most.*" It conceptualizes attachment as how much children feel they can communicate with their caregiver and the degree to which a child believes that particular attachment figure is responsive, available and can be relied upon during times of need. It is a 15 item self report questionnaire, where participants rate whether one of two statements are either *sort of true for me* or *really true for me*. The two statements are presented as one item in a fixed-choice format. The two statements are presented in a "some kids" ... "but other kids" format which was developed by Harter (1982) to reduce response bias due to social desirability. Granot and Mayseless (2001) found high concurrent validity with significant associations between scores on the Security Scale and story completion attachment measures. This was supported by Kerns, Tomich, Aspelmeier, & Contreras (2000) who found high concurrent validity between the response to pictures of separation and the Attachment Security Scale. Kerns et al. (1996) found that scores on the Security Scale demonstrated high test-retest reliability ($r = .75$) over a period of 14 days. In the current study the Cronbach alpha indicated that the scale demonstrated good internal reliability ($\alpha = .82$).

Student-Teacher Relationship Scale (STRS) – Short Form Teacher Version (Pianta, 1992, Appendix F)

The STRS conceptualizes the quality of the teacher-child relationship through the amount of conflict and closeness perceived by the teacher and the questionnaire is divided into these distinct subscales. It is a 15 item questionnaire that uses a five point Likert scale that is completed by the teacher about their relationship with a specific child. It is suitable for relationships with

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children between the ages of 3 and 12. Pianta (1989) found that the total scale and the subscales all had alpha reliabilities exceeding .60. They found no gender differences on the STRS total or subscale scores. Also support was found for discriminant and convergent validity of the STRS total and subscale scores. In the current study internal reliability was checked using Cronbach's alpha. The subscales of conflict and closeness indicated good internal reliability ($\alpha = .84$ and $\alpha = .81$ respectively).

Student-Teacher Relationship Scale- Student Version (Bailey, 2014, Appendix G)

Similarly to the Attachment Security Scale, it was vital to ascertain the child's perception of the relationship as it will be influenced by their IWM. The student version of the student-teacher relationship scale was created by Bailey (2014) to elicit the child's view of the relationship. It follows the same format as the teacher scale with one item removed. Bailey (2014) found good internal reliability for closeness $\alpha = .8$ and conflict $\alpha = .7$ subscales. The current study also found good internal reliability for the conflict subscale ($\alpha = .84$) and closeness reached a satisfactory level ($\alpha = .76$).

Strengths and Difficulties Questionnaire-Teacher Version (Goodman, 1997), a copy of the questionnaire can be accessed at the following website: <http://www.sdqinfo.org/>.

The Strengths and Difficulties Questionnaire (SDQ) is designed to measure both positive and negative behaviours in young people. It was designed for parents and teachers of 4-17 year olds which spans and extends beyond the middle childhood range. Unfortunately there is no self-report version for children under the age of eleven so the teacher version was used in this study. It consists of 25 items divided between 5 scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and pro-social behaviour which are added together to create a total difficulty score. Goodman and Scott (1999) compared the SDQ to the Child Behaviour Checklist (Achenbach, 1991) and found that it was at least as good at detecting internalising and externalising problems and significantly better at detecting hyperactivity and inattention. Goodman (2001) found that the SDQ demonstrated good test- retest reliability after 4

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to 6 months (mean: 0.62) and good internal consistency (Cronbach $\alpha=.73$). The current study found an even higher rate of internal reliability for both the externalising ($\alpha=.87$) and internalising ($\alpha=.86$) subscales. The SDQ helps to identify behaviours that have been observed over the past 6 months. There is an additional supplement for the SDQ that clinicians can use to assess the severity and impact of behavioural difficulty. This impact supplement was not used for this study as the purpose was not to identify if the child has what might be classed as a “conduct disorder” or to diagnose the child. The questionnaire was instead used to assess on a continuum how often the behaviours had been observed to correlate with attachment and relationship measures. One limitation of the SDQ is that it implies that observed behaviours are the result of child characteristics and are therefore located within the child. The SDQ obtains no contextual or situational information from respondents and the behaviour is assessed in isolation. This does not fit with the notion of behaviour as a response or reaction or the interactionist stance of this paper. It could be argued that the SDQ offers a view of behaviour as being a fixed and universal aspect of the child’s nature and not a function of the person and their environment. Although this contrasts with the philosophy of this empirical paper and Bronfenbrenner’s model (1979) the SDQ was used for practical purposes and in the absence of available valid and reliable measures that take into account contextual factors.

Demographic information

Pupil gender, age and SES have been found to be related to teacher-child relationship quality and behavioural outcomes therefore this data was also gathered for this study (McGrath & Van Bergen, 2015). Children stated their age and gender and teachers were asked to indicate whether children were receiving free school meals or were receiving the pupil premium as a measurement of socio-economic status. This data was not completed by the majority of teachers so it was not used in the final analysis.

2.2.4 Procedure

Once clearance from the Southampton Ethics Committee had been received two researchers approached schools from three different Local Educational Authorities. Eight schools were approached and all agreed to take part. Due to the sensitive content of the questionnaires it was deemed important to obtain written consent from the Head Teachers of the schools, the children's parents, the teachers and the children themselves. Head teachers were given information on the research and had the opportunity to discuss and ask any questions as well as looking through the questionnaires before giving consent (Appendix H). Once Head teachers had signed the consent document teachers were then given an information sheet (Appendix I) informing them of the nature of the research and stating that circulation of the parental consent letters and completion of the questionnaires would be considered as them giving consent to take part in the research. If a teacher agreed to take part then the parents of their pupils were approached. Parents were given information on the study and a consent form (Appendix J). Two parents opted to see the questionnaires before giving consent.

Once these children were identified researchers went into the schools and worked with around 3-10 children in a quiet location in the child's school. Firstly, the research was explained verbally and in writing to the children and they were given the opportunity to give consent before participation (Appendix K). Children were informed of their right to withdraw at any point and three children exercised their right to do so. Those children who agreed to continue individually completed the adapted student-teacher relationship scale and Security Scale with the assistance of researchers. Children were supported with if they were struggling to read or understand the questions but were reminded to keep their answers private and not discuss them with their peers. To compensate for the impact of potentially upsetting questions children were asked to do a mood enhancing exercise after completing the questionnaires. For this exercise children were asked to write or draw three good things that have happened at school (Thayer, Newman & McClain, 1994). Finally, participants were fully debriefed both in writing and verbally (Appendix L). This process took approximately 30-40 minutes in total. Their class teacher would then complete

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the strengths and difficulties questionnaire and STRS- teacher version in their own time and these were then collected by the researcher from the school. Teachers were also given written information to debrief them after the study (Appendix M).

2.2.4.1 Data analysis procedure

Initial assumptions were checked to see if the data were normally distributed and to establish if there were any outliers. Initial descriptive statistics were run to establish the means and standard deviations for externalising and internalising behaviour, relationship quality and attachment security and comparisons were made to national averages where available. The internal reliability of questionnaires was checked using Cronbach's alpha. The integrity of the measures was retained as the improvement of reliability through item deletion was negligible. Then initial bivariate correlations of attachment security, teacher-child relationship quality and internalising and externalising difficulties were created to establish any significant relationships that warranted further analysis. Then multiple regressions were run to see which co-variables predict externalising and internalising behaviours. The sample size met the criteria for regression analysis as outlined in Field (2013). Finally, a hierarchical multiple regression was carried out to see whether the level of conflict or closeness in teacher-child relationship moderates the impact of attachment security on externalising and internalising difficulties.

2.3 Results

2.3.1 Preliminary results

All preliminary scatter plots demonstrated that the assumption of linearity was met however the data were not normally distributed for several variables so it was felt that bootstrapping was necessary during analysis. Attachment security, student perception of closeness and conflict and teacher perception of closeness appear to be normally distributed from histograms. Teacher perception of conflict on the other hand was negatively skewed as were externalising and internalising difficulties. This suggests that the majority of participants were judged as having a low conflictual relationship by their teacher and that there were relatively few participants judged as having externalising and internalising difficulties by their teacher. Kolmogorov-Smirnoff statistics were significant for all three variables suggesting that they were not normally distributed. Field (2009) suggests not transforming the data in response to non-normal distribution therefore bootstrapping was used throughout the analysis instead.

The percentage of participants of each gender and age are presented in Table 1. Descriptive statistics of attachment security, externalising, internalising and total difficulty, and student and teacher perceptions of the teacher-child relationship are presented in Table 2.

Table 1.

Number and percentage of each gender and age

	N	%
<u>Gender</u>		
Male	79	48.2
Female	84	51.2
<u>Age</u>		
7	13	7.9
8	44	26.8
9	42	25.6
10	49	29.9
11	16	9.8

Table 2.

Descriptive statistics each of the measures

Measure	<i>M</i>	<i>SD</i>	Minimum	Maximum	Comparison to national average
Attachment Security	47.66	7.19	23	60	Not available
Total SDQ difficulty	4.99	5.8	.00	27	Below national average (8.4)
Externalising SDQ	2.71	3.6	.00	15	Below national average (5.1)
Internalising SDQ	2.28	3.35	.00	16	Below national average (3.4)*
Student STRS conflict	2.44	.85	1	4.25	Not available
Student STRS closeness	3.74	.87	1.57	5	Not available
Teacher STRS closeness	4.13	.77	2.5	9.71	Not available
Teacher STRS Conflict	1.37	.55	1	4.25	Not available

* SDQ national average data obtained from Meltzer, Gatward, Goodman & Ford (2000).

As Table 2. demonstrates, the rates of externalising, internalising and total difficulties in behaviour fell below the national average. This means that the sample is a relatively low risk sample by UK standards. It also shows that the level of closeness was higher than the level of conflict as perceived by both the child and the teacher.

2.3.2 Internalising and externalising correlations

Firstly, an initial bivariate correlation was run to assess whether externalising and internalising behaviours co-occurred. The results indicated that internalising and externalising difficulties were significantly correlated $r = .39$, [.20-.55], $p < 0.01$. (All bias corrected and accelerated bootstrap 95% CIs are reported in square brackets.) The effect size was medium whereby internalising difficulties accounted for 15.21% of the variance in externalising behaviours. This means that children who experience internalising difficulties are likely to also have externalising difficulties and vice versa.

