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UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL, HUMAN AND MATHEMATICAL SCIENCES

School of Psychology

Intervening Effectively at Home and in School to Improve Children's Social, Emotional and Behavioural Outcomes: An Evaluation of Nurture Group and Attachment-Based Approaches.

by

Larissa Jade Cunningham

Thesis for the degree of Doctor of Educational Psychology

July 2017

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

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INTERVENING EFFECTIVELY AT HOME AND IN SCHOOL TO IMPROVE CHILDREN'S SOCIAL, EMOTIONAL AND BEHAVIOURAL OUTCOMES: AN EVALUATION OF NURTURE GROUP AND ATTACHMENT-BASED APPROACHES.

Larissa Jade Cunningham

Stable, caring relationships in early life are fundamental to children's healthy development (National Scientific Council on the Developing Child, 2010). The importance of parent-child attachments is increasingly being emphasised within the wider socio-economic and political context (Meins, 2017), particularly in terms of policy development and intervention. As such, it is pragmatic and valuable to evaluate the effectiveness of interventions derived from attachment theory.

A systematic review of the literature was conducted to examine the efficacy of attachment-based interventions for biological parent-child dyads on children's emotional, behavioural and relational outcomes. 15 of the 19 studies reviewed reported positive change for children in terms of enhanced attachment security, improved internal mental representations of themselves and their caregivers, increased responsiveness and communication with their caregivers and a reduction in externalising behaviours. However, a number of methodological limitations were identified. These included a lack of objectivity in the measures used and limited follow-up data on children's outcomes. Accordingly, Educational Psychologists (EPs) should reflect carefully before recommending attachment-based interventions and ensure due consideration is given to other factors which may be impacting on children's functioning, beyond their attachment style. Directions for future research include the use of longitudinal study designs and the use of more objective measures completed by a range of individuals. A review of qualitative studies as well as consideration of outcomes for parents would also enable an

increased understanding of the mechanisms by which attachment-based interventions may be working.

The empirical paper utilised a mixed-methods design to explore the impact of Nurture Group (NG) intervention on children's social skills. NGs are a short-term, psychotherapeutic intervention which aim to provide reparative attachment experiences for children within an educational setting (Hughes and Schlösser, 2014). The social skills of 16 children (aged between 6 years and 9 years 9 months) were assessed through their verbal responses to hypothetical, challenging, social situations. Teachers also rated children's social skills in problematic, social situations. The Parent-Child Relationship Scale (Pianta, 1992) was completed by parents to assess whether there were any benefits of NGs to the parent-child relationship. Measures were completed prior to children joining the NG and again 15 weeks later. Thematic analysis of six semi-structured interviews with children was conducted to explore their experiences and perceptions of NG intervention in relation to their social skills. Findings suggested that over time, children used significantly more socially appropriate responses. Teachers' ratings of children's social skills also improved, although this change fell just short of statistical significance. There was no change in parental perceptions of the parent-child relationship. Children's own views of NGs suggested that they enjoyed attending and that NGs helped them improve their social skills. However, children also reported experiencing challenges engaging with peers outside of the NG, particularly on the playground. Implications for practice were highlighted, including the need to think about how practitioners can help to facilitate the generalisation of children's developing skills beyond the NG context.

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DECLARATION OF AUTHORSHIP

I, Larissa Jade Cunningham declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

Intervening Effectively at Home and in School to Improve Children's Social, Emotional and Behavioural Outcomes: An Evaluation of Nurture Group and Attachment-Based Approaches.

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 (index of internal consistency)
CBCL	Child Behaviour Checklist (Achenbach and Rescorla, 2000)
CI	Confidence interval
CPP	Child-Parent Psychotherapy
CPRS-SF	Child Parent Relationship Scale Short Form (Pianta, 1992)
CRPM	Child Role Play Measure (Dodge, McClaskey & Feldman, 1985)
d	Cohen's effect size
D	Kolmogorov-Smirnov statistic
EAS	Emotional Availability Subscales (Biringen, Robinson & Emde, 1998)
ELSA	Emotional Literacy Support Assistant
EP	Educational Psychologist
F	F distribution (F statistic from ANOVA)
IPP	Infant-Parent Psychotherapy
KS	Kolmogorov-Smirnoff test
M	Mean
MTP	Mothers and Toddlers Program (Suchman, DeCoste, Castigilioni, McMahon, Rounsaville & Mayes, 2010)
N	Total number of cases
NCAST	Nursing Child Assessment Satellite Training (Kelly, Zuckerman & Rosenblatt, 2008)
NG	Nurture Group
η^2	Eta-squared
η_p^2	Partial-eta squared

p	Probability (significance of a test statistic)
PALME	Parental training for Lone Mothers guided by Educators (Franz, Weihrauch, Buddenberg & Schafer, 2009)
PFR	Promoting First Relationships (Kelly, Zuckerman & Rosenblatt, 2008)
PHV	Parental home visitation
PIP	Parent-Infant Psychotherapy
PRISMA	Preferred reporting items for systematic reviews and meta-analyses
r	Estimate of the Pearson product-moment correlation coefficient (an effect size)
RCT	Randomised controlled trial
RCI	Reliable change index (Jacobson and Traux, 1998)
RFTS	Right From The Start (Niccols, 2008)
SD	Standard Deviation
SDQ	Strengths and Difficulties Questionnaire (Goodman, 1997)
SPSS	Statistical package for the social sciences
t	Statistic from t-test
TA	Thematic analysis
TOPSS	Taxonomy of Problematic Social Situations (Dodge, McClaskey & Feldman, 1985)
TPP	Toddler-Parent Psychotherapy
UK	United Kingdom
VIPP	Video-feedback Intervention to Promote Positive Parenting (Juffer, Bakermans-Kranenberg & van Ijzendoorn, 2007)
VIPP-SD	Video-feedback Intervention to Promote Positive Parenting and Sensitive Discipline (van Zeijl et al., 2006)

χ^2	Chi-square statistic

Chapter 1: Attachment-Based Interventions for Biological Parent-Child Dyads: A Systematic Review of Emotional, Behavioural and Relational Outcomes for Children.

1.1 Introduction

It is widely accepted that the quality of interactions and continuity of responsiveness by a significant caregiver throughout infancy and childhood are important factors affecting children's development, particularly their problem-solving, language and socio-emotional skills (Jones, Erjavec, Viktor, & Hutchings, 2016; Shonkoff, 2011). Developed by John Bowlby (Bowlby, 1969, 1973, 1980), attachment theory offers an informative framework for understanding the role the parent-child relationship plays in promoting children's development. Over the years, attachment theory has been influential in bringing about changes to child-care policies and practice, including changes to pre-school and hospital care for children, fostering and adoption practices and court rulings relating to parental divorce and separation (Slater, 2007).

The importance of parent-child attachments is increasingly being emphasised within the wider social, economic and political context (Meins, 2017). Within the research literature, there is some evidence to suggest that a secure attachment is predictive of fewer externalising and internalising behaviours (e.g. Groh et al., 2016) and greater social competence, including peer relationships (e.g. Groh et al., 2014). However, these findings are based on complex meta-analyses which combine the results from various different, and potentially incomparable, studies and should, therefore, be interpreted with awareness of their limitations. In particular, Meins (2017) argues that more thoughtful restraint should be exercised with regards to interpretations of the evidence aimed at the wider public (such as assumptions that if a secure attachment is predictive of more positive outcomes, insecure attachments must lead to poorer outcomes for children).

One could argue that the evidence which associates secure attachment with more positive later outcomes is rooted in a reductionist and deterministic view of attachment and social, emotional and behavioural functioning. It is acknowledged that this evidence has generally arisen from empirical designs where researchers have simplified human

constructs and world phenomena into limited forms (such as fixed-choice answers on short questionnaires). Conversely, from a constructivist perspective, attachment or social, emotional and behavioural functioning are complex constructs which are influenced by individual perception (Kelly, 1955) and many interacting factors in the ecological systems within which humans exist (Bronfenbrenner, 1979). Possible interacting factors could be at the individual child level (e.g. personality, temperament) (Sanson, Hemphill & Smart, 2004); the family level (e.g. the home environment, family income, parenting practices, parental mental health, family structure) (Berger, Paxon & Waldfogel, 2009; Bornstein, 2002) and the community level (e.g. educational settings, teacher-child relationship, relationships with peers, teacher expectations, support services) (Silver, Measelle, Armstrong & Essex, 2010), all of which are influenced by the wider social, economic, and political context.

Regardless of the epistemological and ontological stance that is taken towards attachment, it remains pragmatic and valuable to evaluate the effectiveness of interventions derived from attachment theory. Therefore, the author has conducted this literature review from an attachment perspective, although it is acknowledged that, in seeking to improve children's emotional, behavioural and relational[1] functioning, enhancing the parent-child relationship is only one possible point of intervention. The review will firstly provide a brief summary of attachment theory and the proposed influences, specifically parental factors, which may impact on the quality of parent-child relationships. Attachment-based interventions which aim to enhance the quality of the parent-child relationship will then be discussed. Finally, implications for Educational Psychology practice will be proposed.

Attachment Theory

The central premise of attachment theory is that children require a relationship with an emotionally sensitive caregiver who provides consistent, predictable and attuned care, especially throughout their early years (Bowlby, 1988). When such a caregiver is emotionally available and responds sensitively to the child's needs, the child will gradually internalise such positive and responsive experiences and develop an internal working model (i.e. internal representations) of the carer as safe, containing and trustworthy (Sroufe, 2005). The caregiver becomes a 'secure base' for the child, allowing them to feel

[1] For the purposes of this literature review, the term relational is used to encompass outcomes related to both social development and attachment style.

safe in their exploration of the environment and to develop a positive expectation or representation of themselves and others in relationships (Bowlby, 1988). However, if the parent-child relationship is a source of stress, for example in abusive or neglectful parenting, the experience of interacting with a caregiver can lead to distress in the child (Schore, 2001). This, in turn, can make the accepting of care from adults, both in terms of nurturance and limits and boundaries, a more difficult process (Schore, 2001).

Most children develop an attachment to adults who care for them but the quality of this varies (Bergin & Bergin, 2009). Using a technique known as the Strange Situation Procedure, psychologists have identified four different styles of attachment: secure, insecure-avoidant, insecure- ambivalent and disorganised (Ainsworth, Blehar, Waters & Wall, 1978; Main and Solomon, 1990). Table 1 provides a summary of the typical characteristics associated with each attachment style.

Table 1

Typical Characteristics Associated with Attachment Styles

Attachment Style	Typical Characteristics
Secure	• Explores actively. • Will seek out and be easily soothed by their caregiver in times of distress.
Insecure-Avoidant	• Independent and tends to focus on toys or a task. • Will often physically and emotionally avoid their caregiver. • Does not tend to seek comfort when distressed and may turn away when comfort is offered.
Insecure-Ambivalent	• May show resistance to moving away from their caregiver to explore novel settings. • May show heightened emotional responses and can be difficult to soothe. • Shows a tendency to seek contact in times of distress but does not appear to be comforted by it. • May become demanding and preoccupied with their caregiver.
Disorganised	• Lacks an organised response to their caregiver and their behaviours can often appear very contradictory, for example, they may seek comfort but then completely ignore their caregiver. • May show fear or freezing behaviours.

Note. This information is the author's summary based on her reading of literature in this area (Bergin and Bergin, 2009; Lyons-Ruth & Jacobvitz, 2008; Schore, 2001).

Influences on the Quality of Attachment

The role of the environment in explaining individual differences in the quality of the parent-child relationship is central to attachment theory (Juffer, Bakermans-Kranenberg & van Ijzendoorn, 2007). Several parenting behaviours or qualities have been identified as crucial for the development of secure attachment relationships. These include caregiver or parental sensitivity, often referred to in the literature as maternal sensitivity, as most research has focused on mothers, and reflective functioning (Fonagy, Gergely, Jurist & Target, 2005)[2]. Caregiver sensitivity refers to the contingent and appropriate responsiveness of the caregiver to their infants' cues and has been shown to play an important role in the formation of positive and secure attachment relationships (De Wolff and van Ijzendoorn, 1997). Research has also drawn attention to the specific nature of the attachment between parents and their infants (e.g. Beebe et al., 2013), and the capacity for 'mind-mindedness' (Meins, Fernyhough, Fradley, & Tuckey, 2001), which is often referred to as 'reflective functioning' (Slade, 2005). Reflective functioning can be defined as the caregiver's capacity to make sense of their child and themselves as a parent, in terms of underlying mental states such as thoughts, feelings, desires and beliefs (Slade, 2005).

An early systematic review of 12 studies found that caregiver sensitivity was a significant predictor of infant attachment security (De Wolff and van Ijzendoorn, 1997). However, it only accounted for one third of the variance in attachment styles, leaving a significant proportion of unexplained variance in infant attachment security. Bakermans-Kranenburg & van Ijzendoorn (2007) propose that genetic factors affecting security of attachment in both parent and child might bridge this gap. The notion of gene-environment interactions is derived from the 'differential susceptibility' hypothesis (Belsky, Bakermans-Kranenburg & van Ijzendoorn, 2007; Belsky, 2005). This suggests that some individuals, possibly for genetic reasons, are more susceptible than others to positive and negative early environmental experiences (Bakermans-Kranenburg & van Ijzendoorn, 2007). According to Bakermans-Kranenburg & van Ijzendoorn (2015), there

[2] For the purposes of this literature review, the term caregiver sensitivity is used to reflect the fact that other individuals can also serve as important attachment figures.

are three broad markers of susceptibility: reactive temperament, biological sensitivity to stress and genetic make-up. Klein Velderman, Bakermans-Kranenburg, Juffer & van Ijzendoorn (2006), for example, found that experimentally induced changes in maternal sensitivity had a greater impact on the attachment security of highly reactive infants than it did on other infants.

Within the literature, several risk factors have been identified as having the potential to impact on caregiver sensitivity and/or reflective functioning, thus affecting the quality of parent-child interactions and attachment security. These factors include: parental mental health (Cicchetti, Rogosch, & Toth, 2000; Goodman et al., 2011; Koutra et al., 2013; Van Doesum, Riksen-Walraven, Hosman, & Hoefnagels, 2008); child maltreatment (Cicchetti, Rogosch, & Toth, 2006; Moss et al., 2011; Oxford, Fleming, Nelson, Jean, & Spieker, 2013); substance abuse (Suchman et al., 2010); poverty (Negrão, Pereira, Soares, & Mesman, 2014); multiple home and school placements (Pasalich, Fleming, Oxford, Zheng, & Spieker, 2016) and premature birth (Barlow et al., 2016). Moss et al. (2011) suggest that families within which instances of maltreatment have occurred constitute one of the highest risk populations. Moreover, such families often experience extreme levels of poverty, social isolation and stressful life events, all of which, they argue, impact on caregiver sensitivity and the ability to engage in reflective functioning.

Research suggests that children who experience early adversity such as neglect, abuse, exposure to domestic violence and separations from caregivers are at increased risk for developing disorganised attachments (Bernard et al., 2012; Lyons-Ruth & Jacobvitz, 2008). In middle-class, low-risk samples, it is estimated that approximately two-thirds of children develop secure attachments with their caregivers and about 15% are classified as having a disorganised attachment style (van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). Contrastingly, in high-risk samples, the percentage of children with a disorganised attachment style is estimated to be around 25% for children from low socio-economic backgrounds, 48% for children whose mothers engage in substance abuse, 21% for children whose mothers have depression and 23% for children with adolescent mothers (van Ijzendoorn et al., 1999). Such evidence suggests that contextual factors can influence children's attachment security, thus highlighting the importance of considering attachment within an interactionist perspective.

Attachment-Based Interventions

To improve the emotional, behavioural and relational outcomes for samples of high-risk parent-child dyads, where secure attachment has not been easily reached, several attachment-based interventions have been developed. Such interventions are based on the assumption that through relationships, positive change can occur (Gerhardt, 2015). They include Mellow Parenting (Puckering, Rogers, Mills, Cox, & Mattsson-Graff, 1994), Child-Parent Psychotherapy (Lieberman, van Horn & Ghosh Ippen, 2005), Attachment and Bio-behavioural Catch-up (Dozier, Lindheim & Ackerman, 2005), the Circle of Security (Marvin, Cooper, Hoffman, & Powell, 2002) and Video-feedback Intervention to Promote Positive Parenting (VIPP: Juffer, Bakermans-Kranenberg & van Ijzendoorn, 2007). However, as yet, there is no real consensus in the literature as to which, if any, of these interventions are most effective and for whom (Ziv, Kaplan, & Venza, 2016).

Many of these interventions, for example VIPP (Juffer et al., 2007), aim to intervene directly at the behavioural level, with the aim of changing parenting patterns and promoting sensitive caregiving strategies that will, in turn, have a positive effect on the child (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; Ziv et al., 2016). Proponents of short-term, behaviourally-based interventions argue that by changing the caregivers' behaviour to be more sensitive and less intrusive, the child will become more responsive which, in turn, will positively reinforce the caregivers' behaviour (van Ijzendoorn, Bakermans-Kranenburg, & Juffer, 2005). They further argue that over time, and as the amount of positive reinforcement increases, this leads to a permanent change in the caregivers' mental state and thus the quality of the attachment relationship (van Ijzendoorn et al., 2005).

Other interventions, often referred to as relationship-based interventions (Ziv et al., 2006), target the mental states and perceptions of the caregiver in relation to self and others. Such interventions are based on the premise that internal perceptions of self, others and the parent-child relationship need to be addressed to effectively promote positive parenting practices, better empathic understanding, and by doing so, enhance both the attachment relationship and the developmental outcomes for the child (Ziv et al., 2016). Some researchers (e.g. Suchman et al., 2010) report that although behaviourally-based interventions seem to improve parental well-being, improvements in parent-child dyadic interactions or child outcomes have been rare. Proponents of relationship-based interventions suggest that this may be due to behaviourally-based interventions failing to

address the underlying emotional quality of the parent-child relationship (Ziv et al., 2016). They argue that caregiver insensitivity and unresponsiveness to children's emotional cues is often a function of the caregivers own unmet attachment needs, based on their own experiences with early caregivers (Suchman et al., 2010). Stored memories or psychological "representations" of these experiences are thought to become the prototype for newly formed relationships, including the next generation of caregiving relationships. As such, without first improving a parent's capacity to recognise and respond sensitively to children's emotional cues, behavioural interventions may do little to improve the parent-child relationship (Suchman et al., 2010).

In a meta-analysis of 70 studies examining the efficacy of attachment-based interventions, Bakermans-Kranenburg et al. (2003) concluded that short-term, behaviourally-based interventions specifically targeting caregiver sensitivity were more effective than more intensive, long-term relationship-based interventions in enhancing caregiver sensitivity (d = 0.33) and, to a lesser extent, children's attachment security (d = 0.20). However, it is noteworthy that this review consisted of largely behaviourally-based interventions; only 16 of the interventions reviewed included some focus on caregivers' mental representations, and only three of these were categorised as purely relationship-based. Therefore, these conclusions should be treated with caution. Moreover, whilst this review highlighted the effectiveness of attachment-based interventions on caregiver sensitivity and children's attachment security, their wider impact on children's development remains unknown.

More recently, Kerr and Cossar (2014) conducted a systematic review of 10 studies of attachment-based interventions, specifically targeting foster and adoptive parents and their children. Broadly speaking, the interventions included within the review aimed to: enhance carers' understanding of attachment theory; teach behaviour management strategies; provide support for increasing children's emotional regulatory capacities and promote caregiver sensitivity. Thus, the included interventions were predominantly behaviourally-based, although this was not made explicit by the authors. Findings from their review suggested evidence of a positive impact of attachment-based interventions on children's emotional, behavioural and relational functioning. Kerr and Cossar (2014) found that the most positive outcomes were reported in studies where the intervention focused on increasing attunement (i.e. caregivers' responsiveness) to young children (e.g. 6 months – 6 years). Moreover, the interventions that appeared to be most effective were those involving direct sessions between therapists, carers and children at home, alongside

the use of video recordings of carer-child interactions. Similarly, Bakermans-Kranenburg et al. (2003) also found video-feedback to be a key component of the more effective interventions.

Overall, Kerr and Cossar (2014) concluded that there was more evidence indicating a positive impact of attachment-based interventions on children's behavioural functioning compared to their emotional and relational functioning. However, behavioural change may be more easily observed and assessed, whereas internal change (i.e. emotional functioning) is harder to detect. Emotional functioning was commonly assessed via subscales of primarily behavioural measures, such as the Child Behaviour Checklist (CBCL: Achenbach and Rescorla, 2000) and the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) which may not have been sensitive enough to detect such changes. Findings also highlighted that studies examining the effectiveness of interventions in older children, age 6 and above, reported no significant positive outcomes. This suggests that the interventions may not have been intensive enough to bring about change in a population where patterns of functioning may have been more engrained. It would therefore seem that attachment-based interventions which are preventative rather than reactive in nature may be more effective, particularly for adopted and fostered children. This is, perhaps, unsurprising given the focus of attachment processes in the early years and the importance of this in developing children's later relational functioning. Nevertheless, the authors proposed that further research was required to examine the impact of attachment-based interventions for biological parent-child dyads.

Aims of the Current Review

Whilst previous meta-analyses (e.g. Bakermans-Kranenburg et al., 2003; Kerr and Cossar, 2014) have considered and found some evidence for the effectiveness of attachment-based interventions, Bakermans-Kranenburg et al. (2003) did not differentiate between biological parent-child dyads and foster or adoptive parent-child dyads. Therefore, it is unknown whether the interventions were more effective for one group or the other. To the author's knowledge, no systematic review on the effectiveness of attachment-based interventions for biological (high-risk) parent-child dyads has been published. This review seeks to redress this gap. More specifically, this review aims to gain a clearer understanding of interventions for biological, high risk, parent-child dyads that are most effective in improving emotional, behavioural and relational outcomes for children.

1.2 Method

Search Strategy

Searches were conducted in two electronic databases: PsycINFO (via EBSCO: 2000 - 2016) and Web of Science (2000 - 2016). The databases were searched using the search terms (*biological parent* or parent**) *AND* (*intervention or training or treatment or therapy*) *AND* (*attachment or attachment theory*) within the domains of title, abstract and keyword/subject heading. The reference lists of the papers found to meet the inclusion criteria for the current review were also searched. See Figure 1 for the PRISMA flow diagram.

Figure 1. PRISMA Flow Diagram

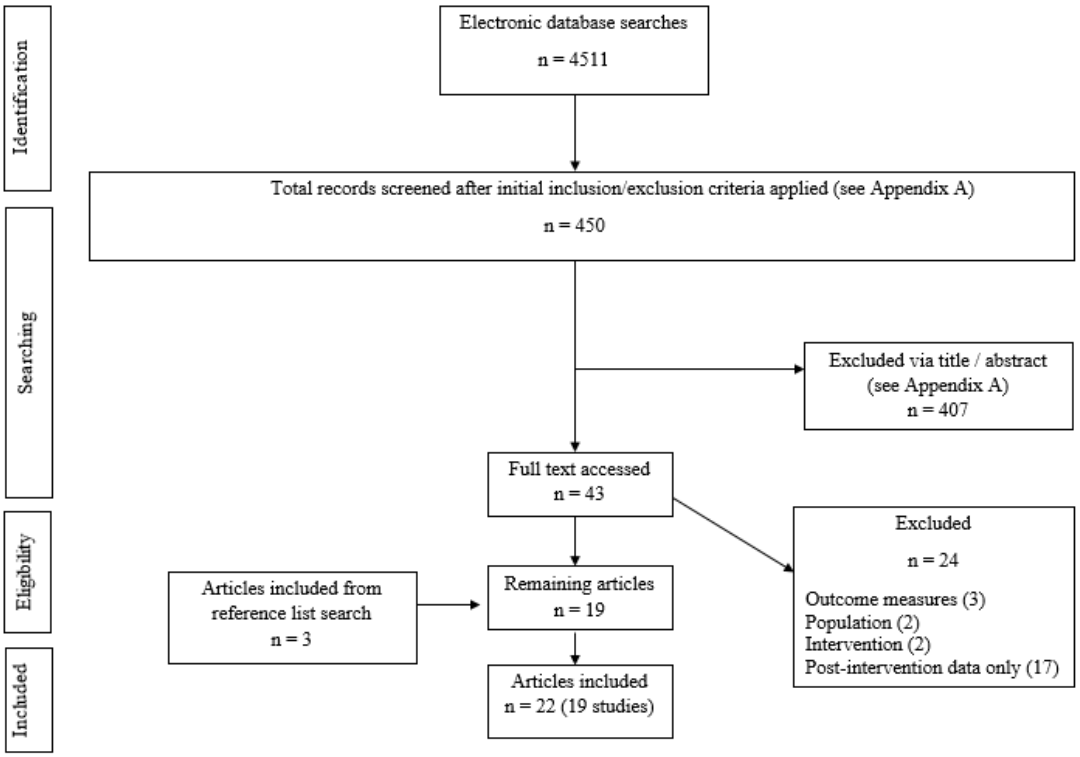

Figure 1. PRISMA Flow Diagram.

Included Studies

Table 2 outlines the inclusion and exclusion criteria used to select studies for inclusion in this review. Further details can be found in Appendix A. Three papers reported the six-month follow-up results from three other included papers (Cicchetti et al., 2006; Lieberman et al., 2005, 2006; Stronach, Toth, Rogosch, & Cicchetti, 2013; Suchman et al., 2010). Therefore, each pair is considered here as one study. In total, 19 studies (22 papers) were included in the review.

Data Extraction and Synthesis

The data extracted from eligible papers included: descriptive information about the sample (age, gender, risk-factors, study location); study design; descriptive information about the intervention (type, duration, frequency, delivery) and control condition; child outcome measures used and the reported effectiveness of the intervention.

Quality Ratings

The quality criteria for the included studies were adapted from those used by Kerr and Cossar (2014) in their systematic review of interventions for fostered and adopted children. The criteria are based on guidance from the Centre for Reviews and Dissemination (2008) which consider five areas as particularly important when appraising the validity and reliability of intervention studies. These include: design and risk of bias; outcome measures; intervention quality; statistical issues and external validity (Kerr and Cossar, 2014). When developing their quality criteria, Kerr and Cossar (2014) used the rating system from the Scottish Intercollegiate Guidelines Network (2011) for randomised controlled trials (RCTs) and cohort studies. This guidance suggested using the following descriptors and numerical scoring system to give each study a quality rating score: well covered (2 points); adequately addressed (1 point); poorly addressed; not addressed; not reported and not applicable (all 0 points).

For the purposes of this systematic review, the author removed the final criterion used by Kerr and Cossar (2014), as this related to interventions delivered within clinical settings so was not considered appropriate for this review. The definitions for each criterion and related rating used to guide the quality assessment process are outlined in Appendix B. The assigned quality ratings can be found in Appendix C.

Table 2

Inclusion and Exclusion Criteria for Studies

	Inclusion Criteria	Exclusion Criteria
Population	Biological parents of a child aged between birth and 12 years.	Parents of children with a clinical diagnosis such as autism spectrum condition.
		Foster and adoptive parents.
Study Design	Quantitative designs including pre- and post-intervention studies, longitudinal and randomised controlled studies.	Case studies.
		Evaluations of interventions without quantitative analysis.
Intervention	Attachment-based interventions[a].	Non attachment-based interventions.
	Interventions described as psychoeducational, experiential, therapeutic, group-based or individual.	Interventions which focused solely on children.
Outcome Measures	Children's emotional, behavioural or relational functioning.	Any other outcomes (e.g. cognitive development).
Publication Requirements	Studies published in a peer-reviewed academic or professional journal.	Articles published in non-peer reviewed journals.
		Book reviews.
		Unpublished dissertations.
Language	Published in English.	Published in any other language other than English.

Note.

[a]Interventions were defined as attachment-based if they met one of the following criteria: described the use of attachment theory as underpinning their development; aimed to improve the understanding of attachment theory in parents; aimed to improve the attachment relationship between the parent and child; aimed to improve the parent's understanding of his/her own attachment style; aimed to improve the ability of the parent to manage the child's difficulties using attachment theory as a guiding principle (Kerr and Cossar, 2014).

1.3 Findings

Findings from the systematic literature review have been organised by grouping the interventions according to the theoretical mechanism of change which underpins them. As previously discussed, literature in the area (e.g. Bakermans-Kranenburg et al., 2003; Ziv et al., 2016) has highlighted the distinction between two different approaches: behaviourally-based and relationship-based interventions. More recently, some interventions have adopted a third approach and aim to intervene at both the behavioural and relational level, hereafter referred to as combined interventions.

Complete details about the sample, design, measures and outcomes for each study can be found in Appendix D. References to studies are given in number form (in brackets) throughout the results section and can also be found in Appendix D below the authors' names. The 19 studies reviewed were conducted in several countries including: America (n = 5); the Netherlands (n = 3); the United Kingdom (n = 3); Canada (n = 2); Germany (n = 2); Portugal (n = 1); Chile (n = 1) and Australia (n = 1). One study did not provide any details about the location in which it was conducted (Ziv et al., 2016).

Quality of Included Studies

Whilst the rating scale does not allow for direct comparison across studies, it does indicate the relative methodological strengths of each. The highest quality ratings were obtained by Fonagy, Sleed, & Baradon, (2016), Moss et al. (2011) and Toth, Maughan, Manly, Spagnola, & Cicchetti (2002). There were also studies with a considerably poor methodological quality rating, including those by Leigh, Vergara, & Santelices (2013), Sleed, James, Baradon, Newbery, & Fonagy (2013) and Ziv et al. (2016). Care should therefore be taken when interpreting their findings. It is also noted that as only the author of this review rated the studies, the outcomes of the quality assessment may be subject to researcher bias.

Behaviourally-Based Interventions

Description of interventions. Ten studies using nine different interventions were included in the review, all of which are underpinned by a behavioural approach (1, 2, 3, 4, 5, 6, 7, 8, 9, 10). Of these, five used video-feedback of parents interacting with their child to promote sensitive interaction skills and to provide personal feedback and reinforcement of positive aspects of their parenting (3, 4, 5, 8, 9). These interventions also provided psychoeducation on child development, attachment theory and emotion regulation. All of

these interventions were delivered individually. Two studies specifically used the Video-feedback Intervention to Promote Positive Parenting and Sensitive Discipline (VIPP-SD: van Zeijl et al., 2006) intervention (4, 9) and two studies incorporated video-feedback within a home visiting intervention (3, 8). The final study (5) used the Right from the Start (RFTS: Niccols, 2008). This is a group-based intervention which involves participants watching generic videos of parents interacting with their children, identifying common parenting errors, discussing their consequences and then suggesting alternatives.

The other five interventions aimed to improve parental behaviours through providing psychoeducation about children's social and emotional needs and offering strategies to help address potentially stressful situations and challenging behaviours (1, 2, 6, 7, 10). All of these interventions were group-based, with the exception of one which was delivered individually as it also incorporated direct coaching of parents' skills using a 'bug in the ear' device (7). Such interventions included Parental training for Lone Mothers guided by Educators (PALME: Franz, Weihrauch, Buddenberg & Schafer, 2009) (1, 10), Parent-Child Interaction Therapy (Eyberg, 1988) (7), a psychotherapeutic baby clinic (6) and a pilot intervention (2).

Frequency and duration of the interventions. There was relative consistency in the frequency and duration for which participants received each intervention. Most consisted of weekly sessions, of approximately 1 – 2 hours, which lasted between 4 (2) and 12 weeks (7). One intervention lasted for 20 weeks (1, 10).

Methodological variation across studies.

Design. Nine of the studies employed a between-subjects repeated measures design. In two of these studies, participants were randomly allocated to either the intervention or an active control condition (4, 5). In three of these studies, participants were randomly allocated to either the intervention or a waiting control condition (1, 7, 10). The remaining three studies (3, 8, 9) randomly allocated participants to either an intervention or control group but it was not clear whether participants would be receiving the intervention afterwards, which raises some ethical concerns. In one study, dyads living in a hostel formed the intervention group. Control hostels were located in the same geographical area (6). One study employed a within-groups repeated measures design and, therefore, only evaluated individual change over time (2). Collectively, a strength of these studies is that all but one (2) employed a control group, thus increasing the robustness of any intervention effects.

Measures. All studies in this group employed standardised questionnaires, checklists or scales to gather data. These included a wide range of measures of several aspects of children's development including their social, emotional and behavioural development, alongside their temperament and attachment style. One study (3) also used the Strange Situation Procedure (Ainsworth et al., 1978) alongside the Preschool Separation-Reunion Procedure (Cassidy and Marvin, 1992). See Appendix D for further details of the specific measures used.

Data collection. Across the studies, data was based on reports or observations from a variety of individuals; parents only (9), teachers only (1, 10) parents and teachers (7), parents and researchers (3), researchers only (2) and independent raters who were unaware of the experimental condition (4, 5, 6, 8). From the 10 studies in this group, three studies collected follow-up data six months post-intervention (5, 8, 10). One study only collected follow-up data one month post-intervention for the intervention group but not the control group (7), limiting our ability to conclude with certainty that any sustained positive intervention effects that were maintained were as a result of the intervention.

Description of participants. For studies included within this category, participants had various risk factors. Two studies specifically targeted mothers with mental health needs, including depression (2, 8). One intervention was aimed specifically at single mothers (1, 10), one study targeted low-socioeconomic status families (4) and one was designed for homeless families living in a hostel (6). Two studies included participants where instances of maltreatment had been reported (3, 7). One study included participants from families where there were attachment concerns, with the most common risk factors being low-socioeconomic status, single parents and maternal stress (5). Participants in the remaining study had been recruited from community records of several cities in the Netherlands and included dyads where children had scored above the 75th percentile for externalising difficulties on the CBCL ages 1.5 - 5 (Achenbach and Rescorla, 2000) (9). Participants in other studies were recruited through a variety of methods including: information leaflets; posters and local advertisements (1, 5, 6, 10); child protection authorities or health and social work agencies (3, 4, 7) and from therapists or primary health care centres (2, 8).

Sample sizes ranged from nine (2) to 237 (9), although the majority of the studies had a sample of between 50 and 70 dyads. The age of parents in the studies ranged from 17 (2) to 40 (5) years. In all studies parent participants were mothers. Children ranged in

age from birth (6) to 8 years (7). The percentage of male and female child participants in each study was equal, with the exception of one study where 38% of the children were male (6) and another study where 71% were male (7).

Aims of the intervention. Whilst the approaches employed varied (i.e. video-feedback and psychoeducation), collectively the studies aimed to enhance caregiver skills in reading infant cues and responding sensitively.

Outcomes. Four studies reported that, compared to controls, children in the intervention group showed a significant improvement in child responsiveness and child involvement (4, 8) as well as significant positive changes in attachment classification, both from insecure to secure or from disorganised to organised (3, 5, 8). The children were also rated by parents (based on their observation of behaviours after the intervention) to be significantly more emotionally competent, for example in showing empathy (8). Three studies reported that in comparison to the control group, children in the intervention group showed a significant reduction in externalising behaviours (1, 7, 10). A fourth study measured children's behavioural difficulties over time but no significant differences were found between the intervention and control groups for both internalising and externalising behaviours (3).

Across all the studies, the majority of effect sizes reported were medium or approaching this, suggesting fairly robust intervention effects. Reported effect sizes included $r = 0.36$ (3), $d = 0.35$ – $d = 0.55$ (5), $d = -0.15$ – $d = -0.64$ (7), $\eta_p^2 = 0.10$ - 0.13 (8) and $d = 0.45$ (10). In one study, a small effect size was reported, $\eta_p^2 = 0.03$ (9) and in another study, medium to large effect sizes were reported, $\eta_p^2 = 0.12$ - 0.17 (4). One study did not provide (or, indeed, report sufficient data to calculate) effect sizes, limiting our ability to understand the size of the positive intervention effects reported (1).

Some studies reported no statistically significant effects (6, 9), although in one of these studies (9), despite no significant Group x Time interaction, it was reported that in families with more marital conflict, the intervention was effective in decreasing overactive child behaviour. The one study which employed a within-groups design reported no statistically significant differences in children's attachment classification over time (2).

Whilst collectively the findings would suggest that behaviourally-based interventions seem to have a positive effect on children's attachment security and emotional and behavioural functioning, it is important to note that the majority of these

studies used questionnaires and checklists to measure children's progress. Such methods typically reflect a positivist epistemology which suggests that there is an independent reality and 'objective truth' that can be discovered through scientific methods (Tubey, Rotich & Bengat, 2015). Thus, the use of questionnaires and checklists assumes children's functioning can be reliably and objectively measured at one point in time and that it is not influenced or determined by the context or their interactions with others. Moreover, these measures were largely completed by either the researchers or parents involved in the study. Therefore, findings should be interpreted with restraint due to their subjective nature and the possibility of expectancy effects which may have inflated the positive results.

Generalisation and maintenance of outcomes. Three studies collected follow-up data six months post-intervention (5, 8, 10), two of which reported that the observed effects post-intervention had been maintained over time (5, 8). The study that collected follow-up data for the intervention group one month later (7) reported short-term maintenance effects in terms of children's externalising behaviour, however, data was not reported in the study.

Relationship-Based Interventions

Description of interventions. Six studies using two different interventions are described in this section, all of which are underpinned by a relational approach. All but one study evaluated the Child-Parent Psychotherapy (CPP) intervention, although the name given to this varied according to the age of the children (11, 12, 13, 15, 16). Across the studies this intervention was referred to as Toddler-Parent Psychotherapy (TPP), Parent-Infant Psychotherapy (PIP) or Infant-Parent Psychotherapy (IPP). CPP is delivered by a trained therapist who works with parents and children together as a dyad, thus the parent-child relationship is the primary focus of intervention. Parents are supported by the therapist to safely explore their relational history and to consider how this may be affecting their present relationship with their child. The remaining study evaluated the Mothers and Toddlers Program (MTP); a psychotherapy intervention designed as an addition to outpatient substance abuse treatment (14). The MTP intervention follows a developmental progression based on attachment theory. Once a therapeutic alliance has been built between the mother and the therapist, the mother's internal working model of her child is explored, with the aim of identifying distorted or denied aspects of her mental representations and promoting a shift towards greater emotional balance, sensitivity and flexibility. All of these interventions were delivered on an individual basis.

Frequency and duration of the interventions. There was fair consistency in the frequency and duration with which participants received each intervention. Most consisted of weekly sessions, of approximately 1 hour, which lasted between 6 (12) and 12 months (11, 13, 15, 16). Due to the individualised nature of the intervention, the number of sessions attended varied amongst participants and in one of the studies, sessions became bi-weekly as the intervention progressed (12). The MTP intervention consisted of one hour weekly sessions and lasted for 12 weeks (14).

Methodological variation across studies.

Design. All of the six studies employed a between-subjects, repeated measures design. In four of these studies, participants were randomly allocated to either the intervention or an active control group (11, 12, 14, 15). In the remaining two studies, it was not clear what support or services participants in the control group were receiving (13, 16). Three of the studies also recruited a third comparison group from the community, in order to compare outcomes for children in the two at-risk conditions (11, 15, 16). The inclusion of control groups is a strength of these studies as, whilst it is not possible to ascertain for definite whether the outcomes would have been different for at-risk children without intervention, it helps to determine how similar outcomes are, relative to what would typically be expected. As such, this provides a stronger evaluation of these interventions in comparison to the behaviourally-based interventions.

Measures. Various measures were used to assess children's emotional, behavioural and relational functioning in response to the intervention. Three studies employed standardised questionnaires, checklists or scales (12, 13, 14). The Strange Situation Procedure (Ainsworth et al., 1978) and attachment story stems were also used (11, 12, 15, 16). See Appendix D for full details of the measures used.

Data collection. For the majority of the studies data was collected by research assistants, trained observers or independent raters (11, 12, 14, 15, 16). One study collected data from parents only (13). Of the six studies discussed in this section, four collected follow-up data (11, 12, 13, 14).

Description of participants. Similar to those studies which evaluated behaviourally-based interventions, participants had several risk factors. Mothers in two studies had mental health difficulties, including depression (12, 16) and were recruited through communication with mental health and social care professionals and also locally

placed advertisements. In another study, mothers were receiving treatment for substance abuse (14) and were recruited through clinician referrals, research staff visits to clinic groups and self-referral. In a further study, participants were families of children who had heard or witnessed marital violence, where there were concerns around either the mother's or child's behaviour following this (13). In this study, referrals were made from a range of sources which included family courts, domestic violence service providers, medical providers, pre-schools, former clients and self-referrals. Participants in a further two studies were known to social services due to previous instances of maltreatment or neglect (11, 15). In these two studies, participants were recruited through their contact with social services.

Sample sizes ranged from 47 (14) to 189 (11). All studies used intervention that worked with the mother-child dyad. Maternal age ranged from 18 (11) to 41 years (11). Children ranged in age from birth (12) to 5 years (13). The percentage of male and female child participants in each study was similar.

Aims of the intervention. Across all the studies, the main aim of the intervention was to improve the parent-child relationship by exploring the mother's relational history and her internal working model of her child, so as to shift towards greater affect regulation, sensitivity and flexibility in her maternal representations. In one study, there was a specific focus on promoting safety, affect regulation and on the joint construction of a trauma narrative of the marital violence incident (13).

Outcomes. Two studies reported a significant increase in the rate of secure attachment in the intervention group compared to the rate observed in the control group (11, 16). In the first study, the attachment classification of children in the two intervention groups and community comparison group (of children who had not experienced any previous maltreatment) did not differ significantly but all three groups differed significantly from the control group (11). The rates of disorganised attachment continued to be significantly higher in the control group than both the intervention and community comparison groups. The effect sizes ranged from $d = 1.17$ to 1.51, indicating a large positive intervention effect. In the second study (evaluating the effectiveness of an intervention to help mothers with depression), the percentage of children with secure attachments in the intervention group was significantly higher post-intervention than in the control group. Moreover, the rate of secure attachment in the control group continued to

be substantially lower than in the non-depressed comparison group (16). The effect size was $d = 1.08$, indicating a large treatment effect associated with the intervention.

Positive findings were also reported with regards to children's behaviour and interactions with their mothers (13, 14). In one study, a significant reduction in children's behavioural difficulties over time was reported only for children in the CPP intervention group, with a small effect size ($d = 0.24$) (13). Children with mothers in the MTP intervention had significantly higher scores of 'communication with their mothers' than children whose mothers took part in a parenting education programme ($d > 0.20$) (14). Positive findings were also reported with regards to children's internal representations (15). Specifically, children in the intervention group showed a significant decrease in maladaptive behaviours and negative self-representations, in comparison to both a group receiving parental home visitation (PHV) and a community standard control group. Moreover, children in the intervention group showed a significant increase in positive self-representations and the most significant increase out of all the groups in terms of positive expectations of the mother-child relationship. Children in both the intervention and PHV group showed a significant decrease in their negative maternal representations and this remained stable for the two control groups. Only the children in the intervention group showed significant positive change over time in their negative self-representations. However, the authors reported no effect sizes and therefore it is not possible to determine the magnitude of this trend, nor determine any meaningful conclusions from the findings. In one study, no statistically significant effects were reported (12).

Generalisation and maintenance of outcomes. Three studies reported that the positive post-intervention effects had been maintained over time (11, 13, 14). In one study, children who had received IPP had significantly higher rates of attachment security and significantly lower rates of disorganised attachment than children in the control group at the 12-month follow-up (11). Children who received IPP were also more likely to demonstrate secure attachment and less likely to be classified as disorganised than children in a parenting education intervention group. Interestingly, rates of attachment security in both of the active intervention groups did not significantly differ from the community comparison group, but rates were significantly lower in the control group. These findings suggest that over time, both interventions were effective in increasing rates of attachment security to a level comparable with the community comparison group but that IPP was more effective in achieving this. The reported effect sizes for these findings were small –

medium (d = 0.13 – 0.46), indicating a decrease in the magnitude of the effect over the 12 month follow-up period.

A significant reduction in children's behavioural difficulties observed post-intervention was also maintained at the six-month follow-up in one study (13). The effect size was reported to increase at follow-up (d = 0.41), suggesting that the intervention was more effective over time (13). However, these findings should be treated with caution as they are based on parental report only and may, therefore, be subject to participant bias. Moreover, no information was gathered as to whether children's behaviour also improved in different contexts. A similar effect was reported in the final study (14). At the six-month follow-up, the authors reported an increase in children's scores of 'communication with their mothers', (d > 0.70).