2.3.3 Are children at more risk of demonstrating externalising and internalising behaviours if they are insecurely attached to their primary caregiver?

Bivariate correlations indicated that, as predicted, externalising difficulties and attachment security were significantly negatively correlated $r = -.16$, $[-.32-.004]$, $p < 0.05$. This demonstrates that those with secure attachments are less likely to demonstrate externalising behaviours at school. However this is only a small effect size with attachment security only accounting for 2.89% of the variance in externalising behaviours. Surprisingly, the same association was not found for internalising behaviours and attachment security ($p > 0.05$) as no significant relationship was found. The possible reasons for this are explored further in the discussion.

2.3.4 How does teacher-child relationship quality correspond to the quality of relationship children have with their attachment figures?

Table 3.

Correlations between attachment security and teacher-child relationship quality

Participant	Relationship construct	r	p
Child Report	Closeness	$r = .2^*$	$p = .01$ [-.34 - .07.]
	Conflict	$r = -.21^{**}$	$p = .006$ [-.34 - .07]
Teacher report	Closeness	$r = .02$	$p = .84$ [-.11 - .15]
	Conflict	$r = .17^*$	$p = .03$ [-.32 - .02]

*= $p < 0.05$, ** = $p < 0.01$, BCa Bootstrap 95% CIs reported in brackets.

Bivariate correlations were run to investigate the relationship between attachment security and teacher-child relationship quality as perceived by both the teacher and the child. Results indicated that both *child* perception of closeness and *child* perception of conflict were significantly linked with attachment security. Specifically, a positive correlation was found between a child's perception of closeness to their teacher and their attachment security. Although only a small effect size this indicates that the closer a child feels to their attachment figure the more likely they are to also have a close relationship with their teacher. Conversely, a negative correlation was found between attachment security and a child's perception of conflict to their teacher. This

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means that children who are more secure in their relationship to a caregiver are less likely to experience conflict with their teacher. This supports the notion of the IWM whereby the relational patterns of caregivers are extrapolated to other relationships.

There was also a significant relationship found between *teacher* perception of conflict and attachment security but interestingly not closeness. This indicated that the more conflict the teacher perceived in the relationship the more likely the child was to be insecurely attached to their caregiver.

2.3.5 Does teacher-child relationship quality impact on internalising and externalising behaviours?

Initial bivariate correlations indicated that internalising difficulties were significantly related to *teacher* perception of closeness and conflict in the relationship. Teachers are less likely to report feeling close and more likely to report conflict in relationships with students who experience internalising difficulties. Internalising difficulties and *teacher* perception of closeness were significantly negatively correlated $r = .20$, $[-.32 \text{ -- } .08]$, $p < 0.05$. This was a small effect size with internalising difficulties accounting for 4% of the variance in teacher perception of closeness with their student. This means that the closer the teacher perceived the relationship to be the less likely the child was to show internalising behaviours. Also internalising difficulties and *teacher* perception of conflict were significantly correlated $r = .38$, $[.18 \text{ -- } .59]$, $p < 0.01$. This is a medium effect size. This means that teachers are not only less close to children with internalising difficulties but they are more likely to report having a conflictual relationship with them too. Interestingly this was not found for the *child's* perception of the relationship. No significant correlation between *child* perception of closeness and conflict and internalising difficulties were found.

Similarly, externalising behaviours and the *teacher* perception of closeness and conflict were significantly correlated. A significant negative correlation was found between closeness and externalising behaviours $r = -.20$, $[-.39 \text{ -- } .05]$, $p < 0.01$. This means that the closer the teacher

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perceived the relationship to be the less likely the child was to show externalising behaviours. However this effect size was small. The correlation between *teacher* perceived conflict and externalising behaviours was also significantly positively correlated $r=.77$, $[.66 - .85]$, $p < 0.01$. This means that the more conflict the teacher perceives in the relationship the more likely the child is to display externalising behaviours. This effect size was large. Teacher perception of conflict accounted for far more variance (59.29%) in externalising behaviours than teacher perception of closeness (4%).

Similarly, perception of conflict appeared to be more associated with externalising behaviours than closeness from the child's perspective. The *child's* perception of conflict with their teacher also significantly correlated with externalising behaviours $r = .17$, $[.01-.34]$, $p < 0.05$ but *child* perception of *closeness* did not. Again this did not account for as much variance as the *teacher's* perception of conflict (2.98%). This suggests that when both the teacher and child perceive the relationship as conflictual then the child is much more likely to demonstrate externalising behaviours. The level of closeness was less associated with behavioural outcomes than the level of conflict. The teacher's perception of conflict seems to be a bigger contributor than the child's however it should be noted that the teacher completed the SDQ so this may have biased the results. This is explored further in the discussion.

Multiple regressions were then carried out to ascertain the unique predictors of externalising difficulties and internalising difficulties. Only relationships that were found to be significant in the bivariate correlations were considered. A forced entry method was used as there is research that supports all of these variables as predictors but their relative importance in predicting externalising behaviours were unclear to be entered in a hierarchical block wise fashion. All tolerance values were greater than 0.2 (9.4 - 9.9) and VIF values were less than 10 (1.01 - 1.06) and there were no substantial correlations ($r = >.9$) indicating that there were no difficulties of multi-collinearity or singularity (Mernard, 1995; Myers, 1990).

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The predictive ability of the teacher's perception of conflict and closeness and the child's perception of conflict on externalising difficulties were considered first (Table 4.)

Table 4.

Results from multiple regression for relational factors predicting externalising difficulties

	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>p</i>
Constant	-.5 [- .77 - .13]	.14		.00
STRS Teacher closeness	.01 [- .05 - .04]	.03	.01	.82
STRS Teacher conflict	.51 [.42 - .61]	.04	.76 ***	.00
STRS Student conflict	.02 [- .02 - .07]	.02	.05	.34

Note: $R^2=.59$, *** $p<.001$, Bca 95% Confidence Intervals (CI) reported in brackets.

Teacher perception of conflict significantly predicted an increased risk of externalising difficulties ($p<0.001$) accounting for 59% of the variance. With *teacher* perception of conflict accounted for, *child* perception of conflict or *teacher* perception of closeness did not significantly improve the prediction of externalising difficulties.

A multiple linear regression (Table 5.) was then conducted to investigate the factors that predict internalising difficulties. *Teacher* perception of closeness and conflict were the only variables significantly correlated with this outcome, and are therefore the only ones included in this analysis.

Table 5.

Multiple regression output for relationship factors that predict internalising difficulties.

	<i>B</i>	<i>SEB</i>	β	<i>p</i>
Constant	.11 [- .28 - .54]	.19		.56
STRS Teacher closeness	-.04 [- .12 - .02]	.04	- .1	.17
STRS Teacher conflict	.22 [.09 - .35]	.07	.35 ***	.00

Note: $R^2=.15$, *** $p<.001$, Bca 95% Confidence Intervals (CI) reported in brackets.

As Table 5 demonstrates, teacher perception of conflict also significantly predicted an increased risk of internalising difficulties ($p < 0.001$) accounting for 15% of the variance. With *teacher* perception of conflict accounted for, *teacher* perception of closeness did not significantly improve the prediction of internalising difficulties.

Both regressions suggest that teacher conflict is more predictive than closeness for the development of behavioural difficulties.

2.3.6 The quality of the teacher-child relationship from both teacher and child perspectives.

Bivariate correlations were conducted to assess how childrens' and teachers' perception of the relationship compared. The results showed that child and teacher perception of closeness were significantly correlated $r = .21$, [.01 - .43], $p < 0.01$. This suggests that teacher and children are consistent in their reports of relationship quality when the relationship is perceived as close. However this was a relatively small effect size. Teacher and student perception of conflict were also significantly correlated however to a lesser extent $r = .16$, [.00 - .33], $p < 0.05$. This suggests that children and teachers share a perception of the level of conflict in the relationship however not as consistently as the degree of closeness. Teacher perception of *conflict* only explains 2.56% of the variance in child perception of conflict whereas teacher perception of *closeness* explains 4.41% of the variance in child perception of closeness. Children were also more likely to report conflict than teachers.

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The more conflict the *teacher* perceives with the child the less close they perceive their relationship to be. Teacher perception of closeness and teacher perception of conflict are significantly negatively correlated $r = .28$, $[-.45 - -.14]$, $p < 0.01$. This suggests that the presence of conflict is associated with lower levels of closeness in the relationship.

The same is true for *children's* perception of closeness and conflict $r = -.42$, $[-.54 - -.28]$, $p < 0.01$ but the relationship is even stronger. The closer a *child* perceives they are to their teacher the less likely they are to report conflict in the relationship. The *child's* perception of closeness explains 17.64% of variance in *child's* perception of conflict whereas *teacher* perception of closeness explains 7.84% of the variance in the *teacher* perception of conflict. This was a medium effect size. This suggests that developing a close relationship with the child could prevent conflict from developing in the relationship particularly if the child perceives it as close.

2.3.7 Can teacher-child relationship quality moderate the impact of insecure attachment on problem behaviours?

The original aim of this research was to assess whether the teacher-child relationship could moderate the effect of IA on the development of internalising and externalising behaviours. There was no evidence for a significant relationship between internalising behaviour and attachment security. Therefore it was not possible to see whether the teacher-child relationship would moderate this relationship.

There was the expected significant relationship between high levels of externalising difficulties and low attachment security. It was predicted that a high quality relationship that was low in conflict and high in closeness would reduce the association between attachment security and problem behaviours. Similarly a poor quality relationship with high conflict and low closeness may act as a risk factor for those with IA. Moderation analysis was conducted using SPSS after standardising the variables to test this hypothesis.

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As Table 6, 7, 8 and 9 demonstrates there was no significant interaction for any of the relationship variables and no significant moderation found. This suggests that for LSAC having a high quality teacher-child relationship does not appear to protect them from developing externalising behaviours in middle childhood.

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Table 6.

Moderation output to assess whether a teacher perception of conflict can moderate the impact of IA on externalising behaviour.

	<i>B</i>	<i>SEB</i>	<i>β</i>	<i>p</i>
<u>Step one</u>				
Constant	2.78[2.4 – 3.19]	.18		.00***
Attachment security	-.11[- .55 - .32]	.21	-.03	.06
STRS Teacher conflict	2.82[2.43 – 3.25]	.21	.76	.00***
<u>Step two</u>				
Constant	2.82[2.42 – 3.23]	.2		.00***
Attachment security	- .12[- .57 - .31]	.21	-.03	.55
STRS Teacher conflict	2.93[2.41 – 3.45]	.27	.79	.00***
Attachment security x STRS teacher conflict	.21[- .29 - .71]	.25	.06	.35

Step 1: $R^2 = .59$, $F(2, 163) = 116.06^{***}$, Step 2: R^2 change = .003, $F(3, 163) = 77.87^{***}$, * $p < .05$, ** $p < .01$, *** $p < .001$. Contains 95% bias corrected and accelerated confidence intervals in parentheses. Results reported from bootstrap table.

Table 7.

Moderation output to assess whether teacher perception of closeness can moderate the impact of IA on externalising behaviour.

	<i>B</i>	<i>SEB</i>	<i>β</i>	<i>p</i>
<u>Step one</u>				
Constant	2.72[2.24 - 3.23]	.27		.00***
Attachment security	-.53[- 1.12 - .03]	.28	-.15	.06
STRS teacher closeness	-.69[- 1.68 - .03]	.43	-.2	.01*
<u>Step two</u>				
Constant	2.71[2.24 – 3.20]	.27		.00**
Attachment security	-.51[- 1.16 - .01]	.27	-.14	.07
STRS teacher closeness	-.69[-1.72 - .16]	.41	-.19	.01*
Attachment security x STRS teacher closeness	.13[-.75 – 1.09]	.41	.03	.73

Step 1: $R^2 = .06$, $F(2, 164) = 5.26^*$, Step 2: R^2 change .001 = .06, $F(3, 164) = 3.53^*$, * $p < .05$, ** $p < .01$, *** $p < .001$. Contains 95% bias corrected and accelerated confidence intervals in parentheses. Results reported from bootstrap table.

Table 8.

Moderation output to assess whether child perception of conflict can moderate the impact of IA on externalising behaviour.

	<i>B</i>	<i>SEB</i>	<i>β</i>	<i>p</i>
<u>Step one</u>				
Constant	2.72[2.21 – 3.26]	.28		.00**
Attachment security	-.41[-1.03 – .14]	.31	-.12	.18
STRS child conflict	.51[-.13 – 1.17]	.31	.14	.11
<u>Step two</u>				
Constant	2.78[2.22 – 3.34]	.31		.00**
Attachment security	-.48[-1.17 – .16]	.35	-.14	.17
STRS child conflict	.49[-.18 – 1.16]	.32	.14	.13
Attachment security x STRS child conflict	.23[-.40 – .86]	.32	.07	.43

Step 1: $R^2 = .04$, $F(2, 164) = 3.5^*$, Step 2: R^2 change = .005, $F(3, 164) = 2.6$, $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. Contains 95% bias corrected and accelerated confidence intervals in parentheses. Results reported from bootstrap table.

Table 9.

Moderation output to assess whether child perception of closeness can moderate the impact of IA on externalising behaviour.

	<i>B</i>	<i>SEB</i>	<i>β</i>	<i>p</i>
<u>Step one</u>				
Constant	2.72[2.23-3.31]	.28		.00***
Attachment security	-.5[-1.23- .34]	.31	-1.39	.08
STRS child closeness	-.22[-.93 – .49]	.32	-.06	.45
<u>Step two</u>				
Constant	2.73[2.23 – 3.33]	.30		.00***
Attachment security	-.50[-1.22 – .03]	.32	-.14	.08
STRS child closeness	-.22[-.94 – .47]	.32	-.06	.45
Attachment security x STRS child closeness	-.05[-.67 – .66]	.30	-.01	.87

Step 1: $R^2 = .03$, $F(2, 162) = 2.2$, Step 2: R^2 change = .00, $F(1, 161) = 1.47$, $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. Contains 95% bias corrected and accelerated confidence intervals in parentheses. Results reported from bootstrap table.

2.4 Discussion

This study aimed to investigate whether the teacher-child relationship could reduce the likelihood of problem behaviour developing in children with IAs to their caregivers. It was found that attachment security does indeed relate to the expression of externalising difficulties. However this study did not find evidence for a relationship between attachment security and internalising difficulties. Attachment security appears to be associated with relationships with teachers, as those who are more secure have closer relationships to their teachers. It appears that children and teachers have good inter-rater reliability on the quality of the relationship especially when the relationship is close. Teacher perception of conflict was the strongest predictor of behavioural difficulties, with the degree of closeness, and the child's perception seeming to be less important.

Internalising and externalising behaviours were found to co-occur in this research. This suggests that children experience more risk of developing internalising behaviours if they have externalising behaviours and vice versa and thus places them at a higher risk of future mental health difficulties and negative life outcomes. This could indicate that each type of behaviour represents an unhelpful pattern of expressing emotions rather than two distinct difficulties. This supports other research that has found a strong correlation between externalising and internalising behaviours (McConaughy, & Skiba, 1993; Lilienfeld, 2003).

The association between attachment security and externalising and internalising difficulties is well documented (Cohn, 1990; DeMulder et al., 2000; Thompson, 2008; Weinfield et al., 2008). However in this study this association was found for externalising but not for internalising behaviours. If these results were taken at face value it would appear that attachment security contributes to a greater degree to externalising than internalising difficulties in middle childhood but this would need further investigation.

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Alternatively the finding could be attributed to the low level of internalising difficulties in the sample ($M = 2.28$) when compared to the national average ($M = 3.4$). It is also possible that externalising difficulties are more visible to teachers than internalising behaviour. Therefore teachers may have observed these behaviours more, not due to a higher occurrence but, due to the fact that these types of behaviour demand more attention from the teacher. The SDQ conceptualises internalising difficulties as a sum of the 'emotional problems' and 'peer problems' sub-scales and externalising difficulties as a sum of the 'conduct problems' and 'hyperactivity' subscales. The latter would have been a lot more visible within the classroom setting than the former. Therefore it is possible that internalising difficulties have been under reported in the sample weakening any association with IA.

Teacher perception of conflict significantly predicted an increased risk of both externalising and internalising difficulties. Child perceptions of conflict or teacher perception of closeness were relatively less predictive of internalising and externalising difficulties. This supports the research of Ladd and Burgess (2001) who found that conflictual teacher-child relationships were associated with reduced cooperative participation and increased misconduct from kindergarten to first grade. Lipscomb et al. (2014) also found that teacher-child conflict correlated with behavioural problems. The implications of this could be to work with teachers on managing conflict appropriately in classrooms rather than just aiming behavioural interventions just at the child. It could be that certain behaviours lead to an increase in conflict or that conflict leads to an increase in behaviours. Relationships by their very nature are dynamic and interactive so it is likely that there is an interaction between these two factors. It may be helpful, therefore, for interventions to address relationship quality as well as supporting children. .

Nevertheless a close relationship is still important. O'Connor et al (2012) found that high levels of conflict were associated with externalising difficulties and low levels of closeness were associated with internalising difficulties. Therefore, the low rate of internalising difficulties may help to explain the reduced association of closeness to behavioural difficulties in this sample. The

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results also indicate that the closer the teacher-child relationship, the less conflict was found. Achieving a close relationship appears to be associated with less relational conflict which is associated with less externalising behaviours.

Teacher perception of relationship quality seemed to correlate more closely with the measures of difficulties than the *child* perception. Interestingly this does not support the IWM concept, as this would predict that the child's perception of the relationship would impact on their behaviour more than the adult's. However this could be due to the fact that the teacher reported on both child behaviour and relationship quality. Future research could use an independent observer to measure behaviour or ascertain the child's perception of their own behaviour. More self report measures are needed for this age group to enable this to happen. Peer ratings of aggression have also been found to be useful (Hughes, Cavell, & Jackson, 1999).

The findings of good inter-rater reliability for relationship quality from students and teachers contradict the findings of earlier research (Hughes, Cavell & Jackson, 1999). This research found that teachers and children generally agreed on relationship quality, particularly if the relationship was close. However, although still significantly related, there was less agreement on ratings of conflict in the relationship with children perceiving the relationship to be more conflictual ($M=2.44$) than teachers ($M=1.37$). Again this goes against the findings of earlier research. Hughes, Cavell, & Grossman, (1997) found that aggressive children are more likely to rate relationships more positive than their teachers. However Hughes and Cavell used different measures of relationship quality for the child and the teacher. The teacher completed the Teacher Reinforcing Scale (TRS) (Hughes, Cavell & Jackson, 1999) and the child completed the Social Support Appraisals Scale (Dubow, Tisak, Causey, Hyrshko, & Reid, 1991; Dubow and Ullman, 1989). One strength of the current study is the use of the adapted STRS (Bailey, 2014) to enable a similar measure for both teacher and child. This could explain the more consistent results between ratings when compared to other studies that used different measures for the child and the

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teacher. It also could be suggested that any differences between individual ratings could be due to a different interpretation of the Likert scales.

No significant moderator effect was observed in this age group and instead it appears that the teacher-child relationship quality reproduced the care-giver child relationship. This supports previous research that has found this association (Howes and Ritchie, 1999; Sroufe & Fleeson, 1986; Cohn, 1990; DeMulder et al., 2000; Pianta et al., 1997; Rydell et al., 2005; Turner, 1993). This could be seen as support for IWM theory as it suggests that children bring with them an interactional style from their early caregiving experiences to subsequent relationships. Lopez, (1997) found that insecurity in early relationships persisted up as far as university, as those who had IA in early childhood also demonstrated insecure relationships with their professors. Also those who were secure had more favourable academic attitudes and stronger feelings of social integration and emotional connectedness to the university community. This implies that early intervention is vital. Although it is suggested that children's attachment style tends to remain relatively stable (Main, Kaplan, & Cassidy, 1985) there is also evidence to suggest that when adults consciously alter their responsiveness to a child they can impact on their attachment security (Grossmann and Grossmann, 1991; Howes et al. 1998; Weinfield et al. 2000). Therefore teachers need training in attachment theory; in particular IWMs, to try to increase awareness and prevent merely repeating and reproducing conflictual patterns of reacting that could exacerbate the development of behavioural problems.