Combined Interventions

Description of interventions. Three studies of three different interventions were included in this category, targeting both parenting behaviours and the parent-child relationship (17, 18, 19). One study evaluated the Promoting First Relationships© (PFR: Kelly, Zuckerman, & Rosenblatt, 2008) intervention. Alongside using video-feedback to encourage more sensitive parenting behaviours and increase understanding of children's cues, PFR uses reflective practice principles (Slade, 2005) to focus on the parent-child relationship and help develop a caregiver's capacity for 'mind-mindedness'. The second study was a pilot study of the Sunderland Infant Programme, which incorporated video-feedback as part of the intervention to encourage parents to think about the impact of observed behaviours and their associated thoughts and feelings (18). The final study evaluated a series of interventions, determined by trained clinicians based on individual participant needs, delivered at a community mental health clinic (19). For more information on the interventions received by participants, see Appendix D, study 19.

Frequency and duration of the interventions. In one study participants received 10 weekly sessions, each lasting 60 – 75 minutes (17). In the remaining two studies, the frequency and duration with which participants received each intervention was unclear. In one study the intervention ranged from one to four sessions, however, the duration and frequency of these sessions was not specified (18). No information was provided in the remaining study (19).

Methodological variation across studies.

Design. Two studies employed a between-subjects repeated measures design (17, 18). In one study (17), participants were randomly allocated to either the intervention or control group and in the other study (18), participants were assigned to groups based on locality. One study employed a within-groups repeated measures design and therefore only evaluated individual change over time (19).

Measures. One study (17) used the Toddler Attachment Sort-45 (Kirkland, Bimler, Drawneek, McKim & Scholmerich, 2004) to measure children's separation distress and one study (19) used the two child subscales from the Emotional Availability Subscales (EAS: Biringen, Robinson & Emde, 1998). The final study (18) used the CARE-Index (Crittenden, 1997); a validated method of microanalysis for evaluating parent-infant interactions. The CARE- Index has four infant subscales which measure cooperativeness, difficultness, passivity and compulsivity (Svanberg, Mennet & Spieker, 2010). This study also used the Strange Situation Procedure (Ainsworth et al., 1978) to measure children's attachment style post-intervention (18).

Data collection. In two studies (18, 19) parent-child interactions were videoed and were coded by trained observers in each of the above measures. The remaining study (17) assessed infants and their caregivers during blinded research home visits.

Description of participants. Participants in one study were mothers and their recently reunified toddlers, who had been placed in care for a period of time due to previous instances of reported maltreatment (17). They were recruited from a larger Fostering Families Project (Spieker, Oxford, Kelly & Fleming, 2012). In the second study, participants were first-time mothers in a low-income, urban area who were approached by the researchers whilst in hospital and were recruited to take part on a voluntary basis (18). Participants in the final study were recruited on a voluntary basis from an outpatient mental health clinic for which referrals are made from social services, courts, day care centres, schools, paediatricians and early intervention services (19).

Sample sizes ranged from 32 (19) to 134 (18). In all studies participants were mother-child dyads. The mean maternal age was 34 years in one study (18). No information was provided on maternal age in the remaining two studies (17, 19). Children ranged in age from 8 weeks (18) to 6 years (19). The percentage of male and female child participants across studies were similar.

Aims of the intervention. Across all studies, the aims of the interventions were to explore and promote the reorganisation of maternal mental representations, whilst also increasing sensitive parenting behaviours in the mothers.

Outcomes. One study reported that compared to the comparison group, infants in the intervention group were more cooperative following the intervention (18). The study also reported that child compulsivity increased in the comparison group over time, however, it remained low in the intervention group. For both findings, a large effect size was reported ($\eta_p^2 = 0.03$ and 0.06 respectively). No significant differences were reported between groups over time in infant difficultness and passivity. Post-intervention, it was reported that the intervention group had significantly fewer infants in the disorganised attachment classification and a trend towards more secure attachment classifications than expected. The comparison group showed the opposite profile. Further analysis indicated no significant differences between intervention risk groups. However, it is noteworthy that as sample sizes were low, there was unlikely to be enough statistical power to detect differences. In the second study, it was reported that following intervention, children were more positively responsive to their mothers and involved them more in their activities (19). The reported effect sizes were small – medium ($d = 0.23$ and 0.40 respectively). The remaining study only reported pre-intervention and follow-up data (17).

Generalisation and maintenance of outcomes. Only one study collected follow-up data (17). Compared to controls, children in the intervention group showed a significantly greater decrease in separation distress from pre-intervention to follow-up (six months post-intervention). However, without post-intervention data, it is not possible to determine if these were positive effects that had been maintained or if they were a delayed effect.

1.4 Summary and Conclusions

The 19 studies reviewed evaluated a range of attachment-based interventions which aimed to enhance parent-child relationships through targeting maternal sensitivity. A greater proportion of studies evaluated behaviourally-based interventions, which focused on increasing maternally sensitive behaviours and on providing parental psychoeducation around parenting practices. Several studies also evaluated relationship-based interventions. These aimed to improve maternal sensitivity through exploring the mothers' representations of their own early caregiving experiences and to increase their capacity to recognise and respond sensitively to their children's emotional cues. Three studies

evaluated a combined approach to intervention, where the focus was both behavioural and relational.

There was considerable variation amongst studies in terms of sample characteristics and size, types of interventions used and the outcomes measured. However, this was the first review, to the author's knowledge, which systematically assessed the effectiveness of attachment-based interventions for biological parent-child dyads. It was important to include a range of studies to gain a better understanding of the research in this field to date. Whilst no firm conclusions can be drawn from the reviewed studies, some tentative conclusions can be put forward for both the behavioural and relationship-based interventions. This review will now summarise the main findings for each group of interventions, before considering the relative strengths and limitations of this review, alongside some possible directions for future research.

Behaviourally-Based Interventions

The majority of studies which evaluated behaviourally-based interventions reported some positive outcomes for children in terms of attachment security, behaviour and emotional development, and where effect sizes were reported, these tended to be medium (3, 4, 7, 8). With regards to attachment security, the findings indicated that post-intervention there was a higher proportion of children classified as securely attached and that children with a disorganised attachment style developed more organised attachment styles (3, 5, 8). One study also found significant improvements in children's attachment security post-intervention and reported that these effects were maintained at follow-up (8). However, as children's attachment classification was not measured pre-intervention, it is not possible to determine if attachment security changed over time and if so, whether this was as a result of the intervention.

Slightly less positive results were reported with regards to children's behaviour. A parenting education programme for single mothers seemed to be effective in reducing children's overall problematic behaviour, with a medium effect size reported in one study (10). However, the analysis was only based on the data of 28 children and therefore the findings cannot be readily generalised to wider populations. Moreover, the observed effect was not maintained at follow-up, indicating that the intervention may only be effective in the short term. Declines in children's externalising behaviour were also reported, although methodologically this study was relatively weak, particularly in terms of randomisation to groups, blinding, reporting of attrition and the lack of follow-up data (7). Furthermore, the

declines in externalising behaviours were only reported by parents, and not by class teachers who were blind to children's group allocation, thus questioning the reliability of these findings.

Positive effects, with medium to large effect sizes, were reported with regards to children's emotional functioning which was measured in terms of their responsiveness to and involvement with their mothers (4, 8). Methodologically, these studies were the strongest of the 10 reviewed studies which used a behaviourally-based approach, with one also collecting follow-up data six months post-intervention (8). However, it is important to note that the EAS (Biringen et al., 1998) is based upon the observation of behaviours assumed to be indicative of a healthy emotional relationship. As such, these findings need to be interpreted with a degree of caution, particularly in terms of the assumptions that may have been made about children's emotional functioning based on a subjective behavioural measure. Additionally, in the study which collected follow-up data (8), whilst it was reported that children were more competent in their social and emotional functioning six months post-intervention, this data was collected using the Infant Toddler Social and Emotional Assessment (Carter, Briggs-Gowan, Jones & Little, 2003); a different measure than had been used pre-intervention, impacting on the validity of these findings.

It is noteworthy that both studies (4, 8) evaluated interventions which utilised video-feedback. The study which evaluated the RFTS intervention (5), and reported significantly positive findings with regards to children's attachment security, also utilised video to facilitate discussion amongst participants. Taken together, these findings seem to provide some support for the conclusions drawn by Bakermans-Kranenburg et al. (2003) who reported that interventions which included video-feedback techniques were most effective in enhancing caregiver sensitivity.

Overall, the research which has evaluated behaviourally-based interventions would suggest some improvements with regards to children's attachment security and their emotional and behavioural functioning. However, the methodological weaknesses of the research, alongside the small number of published studies in the field, limits our ability to draw any firm conclusions at this time.

Relationship-Based Interventions

A similar proportion of studies that evaluated relationship-based interventions reported positive findings across various domains including: children's attachment security

(11, 16); a reduction in behavioural difficulties (13, 14); improved communication (14) and enhanced internal representations amongst children (15). Of the six studies reviewed, two studies reported significant increases in the rates of secure attachment in children who were part of a relationship-based intervention in comparison to a psychoeducational programme or a control group (11, 16). Large effect sizes were reported in both studies and in one, the increased rates of secure attachment were maintained at the 12-month follow-up, albeit with a smaller effect size (11). Whilst replication of these findings would be helpful, both studies were considered to be methodologically relatively strong, particularly in terms of their randomisation of participants, reliability and validity of outcome measures and fidelity to the intervention. However, it is noteworthy that one study also reported no statistically significant differences between groups in terms of children's attachment security at the 12-month follow-up (12). Methodologically, this study was strong and thus, without further research, it is not possible to draw any firm conclusions with regards to the impact of relationship-based interventions on children's attachment security in the long-term.

Alongside some reported significant improvements in children's attachment security, it is possible to draw some tentative conclusions about the impact of relationship-based interventions on other aspects of children's development. In particular, the findings seem to suggest that over time, such interventions can reduce instances of challenging behaviour displayed by children (13, 14) and enhance communication with their caregiver (14). However, these findings do need to be interpreted with a degree of caution as the reported effect sizes were small and there are some methodological weaknesses which need to be taken into consideration. Whilst participants were randomly allocated to groups, individuals collecting the data were not blind to participants' groups. Parental questionnaires were also completed by mothers who were participating in the intervention and thus, the findings may be subject to reporter bias. Moreover, there are some concerns around the reliability and validity of the outcome measures used. For example, in one study the Nursing Child Assessment Satellite Training (NCAST) was used (14); an unpublished measure designed to evaluate the Promoting First Relationships (Kelly et al., 2008) intervention. Furthermore, whilst the findings do suggest a reduction in children's presentation of more challenging behaviours, no measures of children's pro-social behaviour were taken and, therefore, the impact on this area is unclear.

Combined Interventions

Three studies (17, 18, 19) evaluated a combined approach to intervention where the focus was on both maternal representations and promoting sensitive parenting behaviours. Improvements were identified in infant cooperativeness and responsivity to their mothers, alongside a greater decrease in separation distress in comparison to control children. Some positive impact on children's attachment classification was also reported (18). However, with such a small number of studies evaluating a combined approach to intervention, it is not possible to triangulate these findings. Moreover, all three studies were methodologically relatively weak and thus findings should be interpreted cautiously. Presently, no robust conclusions can be drawn from this group of interventions.

Limitations and Directions for Future Research

Of the all studies reviewed, there were a limited number of evaluations of attachment-based interventions which gathered data from a variety of sources and therefore, it is not possible to establish whether the positive outcomes reported generalised beyond the context of the intervention. Furthermore, whilst approximately half of the reviewed studies collected follow-up data, this tended to only be six months post-intervention; therefore, the longer-term outcomes for children are unknown. It will be important that longitudinal studies are conducted to examine the longer-term impact of such interventions on outcomes for children. It is noteworthy that in one study included within the review (14), positive effects were not reported post-intervention but were reported at follow-up, highlighting the importance of gathering follow-up data in case of a possible delayed effect.

It was beyond the scope of this review to explore both parental and child outcomes and it was decided to prioritise child outcomes, as the ultimate aim of such interventions is improved functioning for children. In studies where no significant effects for children were reported, it may be that the intervention had a positive effect on parental functioning but this was yet to influence children's functioning. Further research and reviews considering outcomes for parents would provide this information and also enable an increased understanding of the mechanisms by which attachment-based interventions may be working. Moreover, it may be that some of the standardised measures used were too broad to capture small changes that occurred as a result of the intervention. As such, future research would also benefit from exploring outcomes for children using more sensitive tools.

Across all the studies that reported positive outcomes, participants had a number of different risk factors ranging from mental health needs, to single mothers, to families where children had experienced significant neglect. At this time, it has not been possible to identify whether there is a group of participants for whom the interventions seem to be most effective. More research evaluating the effectiveness of attachment-based interventions for biological parent-child dyads is warranted to triangulate the findings and establish whether certain interventions are more or less effective for families with different risk factors.

Implications for Practice

Within their practice, Educational Psychologists (EPs) draw upon a range of theoretical perspectives to underpin interventions, including behavioural, cognitive-behavioural, psychoanalytic, developmental, systemic and organisational psychology (Fox, 2011). Based on these theoretical perspectives, EPs can advocate for a variety of interventions, which typically range from individual direct work with children and families to consultations with staff and parents, through to supporting change at the organisational level (Fox, 2011). It is, therefore, important to acknowledge that in relation to enhancing children's social, emotional and behavioural functioning, there are multiple frameworks or perspectives which could be used to help determine appropriate intervention, with an attachment framework being one of these.

In light of the lack of firm conclusive evidence with regards to the effectiveness of attachment-based interventions for biological parent-child dyads and recent discussions (e.g. Meins, 2017) suggesting an over-focus on attachment amongst psychologists, EPs do need to exercise some careful consideration before recommending such interventions. During consultations, EPs should draw upon their information gathering skills to sensitively challenge and encourage consultees to broaden their thinking and to give consideration to other factors which may be impacting on children's functioning, beyond their attachment style. Whilst it is useful to have an understanding of their evidence base, when making recommendations about interventions, EPs should continue to draw on practice-based evidence, giving due to consideration to individual factors and preferences which may impact on the effectiveness of an intervention.

Across all the studies reviewed, there seemed to be more positive effects reported in those studies which evaluated relationship-based interventions. Within this group, the average ages of both mother and child participants were younger than in those which

evaluated behaviourally-based interventions. As such, one could suggest that as the mothers and children were younger, it may be that negative internal representations had not become so entrenched that it was easier for the intervention to promote a positive shift in the mothers' thinking which then positively impacted on the children. Although further research would be needed to confirm this hypothesis, such findings highlight the importance of early intervention and of EPs continuing to work preventatively rather than reactively, where possible.

One theme that emerged from the current literature review was that within the behaviourally-based interventions, those which incorporated video-feedback seemed to be more effective. If we hypothesise that this may be as a result of increased positive reinforcement, alongside helping individuals to notice things they had not previously been aware of, EPs may wish to think creatively about how they could make use of video within their practice. For example, EPs could consider using video-feedback when working with key adults to support them in their practice. EPs may also wish to consider using video to record their individual assessment work with children and use this to facilitate a joint consultation with staff and parents.

Limitations of the Review

To the author's knowledge, this is the first review which has focused solely on biological parent-child dyads. However, it is important to note the limitations in the approach the author employed in reviewing the literature. Firstly, only studies published in academic or professional journals were included and unpublished work was excluded, raising the likelihood of a publication bias in the results which may have inflated the positive intervention effects reported. Moreover, this review only included studies which had measured children's outcomes pre- and post-intervention. Given the importance of early intervention, particularly with at-risk populations, some interventions are likely to be implemented before the age at which measures of attachment security, such as the Strange Situation, are valid. As such, the author acknowledges that there is a body of research evaluating attachment-based interventions of which the outcomes still remain unknown. This would be an important area to consider within a future review, although the author also acknowledges that in using such a design, it is not possible to conclude with any certainty that observed improvements in children's outcomes were as a result of participating in the intervention. Any conclusions drawn would be tentative and need to be interpreted with this in mind.

Finally, it is important to note that this literature review only included quantitative studies, the majority of which were RCTs. At present, RCTs are deemed the gold standard for evaluating psychological interventions (Carey and Stiles, 2016). Grounded in a post-positivist paradigm, which embraces 'scientific methods', RCTs are based on the principle of causality (Christ, 2014). Thus, they do not show how or why an intervention may have affected change in the participants, or if the intervention was appropriate or desirable to them (Christ, 2014). Moreover, such studies are reductionist in nature (Scott, 2005) and assume that complex human constructs such as attachment, emotional functioning or behaviour can be measured in a meaningful, valid and reliable way through questionnaires, checklists or scales completed at a given point in time. As such, it is the author's view that there would also be value in reviewing qualitative studies both to complement the findings from the quantitative studies and to develop our understanding of the sense that individuals are making of the interventions and how they feel it impacted upon them. It is quite possible that attachment-based interventions may have affected individuals in ways that are not necessarily captured by measures employed in the quantitative studies. For example, one aspect which has not been considered is parental self-efficacy towards their ability to parent effectively. Self-efficacy refers to an individual's belief in their ability to succeed in a particular situation or to achieve certain goals (Bandura, 1997). Some parents may have quite a fixed mind-set or negative narrative around their parenting skills which may have been determined by their situation, for example, substance abuse or being a single-parent. It may be that certain interventions can help to bring about a positive change in parental beliefs and thinking which consequently leads to a change in behaviour and thus impacts on outcomes for children.

Conclusion

To conclude, there appears to be some evidence that attachment-based interventions for biological parent-child dyads can impact positively on children's emotional, behavioural and relational functioning. However, further confirmation and evaluation of this evidence is required. Future research should seek to address both the methodological limitations discussed and provide further qualitative evidence to triangulate the findings reported within this review before any firm conclusions can be made. When pursuing this field of enquiry, researchers and EPs need to be careful to not look at everything through an 'attachment lens' and give due consideration and acknowledgement of the interaction between the many other factors that may impact both parent-child relationships and outcomes for children.

Chapter 2: Exploring the Impact of Nurture Groups on Children's Social Skills: A Mixed-Methods Approach.

2.1 Introduction

Stable, caring relationships in early life are fundamental to children's healthy development (National Scientific Council on the Developing Child, 2010). Central to attachment theory, an informative framework which emphasises the importance of early caregiving experiences, is the premise that infants are born with a biological predisposition to form emotional attachments with their primary caregivers (Bowlby, 1969, 1980). Through these early caregiving experiences, Bowlby proposed that individuals gradually develop internal working models of themselves, others and relationships which guide their social interactions (Hughes and Schlösser, 2014). Although internal working models become resistant to change, Bowlby also suggested that they are open to revision with changes in the caregiving environment (Sroufe, 2005). This notion fits with a systems perspective (e.g. Bronfenbrenner, 1979) where children's development is influenced by the interaction between themselves and other relationships and organisations, for example their school.

Various attachment-based interventions have been developed which aim to enhance the quality of the parent-child relationship (see Chapter 1). However, researchers involved in evaluating the effectiveness of such interventions have highlighted the difficulties in targeting and engaging with parents, particularly those from high-risk backgrounds (Cicchetti et al., 2006; Thomas and Zimmer-Gembeck, 2011). Other researchers have explored ways in which children's relationships can be developed beyond the home context (e.g. Sabol and Pianta, 2012). Since the publication of *Every Child Matters* (Department for Education and Schools, 2004), it has been government policy that schools have a duty of care to support the social and emotional development of all children. For some children this may involve targeted interventions to develop specific skills, for example, social skills groups or work with an Emotional Literacy Support Assistant (ELSA). For others, they may need a more sustained, nurturing, relationship-based approach. Nurture Groups (NGs) are one intervention schools can consider in supporting these children.

Nurture Groups

NGs are considered to be a short-term, school-based psychotherapeutic intervention which aim to provide reparative attachment experiences for children within their educational setting (Hughes and Schlösser, 2014). Developed in the 1960s by Marjorie Boxall, NGs were created to support children who were either disruptive or withdrawn, experienced difficulties concentrating or struggled to form trusting relationships with adults and interact socially with their peers (Boxall, 2002). According to Boxall (2002), the majority of these children appeared to have missed out on positive attachment experiences which is a likely outcome of impoverished early nurturing. She hypothesised that children had not managed to adequately secure the basic social and emotional skills, usually acquired during early childhood, which she believed develop through close and trusting relationships with significant adults.

NGs aim to teach children the basic social and emotional skills required for learning, through providing increased opportunities for children to develop stable, trusting relationships with adults in school (Boxall, 2002; Cooke, Yeomans, & Parkes, 2008). They aim to create a caregiving environment that should facilitate a revision of children's internal working models and support the development of more positive relationships with adults and peers (Colwell and O'Connor, 2003; Hughes and Schlösser, 2014). "If relationships are where things developmentally can go wrong, then relationships are where they are most likely to be put right" (Howe, 2005, p.278). Through the re-creation of early caregiving experiences, it is hoped that children have the opportunity to develop their social and emotional skills and that ultimately, they will be able to use these skills in different contexts and relationships outside of the NG (Colwell and O'Connor, 2003; Cooper and Whitebread, 2007). Children who receive NG intervention typically return to their mainstream class full-time after two to four terms of regular attendance (Binnie and Allen, 2008).

Classic 'Boxall' NGs were originally developed for 10 – 12 children aged between four and eight (Boxall, 2002). They typically run for four-and-a-half days per week and should be staffed by two adults, ideally a qualified teacher and a teaching assistant, whose interactions are designed to model positive cooperation and social skills to the children (Boxall, 2002; Cooper and Whitehead, 2007). NGs are designed to have a highly structured and predictable daily routine which involves curriculum-based tasks, social

learning and emotional literacy tasks, alongside opportunities for play and interactions with adults and children (Hughes and Schlösser, 2014). As such, NGs provide children with a holistic learning experience, incorporating both the National Curriculum and a curriculum designed to support their social, emotional and behavioural development (Boxall, 2000).

In recent years, several different types of NGs have emerged, typically referred to as 'variant' groups (Cooper, Arnold, & Boyd, 2001; (Lucas, Insley & Buckland, 2006; Cooper and Tiknaz, 2005). Generally, 'variant' NGs are based upon the principles and practice underpinning classic 'Boxall' NGs, however, they differ in terms of their organisation and structure (Nurture Group Network, 2011). For example, some groups run for a reduced number of weekly sessions (part-time NGs), cater for secondary school students or provide support to children across a group of schools (Binnie and Allen, 2008; Cooke et al., 2008). Given the variation amongst NG models, it is important to be aware that different models may yield different outcomes. Thus, findings from studies should be interpreted with this in mind.

Effectiveness of Nurture Groups

Despite running in over 1,500 schools across the UK (Nurture Group Network, 2016), the current evidence base for NGs remains small, although the published research seems to suggest some positive effects. Studies have utilised both quantitative and qualitative methods to examine the impact of NG intervention on children's social, emotional and behavioural development. This body of research will now be discussed, taking each methodological approach in turn.

Quantitative Studies. O'Connor and Colwell (2002) reported statistically significant gains for 68 children (mean age = 5.25 years) across NGs in five schools on all 20 sub-strands of the Boxall Profile (Bennathan and Boxall, 1998; 2000) which is a profile designed to broadly identify children's areas of strength and need and to track their social, emotional and behavioural progress during NG intervention. The authors reported that this trend was still evident at a two-year follow-up, however, these findings should be interpreted with caution as data was only obtained for 12 of the original 68 children. Significant gains on the Boxall Profile were also reported by Gerrard (2006) for 108 children in 13 schools. Additionally, Gerrard (2006) reported a reduction in total difficulties scores on the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) for 133 children in 15 different schools. Similar gains were reported on both measures by Binnie and Allen (2008) for 36 children attending part-time NGs across six schools,

alongside an increase in children's self-esteem, measured using the Behavioural Indicators of Self-esteem Scale (Burnett, 1998). However, none of these studies included control groups, making it impossible to ascertain whether the positive effects were a likely result of NG intervention.

Two studies have reported positive effects with regards to children's development in comparison with control groups. Sanders (2007) reported significant gains on the Boxall Profile scores for 17 NG children in one school compared with nine children in a control school. However, it is noteworthy that the control children had better pre-intervention scores on the Boxall Profile, which were not controlled for statistically, limiting the effectiveness of the comparison. In a larger study, Cooper and Whitebread (2007) examined the outcomes of 359 children attending classic 'Boxall' NGs alongside 184 controls matched for age, gender and teacher perceived academic ability. Relative to the control group, NG children were reported to show a significant reduction in total difficulties scores on the SDQ (Goodman, 1997) during the first two terms of attendance. Similarly, Scott and Lee (2009) used a case-control study design to compare the progress of 25 children attending part-time NGs with 25 control children (aged 5 - 11 years) over a full academic year. Boxall Profile scores of those attending NGs significantly improved in comparison to the control children.

Taken together, these findings tentatively suggest some positive effects of both classic 'Boxall' NGs and part-time 'variant' groups. However, it is noteworthy that children's progress was generally measured using the Boxall Profile, which is typically administered pre-intervention to inform children's developmental targets before being administered again post-intervention. Whilst this can be considered a relevant assessment of children's skills (i.e. in order to ascertain appropriate targets and inform teaching), it lacks objectivity as an evaluative measure of progress. Furthermore, the Boxall Profile prevents consideration of the specific features of children's social, emotional and behavioural development which NGs may support (Seth-Smith, Levi, Pratt, Jaffey, & Fonagy, 2010).

In an attempt to address these limitations, Seth-Smith et al. (2010) evaluated the progress of 41 children attending classic 'Boxall' NGs and 36 control children on the individual subscales of the SDQ over a period of 21 weeks. When compared to the control children, NG children showed significant improvement on the peer problems, pro-social

behaviour and hyperactivity subscales but not the conduct or emotional difficulties subscales. These findings suggest that improvements in children's social rather than emotional development may be observed in the early stages of NG intervention. Seth-Smith et al. (2010) proposed that the small group environment facilitates the development of interactive skills such as turn-taking and that the sustained emphasis on considerate behaviour facilitates positive social interactions between children. Whilst this study had strong ecological validity, children were not matched in terms of their social and emotional needs. Seth-Smith et al. (2010) also acknowledged that more sensitive measures would have added robustness to the findings.

Qualitative Studies. Findings from qualitative studies (Cooper et al., 2001; Cooper and Tiknaz, 2005; Sanders, 2007; Binnie and Allen, 2008; Taylor and Gulliford, 2011) largely support those of the quantitative studies. Cooper and Tiknaz (2005) interviewed mainstream class teachers who reported success in relation to NG children's behaviour and social skills. Teachers noted improvements in children's willingness to participate in classroom activities, increased self-esteem, increased confidence, improved ability to initiate conversations with peers, a reduction in 'acting out' behaviour and improvements in children's self-management of anger (Cooper and Tiknaz, 2005). Similarly, based on observations of children and interviews with staff and parents, Sanders (2007) reported that children made gains in their learning skills and social and emotional development. Staff reported that children established more positive friendships and were better able to regulate their behaviour, however, they commented that observed improvements in children's social skills were less evident in the playground.

NG intervention has also been found to positively impact parent-child relationships. Taylor and Gulliford (2011) conducted semi-structured interviews with 15 parents following their child's participation in NG intervention. They reported that the most consistent observation made by parents related to improved communication and interaction with their child. Parents commented on feeling less stressed and more connected with their child. Taylor and Gulliford (2011) also reported that parents' own happiness seemed to be linked to their child's happiness. Thus, when children felt unhappy in school, their unhappiness transferred to the home context, which may have adversely impacted on the parent-child relationship. However, given the limited research examining the impact of NG intervention on parent-child relationships, further studies are required to triangulate these findings before any firm conclusions can be drawn.

In their preliminary study investigating the effectiveness of NG intervention, Cooper et al. (2001) also interviewed children about the NGs. Findings indicated that children made positive references about opportunities for free play and more structured activities, their relationships with staff and the predictable, calm nature of the environment. Syrnyk (2014) combined verbal interviews with asking children to make drawings of their experiences of NGs. She reported that over a period of five weeks, children demonstrated that they had become attentive to how the NG operated, particularly with regards to managing poor behaviour, and that they showed a fondness towards staff, whilst also focusing on what they valued about their new environment. Despite these positive findings, Syrnyk (2014) suggested that further research is required to fully explore how best to elicit the 'voice' of children who may be perceived as too challenging or young to be heard.

Collectively, this body of research suggests that NGs have some beneficial effects on children's social, emotional and behavioural development and the corroboration between the quantitative and qualitative findings is notable. However, it is important that these findings are interpreted cautiously, particularly in light of their methodological weaknesses. Such limitations include a lack of control groups, poor matching when control groups have been used and small sample sizes. The quantitative measures used to evaluate progress also lack objectivity and specifity. Therefore, our ability to draw any firm conclusions from the data with regards to the impact of NG intervention on children's social, emotional and behavioural development is limited. Moreover, there is a lack of research evaluating the longer-term outcomes for children attending NGs and as such, it is unclear whether the reported positive effects are maintained over time. Within the qualitative studies, there is a lack of detail and transparency in the reporting of the analysis and thus, it is not clear how the data was analysed. As such, the reliability of these findings is questionable.

The Present Study

In light of the reviewed literature, the present study aimed to address the lack of objectivity and specifity in the measures used to evaluate the impact of NG intervention on outcomes for children. As previous research (e.g. Seth-Smith et al., 2010) has reported early improvements in children's social development, this study aimed to explore the

impact of NG intervention specifically on children's social skills using alternative measures than the Boxall Profile or the SDQ.

Given that interventions are intended and designed for those at whom they are aimed, it seems pertinent that children's perceptions and experiences of NGs are also considered. Moreover, there is a growing interest within the educational literature (O'Kane, 2008) and government policy, for example the Special Educational Needs and Disability Code of Practice (Department for Education, 2015) on eliciting 'pupil voice'. The current lack of research on children's perceptions of interventions such as NGs is, therefore, surprising. This study aimed to redress this gap by exploring children's perceptions of NG intervention, specifically in relation to the development of their social skills.

Finally, considering that NGs aim to provide children with reparative attachment experiences with trusted adults in school in order to facilitate revisions in their internal working model, and therefore, relationships with others beyond the NG, a supplementary aim of this study was to examine whether there are any benefits of NG intervention to the parent-child relationship.

Research Questions and Hypotheses

The main research question of the present study was: Are there any changes in children's social skills associated with NG intervention? Within this overall question, the researcher sought to answer the following questions:

1. Does participating in a NG intervention improve children's social skills?
2. What are children's views about attending a NG and whether they help with their social skills?
3. Does participating in a NG intervention improve parent-child relationships at home?

It was hypothesised that children would show an improvement in their overall social skills over time, as assessed by teacher perceptions and their own response to a variety of challenging social situations. It was also hypothesised that parents would report an improved relationship with their child over time, as measured by decreased perceptions of conflict and increased perceptions of closeness.

2.2 Method

Epistemological Position

In the present study, a critical realist epistemology was adopted. This approach incorporates aspects from both positivism and social constructionism, seeking an objective reality whilst acknowledging the perspectives of participants and contextual factors surrounding the research (Robson, 2002). Critical realists believe that reality exists but seek an explanation for this, arguing that outcomes depend upon both processes and contextual factors (Robson, 2002). When evaluating interventions, Pawson and Tilley (2009) highlight the importance of considering what it is about the intervention that works for which individuals and under what conditions. A critical realist perspective was taken as the researcher wished to examine the impact of NG intervention on the development of children's social skills, thus generating data from standardised and reliable sources in a way that might be viewed as objective and pragmatically helpful (i.e. to EPs and teachers involved in setting up, supporting or making decisions about NGs). The critical realist perspective also justifies the benefits of additionally exploring the potential underlying processes, thoughts and contextual factors surrounding the outcomes, through drawing upon the experiences from children in the NGs.

Design

In line with the critical realist perspective taken by the researcher, a mixed-methods design was employed. The quantitative aspect of this study employed a within-subjects repeated measures design and addressed research questions one and three. The qualitative aspect addressed research question two and involved thematic analysis (TA) of interviews conducted with children at the end of their first term in NG. A semi-structured interview approach was chosen to permit greater flexibility in exploring children's views and experiences more widely (Creswell, 2003).

Participants

Participants were recruited from primary schools in the South of England. Information letters were sent to the Headteachers of 29 schools, identified via the Nurture Group Network (2016). Five schools agreed to take part. As can be seen in Table 3, schools varied in terms of the total number of children on role and the percentage of

children receiving free school meals. However, all NGs met the Nurture Group Network quality mark award criteria (Nurture Group Network, 2007) (see Appendix E) which ensured a level of consistency across groups. The NGs were delivered in accordance with the Boxall Guidelines (Nurture Group Network, 2011), although they differed in structure to 'classic' Boxall NGs as they ran on a part-time basis. Detailed information about each NG can be found in Appendix F.

Parental consent was received for 16 out of the 31 children due to start NGs in the participating schools. These 16 children (9 males, 7 females) were aged between 6 years and 9 years 9 months (M = 7.35 years, SD = 1.14). 15 were White British and one was Sri Lankan. Three children were from military families. Alongside NG intervention, the majority of children were receiving additional support for phonics, maths or handwriting. Two children were receiving Occupational Therapy. None of the children had previously received NG intervention.

Table 3

Nurture Group School Characteristics

School	N (%)	Total number of children on roll	% of children receiving free school meals
A	2 (12.50)	250	19.2
B	8 (50.00)	307	7.80
C	2 (12.50)	635	2.20
D	1 (6.25)	421	19.0
E	3 (18.75)	624	4.20

A control group was not included in this study, partly due to the ethical implications of identifying children with similar needs who were not then able to be supported through NG intervention. Practical issues were also influential including difficulties in matching participants. For example, children in schools without NG provision were likely to be receiving alternative interventions to support their social, emotional and behavioural development (e.g. ELSA). However, as NG intervention is unique in terms of delivery and length, it is difficult to find alternative interventions which provide a fair and robust comparison.

Measures

Children's social skills. The Child Role Play Measure (CRPM: Dodge, McClaskey, & Feldman, 1985) is an individually administered assessment of children's skills in response to a variety of challenging social situations (including initiating interactions with peers, responding to provocation and conformity to social expectations). Children are read 15 different social scenarios (α = .72) (Dodge et al., 1985) and are asked to explain what they would do in each situation. Children's responses are rated against one of five benchmark responses (scored between 0 and 8) with higher mean rating scores indicating better social skills. In this study the reliability of the CRPM was questionable at Time 1 (α = .47) and acceptable at Time 2 (α = .79). For the purposes of this study, the wording in some scenarios was changed to reflect UK rather than American English. For example, the word 'recess' was replaced with 'playtime' (Appendix G).

The Taxonomy of Problematic Social Situations for children (TOPSS: Dodge et al., 1985) is a teacher-completed rating scale designed to identify the particular social situations or tasks a child finds difficult. The TOPSS was completed by class teachers to triangulate the scores obtained from the CRPM. The TOPSS consists of 44 items based on the same social situations as the CRPM. Each item is rated on a five-point scale with one representing 'never' and five representing 'almost always'. Thus, lower mean rating scores indicate better social skills. The TOPSS has a reported Cronbach's alpha of .79 (Dodge et al., 1985). Cronbach's alphas in this study were .97 at Time 1 and .98 at Time 2, indicating high reliability.

Parent-child relationships. The Child-Parent Relationship Scale Short Form (CPRS- SF: Pianta, 1992) is a parental self-report measure assessing parents' perceptions of their relationship with their child. It consists of 15 items, each of which are rated on a five-point scale (ranging from one = 'definitely does not apply' and five = 'definitely applies'. Items are summarised in two subscales, conflict (8 items, α = .83) and closeness (7 items, α = .72) (Pianta, 1992). In this study, the conflicts subscale had good reliability at Time 1 (α = .91) and Time 2 (α = .74). The reliability of the closeness subscale was questionable at both Time 1 (α = .62) and Time 2 (α = .42).

Materials

The script and associated prompts for the semi-structured interviews (Appendix H) were designed to enable exploration of children's feelings and perceptions of their social skills in different school contexts, including the NG, classroom and playground. To enable the triangulation of data, questions were developed in line with the skills assessed in the CPRM and the TOPPS. Prior to conducting the interviews, the researcher considered the feasibility of interviewing young children. The researcher also acknowledged the potentially high level of educational need among children within NGs, including their language and communication skills. As such, visual materials were prepared to help facilitate the semi-structured interviews (see Appendix I). These included a picture sorting activity to help build rapport and introduce children to the materials. Feelings cards were used to scaffold children's thinking about different social contexts. Children were also given blank cards so they could identify their own feelings. Rating scales were used to support children in answering questions about how they felt in different social contexts and their social skills. The visual materials were developed based on the suggestions provided by Pellicano, Hill, Croydon, Greathead, Kenny & Yates (2014) in their attempt to elicit the views of children and young people with special educational needs in residential special schools. The interview questions were piloted with three primary school children, which led to minor amendments to the wording on some questions making them easier to understand. The use of practice items to support children's understanding and prepare them for the activity proved to be helpful.

Ethical Considerations

Ethical approval was obtained from the Psychology Ethics Committee at the University of Southampton (Study ID 18658, 4 May 2016) (Appendix K). In addition to the ethical considerations outlined below, as the semi-structured interviews were transcribed by a professional transcription service, a confidentiality agreement (Appendix J) was signed prior to sending the audio-files. The audio-files were encrypted and sent to the transcription company using their secure data service. Acknowledging her ethical responsibility to ensure factual accuracy and to avoid misinterpretation of the data, the researcher listened to the audio-recordings whilst reading the transcripts during the analysis process. This also ensured that the researcher was aware of the way language was used by participants, for example their tone of voice. Parents and children were informed of their right to withdraw from the study at any point without reason. Children were given

cards to indicate if they did not want to answer a question (yellow) or they wanted to stop taking part (red) (see Appendix I).

Procedure

Once ethical approval was obtained, schools were approached to take part in the study (Appendix L). Following Headteacher consent, information letters and consent forms were sent to parents (Appendix M). Child assent was also obtained prior to data collection (Appendix N). Quantitative data was collected from participants at the start of term, prior to them joining the NGs (Time 1). Children's teachers completed the TOPSS, parents completed the CPRS-SF and the researcher worked with children individually to complete the CRPM. This took approximately 15 minutes and was completed in a quiet room in school. All quantitative measures were repeated 15 weeks later (Time 2).

Parental consent was received for 12 out of 16 participants to take part in the interviews at Time 2. From this sample, a computer-based random number generator was used to randomly select six children to take part in the interviews, subject to child assent. Interviews took place individually in a quiet room in school and lasted for approximately 30 minutes. All interviews were audio-recorded. Upon completion of data collection, parents and children were debriefed (Appendices O and P) and children received certificates (Appendix Q). All data was fully anonymised and scored and the interviews were transcribed ready for analysis.

Data Preparation and Analytic Strategy

Quantitative data. Analyses were conducted using SPSS version 24. Initial assumptions were checked to assess whether the data was normally distributed and whether there were any outliers. All data was continuous and of interval level. Boxplots identified one outlier for the CRPM data. As this was greater than 5% of the sample (Field, 2013), the decision was made to exclude the participant's data for this measure. Visual inspection of the histograms indicated that the data for all three measures was normally distributed (see Appendix R). Kolmogorov-Smirnov (KS) tests of normality, which are appropriate for a small sample size (Field, 2013), supported this: TOPSS, $D(16) = 0.137$, $p = .200$; CRPM, $D(15) = 0.127$, $p = .200$; CPRS-SF conflict ($D(16) = 0.160$, $p = .200$); CPRS-SF closeness ($D(16) = 0.105$, $p = .200$). As shown in Table 4, standardised scores for skewness and kurtosis were also all less than 1.96 (non-significant) (Field, 2013).

Table 4

Skewness and Kurtosis Values for all Outcome Measures

Measure	Skewness	Kurtosis
TOPSS	0.62	0.62
CRPM	0.52	0.62
CPRS-SF (Conflict)	0.54	0.25
CPRS-SF (Closeness)	0.07	0.05

Note. TOPSS = Taxonomy of Problematic Social Situations (Dodge et al., 1985); CRPM = Child Role Play Measure (Dodge et al., 1985); CPRS-SF = Child Parent Relationship Scale Short Form (Pianta, 1992).

Descriptive statistics were used to summarise the data through the use of mean scores and standard deviations. To examine change over time in all outcome measures, paired sample t-tests were conducted. In light of the small sample size, and to help determine whether any change over time was meaningful, a Reliable Change Index (RCI: Jacobson and Truax, 1991) was also calculated for the TOPSS scores. This is a statistical indicator of change over time for individual pupils that sets a criterion (at $p < .05$) beyond which change attributable to pre-intervention differences and measurement error has been accounted for. The RCI criterion is calculated using the standard deviation of participants' scores and the reliability of the measure. Thus, if the reliability of a measure is poor, this limits our ability to confidently detect reliable and meaningful change. A RCI index was not calculated for the CRPM and the CPRS-SF due to concerns around their reliability in this sample.

Qualitative data. The semi-structured interviews were transcribed and then analysed using TA which is a method widely used within qualitative research for identifying and analysing patterns across a data set, with the aim of uncovering themes which are representative of the materials (Braun and Clarke, 2006). TA can be employed across a range of epistemological approaches and can be useful in under-researched areas,

or where participants' views regarding a topic are unknown, as it can provide a rich description of the data (Braun and Clarke, 2006; (Howitt and Cramer, 2011). Prior to selecting TA, the researcher considered alternative approaches, including content analysis. Arguably, content analysis is similar to TA, however, it is often used for the quantitative analysis of qualitative data (Robson, 2002). Thus, it was not felt to be suitable for this study. The researcher also considered discourse analysis, however, this was discounted as it focuses specifically on participants' use of language (Willig, 2003).

To ensure a methodologically sound approach to conducting the TA, the researcher followed Braun and Clarke's (2006) six stage process (see Table 5). A theoretical TA approach, which is more explicitly analytical, was taken as the analysis (including the themes generated and reported) was driven by the researcher's topic of interest (Braun and Clarke, 2006). The researcher used the research questions to frame the analysis, in order to explore the context of the NGs relative to children's social skills. In line with the critical realist perspective taken, data was coded at the semantic level and codes were generated from the data, rather than being explicitly driven by previous literature. In this way, the analysis and interpretation did not go beyond what the children had said.

Initially, the researcher analysed the data separately for both sections of the interviews (i.e. children's views on NGs and perceptions of their social skill development) and from this produced two thematic maps. However, the researcher did not anticipate the quantity and richness of the data collected from the children. Moreover, after defining the themes for the second thematic map and reflecting on this, the researcher became aware of areas of duplication. Thus, in order to make sense of the data and ensure that the reported findings were both useful and manageable, the decision was made to combine the first two thematic maps. The first step taken by the researcher in this decision-making process was to look for areas of duplication and to see if any themes or sub-themes could be combined. All three thematic maps were shared with both supervisors (one of whom was not an EP) and another trainee to agree on the final thematic map.

In contrast to quantitative data, qualitative data is often criticised for being subjective and therefore less reliable (Howitt and Cramer, 2011). As such, it is important to acknowledge the potential for researcher subjectivity bias within the study, particularly with regards to the researcher's role in both the interviews and data analysis process. To minimise the impact of this, the researcher aimed to be reflexive, engaging in frequent

discussions and reflecting on her thought processes with her supervisors, alongside keeping a reflective log. Through this the researcher was able to reflect on her own position within the research and consider her role in the construction of meaning given to the data. As per the recommendations in Elliott, Fischer & Rennie (1999), credibility checks were made throughout, for example, decisions for thematic maps were checked with two supervisors and another trainee.

Table 5

Braun and Clarke's (2006) Stages of the Thematic Analysis and the Researcher's Actions

Stage	Process
1. Data Familiarisation	• The data obtained from the semi-structured interviews was transcribed verbatim by a transcription company. • The researcher read through the transcripts whilst listening to the audio recordings to ensure they were an accurate representation. This also enabled the researcher to begin to familiarise herself with the data. • The researcher then repeatedly and actively read through all of the transcripts several times, making notes of initial ideas of meanings and patterns.
2. Identification of Initial Codes	• Based on the initial list of ideas generated and content that was of interest, initial codes were produced to reflect elements of the data which captured the researcher's attention. The codes were data rather than theory driven (Braun and Clarke, 2006). • The researcher systematically worked through the entire data set and manually coded and organised the data into meaningful groups. See Appendix S for some examples of coded transcript extracts.
3. Searching for Themes	• Codes were manually sorted into initial themes and subsequently into main themes and sub-themes. These were developed through the researcher's judgement (see Appendix T for the researcher's final coding manual). • Initial thematic maps (visual representations), for each section of the interviews, were produced to assist with this process (see Appendix U).
4. Reviewing Themes	• Themes were reviewed in line with the coded extracts and re-worked if necessary. • The thematic maps were amended by the researcher.

	• A final thematic map was produced.
5. Defining themes	• Data extracts for each theme were collated to define the theme and identify their story, with consideration given to what was of interest about the themes and why. Data extracts were selected by the researcher to provide support for the themes (see findings section).
6. Reporting the Analysis	• An account of the data in relation to the research questions was produced which also incorporated consideration of relevant psychological theory and literature (see discussion section).