As seen in Chapter One, there is also evidence to suggest that teachers can moderate and ameliorate the difficulties associated with IA in other age groups (Buyse et al. 2011; Lipscomb et al., 2014, Runions et al, 2014; Hughes Cavell, & Jackson, 1999; Silver et al., 2010). Therefore more research needs to be conducted to ascertain what variables enable some teachers to break this association. In agreement with Sabol and Pianta (2012) we need to start to understand the exact mechanisms by which teachers can act as protective factors. Buyse et al. (2011) propose that one such mechanism is teacher sensitivity. They found that when the teacher demonstrated low

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sensitivity that the quality of mother-child relationship continued into the teacher-child relationship and that it discontinued when the teacher demonstrated a high level of sensitivity.

It is possible that the teacher-child relationship acts as a mediator rather than a moderator, meaning that teacher-child relationship quality may explain the link between parent-child relationship and problem behaviours rather than changing the strength of the relationship. The teacher-child relationship may act as a pathway between low attachment security and problem behaviour and could explain why this association exists rather than the relationship acting as a protective or risk factor, as this research had proposed. Future research could test this association using a more complicated design, such as mediated moderation, that was beyond the scope of the current study. This study chose to focus on the possibility of a moderator relationship because of the potential implications for Educational Psychologists for the support of vulnerable children.

2.4.1 Limitations, future research and implications for practice

Given the potentially sensitive nature of the research, opt-in consent from parents and children was deemed the most appropriate approach. However there are inherent difficulties in parents self-selecting for a study investigating parental relationships and this could have caused a possible bias in recruitment. There was a low response rate at 7.5 % meaning that any moderator effect is possibly reduced compared to if a higher level of response had been obtained. If future research could target or recruit in a way that was more representative of different parent-child relationships then this may overcome this difficulty. There were few children with internalising and externalising difficulties in the sample as demonstrated by below national average levels. As chapter one demonstrates, past research has shown that moderator effects are more often observed in samples that are more at risk of IA (e.g. Lipscomb et al., 2014; Hughes, Cavell, & Jackson, 1999). Although the levels of attachment in this study were comparable to other studies in this field, these studies are also likely to have had the same bias in recruitment of self-selecting parents. A conscious effort to recruit samples of LSAC may increase the likelihood of seeing the benefits of a close teacher-child relationship. As noted earlier eight participants were removed

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from the analysis as they did not complete questionnaires sufficiently (i.e. they had more than five items missing (33.3%) in a questionnaire). This meant that some students who may demonstrate some externalising behaviours were removed from the analysis.

This research focussed on the child's attachment security in isolation. Future research could ascertain a teacher's own level of attachment security and how this might interact with the child's. The interactional impact between these two variables and their influence on the child's IWM would be an interesting consideration, particularly on the level of conflict and closeness of the relationship. Also this study focussed on the student-teacher relationship, however there are many other possible attachment figures within schools that may be able to moderate the impact of IA and act as a protective factor. In fact some children will spend a great deal of their school day with other adults such as teaching assistants, emotional literacy support assistants, nurture group leaders or learning mentors. It is also true that there may be adults from institutions outside of school who can protect against the impact of IA e.g. Youth workers (Grossman & Bulle, 2006). It would therefore be of interest to extend this research to investigate whether other figures within educational settings, or indeed other institutions, could help to moderate the impact of IA on behavioural outcomes. In relation to the concept of attachment hierarchies it will be useful in the future to consider behaviour through multiple levels of influence rather than merely the dyadic relationship model. It may also be interesting to apply the notion of attachment categories (insecure ambivalent, avoidant, disorganized and secure) and assess if they create different teacher-child relationships and how this impacts on their behaviours in class. This may add insight into the types of intervention that would be appropriate for the different categories of attachment.

Considering Bronfenbrenner's (1979) ecological systems model, it appears that teacher perception of conflict is associated with the amount of externalising and internalising behaviours seen. Therefore interventions to address behaviour are best viewed in a holistic way where both the teacher and child are supported. Educational Psychologists could help to train teachers in

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reducing conflict in these relationships, and help to develop knowledge of IWMs, so that teachers are aware of not reproducing negative patterns of interaction with children with IA. Future research could focus on macro ecosystems such as culture and the education system. Culture could influence teacher-child relationships in several ways and could explain the different results from this study and others. The amount of time teachers and children have together varies cross culturally, including when formal education starts, and the length of relationship also varies. Typical practice in the UK is to change teacher every year whereas in Norway, primary school teachers may remain with a class for their first 5 years of education allowing a stronger teacher-child relationship to develop (Schmidt & Cogan, 2001). Longitudinal cross-cultural research would elucidate the impact of these differences. How the teacher and student are perceived in the relationship also varies across cultures. Typically in Western cultures teachers are seen as people who can provide knowledge and develop skills. According to Rubenstein (2006), in China the teacher "is viewed as a moral guide and friend or parent figure with valuable knowledge that is a student's duty to learn" (p.436). Also in Asian cultures there is a higher level of peer support used. In Japanese and Chinese classrooms children who are achieving well will support those who are struggling. Peer-to-peer relationships in this context could therefore be more important in these settings particularly in middle childhood. Also different interactional patterns vary from culture to culture. For example, in Asian countries to look a teacher in the eye would be very disrespectful and intrusive whereas in the U.S. to avoid eye contact could be interpreted as hiding something (Rubenstein, 2006). Further research could investigate these cultural effects on teacher-child relationships and the concomitant pupil behaviour.

Another limitation of this research is the reliance of self-report methods. It would have been useful to be able to triangulate the report of teachers and children with that of an independent observer. Due to the constraints of this research it was not possible to do so, however future research could make use of both observation and self-report methods. There is also a potential difficulty in this study that teachers reported on both the level of conflict and closeness and the children's behaviours. However due to the age of the sample it was not possible

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to use the SDQ youth version. It would be useful and interesting to assess whether if children had rated their behaviour whether this would be different from the teacher's ratings.

Another limitation of the research is that there is little information about the teacher. It would be interesting to know details such as whether the teachers had taught the children before, whether they had sole responsibility for the child or worked with another teacher, their age and level of teaching experience. Future research could investigate the impact of these teacher variables and how they impact on the teacher-child relationship. Also additional demographic information was included in the questionnaires for teachers to answer about the children to establish SES. The majority of teachers did not complete these questions so no conclusions could be drawn from this information and it was not possible to control for SES. Gender is also known to impact on behaviour and teacher-child relationships (McGrath & Van Bergen, 2015) however there were no significant correlations between gender and these outcomes in this study so it was not felt that this was needed to be controlled for. The timing of data collection is also a consideration for future research as it is possible that the teacher-child relationship may improve over the course of the year. The data in this study was collected from three to six months into an academic year. If data collection was conducted towards the end of the academic year this may change the levels of relationship quality found.

Within a critical realist epistemology the current research acknowledges the difficulties of attempting to measure abstract concepts such as relationship quality and attachment. Whether relationships exist between people or whether they can be measured from one person's perspective is debatable. The current study attempted to overcome this by triangulation of both the childrens' and teachers' perspective of relationship quality. This was not the case for the measurement of attachment and future research could ensure to get both adult and child perception of this relationship. What constitutes a positive teacher-child relationship or a secure attachment may be operationalised differently with different measures or indeed individuals' preferences or experiences of these relationships. One person may value different elements of

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relationships from another (e.g. reliability, sensitivity, responsiveness, trustworthiness) which will impact on how positive they perceive the relationship to be. As noted earlier, dependency in the teacher-child relationship was not measured in this study as this is viewed as positive or negative depending upon culture (McGrath & Van Bergin, 2015). So although attempting to measure both attachment and relationship quality this research acknowledges that what constitutes a secure relationship may vary culturally or across individuals and their experiences of that relationship. A social constructivist may argue that it is the individual's experience of the relationship that is important and that therefore a qualitative method may help to elucidate the constructs that teachers and children have about their relationships. As this study is within a critical realist epistemology it recognises these individual differences but also sees that there may be some commonalities in experience that can allow findings to be generalised to a wider population.

Future research could use interviews to help to answer what individuals value in such relationships, what helps to make a positive relationship and what their role is in the relationship. This research could use interviews with children and teachers to elucidate their constructs of teacher-child relationships and how to make them more positive.

This research serves as a caution to teachers to try not to replicate the relationships that children have with their caregivers. The findings suggest that the presence of conflict, as perceived by the teacher in particular, is a bigger risk factor than an absence of closeness. Therefore interventions that support teachers to reduce the amount of conflict in the relationship will hopefully reduce the amount of behavioural problems. A holistic approach where both the child and the teacher receive support to reduce behavioural difficulties would be useful. Behavioural difficulties could be usefully reframed as being part of a relationship rather than merely being placed within the child when it comes to intervention. This supports DeMulder et al. (2000)'s assertion that behaviour must be addressed from a relational perspective.

There is evidence to support this idea as interventions aimed at improving the teacher-child relationship have been found to reduce behavioural difficulties (Morrison, Bennett & Bratton,

2011). There are several interventions aimed at improving the teacher-child relationship e.g. “banking time” (Pianta, 1999) and “Child Teacher Relationship Training” (CTRT, Morrison, Bennett & Bratton, 2011). The current research used a correlational design where cause and effect can only be inferred. A more robust way to ascertain whether teacher-child relationships can indeed reduce problem behaviours for LSAC is to assess the impact of these interventions on behaviour. If an intervention improving in the teacher-child relationship can lessen behavioural difficulties as part of a randomised controlled trial then it can be inferred to be the cause of the improvement.

Morrison, Bennett & Bratton (2011) is one such study. They looked at the impact of Child-Teacher Relationship Training (CTRT) by comparing it to an active control called the ‘conscious discipline’ intervention (Bailey, 2000). They studied the impact of the intervention on 22 preschool children who attended the Head Start programme. The children had been identified as having behavioural problems through teacher completion of the Child Behaviour Checklist (Achenbach, 1991). They found a significant reduction in externalising behaviours in children who received the CTRT intervention compared with the active control group. Although not directly looking at children who have problem behaviours specifically as a result of IA the children were part of the Head Start Programme in America where families were receiving help for alcohol, drugs, suicide, domestic violence and homelessness (Duncan, Brooks-Gunn, & Klebanov, 1994; Knitzer, 2000). Therefore it is probable that these children would have experienced poor caregiving that may have been disrupted, neglectful or abusive. Although promising, more research is needed into the efficacy of these interventions in particular for a population of LSAC.