2.3 Findings

Quantitative Data

The primary outcome variables were children's total scores on the TOPSS and the CRPM, alongside scores on the CPRS-SF (conflict and closeness). Table 6 presents descriptive statistics for all outcomes measures at Time 1 and Time 2. Results showed lower mean rating scores on the TOPSS and higher mean rating scores on the CRPM at Time 2, both indicating an improvement in children's social skills over time. This change was approaching significance with a medium effect size for the TOPSS ($t(15) = 2.08$, $p = .055$, $d = 0.52$) and was statistically significant for the CRPM with a large effect size ($t(14) = -3.76$, $p = .002$, $d = 0.97$). These findings provide some support for the hypothesis that following NG intervention, children would show an improvement in their social skills over time. There was no change in scores on either the conflict or closeness subscale of the CPRS (see Table 6).

Table 6

Descriptive Statistics for all Outcome Measures at Time 1 and Time 2

	Time 1				Time 2			
Measure (no. of items)	*M (SD)*	95% CI	Median	Range	*M (SD)*	95% CI	Median	Range
TOPSS Total (44)	2.66 (0.69)	[2.33, 3.01]	2.66	1.50 – 4.00	2.26 (0.72)	[1.92, 2.60]	2.22	1.00 – 3.36
CRPM Total (15)	4.70 (0.95)	[4.17, 5.23]	4.80	2.53 – 6.00	5.59 (0.81)	[5.14, 6.04]	5.60	4.53 – 7.20
CPRS – Conflict (8)	21.50 (8.40)	[17.02, 25.98]	19.50	9.00 – 38.00	21.06 (6.19)	[17.76, 24.36]	20.00	9.00 – 34.00
CPRS – Closeness (7)	30.19 (3.47)	[28.34, 32.04]	31.00	23.00 – 34.00	30.56 (2.78)	[29.08, 32.04]	30.50	24.00 – 35.00

Note. CI = confidence interval; TOPSS = Taxonomy of Problematic Social Situations (Dodge et al., 1985); CRPM = Child Role Play Measure (Dodge et al., 1985); CPRS = Child Parent Relationship Scale.

Reliable change index. As illustrated in Figure 2, nine children showed positive reliable change in teacher rated perceptions of their social skills. Four children showed no reliable change and three children showed negative reliable change (i.e. perceived regression in their social skills).

Figure 2. Reliable Change Index (RCI) for TOPSS Change Scores

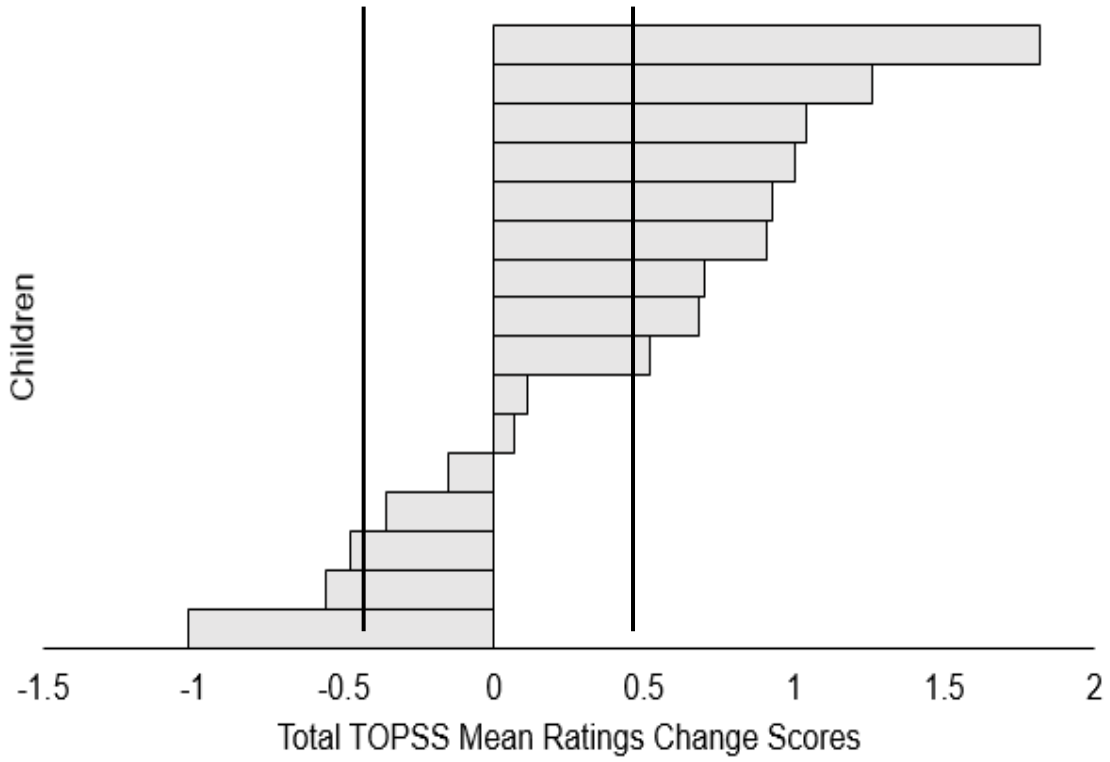

Figure 2. Reliable Change Index (RCI) for Total TOPSS Mean Ratings Change Scores. RCI criterion value = +/- 0.47, as indicated by the black line. Positive change is indicative of an improvement in social skills.

Qualitative Data

Qualitative data was obtained through semi-structured interviews with six children in an effort to elicit the children's views and acknowledge their experiences of NGs. Participant information can be found in Table 7. To protect their identity, children's names have all been changed.

Table 7

Participant Information for Interviewed Children

Pseudonym	School	Age (years)
Kate	D	6.11
Lucy	C	9.03
Poppy	C	9.09
Ella	B	7.10
Tom	B	7.03
Harry	B	7.02

As shown in Figure 3, two overarching themes were identified: 'child-related factors' and 'social and environmental factors'. From these two main themes five sub-themes and 10 subordinate sub-themes were identified. However, due to the richness of the data collected it was beyond the scope of this thesis to explore every theme. Whilst the sub-theme 'coping strategies' and subordinate sub-themes 'learning', 'behaviour' and 'rewards' do contain important and useful information, this has not been reported in this thesis due to this being beyond the scope of what could be achieved within the imposed word limits. They were also thought to be the least relevant in understanding children's views about their experiences of NGs, specifically with regards to their social skills.

Figure 3. Final Thematic Map

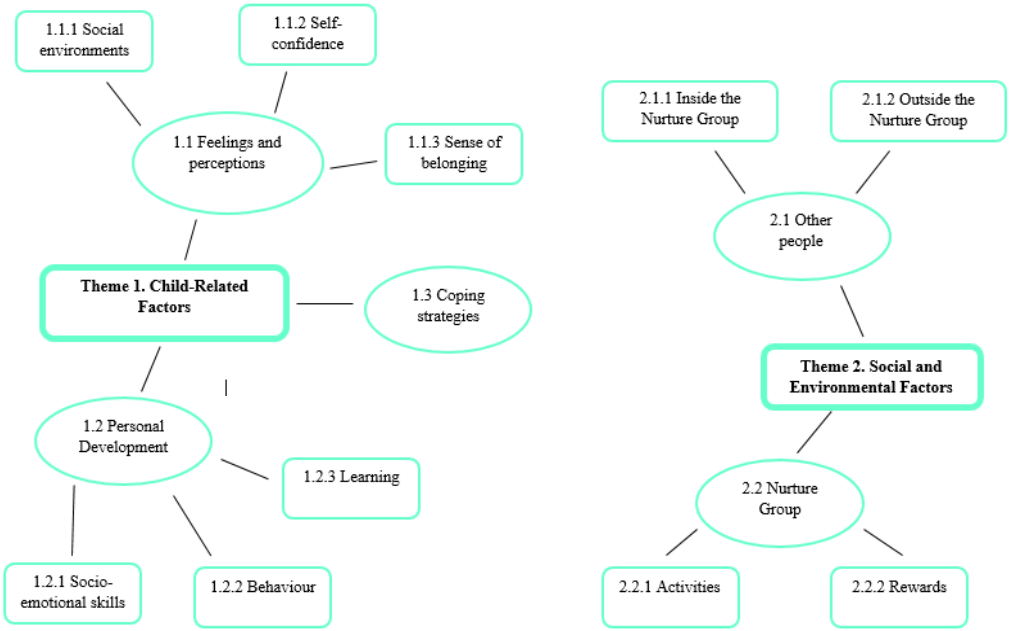

Figure 3: Final Thematic Map Identified from Children's Views about Whether Attending Nurture Group Helped their Social Skills.

Theme one: Child-related factors. The theme 'child-related factors' concerned factors related to the children personally which they discussed in relation to the NGs, including the perceived impact on their social skills. This theme comprises of two main sub-themes: 'feelings and perceptions' and 'personal development'.

Feeling and perceptions (sub-theme 1.1). This sub-theme relates to children's feelings and perceptions both in and outside of the NG, particularly with regards to their social skills. Further analysis indicated that this related to social environments, their self-confidence and sense of belonging.

Social environments (subordinate sub-theme 1.1.1). Initially, children were provided with a range of different feelings cards and asked to choose those which represented how they feel about the NG, their classroom and the playground (see Figure 4 for some examples).

Figure 4. Sorted Feelings Cards

Tom Harry Lucy

Figure 4: Examples of Children's Sorted Feelings Cards.

When engaging in discussions about the NGs, children chose feelings cards such as excited, comfortable, cheerful and happy. It seemed as though they enjoyed coming to NG, they felt happy and that they had fun. Prompt questions were asked to encourage the children to elaborate further:

Interviewer: What is it that makes you feel excited in the NG?
Ella: Because we do fun stuff.
Poppy: It's awesome.

Harry: It's really fun.

On a scale of 1 – 10 most children rated their NG as a 10, indicating that they 'like it a lot'. One child also expressed sadness at having to leave the NG, again reflecting positive feelings towards the group:

Ella: Yeah. The only thing which is really annoying is that I'm leaving it. After Easter I'm not coming anymore.
Interviewer: Ah, and how do you feel about that?
Ella: Sad.

Some children chose more uncomfortable feelings when engaging in discussions about the classroom or the playground. Such feelings included bored, left out, lonely and shy. For Kate, the contrast between how she feels in the NG in comparison to the playground seemed quite marked (Figure 5). This was supported by a comment she made whilst sorting the cards:

Interviewer: You feel a bit frightened on the playground?
Kate: I feel all the horrible ones.

Figure 5: Kate's Sorted Feeling Cards

Figure 5: Kate's Sorted Feeling Cards.

Not all children expressed such a contrast in feelings. Some children selected more positive or comfortable feeling cards for the classroom and playground such as friendly, cheerful and comfortable. Perhaps this reflects differences between different NG provisions and how links are made between children's experiences in NGs and other aspects of the mainstream school. However, as interviews were only conducted at Time 2,

there is no way of knowing whether these positive comments could be as a result of NG intervention.

Self-confidence (subordinate sub-theme 1.1.2). This subordinate sub-theme concerns comments from children which indicated their feelings of self-confidence, particularly in their ability to cope with or manage different skills in social situations, for example sharing. As previously mentioned, scaling was used to prompt an initial response and thoughts from children before probe questions were asked to elicit more information. Children's responses, relative to their ability to cope or manage in the NGs, were more often placed at the upper end of the scale, indicating a high degree of self-confidence:

Interviewer: How do you feel about talking to other children in [name of NG]?
Tom: Good.
Interviewer: Yeah. Where would you put it on my scale?
Tom: 1000.

Interviewer: How do you feel about talking to other children in the nurture group?
Poppy: I can cope really well with that.
Interviewer: You can cope really well with that. What score would you give it?
Poppy: Ten.

Harry: So I say, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, hundred.
Interviewer: So it would be higher than a 10?
Harry: 1000.
Interviewer: You're really, really good at taking turns then?
Harry: Uh hmm.

Interestingly, when discussing the classroom and the playground, children's responses to their ability to cope or manage were more often placed at the lower end of the scaling:

Interviewer: What about in the classroom, if children are unkind to you in the classroom where would you put it on my scale?
Tom: Past that.
Interviewer: What less than a one?
Tom: Yeah.

Interviewer: Oh dear, so you really, really can't cope with that?
Tom: Minus zero.

Interviewer: And how do you feel about talking to other children?
Kate: Shy.
Interviewer: Shy. You feel shy about that.
Kate: Yeah.
Interviewer: And what makes it a one? What makes you feel shy on the playground?
Kate: 'Cause there are loads of people on the playground.

Children were not asked, nor did they mention, whether they had always felt like this in the classroom or on the playground or whether things had changed in any way since starting NG.

Sense of belonging (subordinate sub-theme 1.1.3). When engaging in discussions about the NG, children talked about other children in the group and how they perceived everyone to be quite similar:

Poppy: Like people have the same feelings as you, like makes you feel comfortable knowing that other people know how I'm feeling.

Children generally seemed to view the NG as a place where they felt included, with one child even referring to it as a 'club':

Kate: It's the best club in school.
Poppy: Like everybody includes each other.

The majority of children talked about having friends in the NG and it felt that this was really important for them. They seemed to view the NG as somewhere they could make friends:

Interviewer: If someone was coming to visit your school, what would you tell them about [name of NG]?
Harry: That it's really good and you get to make new friends.
Interviewer: It's really good and has it helped you make new friends?

Harry: The first time I went in there I didn't know xxx and then I made friends with him.

Ella: You can make really nice friends in there.
Interviewer: You can make really nice friends.
Ella: And you can improve and make friends really quickly, and feel settled in.

Children also talked about how having friends in NG made them feel happy and comfortable:

Kate: 'Cause I've got my best friend in NG.

Interviewer: What makes you feel comfortable in [name of NG]?
Tom: My friends.

Interviewer: You said that you feel relaxed, what makes you feel relaxed?
Ella: Because I'm comfortable in the group.
Interviewer: You're comfortable in the group. With the other children?
Ella: Yeah.

In contrast the children seemed to feel quite differently outside of the NG, and in particular on the playground, with the majority of children sharing that they felt lonely:

Interviewer: And you said the playground was here, 'don't mind'. What number would you give it?
Harry: Six
Interviewer: A six. And what makes it a six?
Harry: Because I'm lonely.

Tom: I don't really have anyone to play with. I just bounce my ball in the playground.
Kate: Because I'm a lonely kid.

Interviewer: And how do you feel about the playground?
Ella: About three because I'm very lonely.

These extracts suggest that NGs may provide opportunities for children to experience making and having friends and to develop a sense of belonging within the

group. However, children's feelings and perceptions on the playground seemed quite different which could be due to the fact that in NGs, children are often with children from different classes. Alternatively, it may be that the playground is a very different social context (i.e. more children, less adult supervision and scaffolding and less structured) and is, therefore, harder to navigate and manage.

Personal development (sub-theme 1.2). This sub-theme relates to the impact that NG intervention seemed to have had on children's personal development and in particular their socio-emotional skills.

Socio-emotional skills (subordinate sub-theme 1.2.1). Two children commented that the NG helped them with expressing their emotions and also with helping others:

Kate: Well, it helped me care [for] little kids and big kids if they're hurt.

Interviewer: Has being in NG helped you at school in any way?
Poppy: Yeah.
Interviewer: Yeah. How has it helped?
Poppy: I can now share my feelings to [with] other people.
Interviewer: So you feel more able to share your feelings. Has it helped with anything else?
Poppy: I can know what other people go through.

Children also talked about the improvements they felt they had made in the NG with regards to social skills such as sharing, turn-taking and talking to other children:

Interviewer: Do you think you've got better at talking to other children?
Poppy: Yeah.
Interviewer: Where do you think it's been before?
Poppy: Probably a seven.
Interviewer: And what's helped it moved from a seven to a nine?
Poppy: Well when it was a seven it was when I didn't do nurture.

Interviewer: And how do you feel about talking to other children in the NG?
Kate: Er, that's a bit shy.
Interviewer: A little bit shy.
Kate: When I first came in I actually felt a little bit shy.

Interviewer: So where would you put it on this scale when you first came in?
Kate: Zero.
Interviewer: Okay, a zero. And what about now, how do you feel about talking to other children now?
Kate: 900.

Interviewer: And what about sharing, has coming to [name of NG] helped you with sharing?
Harry: Yeah. It helps me to like… I used to not share in Year Two and it gave me a lesson to share.

Interviewer: Has being in NG helped you with taking turns?
Poppy: Yeah.

These extracts suggest that the children felt that the NG has helped them to develop some of their social skills. The NG also seems to have had some impact on children's emotional development, potentially helping to increase children's emotional vocabulary and providing a 'safe space' for them to express themselves emotionally and feel 'contained'.

Theme two: Social and environmental factors.

When children had commented that NG had helped them in some way, this was followed up with a prompt question to explore what they felt had helped them in developing their social skills. This theme comprises of two sub-themes: 'other people' and 'NG environment'.

Other people (sub-theme 2.1). When children talked about what helped them in developing their social skills, they commented on both staff and children in the NG. However, children also talked about the impact of children outside of the NG. These formed two subordinate sub-themes.

Inside the nurture group (subordinate sub-theme 2.1.1). Children talked about how other children in the NG have helped them in developing their social skills:

Interviewer: Okay, and what do you think's helped make you feel a little bit less shy?
Kate: Me speaking to xxx.

One child talked about how she felt she can cope really well with talking to other children in the NG because there seemed to be a sense of trust:

Interviewer: Ten. And what makes it a ten?
Poppy: Well, you know they're not going to tell anyone else.
Interviewer: Okay.
Poppy: Because it's your personal feelings and they're sharing it to you and you know that if you don't tell it to anybody, that they're not going to tell it to anybody.

Alongside other children in the NG, children also talked about how the teachers helped them:

Interviewer: So what makes it better in the nurture group than in the classroom?
Ella: Because the nurture group helps me.
Interviewer: The nurture group helps you. What does it help you with?
Ella: The teachers help me with being kind and friendly to other people.

Harry: So I never didn't share again. I always share again now.
Interviewer: You always share now. And what helped you with the lesson?
Harry: [name of NG]. The teachers.
Interviewer: The teachers were helping you with sharing?
Harry: Uh hmm.

These extracts suggest that, from the children's perspectives, they felt that both staff and other children within the NG have helped them to develop their social skills, through both teaching and the games they have played.

Outside the Nurture Group (subordinate sub-theme 2.1.2). When children were talking about other social environments, in particular the playground, some children commented that other children do not play with them:

Interviewer: Three because you're very lonely in the playground. Why do you feel lonely?

Ella: Because no-one wants to play with me.

Interviewer: And what makes it a one? What makes you shy on the playground?
Kate: 'Cause there are loads of people on the playground, and some people go and have a lot of people on there, a lot of friends, because I don't even play with anyone.
Interviewer: You've got some friends in nurture group?
Kate: Yes, but I never play with anyone outside.

Interviewer: Ah. And what do you do when you feel sad and lonely?
Harry: I just sit on the bench.
Interviewer: Ah. And does anyone come and talk to you?
Harry: No.

For one child it seemed as though her peers were even actively rejecting her:

Interviewer: Okay. And do you try and play with them?
Ella: Yeah.
Interviewer: And what happens when you ask them to play?
Ella: They say no.
Interviewer: They say no. Ah, that's a bit sad isn't it?
Ella: There's a different way of getting away with it.
Interviewer: Yeah?
Ella: They say there's no more characters. It's the same meaning but they say it differently to pretend that they're not saying no, but they are actually meaning to say no.
Interviewer: But there's not enough space left in their game because they've run out of characters almost. Is that what you mean?
Ella: Well, they're trying to say that but soon I hear two other people join in when they say there was no more characters left, so what they're doing is saying they don't want me to play.

These extracts suggest that children may not have the opportunity to use their developing social skills within contexts outside of the NG. Perhaps this might be due to peers' perceptions of children attending NGs, alongside the fact that the playground is

quite a different environment to the NG and children may not have been able to apply their skills within this context.

Nurture group environment (sub-theme 2.2). This sub-theme relates to aspects of the NG environment which children talked about that seemed to have supported their social skill development.

Activities (subordinate sub-theme 2.2.1). Most children commented upon different activities, including playing, that had been helpful, especially in terms of sharing and turn-taking:

> *Interviewer:* And what's helped you in nurture group taking turns?
> *Poppy:* Well, last week we got a board game, or like a game and then two other girls, we played this game where we had pillars and we made a tower with them, and we had to roll the dice and if it landed on a blue, we had to take a blue pillar out and put it on the top. And yeah, taught us to take turns.
>
> *Interviewer:* You were doing all those things. Do you think nurture group's helped?
> *Kate:* Yeah.
> *Interviewer:* How has it helped you? What's helped you in nurture group to do good turn taking?
> *Kate:* Playing with my friends.
>
> *Interviewer:* What's helped you in nurture group to be a good sharer?
> *Lucy:* Like I share toys when playing with other children.

One child also talked about how, in her NG, they act out scenarios of different situations that have already happened and think about how they can make them better next time:

> *Interviewer:* Yeah. How has it helped you?
> *Poppy:* Well, when we did the acting two weeks ago, it helped knowing how to cope if you've made a mistake.
> *Interviewer:* Okay. So you you've found it helpful to role play different situations before they might happen in real life?
> *Poppy:* It did happen.

Interviewer: It did happen. What you made a mistake doing the acting?
Poppy: No, it was acting of you doing a mistake that you've done before.

These extracts suggest that through different activities in the NG, children have the opportunity to practice their social skills, both implicitly and explicitly. This may allow children to 'rehearse' appropriate behaviours alongside enabling them to learn alternative ways to manage different social situations. It would seem as though play may be an important aspect of NG provision in facilitating the development of children's skills.

2.4 Discussion

A critical realist epistemology was adopted to explore the impact of NG intervention on children's social skills. The use of quantitative and qualitative methods enabled exploration of both outcomes and the potential process and contextual factors surrounding these. Findings from the present study suggest that children's social skills showed some improvement after their first term in NGs. Specifically, children used significantly more appropriate responses to challenging, hypothetical social situations compared to when they started NG intervention. Teachers' ratings of children's social skills in problematic social situations also improved with a moderate effect size but this change over time fell just short of statistical significance. Moreover, children's own views and perceptions of NGs suggested that they enjoyed attending and that NGs helped them improve their social skills. However, children also reported experiencing challenges engaging with peers outside of the NG (i.e. in the playground and classroom). The main findings will be discussed in more depth below.

The present findings extend the research by Seth-Smith et al. (2010) who reported significant improvements for children on the peer problems and pro-social behaviour subscales of the SDQ following 21 weeks of NG intervention. This study is the first to explore more directly children's social skills as reflected in their responses to hypothetical social situations such as responding to peer provocation, or finding an effective way to join a peer group. However, caution is necessary when interpreting these findings. Firstly, the reliability of the CRPM at Time 1 in this sample was questionable. It may be that before starting NG, children's responses to a range of challenging social situations were more varied and inconsistent, perhaps reflecting less clear and organised mental representations of how to manage complex social situations. Children giving inconsistent responses would

result in lower correlations amongst the ratings for the 15 scenarios. At Time 2, children may have been more able to understand and respond to a wider range of challenging social situations. Cronbach's alpha at Time 2 fell in the acceptable range, suggesting children's responses to the different scenarios were more closely related to one another. Secondly, it should be acknowledged that the CRPM is based on hypothetical situations and thus children's responses may not be wholly reflective of how they would respond in reality. Direct observation of children's actual skills by independent raters across different contexts and at several time points would provide more robust data to clarify whether their skills had actually improved. However, it is noted that this approach would be more expensive and time-consuming.

Teachers' perceptions of children's social skills also suggested improvement over time but this effect fell just short of statistical significance. However, the RCI indicated meaningful change over time for nine of the 16 children. This finding is consistent with Cooper and Tiknaz (2005) who found that following NG intervention, teachers reported improvements in children's ability to initiate conversations with peers. The improvements in teacher perceptions of children's skills is noteworthy, particularly as children had only been accessing NG intervention for 15 weeks, and would suggest that children may be starting to generalise their skills to other adults or other contexts. It is acknowledged that expectancy effects could have impacted teachers' responses. However, the TOPSS is a broad measure of children's social skills across various contexts and does not relate specifically to NG intervention.

Children talked positively about the NGs, sharing that they were a place where they felt happy and excited. They seemed to enjoy coming to NG and felt comfortable with the other children and staff in the group. These findings concur with previous research (e.g. Cooper et al., 2001; Syrnyk, 2014) which reported that during the interviews, children were positive towards the NG and showed a fondness towards staff. Extending these findings, children in the present study also acknowledged their enjoyment of activities within the NG. Play, in particular, was an activity that children identified as being fun, something which made them feel excited and something that they liked doing with others. Children commented that they enjoyed role play activities, which may have allowed them to practice responding in different situations. Indeed, Elias and Berk (2002) suggest that role play may be a valuable asset in the development of self-regulation skills.

Children's accounts also indicated that they perceived positive change in their social skills, particularly in terms of sharing, turn-taking and talking to other children. They seemed to be growing in confidence in their developing skills, especially within the NG environment. Children valued that they were given the opportunity to experience making and having friends. These findings triangulate with the quantitative results obtained. Whilst, to the author's knowledge, this is the first study to have directly explored the views of children attending NGs in relation to their social skills, the present findings extend research by Cooper and Tiknaz (2005) who found that following NG intervention, teachers reported an improvement in children's abilities to initiate conversations with peers.

Conversely, children's interviews suggested that other social contexts, including the classroom and playground, were more challenging. Many children shared that they felt lonely on the playground, are often left-out of games and can never find anyone to play with. Similarly, Sanders (2007) reported that following NG intervention, staff commented that children had established more positive friendships but observed improvements in children's social skills were less evident in the playground. To some extent, this finding is perhaps unsurprising, given that NGs tend to be small, safe and predictable; potentially quite a different environment to the playground. Moreover, NGs often take place in a separate room with different teachers and different children. Whilst this context may be particularly facilitative for both social skill development and children's confidence (Seth-Smith et al., 2010), it may also make it more difficult for children to generalise their skills more widely. Furthermore, NGs do not address factors in children's social environments (e.g. peer perceptions) which may be impacting on children's ability to use their skills. It is also noteworthy that presently, there is a strong focus within schools on raising academic achievement and, therefore, the classroom environment may not be conducive to providing children with as many opportunities for non-work related social interactions. This seems to be reflected in a comment made by one child:

Poppy: We can't really talk in the classroom because we get told off for it.

Finally, it is possible that regular withdrawal for NG could negatively impact on children's continuity and playground inclusion with peers who do not attend. However, whilst this contrast between the NG and the playground is an interesting finding, it is not clear from the present study whether children's experiences on the playground have always

been negative, whether they have become worse or improved after joining the NG, or whether there has been no change. This indicates a gap in the knowledge base to inform future research directions.

Children talked about specific aspects of NG intervention that they felt had helped them. For example, children talked about developing relationships with other children in the NG. They commented that they had enjoyed playing with the other children, suggesting they had formed positive peer relationships. Children alluded to feelings of connectedness and mutual trust with the other NG children, suggesting that they may have developed a sense of belonging within the NG; an important factor for children's social and emotional development. Children also noted how staff had helped them learn to be kind and friendly. These findings are reflective of the principles underlying NG intervention (Lucas et al., 2006), namely the importance of social interactions with both adults and peers in facilitating children's social and emotional development. One of the key elements of NGs is that two staff members facilitate the group. Thus, the high adult-child ratio may enable staff to model and scaffold children's social interactions with peers at a developmentally appropriate level. Indeed, longitudinal research (e.g. Blatchford, Bassett, Goldstein & Martin, 2003) has found that in smaller classes, there are more teacher-pupil interactions, both individually or in small groups.

The present study also explored whether NG intervention positively impacted on parent-child relationships. Parents' perceptions of their relationship with their child did not change over time, as assessed using the CPRS. This finding is in contrast to the qualitative research by Taylor and Gulliford (2011) who reported that parents perceived an improvement in the quality of the parent-child relationship following their child's participation in NG intervention. Whilst it was not reported in Taylor and Gulliford's (2011) study how long children were in the NG for, the finding in the present study was perhaps to be expected, given that children had only been accessing the NG for one school term. It is also possible that parents in the present study had noticed a difference over time in their relationship with their child but that the CPRS was not sensitive enough to capture this change. Furthermore, the measure itself did not triangulate well with the CRPM and TOPPS so it may have been more useful to have explored parents' perceptions of children's social skills in the home context.

Limitations and Directions for Future Research

To the best of the author's knowledge, this is the first study to examine the impact of NG intervention using a more direct measure of children's social skills. Moreover, the present study explored children's perspectives of NG intervention, addressing recent paucity in the literature. Nevertheless, there were some important limitations.

Firstly, this study is limited in terms of its generalisability, due to both the small sample size and the subjective nature of qualitative research. Importantly, out of a possible sample of 31 children, consent was obtained for only 16. It is possible that the parents who gave consent were more engaged with school and supportive of NG work, thus the present findings may be positively skewed. Secondly, this study lacked an appropriately matched comparison group. Children also attended part-time NGs, thus a significant proportion of their day was spent in different social contexts outside of the NG which may have contributed to the development of their social skills over time. Thirdly, although the measures used in this study were more specific, in terms of assessing children's social skills, than either the Boxall Profile or the SDQ, the researcher acknowledges that they were still subjective and context dependent (i.e. based on teacher judgments in the classroom). Finally, whilst some level of consistency between NGs existed, as they all met the NG quality mark criteria (Nurture Group Network, 2007), there was still variation across the children from different NGs. For example, children differed in age and likely in their presenting areas of need (i.e. social, emotional and behavioural). Moreover, it is also likely that there were differences across NGs in the content and delivery of the intervention and in the experience of staff. It is therefore possible that there were some differences across NGs in their emphasis and approach, specifically to supporting children's social development. Due to these limitations, it is not possible to conclude with any certainty that the present findings were a direct result of NG intervention.

Future research could include active (i.e. children receiving an alternative intervention such as social skills groups or adult-led lunchtime groups) and wait-list matched comparison groups to more robustly assess the benefits of NG intervention. Additionally, future research would benefit from using methods that limit reporter bias, such as using observational data from raters blind to the intervention. Future studies should also collect follow-up data to determine the impact of NG intervention on children's social skills longer-term. Furthermore, it might be more meaningful for the

TOPPS measure to be completed by various individuals, for example the NG staff, lunchtime supervisors and teachers to gain a richer understanding of children's social skills.

Regarding the qualitative aspect of this research, it is possible that children's responses might have been influenced by the researcher and the context (i.e. the NG) where the interviews were conducted, despite efforts to keep the interviews as objective as possible. Moreover, the interviews were only conducted at Time 2. Whilst the current data suggests children experienced some positive change over time, particularly with regards to their social skills and friendships, interviewing children prior to NG entry would have increased the robustness of these findings and enabled a better understanding of their perception of progress over time. Future research should also seek to elicit children's views about other social contexts (such as the playground) before they joined the NG. This would help to determine whether there is any potential drawback associated with NG intervention. It is noted that NG intervention is a significant withdrawal of children away from their peers and ethically we have a duty of care to clarify that the benefits of NG intervention for children are not at the expense of marginalisation from their usual community of learners (i.e. a potential negative impact of intervention). Furthermore, future studies should seek to engage the potentially 'harder to reach' parents so as to ensure the widest possible representation of children's views.

It is important to acknowledge the subjectivity of the qualitative findings (even though appropriate steps were taken to ensure the researcher's actions were transparent), especially as the researcher conducted and analysed the interviews. Further research exploring the views of children in NG provision would be welcomed, both to extend and replicate these findings. Additionally, future research should conduct interviews with parents and staff in order to triangulate the children's views with those of the various individuals who work with them across different social contexts. Moreover, the views of other children in school who do not attend NGs (e.g. their perceptions of NGs and of children who attend them) could be explored. If other children hold any negative views towards NGs, it is possible that this may be a contributory factor to the feelings of loneliness described by the children in this study.

Reflexivity

The nature of qualitative research means that researchers are active participants in the process and thus, it is important that they acknowledge their influence on this (Willig, 2013). Reflecting on the process of conducting the interviews and eliciting children's views, I was surprised by how much rich data I generated. However, I recognise that building rapport with children and eliciting their views is something that within my professional role I feel competent and confident in doing, which may have contributed to the children being so open in talking about their experiences. I am also aware that through asking the children to consider different social contexts, this may have encouraged children to think about the differences rather than any similarities, potentially leading to some biases in the data. Moreover, throughout the research process I was aware of adopting an interactionist perspective and the value I place upon this. As such, this may have influenced how I coded and interpreted the data. The researcher's attempts to minimise such biases have been discussed in the method section of this thesis.

Implications for Practice

The findings from this study have several important implications for practice. Firstly, NG intervention does seem to have tangible benefits for many children and should continue to be an intervention that is offered/recommended in schools and supported by EPs. Secondly, findings from this study suggest that the NG intervention had a positive impact for most children in terms of their confidence, social skill development and the opportunity to make friends. Whilst these positive effects did not seem to be as evident beyond the NG environment, such a generalisation may not have been expected over a 15 week period. It also important to acknowledge the impact of external factors on children's ability to generalise their skills, for example, appropriate support from adults and opportunities to play and socialise with their peers. However, it is noteworthy that teachers (not involved in the NGs) reported an improvement in children's social skills which may suggest that after one term of NG intervention, children were starting to generalise their skills. As such, school staff should capitalise upon this and consider how to support children in generalising skills learnt to other social contexts, in particular the playground, whilst they are still receiving NG intervention. For example, after a term of intervention, staff could run a NG lunchtime club, which also involves other children in the school, so

that children in NGs have adult-facilitated opportunities to practice using their skills in other social contexts before their time in NG ends.

Thirdly, it is also noteworthy that three children showed negative reliable change in their TOPSS scores and four showed no change. Whilst it is acknowledged that individual or contextual factors on the day of data collection may have influenced children's scores, the fact that some children showed perceived regression in their social skills is an important reminder that interventions do not necessarily benefit all children. EPs should therefore support staff to be reflective and to have appropriate systems in place to monitor children's response to intervention and to make careful decisions accordingly. Given the feelings of loneliness that the children described on the playground, schools may wish to give consideration to the role of mid-day supervisors and how they could be facilitators of more structured play opportunities for children at lunchtime. EPs would be well-placed to deliver training to staff, particularly about the importance of belonging and of peer relationships for children in school. Moreover, EPs should think carefully with staff and parents about the withdrawal of children from their usual lessons for interventions and the negative impact this may have on their sense of belonging with their class peers.

Finally, this study also highlighted the importance of eliciting the child's voice, particularly in contributing to understanding the effectiveness of an intervention. The qualitative methodology used in this research was effective in collecting rich information from the children and may be a useful approach for teachers and EPs to employ when assessing the effectiveness of interventions more generally. However, it is noteworthy that the researcher's experience and confidence in using such an approach may have contributed to the richness of the data gathered. Therefore, EPs may need to train school staff so they can effectively use this method of eliciting children's views.

Conclusion

In summary, results indicate that NG intervention appeared to have some positive impact on children's social skills over the duration of their first term. In particular, most children showed increased self-confidence and skills in their responses to challenging social situations. This improvement was also noticed by teachers. Findings from the children's interviews indicated that the NGs seemed to be providing them with the opportunity to experience making and having friends which did not appear to be the case in

other social environments, especially the playground, and maybe even happened at the expense of this. However, due to the methodological limitations of the study, it is not possible to conclude with any certainty that these positive effects were as a direct result of NG intervention. Further research with larger sample sizes and comparison groups is needed.

Findings from this study have highlighted several implications for practice, including the need to think about how practitioners can help to facilitate the generalisation of children's developing skills beyond the NG context. Eliciting children's views on their perceptions and experiences of NG intervention also offered important insights into the effectiveness of NGs which may help us to better support children's social development. NGs do seem to have tangible benefits for many children and should, therefore, continue to be an intervention offered in schools and supported by EPs. However, not all children may benefit equally from NG intervention. As such, when recommending interventions, it is important that EPs draw upon and make careful use of both research-based and practice-based evidence (Fox, 2011), ensuring that the individual needs, preferences and circumstances of the children, young people and their families are taken into consideration.

Appendices

Appendix A: Literature Review Inclusion and Exclusion Criteria

Using the search terms outlined in the method section, 4511 studies were obtained. Search results were then filtered using the following inclusion/exclusion criteria:

1. Papers not published in English (n = 274)
2. Papers published in an academic or professional journal. Unpublished work and studies reported in books, abstracts, conference proceedings and review articles were excluded (n = 2057)
3. Exclude papers that were not published between the years 2000 – 2016 (n = 511)

Results were also filtered by age to only include studies which involved children between the ages of 0 and 12 years (birth – 12 filter). This resulted in the removal of a further 61 papers. Following application of the initial inclusion and exclusion criteria, the titles and abstracts of 450 papers were screened and a further 407 papers were excluded for the following reasons:

1. Children had a known clinical diagnosis (n = 5)
2. The intervention targeted the child only (n = 2)
3. A case study design was employed (n = 13)
4. Studies used qualitative methods with no quantitative analysis (n = 12)
5. The intervention used was not 'attachment theory based' (n = 21)
6. No/ irrelevant child outcomes measures were included as part of the evaluation (n = 28)
7. Review papers (n = 21)
8. Duplicates (n = 5)
9. The paper was irrelevant to the research question (n = 165)
10. Papers were descriptive and did not evaluate an intervention (n = 107)
11. Studies included fostered/adopted children within the sample (n = 21)
12. Studies reported on findings from a secondary data analysis (n = 1)
13. Studies included adolescents (13 years +) within the sample (n = 6)

The full texts of the remaining 43 papers were then accessed and read. Based on the identified inclusion and exclusion criteria, seven papers were excluded for the following reasons:

1. Studies included fostered/adopted children within the sample (n = 2)
2. No child outcomes measures were included as part of the evaluation (n = 3)
3. The intervention used was not 'attachment theory based' (n = 2)

The initial inclusion and exclusion criteria were subsequently refined and any papers which had not measured children's outcomes pre- and post-intervention were excluded. This resulted in the exclusion of a further 17 papers. The reference lists of the 19 papers included within the review were manually scanned and this resulted in the inclusion of an additional 3 papers. However, it was noted that within the 22 studies, three papers just reported the six-month follow-up results from three other papers already included. For the purposes of this literature review these three pairs of papers were combined and each discussed as one study. As such, the final number of studies included within the review was 19 (22 papers).

Appendix B: Quality Ratings Criteria

Quality Criteria

1	The study has an adequate control group.
2	The assignment of participants to groups is randomised and an adequate concealment method is used in this process.
3	Those involved in assessment of baseline and outcome measures are blind to the group participants are in.
4	The only difference between groups is the intervention undertaken or if differences are present they are controlled for (confounds).
5	Attrition from both intervention and control groups is reported and intention to treat analyses undertaken.
6	Outcome measure of child's emotional functioning is reliable and valid.
7	Outcome measure of child's behavioural functioning is reliable and valid.
8	Outcome measure of child's relational functioning is reliable and valid.
9	Intervention is described in detail and links with theoretical underpinning are explicit.
10	Intervention is undertaken as planned and measures are taken to ensure this (good fidelity).
11	Sample size and power adequate.
12	Appropriate analysis for outcome measures are used and confidence intervals, effects sizes and p-values are reported.
13	Follow-up evaluation is undertaken (well = 6 months; adequate = 1-5 months; poor = no follow up).

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Operationalisation of Quality Criteria

1. The study had an adequate control group.

Well covered	The study had a matched control group, recruited in the same way as the treatment group.
Adequately addressed	The study had a control group which was not recruited in the same way as the treatment group and may not be matched.
Poorly addressed	The study had no control group.

2. The assignment of participants to groups is randomised and an adequate concealment method is used.

Well covered	Randomisation is well described: includes a clear description of the method used and it is clear that concealment of identity and group is ensured during the process.
Adequately addressed	Randomisation is not well described: less clear from the description how exactly the process was undertaken and it may not involve stringent concealment.
Poorly addressed	Inadequate randomization and concealment process or non-randomized allocation to groups.

3. Those involved in assessment of baseline and outcome measures are blind to the group participants are in OR different people undertake assessment and carry out interventions.

Well covered	Description outlines adequate blinding: explains how it was ensured that those who conducted baseline and outcome assessments were blind to participant group.
Adequately addressed	Description outlines the use of blinding but does not explain how this was ensured.
Poorly addressed	Unclear from description given if blinding was conducted appropriately or no blinding used.

4. The only difference between groups is the intervention undertaken or if differences are present they are controlled for (confounds).

Well covered	Carer demographic factors & child baseline measures are fully assessed and compared between intervention and control groups. Where differences occur, these are considered in analyses.
Adequately addressed	Carer demographics and child baseline measures are fully assessed and compared between intervention and control groups. Where differences occur conclusions are interpreted and adjusted accordingly in light of this.
Poorly addressed	Carer demographics and child baseline measures are fully assessed and compared between intervention and control groups BUT where differences occur these are not controlled for in analyses and/or

	conclusions are not altered accordingly OR no baseline comparisons between intervention and control groups are undertaken.

5. Attrition from groups is reported and intention to treat analyses undertaken if required.

Well covered	Attrition from both intervention and control groups is reported and similar between groups, where differences occur intention to treat analysis are conducted appropriately.
Adequately addressed	Attrition is reported but is different between groups and intention to treat analyses are undertaken but less well described.
Poorly addressed	Attrition between groups is reported and is different between groups and no intention to treat analyses are undertaken.

6. Outcome measure of child's emotional functioning is reliable and valid.

Well covered	Psychometric properties of outcome measures demonstrate high validity and reliability. Outcome measure is commonly used with the population.
Adequately addressed	Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less commonly used with the population.

Poorly addressed	Psychometric properties of outcome measure have low validity and reliability is not evident. OR a measure with no established psychometric properties is used.

7. Outcome measure of child's behavioural functioning is reliable and valid.

Well covered	Psychometric properties of outcome measures demonstrate high validity and reliability. Outcome measure is commonly used with the population.
Adequately addressed	Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less commonly used with the population.
Poorly addressed	Psychometric properties of outcome measure have low validity and reliability is not evident. OR a measure with no established psychometric properties is used.

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8. Outcome measure of child's relational functioning is reliable and valid.

Well covered	Psychometric properties of outcome measures demonstrate high validity and reliability. Outcome measure is commonly used with the population.
Adequately addressed	Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less commonly used with the population.
Poorly addressed	Psychometric properties of outcome measure have low validity and reliability is not evident. OR a measure with no established psychometric properties is used.

9. Intervention is described in detail.

Well covered	Intervention is described in detailed with reference to theoretical underpinning and hypothesised impact on outcomes for children. The content and procedures of the intervention are described in sufficient detail such that the number of hours of input and format of input can be identified.
Adequately addressed	The content and procedures of the intervention are described in lesser detail and the theoretical underpinnings and hypothesised impact on outcomes for children are less clearly described.
Poorly addressed	The content and procedures of the intervention and the theoretical underpinning and hypothesised impact on outcomes for children are not described in detail.

10. Intervention is undertaken as planned and measures are taken to ensure this (good fidelity).

Well covered	Intervention is operationalised (e.g. follows manual) AND some check on fidelity is undertaken (e.g. supervision, video recording and rating of fidelity).
Adequately addressed	Intervention is operationalised (e.g. follows manual) BUT no fidelity checks are undertaken.
Poorly addressed	Intervention is not operationalised and no checks on fidelity are undertaken.

11. Sample size and power adequate.

Well covered	Power calculation undertaken and reported using reasonable effect size estimation and subsequent sufficient number of participants in each group.
Adequately addressed	Sample size is adequate for statistical power but undertaken using arbitrary effect size, or no calculation undertaken.
Poorly addressed	Low sample size and low power to detect statistically significant difference.

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12. Appropriate analysis for outcome measures is used and confidence intervals, effect sizes and p-values are reported where appropriate.

Well covered	Appropriate quantitative analysis used. Confidence intervals, effect sizes and p-values reported for every analysis.
Adequately addressed	Appropriate quantitative analysis used but less fully described and reporting of confidence intervals, effect sizes and p-values is less clear.
Poorly addressed	Poor method of statistical analysis used, not well described, confidence intervals, effect sizes and p-values not reported for any analysis.

13. Follow-up evaluation is undertaken.

Well covered	Follow-up evaluation using the same outcome measures is undertaken at 6 months or more following completion of the intervention.
Adequately addressed	Follow-up evaluation using the same outcome measures is undertaken between 1 – 5 months following completion of the intervention.
Poorly addressed	No follow-up evaluation undertaken OR follow-up undertaken using different outcome measures.