This research has many implications for Educational Psychologists (EPs) working in schools. EPs could be involved in the training and delivering interventions aimed at improving the teacher-child relationship (such as CTRT, Banking time etc) if future research supports their efficacy. Also EPs are often involved in training in attachment for schools. It will be important during this training that EPs emphasise the concepts of internal working models so that teachers can understand the possible origins of children’s behaviours. This will hopefully encourage a holistic and interactionist view of behaviour rather than a within child model. The way that behaviour is

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perceived and the level of control a child has over their actions will determine how a school decides to react to such behaviour.

It will be important for EPs in their work with schools to emphasise the communicative function of externalising and internalising behaviours. This could be done through the use of the multi-element model (LaVignia & Willis, 1995) which emphasises the underlying function of the behaviour, environmental change, the teaching of new skills, reactive strategies and how behavioural change will be reinforced. This may help EPs in reframing behaviour with some schools as something that is part of an interaction and relationship rather than something that is placed within the child.

EPs can help school to develop positive behaviour management techniques through developing school policies and ethos towards behaviour that includes skill and relationship development in staff and children rather than punitive measures. This will hopefully enable relationships to remain positive even when difficult behaviour is present and prevent escalation. For example, EPs could help to develop restorative justice techniques (McCluskey et al., 2008) within schools which focus on the reparation of relationships after incidents. Also using techniques such as Video Enhanced Reflective Practice (Kennedy, Landor & Todd, 2015) may help teachers to reflect on their interactions with students and how they can increase the positive moments that they have with them in order to develop good relationships.

To conclude, it is clear that the teacher-child relationship is strongly associated with the level of behavioural difficulties observed in school especially if it is marked with conflict. There is promising evidence to suggest that interventions aimed at improving the teacher-child relationship can reduce the observation of externalising behaviours in school. Therefore it is important to intervene not only directly with the child with behavioural difficulties, through skill development but also at the contextual, micro and meso-systems that could help to reduce negative behavioural outcomes. One such area is teacher-child relationship quality. Teachers would benefit for support with reducing and managing conflict at school. Educational

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Psychologists could play a part in ensuring that teachers are aware of the association of NCP and attachment on behaviour and possible ways they can help to break negative cycles of interaction with children. This education may help to ensure that teachers do not merely replicate the relationship quality that children have with their parents.

Appendix A Search terms

The following search terms were entered into PsychINFO and Web of Science via EBSCO host. The search terms were created through establishing the subject words for key articles in this field and using the thesaurus in EBSCO host to create related search terms.

Teacher student interaction OR teacher-child relationship OR teacher student relationship

AND

Aggressive behaviour OR externalising behaviour OR internalising behaviour OR attachment behaviour OR relational trauma

AND

Mother child relations OR mother child relationship OR parent child relations OR parent child relationship OR father child relations OR father child relationship OR early caregiving experiences.

Appendix B Inclusion and exclusion criteria

B.1 Inclusion criteria

- Studies that consider relationships between teacher-child relationship, parent-child attachments and externalising and internalising behaviours.
- Studies in the English language.
- Original research articles.

B.2 Exclusion criteria

Within Web of science the search results were first refined to *articles, reviews* or *clinical trials* and only articles in the *English language* were selected.

Within PsychINFO *dissertations* and *books* were excluded, only *peer reviewed articles* were selected and only those in the *English Language* were then retained.

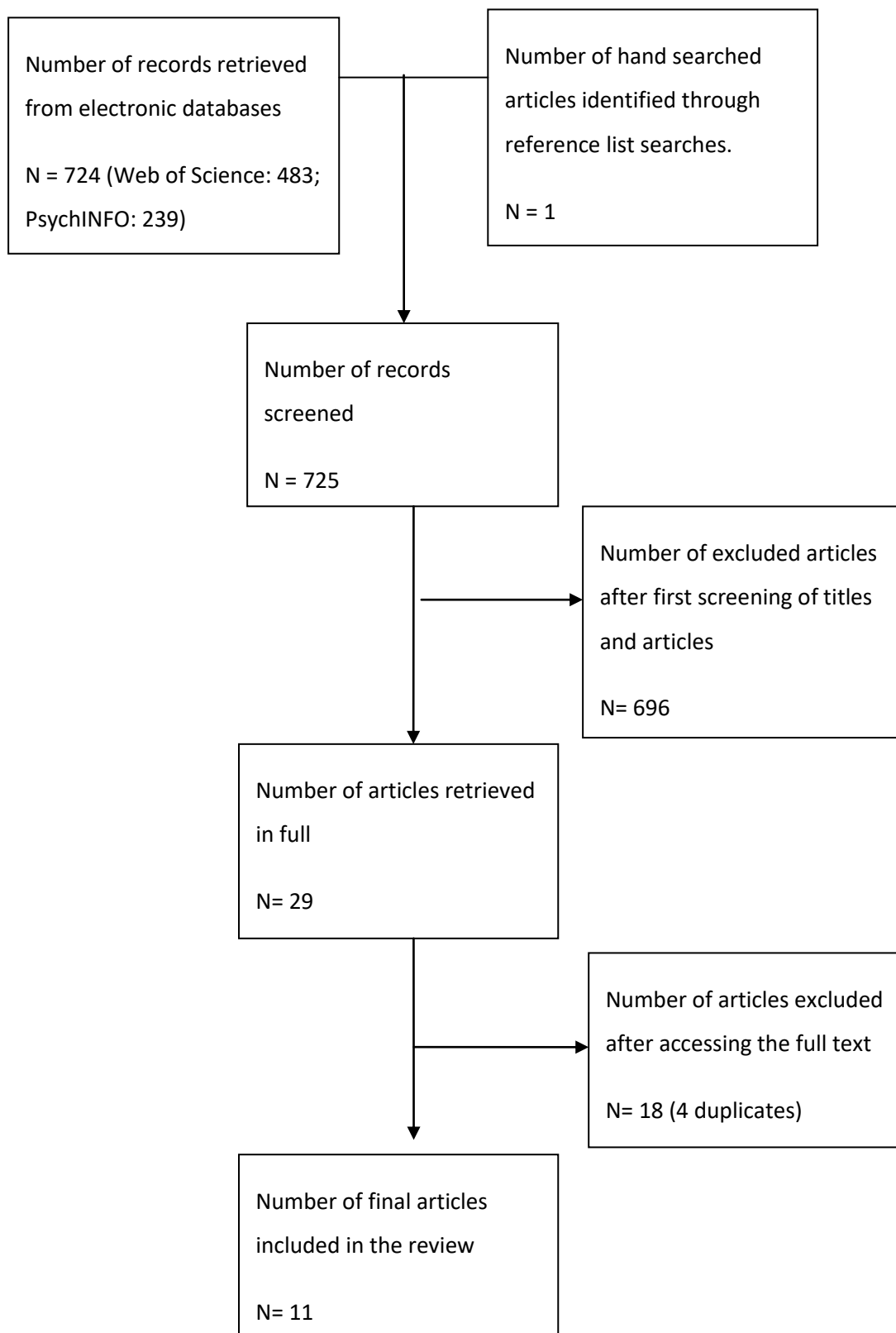
The following exclusions were applied to both databases when analysing the retrieved abstracts from the initial search and then applied to the articles retrieved for the full text:

- Those not in the English language.
- Studies related to behavioural difficulties that were due to a condition such as Autistic Spectrum disorder, Attention Deficit Disorder, Oppositional Defiant Disorder or learning difficulty rather than potential attachment related behaviours.
- Studies that were unrelated to the notion of teacher being a risk or protective factor for vulnerable children (whether or not they reached significance).
- Studies that only looked at the teacher-child relationship impacting on behaviour with no previous risk for behavioural difficulties established particularly through insecure attachment or negative caregiving practices.

APPENDICES

- Studies that only looked at the teacher-child relationship with no impact of parental influence.
- Studies that only looked at parent-child relationship with no impact of the teacher-child relationship.
- Studies that looked at school factors such as sense of belonging but not specifically relationship to teachers.
- Studies that focussed on peer factors or social interaction rather than the teacher-child relationship.
- Studies that focussed on other academic outcomes such as achievement, general school adjustment, peer relationships or school drop-out and not specifically behavioural outcomes.

Appendix C Systematic Flow Diagram



Appendix D Literature review table

Author(s)	Study Details	Participant characteristics	Findings and Conclusions
Buyse, Verschueren & Doumen (2011)	<p>Design: Longitudinal correlation.</p> <p>Measures: Attachment Q sort (Waters & Deane, 1985), Teacher Sensitivity Subscale of the Classroom Assessment Scoring System (CLASS, La Paro, Pianta, & Stuhlman, 2004), STRS (Pianta, 1992) and Child Behaviour Scale (CBS; Ladd & Profilet, 1996).</p> <p>Country: Belgium.</p>	<p>N= 127 children from 19 schools.</p> <p>Gender: 49% male.</p> <p>Age: Mean age for children= 4 years and 11 months (<i>SD</i>=4 months) and for mothers= 36 years and 1 month (<i>SD</i>= 4 years and 10 months.) Mean age for teachers= 41 years and 10 months (<i>SD</i>= 12 years and 9 months).</p> <p>Nationality: 9% with one or more parents who were not Belgian.</p> <p>SES= 83% of mothers and 72 % of fathers had a college or university degree.</p>	<p>Findings: Low levels in preschool mother-child closeness predicted high levels of aggression in kindergarten when there was a low level of teacher-child closeness ($\beta = -.50, p < .001$) this association disappeared with a high level of teacher child closeness ($\beta = -.01, NS$). Thus a high quality teacher-child relationship can buffer children against developing externalising behaviours as a result of early IA.</p> <p>High levels of sensitivity from the class teacher made LSAC no more at risk than their more securely attached peers for low closeness in the teacher-child relationship.</p>
Davidson, & Adams(2013)	<p>Design: Longitudinal design using data from the Gansu Survey of Children and Families.</p> <p>Measures: Child Behaviour Checklist (CBCL) and Youth-Self Report (YSR) (Achenbach, 1991), Junior High Life Experiences Survey (Swearingen & Cohen, 1985), adapted Child Reports of Parenting Behaviour Inventory (Schaefer, 1965), adapted CASSS (Malecki & Demaray, 2002).</p> <p>Controls: Both individual SES (mother's education and family wealth) and community SES (per capita village income and middle School graduation rate) and baseline rates of internalising behaviour at age 9-12.</p>	<p>N=1,659 adolescents.</p> <p>Age: 13 - 16 years old.</p> <p>Gender: males (54%) females (46%).</p>	<p>Findings: The rate of internalising problems increased with age even when the adversity index score remained the same. Parental warmth and teacher support, as perceived by the young people, were found to be compensatory factors. Adolescents with high levels of parental warmth or teacher support had less internalising problems. Adolescents with higher levels of teacher support had lower internalising problems at all levels of parental warmth. However the impact of Teacher support was better at reducing risk of internalising difficulties for adolescents who had high perceived parental warmth.</p>