Appendix C: Quality Ratings Assigned to Studies

Quality criteria	1. Control group	2 Randomisation	3 Blinding	4 Confounds	5 Attrition	6 Measure - Emotional	7 Measure - Behavioural	8 Measure - Relational	9 Intervention	8 Fidelity	9 Sample/power	10 Analysis	11 Follow-up	Rating / 26
Study (Study no.)														
Cicchetti et al. (2006) Stronach et al. (2013) (11)	Well	Adequate	Well	Well	Poor	Not applicable	Not applicable	Well	Well	Well	Adequate	Adequate	Well	17
Fongay et al. (2016) (12)	Well	Well	Adequate	Well	Well	Well	Not applicable	Not applicable	Well	Adequate	Well	Well	Well	19

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Franz et al. (2011) (1)	Well	Adequate	Poor	Poor	Adequate	Well	Not applicable	Well	Adequate	Adequate	Not addressed	Adequate	Poor	11
Leigh et al. (2013) (2)	Poor	Not addressed	Not applicable	Not applicable	Not applicable	Not addressed	Adequate	Adequate	Adequate	Not addressed	Not addressed	Not addressed	Poor	3
Lieberman et al. (2005; 2006) (13)	Well	Adequate	Not addressed	Well	Well	Not addressed	Well	Not addressed	Well	Adequate	Not addressed	Adequate	Well	15
Moss et al. (2011) (3)	Well	Adequate	Well	Well	Well	Not applicable	Well	Well	Well	Well	Adequate	Adequate	Poor	19
Negrão et al. (2014) (4)	Well	Well	Well	Well	Well	Well	Not applicable	Not applicable	Well	Adequate	Poor	Well	Poor	17
Niccols (2008) (5)	Well	Well	Adequate	Not addressed	Well	Not applicable	Not applicable	Well	Well	Well	Poor	Adequate	Well	15
Oxford et al. (2013) (17)	Well	Not addressed	Adequate	Well	Poor	Not applicable	Not applicable	Well	Poor	Adequate	Poor	Well	Well	12
Sleed et al. (2013)	Adequate	Poor	Not applicable	Adequate	Not addressed	Not applicable	Well	Not applicable	Adequate	Poor	Adequate	Adequate	Poor	7

(6)														
Suchman et al. (2010; 2011) (14)	Well	Adequate	Poor	Well	Well	Not applicable	Adequate	Not applicable	Well	Well	Poor	Adequate	Poor	13
Svanberg et al. (2010) (18)	Adequate	Poor	Adequate	Well	Poor	Not applicable	Not applicable	Well	Well	Adequate	Adequate	Adequate	Poor	11
Thomas and Zimmer-Gembeck (2011) (7)	Well	Adequate	Poor	Adequate	Not addressed	Not addressed	Well	Not addressed	Adequate	Well	Adequate	Adequate	Poor	11
Toth et al. (2002) (15)	Well	Adequate	Well	Well	Poor	Well	Well	Well	Well	Well	Adequate	Well	Poor	20
Toth et al. (2006) (16)	Adequate	Adequate	Poor	Well	Well	Not applicable	Not applicable	Well	Well	Well	Adequate	Well	Poor	15
Van Doesum et al. (2008) (8)	Well	Well	Poor	Well	Not addressed	Well	Not addressed	Well	Well	Adequate	Adequate	Well	Well	18
Van Zeijl et al. (2006) (9)	Well	Well	Well	Well	Not addressed	Not applicable	Well	Not applicable	Well	Well	Adequate	Well	Poor	16

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Weihrauch et al. (2014) (10)	Well	Well	Adequate	Well	Poor	Not applicable	Well	Not applicable	Well	Well	Adequate	Well	Well	17
Ziv et al. (2016) (19)	Poor	Not applicable	Not applicable	Poor	Not addressed	Well	Not applicable	Not applicable	Adequate	Poor	Poor	Adequate	Poor	4

Appendix D: Data Extraction Table

Author(s) (Year) Country	Participants (Age, Gender, Risk Factor)	Design	Intervention (Type, duration, frequency, delivery)	Child Outcome Measures	Key findings (relevant to review)	Effect size
(Franz, Weihrauch & Schäfer, 2011) Germany **Ref: 1**	61 single mothers and their children. Age range of the children = 3 – 6 years. Average age of mothers = 36.3 years.	Dyads randomly assigned to either the intervention or a wait-list control group. Data collected pre- and post-intervention.	Parental training for Lone Mothers guided by Education (PALME). Participants attended 20 group sessions, each lasting 90 minutes each over a six-month period. The intervention followed a	Strengths and Difficulties questionnaire – German version (SDQ: Goodman, 1997). The SDQ was completed by teachers who were blind to mothers' group allocation.	Statistical analysis was only conducted on data from 37 children. The children of mothers in the intervention group showed significantly less behavioural problems at Time 2 compared with Time 1, $F(1,13) = 7.26$, $p < .05$.	No effect sizes were reported.

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			manualised programme and was delivered by two trained kindergarten teachers.		The children of mothers in the control group showed no significant changes in their behaviour over time.	
Leigh, Vergara & Santelices (2013) Chile **Ref: 2**	9 mother-child dyads. Mothers were attending primary health care centres. Average age of the children = 7 months (range = 5 – 12 months). Average age of the mothers = 22.7 years (range = 17- 31 years). 22.2% of mothers	Within-subjects repeated measures design. Data collected pre- and post-intervention.	Pilot intervention which involved a group workshop designed for dyads with children between the ages of 6 months and one year. Participants attended four weekly sessions, each lasting two hours. Sessions were monitored by two	Massie-Campbell Scale (Massie and Campbell, 1983).	Pre-intervention five dyads were noted as presenting with an insecure attachment style. Four months after the pilot workshop, three of the dyads had changed to a secure style of attachment. The four dyads who presented with a secure attachment style pre-intervention maintained this throughout.	

	had a history of depression and 33.3% had suspected depression at the time of the study.		health care professionals.		None of the observed differences were statistically significant.	
Moss et al. (2011) Canada **Ref: 3**	67 mother-child dyads recruited through child welfare or community services due to issues of maltreatment. Average age of the children = 3.35 years.	Dyads randomly assigned to either the intervention or a control group using a 1:1 block sequence. Data collected pre- and post-intervention.	Home visitation programme. Participants received 8 weekly home visits, each lasting approximately 90 minutes. The intervention was delivered by four clinical workers with bachelor's degrees in	Child Behaviour Checklist (Achenbach and Rescorla, 2000). Strange Situation Procedure (Ainsworth et al., 1978). Preschool Separation-Reunion Procedure (Cassidy and Marvin, 1992).	Post-intervention, a greater proportion of insecure children in the intervention group became secure (42.9%, *z* = 2.40) in comparison to the control group (15.6%, *z* = -2.40). A greater proportion of children in the intervention group became organised (were no longer disorganised but may not be secure)	*r = 0.36*

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	Average age of the mothers = 27.82 years.		psychology and relevant experience.		(37.1%, z = 2.00) in comparison to the control group (15.6%, z = -2.00). There were no significant group differences post-intervention in terms of children's internalising and externalising behaviours.	
Negrão, Pereira, Soares & Mesman (2014) Portugal **Ref: 4**	43 mother-child dyads from low socio-economic status, high-risk families. Average age of children = 29.07 months (range 12 – 48 months).	Dyads randomly assigned to either the intervention or control group (telephone call intervention). Data collected pre- and post-intervention.	Video-feedback Intervention to promote Positive Parenting – Sensitive Discipline (VIPP-SD). Participants received six home visits, the	Emotional Availability Scales (Biringen, Robinson & Emde, 1998).	Significant group x time interaction for positive child behaviour (F = 7.85, p < .05), child responsiveness (F = 8.38, p < .05) and child involvement (F = 5.77, p < .05). Children in the intervention group	Large (η_p^2 = 0.16) Large (η_p^2 = 0.17) Large (η_p^2 = 0.12)

	Average age of mothers = 29.98 years.		first four of which were bi-weekly. The intervention was delivered by four trained interveners (all female).		showed better functioning from pre- to post-intervention, whereas children in the control group showed worse functioning.	
Niccols (2008) Canada **Ref: 5**	64 mother-child dyads. Age of children = 1 – 24 months. Age of mothers = 18 – 40 years.	Dyads randomly assigned to either the intervention or control group (home visitation intervention). Data collected pre- and post-intervention and also six months later (follow-up).	Right From The Start (RFTS). A group based weekly intervention delivered over 8 weeks. Each session last for two hours.	Attachment Q-Set (AQS: Waters & Deane, 1985). Only completed for infants over 9 months (n = 28)	Significant group differences on AQS pre-intervention and 6-month follow up change scores, $F(2,20) = 4.13$, $p < .05$. Tukey post-hoc tests showed that the change scores were significantly greater for RFTS group	Medium ($d = 0.35 – 0.55$) (RFTS) Small (control group and non-attenders)

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			The intervention was delivered by infant developmental specialists with educational backgrounds in psychology, early childhood education, social work and additional training in parent interventions.		than the home-visiting or non-attenders, $p < .05$. No significant group differences pre/post intervention.	
Sleed, James, Baradon, Newbery & Fonagy (2013)	59 mother-infant dyads who were homeless and living in temporary accommodation (hostels)	The intervention hostel was selected following discussions between the psychotherapist and the health visitor. Control hostels were approached by the researcher and were located	Weekly baby clinic delivered by a health visitor and supported by a parent-infant psychotherapist.	Coding Interactive Behaviour Scales (Feldman, 1998).	There were no significant group differences in children's involvement or withdrawal over time.	

United Kingdom **Ref: 6**	Average age of the children = 7.5 months (intervention group) and 9 months (control group). Average of mothers = 25 years (intervention group) and 27 years (comparison group).	in the same geographical area. Data was collected pre-and post-intervention (12 weeks later).				

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Thomas & Zimmer-Gembeck, (2011) Australia **Ref: 7**	150 mother-child dyads. Mothers were referred from child protection authorities. Average age of the children = 5 years. Average age of the mothers = 33.5 years.	Dyads randomly assigned to either the intervention or a wait-list control group who received 'attention'. Data collected pre- and post-intervention. One month follow-up data collected for the intervention group.	Parent Child Interaction Therapy (PCIT) PCIT treatment varied in length depending on each family's progress with the skills but a follow-up assessment was conducted 12 weeks after baseline. Mean treatment length = 11.8 sessions (SD = 4.49). The intervention was delivered on an individual basis by	Parent completed: Eyberg Child Behaviour Inventory (Eyberg & Pincus, 1999). Teacher completed: Sutter-Eyberg Student Behaviour Inventory-Revised (Eyberg and Pincus, 1999). Child Behaviour Checklist (Achenbach and Rescorla, 2000).	A significant Group x Time interaction was found, with greater declines in externalizing behaviour in the PCIT group than the attention only group. No significant interactions in teacher's reports of externalising and internalising symptoms. Short-term (one month) maintenance of improvement was found for children's externalising behaviour (data only collected for intervention group but	Medium (*d* = -0.40 – -0.70

			primary PCIT psychologists.		data not reported in the study).	
van Doesum, Riksen-Walraven, Hosman & Hoefnagels (2008) Netherlands **Ref: 8**	71 mothers with depression and their infants. Average age of infants = 5.6 months. Average age of mothers = 30.3 years.	Dyads were randomly assigned to either the intervention or an active control group. Data was collected pre- and post-intervention with a follow-up assessment conducted six months later.	Home visiting intervention with video feedback. Participants received 8 – 10 home visits, each lasting approximately 60 – 90 minutes. Initially, visits were weekly but this was decreased to bi-weekly during the course of the program. The intervention followed a standardised	Emotional Availability Subscales (Biringen, Robinson & Emde, 1998). Attachment Q-Set (Waters & Deane, 1985). Infant Toddler Social and Emotional Assessment (Carter, Briggs-Gowan, Jones & Little, 2003).	A significant group x time interaction was found for child responsiveness, $F(2,68) = 3.88$, $<.05$ and also for child involvement, $F(2,68) = 4.85$, $p < .01$. Infants in the intervention group had significantly higher scores ($M = 0.41$, $SD = 0.30$) for attachment security at the follow up assessment than control children ($M = 0.26$, $SD = 0.35$), $t(69) = 1.92$, $p < .05$. Children in the intervention group were	Medium ($\eta^2 = 0.10$ and 0.13 respectively)

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			protocol and was delivered by one of 14 home visitors (qualified prevention specialists). Participants in the control group received three telephone calls, each lasting approximately 5 minutes, by one of eight child therapists. Practical parenting advice was provided.		significantly more competent in their socio-emotional functioning at the follow-up tests (M = 1.40, SD = 0.28) than the children in the control group (M = 1.22, SD = 0.30), t(69) = 2.64, p < .01. No significant differences between groups for externalising, internalising and dysregulation symptoms over time.	
van Zeijl et al. (2006)	237 mother-child dyads, of which the children were had been	Dyads randomly assigned to either the intervention or a control group which received six telephone calls.	Video-feedback Intervention to promote Positive Parenting – Sensitive	Infant Characteristics Questionnaire	No significant interaction between experimental condition and time for child behaviour.	Small (η_p^2= 0.03)

Netherlands **Ref: 9**	assessed as being relatively high-risk for externalising behaviour difficulties. Age of the children = 1 – 3 years. Average age of mothers = 33.15 years.	Data collected pre- and post-intervention.	Discipline (VIPP-SD). Participants received six home visits, each lasting 1.5 hours. The first four sessions were delivered every month and the final two were delivered every other month. The intervention was delivered by trained interveners (all female).	Bates, Bennett, Freeand & Lounsbury, 1979) Child Behaviour Checklist (Achenbach and Rescorla, 2000).	However, the intervention was more effective in decreasing children's overactive behaviour in families who had experienced marital discord, $F(3,227) = 3.02$, $p < .05$.	

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Weihrauch, Schafer & Franz (2014) Germany **Ref: 10**	58 single mothers and their children. Age of the children = 4 – 6 years. Average age of the mothers = 36.3 years.	Dyads were randomly assigned to either the intervention or a wait-list control group. Data was collected pre- and post-intervention with a follow-up assessment conducted six months later.	Parental training for Lone Mothers guided by Education (PALME) Participants attended 20 group sessions, each lasting 90 minutes each over a six-month period. The intervention followed a manualised programme and was delivered by two trained kindergarten teachers.	Strengths and Difficulties questionnaire – German version (Goodman, 1997).	Analysis was based on data collected from 28 children only. Significant reduction in total difficulties score from pre- to post-intervention for the intervention group only. This was not significant at the 6-month follow up suggesting that the intervention effects were not maintained long-term. Time 1 – 2: z = -2.25, p = .025 Time 1 – 3: z = -1.44, p = .149	Medium (d = 0.45)

					There was no significant improvement over time in behaviour for children in the control group.	
Cicchetti, Rogosch & Toth (2006) Stronach, Toth, Rogosch & Cicchetti (2013). USA **Ref: 11**	189 mother-child dyads (137 of these had previously experienced maltreatment). Average age of children = 13.31 months. Average age of mothers = 26.87 years, range = 18 – 41 years.	Dyads were randomly assigned to the three intervention conditions. A group of dyads where there had not been any reported instances of maltreatment formed a community comparison sample (NCS). Data collected pre- and post-intervention. 12-month follow-up data was reported in the paper by Stronach et al. (2013).	Infant -Parent Psychotherapy (IPP) Psychoeducational Parent Program (PPP) Community Standard (CS) Participants received one hour weekly sessions at home for 12 months.	Strange Situation Procedure (Ainsworth et al., 1978).	At baseline the distribution of attachment classifications differed significantly, χ^2 (9,189) = 63.98, $p < .001$ but follow-up contrasts indicated no significant differences between the three intervention groups. Post-intervention significant group differences were found, χ^2 (9,148) = 43.75, $p < .001$, however, the pattern of significant group differences had changed.	

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			Both interventions followed manualised programme. IPP was delivered by masters-level therapists. PPI was delivered by nurses.		Contrasts revealed that the IPP, PPI and NCS group all differed significantly ($p < .001$) from the CS group and that no significant group differences existed among the IPP, PPI and NCS groups. <u>Rates of secure attachment</u> IPP: increased from 3.1% to 60.7% PPI: increased from 0% to 54.5% CS: 1.9% post-intervention.	IPP: $d = 1.51$ PPI: $d = 1.41$ NCS: $d = 1.17$

					NCS: increased from 32.7% to 38.6% Disorganised attachment continued to be prominent in the CS group (77.8%), contrasting with lower rates in the IPP (32.1%), PP1 (45.5%) and NCS (43.2%) groups, χ^2 (3,148) = 20.40, $p < .001$. At the 12-month follow-up children who had received IPP had significantly higher rates of secure attachment, χ^2 (1,76) = 16.33, $p < .001$ and lower rates of disorganised attachment than children in the CS	Medium ($d = 0.46$) Small ($d = 0.23$) Small ($d = 0.13$)

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					group, χ^2 (1, 76) = 3.83, p = .05. There were no significant differences between children in the PPI and CS groups in terms of attachment security or disorganisation. Children who received IPP were more likely to demonstrate secure attachment, χ^2 (1, 49) = 5.41, p = .02, and were less likely to be classified as disorganised, χ^2 (1, 49) = 5.52, p = .02 than children who received PPI.	Small (d = 0.33) Small (d = 0.13 - 0.17)

					Rates of secure attachment in both of the active intervention groups did not differ significantly from the NCS group, whereas attachment security was significantly lower in the CS group than the NCS group, χ^2 (1, 96) = 8.68, p = .003. Rates of disorganised attachment did not significantly differ between the IPP and NCS group, whereas the PPI group had significantly higher rates of disorganisation than the NCS group, χ^2 (1, 69) = 5.40, p = .02.	Medium (d = 0.30) Small (d = 0.28)

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Fonagy, Sleed & Baradon (2016) UK **Ref: 12**	76 mother-infant dyads. Mothers had mental health difficulties and were also experiencing high levels of social adversity (e.g. social isolation, domestic violence, maternal childhood abuse, bereavement). Average age of the infants = 3.8 months.	Dyads were randomly assigned to either the intervention or a control group. All participants continued to receive standard treatment (secondary and specialist primary care treatment). Data was collected pre- and post-intervention with a follow-up assessment conducted 12 months later.	Parent-infant psychotherapy (PIP) Appointments were usually offered to participants on a weekly basis and in some cases, bi-weekly as the intervention progressed. Manualised intervention delivered over six months by six experienced parent-infant psychotherapists.	Bayley Scales of Infant Development (Bayley, 2006). Emotional Availability Scales (Biringen, Robinson & Emde, 1998). Coding Interactive Behaviour scales (Feldman, 1998). Follow-up: Strange Situation Procedure (Ainsworth et al., 1978).	No significant improvement in any of the subscales measuring parent-child interaction behaviour. At follow-up there were proportionally more infants in the PIP group who were classified as securely attached, as compared to the control group, however, the difference was not statistically significant. There was no significant difference between groups in the proportion	

	Average age of mothers = 31 years.				of children classified as disorganised.	
Lieberman, van Horn & Ippen (2005) Lieberman, Ippen & van Horn (2006) USA **Ref: 13**	65 mother child dyads (n = 50 at follow-up). Dyads were referred after there were concerns raised about the child's behaviour or mother's parenting after the child witnessed or overheard marital violence.	Dyads were randomly assigned to either the intervention or an active control group. Data was collected pre- and post-intervention with a follow-up assessment conducted six months later.	Child-Parent Psychotherapy. Participants received 60 minute weekly sessions delivered over 50 weeks. The intervention was delivered by trained clinicians with either a master's or doctorate in clinical psychology.	Child Behaviour Checklist (Achenbach and Rescorla, 2000).	A significant Group x Time interaction was observed, $F(1,61) = 5.77$, $p < .05$. Follow-up analyses revealed that only the CPP group had significantly reduced in behaviour difficulties over time; $t(34) = 2.86$, $p < .01$ This effect was also maintained at follow-up and a significant Group x Time interaction was reported, $F(1,48) = 5.39$, $p < .05$. Children in the CPP group continued to	Small ($d = 0.24$) Small – medium ($d = 0.41$)

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	Average age of the children = 4.06 years.				show significantly fewer behaviour problems than children in the control group, $t(26) = 3.92$, $p < .001$.	
Suchman, DeCoste, Castigilioni, McMahon, Rounsaville & Mayes (2010) Suchman, DeCoste, McMahon, Rounsaville& Mayes, (2011) USA	47 mothers who had engaged in substance abuse and their infants. Average age of children = 16.67 – 18.74 months. Average age of mothers = 24 – 31.43 years.	Pilot study. Dyads were randomly assigned to either the intervention or an active control group (Parent Education Program). Data was collected pre- and post-intervention with a follow-up assessment conducted six months later.	Mothers and Toddlers Program (MTP) A 12-week individual psychotherapy intervention. Mothers meet with an individual clinician for one hour per week. Delivered by four therapists (two	Nursing Child Assessment Satellite Training (NCAST: Kelly et al., 2008).	Post-intervention there were no overall differences between groups in terms of child behaviour (clarity of children's cues and responsiveness to the mother). However, children of MTP mothers had significantly higher total scores of communication with their mothers than did children of PE	Small ($d > 0.20$)

Ref: 14			masters- and two doctoral-level).		mothers and this effect increased in magnitude at follow-up. There were no group differences in children's contingency score post-intervention but a delayed effect favouring MTP children was observed at follow-up.	Medium (d > 0.50) Small (d > 0.20)
Toth, Maughan, Manly, Spagnola &	122 mother-child dyads (87 = intervention and	Dyads were randomly assigned to one of two	Pre-school Parent Psychotherapy (PPP)	MacArthur Story Stem Battery and the	Children in the PPP group showed a significant decrease in maladaptive	No effect sizes were reported.