	<p>Country: China.</p> <p>Theoretical orientation: Ecological systems theory.</p>		
Hughes, Cavell, & Jackson (1999).	<p>Design: longitudinal prospective correlation over three years.</p> <p>Measures: The Child Behaviour Checklist-Teacher Report Form (CBCL-TRF) (Achenbach, 1991), Teacher Reinforcing Scale (TRS (Hughes, 1999), Network of Relationships Inventory (NRI, Furman & Buhrmester, 1985), Social Support Appraisals Scale (Dubow, Tisak, Causey, Hyrshko, & Reid, 1991; Dubow and Ullman, 1989), Peer rated aggression (Masten, Morrison and Pelligrini, 1985) and Parental Acceptance-Rejection Questionnaire (Rohner, 1986).</p> <p>Country: America.</p>	<p>N=61 second and third grade students rated as aggressive (above 84th percentile on CBCL-TRF) by teachers across five schools.</p> <p>N=44 second and third grade teachers.</p> <p>Ethnicity: 49% African American, 38% Caucasian, 11% Hispanic and 3 % other.</p> <p>Gender: 75% boys.</p> <p>SES: 30% of mothers had not completed high school.</p>	<p>Findings: The results demonstrated that the teacher-child relationship quality was of variable stability. It was of limited stability across teachers between year 1 ($r=.28$) and year 2 ($r=.24$). There was <i>ns</i> relationship between teacher and child reports of the quality of the relationship; Year 1 ($r=.23$), Year 2 ($r=.15$) and Year 3 ($r=.11$) The results demonstrated that teachers protected students with rejecting parenting histories, by lessening their aggression, more than for those without rejecting parenting histories. (Fishers $Z=1.62, p=.10$)</p>
Lipscomb, Schmitt, Pratt et al. (2014)	<p>Design: Data study.</p> <p>Measures: Interview with caregivers to establish whether child was in parental or non-parental care and how many hours children spent in child care, Early Childhood Environment Rating Scale—Revised Edition (ECERS-R; Harms, Clifford, & Cryer, 1998) and the Arnett Scale of Teacher Behaviour (Arnett, 1989), STRS (short form; Pianta, 2001), Adjustment Scales for Preschool Intervention (ASPI; Lutz, Fantuzzo, & McDermott, 2002) and Child-Rearing Practices Report (CRPR; Block,</p>	<p>N= 2783 3-4 year olds with a control group of $n=1884$ (data used from Head Start Impact Study (U.S. DHSS, 2010).</p> <p>Gender: 50% female.</p> <p>Age: 4-years-old ($M = 49.37$ months, $SD = 6.85$, range = 33.60–71.67).</p> <p>Ethnicity: Hispanic (37%), Black (32%), and White (32%).</p> <p>Subsample: $N= 215$ children who lived in non-parental care and had experienced an average of 1.27 transitions ($SD = 1.14$).</p>	<p>Findings: There were <i>ns</i> differences between those in parental and non-parental care on process quality, quantity, or teacher–child closeness. However there were significant differences for levels of teacher–child conflict, $t(2577) = -2.27, p = .02$ ($M = 13.65$ in parental care and $M = 14.75$ for non-parental care sample). Levels of Teacher– child closeness, conflict, and prekindergarten quantity of child care were significantly correlated with kindergarten behaviour problems.</p> <p>More conflict in teacher–child relationships</p>

	<p>1965).</p> <p>Controls: sex, age, special needs status, household income, caregiver instability and style.</p> <p>Country: America.</p>	<p>Gender: 50% female.</p> <p>Ethnicity: Hispanic (16%), Black (44%), and White (40%).</p>	<p>predicted significant increases in externalising behaviour problems ($\beta = .11, p < .001$) between prekindergarten and kindergarten.</p> <p>A close teacher–child relationship predicted fewer externalising behaviour problems in kindergarten for children living in non-parental care but not for children from similar backgrounds. However there was no larger impact of teacher–child conflict on externalising behaviour problems for children living in non-parental care than for controls.</p>
Meehan, Hughes, & Cavell (2003).	<p>Design: 2 year prospective experiment.</p> <p>Measures: Network of relationships Inventory (Furman & Burhmester, 1985), Teacher Report Form (Achenbach, 1991), Weinberger Parenting Inventory (Feldman & Weinberger, 1994) and Revised Class Play Method (Masten, Morrison, & Pelligrini, 1985).</p> <p>Controls: Classrooms were randomly assigned to ‘lunch buddy’ or ‘PrimeTime’ interventions. <i>Ns</i> differences in demographic variables between groups.</p> <p>Country: America.</p>	<p>N=140 second and third year children identified by teachers as aggressive across fifteen schools. Mean age= 8.18.</p> <p>Gender: Males <i>n</i>=93 and females <i>n</i>= 47.</p> <p>Ethnicity: 37 % Caucasian, 41% African American and 22 %Hispanic. Teachers <i>n</i>= 39.</p>	<p>Findings: Results did not support the hypothesis that a positive teacher-student relationship moderates the risk of aggressive children from becoming more aggressive due to harsh parenting and discipline. They found that positive teacher-student relationships were more beneficial for ethnic minority students than Caucasian in terms of lessening aggression.</p>
Morrison-Bennett & Bratton (2011)	<p>Design: Experiment to assess the efficacy of Child Teacher Relationship Training (CTRT).</p> <p>Independent Variable: Access to CTRT or active control (Conscious Discipline; Bailey, 2000).</p> <p>Dependent Variable: Level of children’s</p>	<p>N= 24 Headstart teachers randomly allocated to groups.</p> <p>N= 22 preschool children identified as having behavioural difficulties.</p>	<p>Findings: They found a statistically significant reduction in total externalising and internalising behaviours in the CTRT children compared with children in the control group.</p> <p>There was a statistically significant interaction effect of Time (pre, mid and post-test) x Group</p>

	<p>externalising and internalising behaviours.</p> <p>Measures: Child Behaviour Checklist Teacher Report Form (Achenbach, 1991).</p> <p>Country: America.</p>		<p>Membership, ($F(2, 19) = 7.375, p = .004, \eta^2_p = 0.437$) for externalising behaviour. Indicating a statistically significant reduction in difficult behaviour when comparing children in the experimental and control group.</p> <p>Results for internalising behaviour revealed no statistically significant interaction effect of Time x Group Membership ($F(2, 19) = 1.934, p = .172, \eta^2_p = 0.169$.) Authors argue that although <i>ns</i>, CTRT did demonstrate a large treatment effect ($\eta^2_p = 0.169$) on children's internalising behaviour problems over time compared with the control group.</p>
<p>O'Connor, Scott, McCormick, & Weinberg(2014)</p>	<p>Design: longitudinal correlation of data collected at first, third and fifth grade. Data from the NICHD Study of Early Child Care and Youth Development were used.</p> <p>Measures: The parent version of Child Behaviour Checklist (CBCL, Achenbach, 1991), Attachment Q set (Waters & Deane, 1985), Modified strange situation procedure (Cassidy, Parke, Butkovsky, and Braungart (1992), STRS (Pianta, 1992) and the Child-Parent Relationship Scale (CPRS; Pianta, 1994).</p> <p>Controls: family income, race/ethnicity and gender.</p> <p>Country: America.</p>	<p>N: 1364 mothers and children.</p> <p>Gender: Not stated.</p> <p>Ethnicity: 24% ethnic minority.</p> <p>SES: 11% mothers without a high School education and 14% single mothers at child's birth.</p>	<p>Findings: They found that concurrent teacher child conflict ($B = 0.20, p < .05$), mother child conflict ($B = 1.29, p < .01$) and mother child closeness ($B = -0.35, p < .01$) significantly predicted internalising behaviours in middle childhood. Similarly concurrent teacher-child conflict ($B = 0.57, p < .01$), mother-child conflict ($B = 2.65, p < .01$), mother-child closeness ($B = -0.25, p < .05$) and lagged mother-child conflict ($B = 0.34, p < .01$) and lagged teacher-child conflict ($B = 0.25, p < .01$) significantly predicted externalising behaviours in middle childhood.</p> <p>There were <i>no</i> interactions between early attachment and subsequent caregiving experiences on internalising and externalising behaviours. They found that the avoidant attachment style was most likely to predict internalising behaviours in middle childhood.</p>

O'Connor et al. (2011)	<p>Design: longitudinal correlation of data collected at first, third and fifth grade. Data from the NICHD Study of Early Child Care and Youth Development were used.</p> <p>Measures: The parent version of Child Behaviour Checklist (CBCL, Achenbach, 1991), Attachment Q set (Waters & Deane, 1985), Modified strange situation procedure (Cassidy, Parke, Butkovsky, and Braungart (1992), STRS (Pianta, 1992) and the Child-Parent Relationship Scale (CPRS; Pianta, 1994).</p> <p>Controls: family income, race/ethnicity and gender.</p> <p>Country: America.</p>	<p>N=1,264 children</p> <p>Gender: Not stated.</p> <p>Ethnicity: 24% ethnic minority,</p> <p>SES: 11% mothers without a high school education and 14% single mothers at child's birth.</p>	<p>A good quality teacher-child relationship protected those at risk from developing internalising behaviours in middle childhood. The same was not found for externalising behaviours.</p>
Runions, Vitaro, Cross, Boivin, Shaw, & Hall (2014)	<p>Design: Two part growth modelling and cross-lagged panel analysis.</p> <p>Measures: Social Behaviour Questionnaire (SBQ; Tremblay, Loeber, Gagnon, Charlebois, Larivée, & LeBlanc, 1991), Scale from Child Rearing Practices Report (Roberts, Block & Block, 1984) and STRS (Pianta, 1992).</p> <p>Controls: Parent education and gender.</p> <p>Country: Perth, Australia.</p>	<p>N =374 pre-kindergarten (4 years old) children followed into first grade (followed for two years).</p> <p>SES: 12 Randomly selected schools with high, middle and low SES areas. 20% of parent raters had completed high school.</p> <p>Home language: 97% spoke English at home.</p>	<p>Findings: Boys were significantly more aggressive than girls in prekindergarten but not in first grade. Parent rating of aggression significantly decreased over time ($B = -.03$, $SE = .01$, $p = .003$). Parental warmth was associated with low levels of early aggression. Being male was the most significant predictors of early aggression. The teacher-child relationship became more important as children progressed through school. Parenting was the most important on school entry however the teacher-child relationship becomes relatively more important over time to the level of aggressive behaviour.</p>
Silver, Measelle, Armstrong et	<p>Design: Growth Mixture Modelling with longitudinal design from kindergarten to fifth</p>	<p>N= 241 children.</p> <p>Gender: 124 female.</p>	<p>Findings: They identify three trajectories of externalising behaviour including chronic high,</p>

<p>al.(2010)</p>	<p>grade.</p> <p>Measures: Preschool Behaviour Questionnaire (Behar & Stringfield, 1974a,b), 2-hour home visit involving 13 tasks designed to assess child temperament (Goldsmith et al., 1993) and three mother–child interaction tasks (Clark, 1999),Block Child-rearing Practices Report (Block, 1965), Child Adaptive Behaviour Inventory (CABI; Cowan, Cowan, Heming, & Miller, 1995), shortened version STRS (Pianta, 1996; Pianta, Steinberg, & Rollins, 1995) and Mental Health Subscales of the MacArthur Health and Behaviour Questionnaire (HBQ) (Ablow et al., 1999).</p> <p>Controls: SES.</p> <p>Country: America.</p>	<p>Age: average age was 4.6 years old (range= 4.5 to 5.1).</p> <p>Ethnicity=European American (90.0%), African American (3.3%), Native American (2.5%), Latino (1.6%), Asian American (1.2%), and other (1.2%).</p> <p>SEN: 6.8% had had an Individualized Educational Plan (IEP) in kindergarten rising to 8.2% by 5th grade.</p> <p>SES: Mean family income in preschool=\$71,055 (range \$20,800 to \$300,000). 92.1% of mothers lived with the child's biological father; 68.3% of mothers were in work.</p>	<p>low, and low increasing. Those in the chronic high group were more likely to have experienced high amounts of maternal negativity, decreased child care assistant closeness, increased conflict with their childcare provider, decreased teacher–child closeness and decreased peer acceptance. The higher the teacher-child conflict the higher the odds of a child being in either the Chronic High or Low Increasing trajectories.</p>
<p>Wang, Brinkworth & Eccles(2013)</p>	<p>Design: Longitudinal correlation (5 years).</p> <p>Measures: Children’s Depression Inventory (Kovacs, 1992). Misconduct measure (Elliott, Huizinga, and Menard, 1989), teacher–student relationship scale adapted from the School Climate Survey (Feldlaufer, Midgley, & Eccles, 1988; Haynes, Emmons, & Ben-Avie,2001), the short form of the Early Adolescence Temperament Questionnaire—Revised (EATQ-R; see Putnam, Ellis, & Rothbart, 2001) and eight-item conflict subscale adapted from the Family Management Study (Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999).</p>	<p>N=1,400 adolescents.</p> <p>Gender: 52% female.</p> <p>Age: Wave 1 <i>M</i> age = 12.9 years; Wave 2 <i>M</i> age = 14.5 years; Wave 3 <i>M</i> age = 17.1years; and Wave 4 <i>M</i> age = 18.3 years.</p> <p>Ethnicity: 51% Black, 44%White.</p> <p>SES: ranging from \$20,000 to \$95,000 and 86% of primary caregivers in employment. 54% of primary caregivers were high school graduates.</p>	<p>Findings: An early high level of effortful (age 13) decreased the likelihood of depression between ages 13and 18. Conflictual parental relationship at age 13increased rates of depression and misconduct from ages13–18. They found a significant interaction of teacher–student relationship with effortful control on rates of depression over time. Adolescents who had low effortful control and poor quality teacher–student relationships engaged in the most challenging behaviour from ages 13–18 (simple slope =.29, $p < .001$).Adolescents with raised conflict with parents who also had negative teacher–student relationship reported the most conduct problems</p>

	Controls: Gender, ethnicity and SES. Country: America.		whereas those having positive teacher–student relationships reported fewer conduct problems.
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Appendix E Security Scale

What I am like with my Mother

Instructions (to be read out and given to the child)

This questionnaire is what you are like with the person who looks after you the most. Like how you act or feel about them. For most kids, this is usually their mum. However, for some kids this can be their dad or another adult. If it is not your mum answer the questions thinking about that person. Please write which of these people you are writing about in the box below. For example 'my mum or my dad'.

Please write which of these people you are writing about i.e. mum or my Dad in the box above. Each question talks about two kinds of kids, and we want to know which kids are most like you. Decide first whether you are more like the kids on the left side or more like the kids on the right side, then decide whether that is sort of true for you, or really true for you, and circle that phrase. For each question you will only circle one answer. Let's try a practice question.

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Person I am writing about:

Really True
for me

Sort of True
for me

Sort of
True for
me

Really True for
Me

Practice Question

☐
☐

Some kids would
rather play sports in
their spare time

BUT

Other kids would
rather watch T.V

☐
☐
☐
☐

Some kids find it easy
to trust their mum.

BUT

Other kids are not
sure if they can trust
their mum.

☐
☐
☐
☐

Some kids feel like
their mum interrupts
them a lot when they
are trying to do things.

BUT

Other kids feel like
their mum lets them
do things on their
own.

☐
☐
☐
☐

Some kids find it easy
to rely on their mum
for help.

BUT

Other kids think it's
hard to rely on their
mum.

☐
☐
☐
☐

Some kids think their
mum spends enough
time with them.

BUT

Other kids think their
mum does not spend
enough time with
them.

☐
☐
☐
☐

Some kids do not
really like telling their
mum what they are
thinking and feeling.

BUT

Other kids do like
telling their mum what
they are thinking and
feeling.

☐
☐
☐
☐

Some kids do not
really need their mum
for much.

BUT

Other kids need their
mum for a lot of
things.

☐
☐

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<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish they were closer to their mum	BUT	Other kids are happy with how close they are to their mum.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids worry that their mum does not really love them	BUT	Other kids are really sure that their mum loves them	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel like their mum really understands them.	BUT	Other kids feel like their mum does not understand them.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids are really sure their mum will not leave them.	BUT	Other kids sometimes wonder if their mum might leave them.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids worry that their mum might not be there when they need her.	BUT	Other kids are sure their mum will be there when they need her.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids think their mum does not listen to them.	BUT	Other kids do think their mum listens to them.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids go to their mum when they are upset.	BUT	Other kids do not go to their mum when they are upset.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their mum would help them more with their problems.	BUT	Other kids think their mum helps them enough.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel better when their mum is around.	BUT	Other kids do not feel better when their mum is around.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F Student Teacher Relationship Scale (Teacher version)

Child: _____ Teacher: _____

Year: _____

Eligible for free school meals: _____ Pupil Premium: _____

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child. Using the scale below, circle the appropriate number for each item.

Definitely does not apply	Not really	Neutral, not sure	Applies somewhat	Definitely applies
1	2	3	4	5

1	I share an affectionate, warm relationship with this child.	1	2	3	4	5
2	This child and I always seem to be struggling with each other.	1	2	3	4	5
3	If upset, this child will seek comfort from me.	1	2	3	4	5
4	This child is uncomfortable with physical affection or touch from me.	1	2	3	4	5
5	This child values his/her relationship with me.	1	2	3	4	5
6	When I praise this child, he/she beams with pride.	1	2	3	4	5
7	This child spontaneously shares information about himself/herself.	1	2	3	4	5
8	This child easily becomes angry with me.	1	2	3	4	5
9	It is easy to be in tune with what this child is feeling.	1	2	3	4	5
10	This child remains angry or is resistant after being disciplined.	1	2	3	4	5
11	Dealing with this child drains my energy	1	2	3	4	5

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1 2 .	When this child is in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
1 3 .	This child's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
1 4 .	This child is sneaky or manipulative with me.	1	2	3	4	5
1 5 .	This child openly shares his/her feelings and experiences with me.	1	2	3	4	5

Appendix G Student Teacher Relationship Scale Revised (Child Version)

Think about how you feel about your teacher.

Tick the box that applies to your relationship with your teacher.

Your teacher will not see your answers.

Scale:

	Definitely does not apply/ not true	Not really	Neutral Not sure	Applies somewhat	Definitely applies/true	
x						✓
	1	2	3	4	5	

	1	2	3	4	5
	x	<hr/>			✓
1. I have a good relationship with my teacher					
2. I seem to always struggle with my teacher					
3. When I am upset, I can go to my teacher for support and comfort					
4. I feel uncomfortable if my teacher stands too close to me					
5. I value my relationship with my teacher					
6. I feel proud when my teacher praises me					
7. I like sharing my information about myself with my					

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teacher					
8. I find it easy to get angry with my teacher					
9. My teacher understands how I am feeling in class					
10. If my Teacher tells me off, I feel angry or upset for a long time afterwards					
11. I can tell my teacher how I feel and what I've been doing					
12. My teacher gets angry easily					
13. When I am in a bad mood with my teacher it takes me a long time to get over it					
14. The way I feel about my teacher can change quickly					

Appendix H Information sheet and consent form for Head Teachers



Dear Head Teacher,

Our names are Beth Turner and Sarah Delo. We are both third year trainee educational psychologists from the University of Southampton. We are writing to request the opportunity to carry out a piece of research in your school for our thesis.

The aim of the study

We are investigating how parent and teacher relationships support children to be curious in their learning and confident in their friendships and approach to their environment. We are particularly interested in the role that teachers, through their relationships with children, can play in promoting the development of positive behaviours, wellbeing and self-concept (the feelings the children have towards themselves).

What will happen if my school takes part?

The study would involve children from years 3-6 completing three short paper questionnaires on their relationships with their teacher and a parent and how they feel about themselves. Completion should take no longer than 20 minutes. We would require your permission to do this during the school day. We would also require access to a quiet room for the child to complete the questionnaires. One of us would be available in the room to provide further assistance if there were any difficulties or questions about the study.

Should you decide to take part, teachers will also be asked to fill in a short questionnaire about their relationship with each child in the study and a questionnaire on that child's behaviour in class. This should take no more than 5 minutes per child.

We will provide a letter to parents/guardians explaining the study and ask parents/guardians to consent to their children taking part in the study. After the study we will fully debrief the children and the parents/guardians via letters. We can also provide copies of the questionnaires to the school should parents want to see them before they choose to allow their child to take part in the study.

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I understand that taking part may cause some disruption to the school day but in return I would like to offer an information pack about ways of supporting children with attachment difficulties in the classroom.

If you want to take part in this study please return the slip below to Beth Turner and Sarah Delo Building 44a, University of Southampton, SO17 1BJ, UK by the _____

If you have any questions about the study, please do not hesitate to contact Beth Turner on bt1g13@soton.ac.uk or Sarah Delo on sld2g13@soton.ac.uk and we can arrange a meeting to discuss any queries you have in person.

Yours sincerely,

Beth Turner and Sarah Delo
Trainee Educational Psychologists
University of Southampton

CONSENT FORM (25.09.15, version 1.2)

Researcher name: Beth Turner and Sarah Delo

Study reference: 14723

Ethics reference:

Please initial the box(es) if you agree with the statement(s):

I have read and understood the letter above (Version 1.2, 25.09.15)

And I have had the opportunity to ask questions about the study

I agree to take part in this research project and agree that the researchers

May assess children during their school attendance

**I understand that families that meet the requirements of the study
will be approached via letters being sent home with the child, and an
“opt in” option to the parents would be provided**

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**I understand the school's participation is voluntary and
we may withdraw at any time without any legal rights being affected**



Name of School Establishment (print name) _____

Name of Consenting Head Teacher (print name)_____

Signature of consenting Head Teacher_____

Date : _____

Appendix I Information and consent for Teachers



(Version 1.3, 25/09/15)

Dear Teacher,

Our names are Beth Turner and Sarah Delo. We are both third year trainee educational psychologists from the University of Southampton. We are writing to inform you on a study we are conducting in your school on how parent and teacher relationships support children to be curious in their learning, and confident in their friendships and approach to their environment.

We are particularly interested in the role that teacher relationships can play in promoting the development of their pupils positive behaviours, wellbeing and self-concept (the feelings a child has towards themselves).

This will involve completing two short questionnaires. You will be asked about some of the children in your class regarding their behaviour and your relationship to them. This should take no longer than 5 minutes per child. We will provide you with the questionnaires during our visit to the school and you will have approximately two weeks to complete and return them to us (in a stamped addressed envelope we will provide) or we can collect them at an agreed time.

Personal information will not be released to or viewed by anyone other than the researchers involved in this project, and the results of this study will not include your name or any other identifying characteristics.

Completion and return of these questionnaires will be taken as evidence of you giving informed consent to be included as a participant in this study and for your data to be used for the purposes of research. The published results of this research project will maintain

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your confidentiality and any participation is voluntary and you may withdraw at any time.

A summary of this research project will be supplied to you upon request. To request a project summary or If you have any questions please contact Beth Turner at bt1g13@soton.ac.uk.

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 3856, email fshs-rgo@soton.ac.uk.

Yours Sincerely,

Beth Turner and Sarah Delo

Trainee Educational Psychologists

Appendix J Information sheet and consent form for Parents

Dear Parent/Guardian,



Invitation to take part in a research project: Can relationships with teachers help children to increase positive behaviours and self-concept (how the child views themselves) in middle childhood?

Our names are Beth Turner and Sarah Delo. We are both studying on a Doctoral programme in Educational Psychology. We are writing to you to ask your permission for your child to be involved in a research project with The University of Southampton. Before you decide whether you want your child to take part in the study, here is the key information that you should know:

What is the purpose of this study?

We are investigating how parent and teacher relationships support children to be curious in their learning, and confident in their friendships and approach to their environment. We would like to investigate how children's relationships with those around them (i.e. parents and teachers) impact on their wellbeing in school and allow them to develop positive learning behaviours and self-concept (how they view themselves).

Why has my child been invited?

All children from year 3 to 6 are being asked to take part in this study.

What will happen to my child if I take part?

If you are happy for your child to take part in this research they will complete three quick surveys (approximately 5-20 minutes) in school asking them about their relationships to key people in their life. If your child has difficulty with reading then the questions can be read out the researcher. A researcher will be present at each session to support your child should they need the question explaining.

After the questionnaires, your child will complete an activity regarding their three best memories at school. We will then check whether your child has any questions before we finish. We will also send home contact details for ourselves should you have any further

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questions. Their teacher will also complete two short parallel questionnaires about your child.

Are there any benefits in my taking part?

This research will help to add to the field of Psychology and Education's current understanding of the extent to which teacher-student relationships can help student learning and wellbeing in the classroom. This research could potentially lead to further support from teachers for children in schools.

Are there any risks involved?

We have tried to ensure that the questions in this study do not cause any distress. However, it is possible to experience some anxieties when completing questionnaires about relationships, and support is available from the class teacher and a researcher who will be present. Every endeavour will be taken to make pupils feel comfortable and they will be able to withdraw from the research at any point.

What will happen with the results from this research?

The results will be written up in our thesis and we will provide the school with a summary of the study that parents can access through members of school staff.

What do I have to do?

If you are happy for your child to take part in this study, then you should fill out the consent form below and send it back to school.

If you would like to see a copy of the questionnaires before you decide if you want your child to be involved in this study, a copy will be available at school for parents to look at. If you wish to do this please ask your child's class teacher or a member of staff to give you access to the school's copy.

Will my child's participation be kept confidential?

Yes your child's responses will be kept on a password-protected computer. Your child's personal details will not be included in the write up.

What happens if something goes wrong?

This piece of research has been reviewed and approved by The University of Southampton's Ethics Committee. In the unlikely case of concern or complaint please

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contact the Research Governance Manager (02380 595058, or email: fshs-rgo@soton.ac.uk)

Where can I get more information?

Should you wish to discuss the study in further detail please contact Beth Turner on bt1g13@soton.ac.uk.

IF YOU ARE HAPPY FOR YOUR CHILD TO TAKE PART IN THIS STUDY PLEASE COMPLETE THE CONSENT FORM BELOW BY _____

CONSENT FORM (26.07.15, version 1.1)

Research: Can relationships with teachers help children to increase positive behaviours and self-concept (how the child views themselves) in middle childhood?

Researchers name: Beth Turner and Sarah Delo

Study reference:

Ethics reference: 14723

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (26.07.15, Version 1,1) about my child's participation in this study and have had the opportunity to ask questions about the study.

☐

I agree for my child to take part in this research project and agree for my data to be used for the purpose of this study

☐

I understand my child's participation is voluntary and that they may withdraw at any time without their legal rights being affected

☐

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Data Protection

I understand that information collected about my during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of Child: _____ Child's Date of birth: _____

Name of parent/guardian: _____ Signature: _____

Relationship to child: _____ Date _____

Appendix K Information sheet and consent form for children



Hello,

My name is (Sarah Delo/Beth Turner) from the University of Southampton. I am here to ask you if you would mind answering some questions for a research project that I am working on.

I am looking at children's relationships with their parents and their class teachers and how this might affect them at school.

You do not have to take part in this activity. If you do not want to then please tell an adult that you would like to go back to class. You can go back to class at any point during this session. If you have any questions please ask them now.

If you are happy to help us with this study, please circle the yes or happy face (😊) if you agree with the questions below:

😊 YES 😞 NO

Have you read about this project above?	😊 OR 😞
Has someone talked to you about this project?	😊 OR 😞
Do you understand what this project is about?	😊 OR 😞
Have you asked all the questions that you want?	😊 OR 😞
Do you know that it's okay to stop taking part at any time?	😊 OR 😞
Are you happy to take part?	😊 OR 😞

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Survey Number: (Added by researcher)

Age: _____

Boy OR Girl?

School: _____

Class teacher: _____

Appendix L Child debriefing Form



Can relationships with teachers help children to increase positive behaviours and self-concept (how the child views themselves) in middle childhood?

Child Debriefing Statement (verbal and written) (Version 1.1, 26.07.15)

Thank you very much for your help with my project. The aim of this research was find out how important teachers are in helping young children to be comfortable in class and be confident learners. Just to remind you that your answers will not be shared with anyone. Does anyone have any questions before I let you go back to class? If you feel that you want to talk about anything the questionnaires have brought up for you let your teacher know or you can speak to me afterwards.

Thank you again for helping me with my project

If you or your parent/guardian wish to have a copy of the research findings or if you or your parent/guardian have any further questions please contact either Beth Turner at bt1g13@soton.ac.uk or Sarah Delo at sld2g13@soton.ac.uk

Thank you for your participation in this research.

If you or your parent/guardian have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 3856, email fshs-rso@soton.ac.uk

Appendix M Teacher debriefing statement

Can relationships with teachers help children to increase positive behaviours and self-concept (how the child views themselves) in middle childhood?

Teacher's Debriefing Statement (Version 1.1, 26.07.15)

The aim of this research was to explore the role that teacher relationships can play in promoting the development of their pupils positive behaviours, wellbeing and self-concept (the feelings a child has towards themselves).

It is expected that teachers can act as a protective factor for vulnerable students in particular those who do not feel secure in their relationships. Your data will help our understanding of the importance of the teacher-student relationship especially for vulnerable students.

Once again results of this study will not include your name or any other identifying characteristics. The research did not use deception. If you wish to have a copy of the research findings or if you have any further questions please contact either Beth Turner at bt1g13@soton.ac.uk or Sarah Delo at sld2g13@soton.ac.uk

Thank you for your participation in this research.

Signature _____ Date _____

Name

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 3856, email fshs-rso@soton.ac.uk

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