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Cicchetti (2002) USA **Ref: 15**	30 = comparison group). Children had previously experienced maltreatment. Average age of the children = 48.18 months.	intervention groups or the control group. Children who had not previously experienced maltreatment formed a comparison group. Data was collected pre- and post-intervention.	Psychoeducational Home Visitation (PHV) Community Standard (CS) Participants received one hour weekly sessions for 12 months. The intervention followed a manualised programme and was delivered by masters-level clinical therapists.	Attachment Story Completion Task (Bretherton, Ridgeway & Cassidy, 1990).	behaviours and negative self-representations in comparison to children in the PHV and CS groups. PPP children showed a significant increase in positive self-representations and the most significant increase out of all the groups in terms of positive expectations of the mother-child relationship. Children in both the PPP and PHV group showed a significant decrease in maladaptive maternal representations and this remained stable for the	

					CS and comparison group. Apart from children in the PPP group, there was no significant change over time in children's negative self-representations.	
Toth, Rogosch, Manly, & Cicchetti (2006) USA **Ref: 16**	100 mothers with Major Depressive Disorder (MDD) and their infants. 68 non-depressed mothers and their infants were also recruited for comparison purposes.	A randomised blocks procedure was employed. Data was collected pre- and post-intervention.	Toddler-Parent Psychotherapy (TPP) Conjoint therapy sessions with mother and infant. Weekly sessions with the average length of intervention period being 58.19 weeks (SD = 10.00).	Strange Situation Procedure (Ainsworth et al., 1978).	<u>Pre-intervention</u> 55.9% of the non-depressed comparison children were classified as secure. There were significantly fewer children classified as secure in the depressed intervention group (16.7%), $\chi^2 = 22.21$, $p < .001$ and in the	

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	Average age of the children = 20.34 months. Average age of the mothers = 31.68 years (range = 21 to 41 years).		The intervention followed a manualised programme.		depressed control group (21.9%), $\chi^2 = 15.97$, $p < .001$. No significant differences were found between the depressed intervention and depressed control group. <u>Post-intervention</u> The rate of secure attachment in the depressed control group (16.7%) continued to be substantially lower than in the non-depressed comparison group (47.6%), $\chi^2 = 12.54$, $p < .001$.	

					However, the percentage of children with secure attachments in the depressed intervention group (67.4%) was significantly higher than the depressed control group, $\chi^2 = 26.63$, $p < .001$ and the non-depressed comparison group, $\chi^2 = 4.22$, $p < .04$.	
Oxford, Fleming, Nelson, Kelly & Spieker (2013) USA	43 mothers and their recently reunified toddlers (toddlers had been placed in care for a period of time due to maltreatment).	Analysis of data taken from a larger randomised controlled trial. Participants were randomly allocated to either the intervention or a control group (early education service).	Promoting First Relationships (PFR). The intervention consists of 10 weekly 60 – 75 minute home visits made by providers from community	Toddler Attachment Sort-45 (Kirkland, Bimler, Drawneek, McKim & Scholmerich, 2004).	Significant and negative effect of PFR on 6-month follow up separation distress. Toddlers in the PFR condition showed a greater decrease in their separation distress scores.	

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Ref: 17	Average age of children = 18 months.	Data collected pre- and post-intervention and also six months later (follow-up).	mental health agencies.			
Svanberg, Mennet, & Spieker, (2010) United Kingdom **Ref: 18**	134 mother-infant dyads, all of whom were new mothers. Average age of mothers = 26.1 years. No information was provided on the age of the infants.	Assignment to the intervention or control condition was based on geographical location. Data was collected pre- and post-intervention.	Sunderland Infant Program. Dyads in each group were classified based on risk (high-risk, struggling and sensitive enough). The sensitive enough group received one visit and a leaflet on early child development. The	The CAREX-Index (Crittenden, 1997). Strange Situation Procedure (Ainsworth et al., 1978).	Infants in the intervention group were more co-operative after intervention than infants in the comparison group, $F(1,184) = 5.3$, $p < .05$. Post-intervention infant compulsivity increased in the comparison group whereas it stayed low in the intervention group, $F(1,187) = 11.3$, $p < .001$.	Small ($\eta_p^2 = 0.03$) Medium ($\eta_p^2 = 0.06$)

			struggling and high-risk groups were offered a series of four reflective video feedback sessions. Parent/infant psychotherapy or couple/parent therapy was also offered on a case by cases basis for the high-risk group. Video feedback was used in all cases. The intervention was delivered by health visitors. All participants in the comparison group received		There were no significant differences for infant difficultness or passivity. Post-intervention there were significant differences in distribution of the four infant attachment classifications, $\chi^2(3) = 16.5$, $p < .001$. The intervention group had significantly fewer infants in the 'complex' attachment classification than was expected (15 observed cases vs 24.8 expected cases, p<.001). There was also a trend towards more secure attachments in the	

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			‘routine care’ which consisted of standard health visiting practice.		intervention group (59 observed cases vs 50.3 expected, $p = .08$). Outcomes for the comparison group showed the opposite profile, with fewer than expected securely attached infants (16 observed vs 24.7 expected, $p = .03$) and more infants with a complex attachment than was expected (23 observed vs 12.3 expected, $p = .005$). <u>Levels of risk</u> Analyses comparing the intervention and	

					comparison conditions were not significant for the sensitive enough and high risk groups. For the struggling risk group, there were significantly fewer 'complex' attachments among infants in the intervention group (8 observed vs 13.3 expected, $p = .07$) with the reverse trend in the comparison group (13 observed vs 7.7 expected, $p = .04$). There was also a trend towards fewer securely attached infants in the struggling comparison group (5	

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					observed vs 9.9 expected, p = .06).	
Ziv, Kaplan & Venza (2016) Country not specified. **Ref: 19**	32 mother-child dyads. Mothers were receiving treatment at an outpatient community mental health clinic. Average age of the children = 5.2 years (range 3 – 6 years).	Intervention was determined based on the needs of the parent and child. Data was collected pre- and post-intervention. No control group.	Parent Child Psychotherapy Program (PPP) (received by 20% of participants). Two Clinician Model, during which one clinician gives 'voice to the child' (received by 12% of participants). Dyadic Psychotherapy (received by 36% of participants).	Emotional Availability Subscales (Biringen, Robinson & Emde, 1998).	Children were significantly more responsive post-intervention (M = 4.92, SD = 1.43) compared to pre-intervention (M = 4.59, SD = 1.44), $t(31)$ = 3.03, p <.01. Children were significantly more involved post-intervention (M = 4.88, SD = 1.19) compared to pre-intervention (M = 4.38, SD = 1.32), $t(31)$ = 3.95, p <.001.	Small (d = 0.23) Small – medium (d = 0.40)

			Individual Play Therapy with Parent Guidance sessions (received by 68% of participants).			

Appendix E: Quality Mark Award (QMA) Criteria for Nurture Groups

The QMA essential criteria are as follows:

- Member of the Nurture Group Network.
- Two members of staff present at all times.
- One member of staff must have completed the Nurture Group Network Theory and Practice of Nurture Groups course.
- The group must have been running for a minimum of two years.
- There must be a minimum of 6 – 12 children present for the majority of the time.
- Nurture Groups must run for a minimum of three sessions (AM or PM) per week with the same group of children.

Appendix F: Additional Nurture Group Information

	Nurture Group A
Size	Eight children in total (6 Boys, 2 Girls) *2 children included in the research
Staffing	Four adults (1 Higher Level Teaching Assistant, 3 teaching assistants)
Sessions	Children accessed the Nurture Group for 4 out of 10 half day sessions per week.
Establishment	The school has been running a Nurture Group for 4 years.
Layout	The group took place in a designated classroom with access to: - A carpet area - Kitchen area - Dining area - Book corner with a sofa, cushions and cuddly animals - Role play area - Games area - Basic classroom furniture - Children's choice board - A 'how are you feeling today' board - Display boards of children's achievements and targets - Display boards related to curriculum topic areas - Reward system
Daily Routine	The group provided an explicit and predictable daily routine, with a visual timetable to remind children. The routine consisted of: - Welcome - An activity around the dining table - Outline of the timetable and activities for the session - Time dedicated to chosen activities with carefully managed transitions - Snack time - Review of the session, acknowledgement of children's achievements - Goodbye
Involvement with the mainstream school	- Children were registered both morning and afternoon in their mainstream classrooms. - Children were also taught with their mainstream class for 6 out of 10 half day sessions per week. - Close liaison with class teachers to monitor progress and exchange information. Class teachers join children for a snack on a Friday when they can.
Involvement with parents	- An initial letter is sent to all parents of children attending the Nurture Group.

	- Staff take children out to meet their parents at the end of the day so briefly chat with them then. - Arrangements in place for an afternoon session where parents can come in and join their child to play a game and have a snack with them.

	Nurture Group B
Size	Eight children in total (6 Boys, 2 Girls) *All 8 children included in the research
Staffing	Two/three adults (2 teaching assistants, 1 teacher/SENCo)
Sessions	Children accessed the Nurture Group for 4 out of 10 half day sessions per week.
Establishment	The school has been running a Nurture Group for 4 years.
Layout	The group took place in a designated classroom with access to: - A carpet area - Dining area - Book corner with a sofa, cushions and cuddly animals - Role play area - Games area - Music area - Drawing area - Basic classroom furniture - Feelings board (emotional detective) - Display boards of children's achievements and targets - Display boards related to curriculum topic areas - Display board of staff and children's birthdays - Display board of 'our learning values this term' - Reward system
Daily Routine	The group provided an explicit and predictable daily routine, with a visual timetable to remind children. The routine consisted of: - Welcome - Circle time (sharing news) - Outline of the timetable and activities for the session - Time dedicated to chosen activities with carefully managed transitions - Snack time - Review of the session, acknowledgement of children's achievements - Goodbye
Involvement with the mainstream school	- Children were registered both morning and afternoon in their mainstream classrooms. - Children were also taught with their mainstream class for 6 out of 10 half day sessions per week. - Liaison with teaching staff regarding planning.

	- Visits from class teachers are actively encouraged. - Children choose a peer from their class to join them at a session in the Summer term.
Involvement with parents	- Welcome session in September. - Termly meetings to share children's work/achievements and to discuss any concerns. - Weekly emails to parents letting them know what is happening in the Nurture Group that week.
	Nurture Group C
Size	6 children in total (2 Boys, 4 Girls) *2 children included in the research
Staffing	Two adults (1 teacher/SENCo and 1 teaching assistant)
Sessions	Children accessed the Nurture Group for 3 out of 10 half day sessions per week.
Establishment	The school has been running a Nurture Group for 4 years.
Layout	The group took place in a designated classroom with access to: - A carpet area - Dining area - Book corner - Role play area - Games area - Basic classroom furniture - A 'how are you feeling today' board - Display boards of children's achievements and targets - Display boards related to curriculum topic areas - Reward system
Daily Routine	The group provided an explicit and predictable daily routine, with a visual timetable to remind children. The routine consisted of: - Hello/welcome - Feelings check-in - Target work - Free play - Snack time - Reflection / story time - Goodbye
Involvement with the mainstream school	- Children were registered both morning and afternoon in their mainstream classrooms. - Children were also taught with their mainstream class for 7 out of 10 half day sessions per week. - Class teachers are given a copy of children's targets and the aim is for them to join a session at least once per year. - The Headteacher carries out a formal observation each term.
Involvement with parents	- All parents are made aware their child is in Nurture and given a copy of their children's targets.

	Nurture Group D
Size	6 children in total (4 Boys, 2 Girls) *1 child included in the research
Staffing	Two adults (2 Higher Level Teaching Assistants but the group is overseen by the SENCo who is a qualified teacher)
Sessions	Children accessed the Nurture Group for 4 out of 10 half day sessions per week. One half day session per week is for planning.
Establishment	The school has been running a Nurture Group for 8 years.
Layout	The group took place in a designated classroom with access to: - A carpet area - Kitchen area - Dining area - Book corner - Role play area - Games area - Basic classroom furniture - Feelings board - Display boards of children's achievements and targets - Reward system
Daily Routine	The group provided an explicit and predictable daily routine, with a visual timetable to remind children. The routine consisted of: - Register - Hello and welcome - Free play - Snack time - Curriculum / target work - Tidy up time - Goodbye
Involvement with the mainstream school	- Class teachers are consulted when a new Nurture Group is being planned. - One children have been selected, the Nurture Group staff consult the class teachers and teaching assistants and targets are discussed and agreed upon. - Daily feedback from Nurture Group staff to teaching staff. - During the fourth term transition is discussed with teaching staff and appropriate days are planned for the children to back into class in the afternoons. - Children are registered both morning and afternoon in their mainstream classrooms. - Children are taught with their mainstream class for 6 out of 10 half day sessions per week.

	- Class teachers, teaching assistants and the senior leadership team are invited every term to attend snack time during Nurture Group. - Nurture Group staff blog on the school website along with class teachers. - Nurture staff are informed when Nurture children are on the playground rota, any outside agency involvement and Child Protection issues arise. - When class teachers complete pupil passports for SEN pupils, the targets are discussed with Nurture Group staff.
Involvement with parents	- Parents of selected children are invited in to the Nurture room to meet the Nurture Group staff along with the Nurture Group teacher. Any questions or concerns from parents are dealt with at this first meeting. - At the end of each term, parents are invited in to review their child's progress with class teachers and Nurture Group staff and new targets are shared with them. - Parents are invited to join snack time at least once during the four terms. They are also invited to join the Nurture Group for a Christmas afternoon. - During the third term parents are advised on the phased transition back to class. - Parents are invited in at the end of the fourth term for a final celebration with their child. - An 'open door' policy for the parents of Nurture Group children is in place.

	Nurture Group E
Size	12 children in total (4 Boys, 2 Girls) 2x groups running *3 children included in the research
Staffing	Three adults in total (ELSA and 2 teaching assistants)
Sessions	Children accessed the Nurture Group for 3 out of 10 half day sessions per week. The first and last weeks of term are used for planning.
Establishment	The school has been running a Nurture Group for 10 years.
Layout	The group took place in a designated room with access to: - A carpet area - Kitchen area - Dining area - Book corner - Role play area - Games area - Basic classroom furniture - Feelings board - Display boards of children's achievements and targets

	- Reward system: 10 sessions of target achieved = prize from the box. - Displays: Height chart, visual timetable, group rules, all about me sheets, self-portraits, helping hands job chart, group charter, seasons chart and photos of previous members of the group.
Daily Routine	The group provided an explicit and predictable daily routine, with a visual timetable to remind children. The routine consisted of: - Welcome - Visual time-table and circle time (learning activity 1) - Learning at the table/or outdoors (learning activity 2) - Choosing time - Snack time - Choosing time and helping hands jobs - Tidy up - Review targets - Goodbye
Involvement with the mainstream school	- Class teachers identify pupils and complete the Boxall Profiles. Teachers are provided with a letter which outlines what a Nurture Group is and which children might benefit from the intervention to help them in identifying appropriate children. - Teachers use the Nurture IEP targets in class. - Staff are invited for toast once a year. - Have had 'bring a friend' days.
Involvement with parents	- Parents are invited to visit the Nurture room. 50% of parents come into school to see the ELSA for individual appointments and to discuss children's progress towards targets in Nurture. - Parents receive a Nurture Group leaflet when their child is offered a place in Nurture. Parents are always spoken to by their child's class teacher first before the letter and leaflet are sent out so they are aware of the learning needs their child may have.

Appendix G: Adapted Child Role Play Measure

SOCIAL COMMUNICATION IN CHALLENGING SITUATIONS

The Child Role Play Measure

Developed by Dodge, McClaskey & Feldman (1985)

Adapted by Larissa Cunningham (2016) for D. Ed Psych Thesis

Pupil ID:

Instructions: Say to student: "*I am interested in finding out what children your age do in different situations in school. I am going to ask you to imagine some situations. I will pretend I am one of the children in your class. I want you to act out what you would do and say. There are not any right or wrong answers; I just want you to show me what you would really do and tell me what you would really say."*

Write out the child's response. Circle the appropriate score.

Situation	Response Key	Score
1. Let's pretend we're outside for playtime. You're playing it, but all of a sudden you notice that I'm standing all by myself. You come over to talk to me and you see that I've been crying. What do you do and say?	• Attempts to console child or help them personally ("I would play with her", "I would hold her hand". • Asks the child what has happened or if the child is alright. • Tells, or offers to tell, someone in authority. • No response. • Laughs at child. Does nothing. Doesn't know what to do or say.	8 6 4 2 0
Response: 1		
2. Let's pretend that I'm playing with building blocks with some friends after lunch. We're building a really good house. You come into the classroom and see us. Pretend that you really want to play with the blocks with us. What do you do and say?	• Complementary or evaluative remark with a request to play ("Hey, that's good. Can I play?") • A simple request to play ("I'd ask." "May I play?") • Rhetorical question ("What are you doing?") or an evaluative remark with no request to play ("That's good"). • Suggestion for a different activity ("Want to play a game?"). • Aggressive response ("I'd knock the blocks over) or says he would sit down without saying anything; doesn't know what to do.	8 6 4 2 0
Response: 2		

3. Let's pretend that we're in the dinner hall at lunchtime carrying our food. I'm walking right beside you. I want to sit by my friend. I accidentally bump you and you drop all of your food. What do you do or say?	• Acknowledge the accidental nature of the event ("Well, if she did it accidentally…OK" "That's all right if you bumped me" or responses that deal with the person in the situation ("I would ask if she would help me pick up the food"). • Responses that deal only with the spilled food ("I'd get more food" "I'd get a teacher/supervisor (score as a 2 if used as a threat) or responses that attempt to clarify the motivation behind the incident ("Why did you do that?" "You knocked my tray over!" "What have you done?"). • There is no response scored as a 4 for this scenario • Responses that are threats ("I'm going to tell!" "Don't do it again!") or responses that criticize the child ("YOU clean it up!" "Thanks a lot!"). • Retaliatory responses that involve physical force ("I'd dump your food on the floor" "I'd hit you") or responses that involve name calling ("Idiot!").	8 6 2 0
Response: 3		
4. Let's pretend that the teacher has told the whole class to line up for lunch. You are standing in line. Then I come and stand in front of you (pushing in). I say "I'm standing here now." What do you do and say?	• Asks child to go to the end of the line, or to allow them to return to their original position ("Go to the end of the line" "Let me have my place back") or asks other child why they cut in. Or responds without upset ("That's OK if she's a friend, if not I'd ask why she cut in" "I don't care about cutting in"). • Comments on the child's behaviour without asking for a specific replacement behaviour ("I was here first" "You cut in" "I was here first" "No you don't!") • Tells the teacher about the other child's behaviour. Pushes back in front of the other child without employing physical force. • There is no response scored as a 2 for this scenario. • Physical retaliation at the time or later ("I'd push you out of the way") or doesn't know what to do, doesn't answer, does nothing.	8 6 4 0
Response: 4		

Situation	**Response Key**	**Score**

5. Let's pretend that I and some other children have a new video game that we're playing with. You can see that it looks like a lot of fun. We are taking turns playing with it. You ask, "Can I have a turn?" I say, "No. You have to wait until I say you can play." What do you do and say?	• Waits for turn or waits and asks again later ("I guess I'll wait" "When will you be done?" "OK, when is it my turn?). Watches and comments on the game while waiting. • Asks again immediately or asks reason for refusal ("Please can I play?" "Why do you let your friends play?") or says "OK" and then goes in search of the owner of the video game to ask him/her. • Walks away without commenting, goes to play somewhere else or in some other way, drops the subject ("I would walk away without saying anything"). • Questions or comments on child's behavior in a negative way ("Well that's not nice" "I don't want to play"). Tells teacher or asks teacher when s/he can play. Attempts to bribe child ("Let me play or I won't give you candy"). • Uses physical force ("I'd shove you" "I'd cry, then I'd punch you" "I'd say 'please' then I'd knock their heads together"). Sabotages the game. Makes rude comment ("Aw, shove it"). Doesn't know what to do, does nothing.	8 6 4 2 0
Response: **5**		
6. Let's pretend that I'm another child in your class. You have some choosing time and want to talk to someone. You see me sitting at my table. You decide to talk to me. What do you do and say?	• Initiates a conversation by commenting on the child's activity or suggesting an activity ("Hi, want to do some drawing?" "I'd ask if I could play with the toy you're playing with" "Are you done with your Work?" "Would you like to help me with my Spelling?" • General questions or remarks ("Do you want to talk?" "Hi, will you come over here?"). Direct appeals for friendship ("Do you want to be friends?"). • A statement that is not a specific comment (score 8) or a general comment (score 6) but is a conditional statement regarding what the child might do ("I would go over and talk" "I'd see if you were busy, if not I'd talk"). • Questions the comment on the child's inactivity in a negative fashion ("Why are you just sitting here?"). • Responses that are not relevant to the task or that are inappropriate ("Quit looking around" "No I'd give you some….."). Says they would do nothing.	8 6 4 2 0
Response: **6**		

7. Let's pretend that you're drawing with your felt tip pens during break time. I am colouring too, but some of my pens are lost. I ask you, "Can I use your red one?" What do you do or say?	• Responses that say simply "yes" or that have a cautionary or conditional phrase added ("Yes, when I'm finished" "Yes, bring it back though"). • Questions such as, "What do you want a marker for?" or child changes his mind ("No, I'm using it. Yes, OK"). • There is no response scored as 4 for this scenario. • Responses with a threat attached ("Yes, but give it back or I'll tell"). Reponses that require "Say please". • Replies "No".	8 6 2 0
Response: 7		
8. Let's pretend that we're in the classroom. The teacher is handing out the maths books. When the teacher gives you your book you smile because you got all of the answers correct. Then you notice that I got lots wrong and start to cry. What do you do and say?	• Offer specific or general advice *and* console the child. • Offers constructive, specific advice to the child ("Let me help you with your math"). Attempts to console child ("It's OK, nobody's perfect" "Maybe you could do better next time"). Offers to help the child or to tell the teacher so that the teacher could provide help. • Simply gives advice without attempting to comfort or actually help the child ("Try harder next time" "Practice so you do better"). • Asks what is wrong or why they did so badly ("Why did you get them wrong?" "Why are you crying?"). Is matter-of-fact about the grade ("So what, if you get lots wrong"). • Wouldn't say anything. Simply says she would be sad but wouldn't communicate this to the child. Ridicules the child either to his face or behind his back ("Ha! You got lots wrong!" "I would spread it around the school"). Laughs at the other child or has no sympathy ("Tough, it's his own fault"). Doesn't know what to do or doesn't answer.	8 6 4 2 0
Response: 8		

Situation	Response Key	Score
9. Let's pretend that some children have started a club at lunchtime. It's a really fun club and we do some really good things. I'm in the club. Let's pretend that you	• Sends a message to the leader of the club asking if s/he can join. Asks child if s/he can go to a club meeting first to see if s/he likes it before s/he joins. Asks how to join the club. Asks if the child is the leader. • Asks child if s/he can be in the club, or go with the child to the meeting. • There is no response scored as 4 for this scenario. • Asks where child is going or what will be happening at the club today (without specifically asking to join the club).	8 6 2 0

wish that you could join the club too. One day you see me walking down the hall on my way to a club meeting. What do you say?	• Simply says "come here" to the child. Replies off subject ("Don't run in the hall"). Says he would bump into the child and then keep walking away. Says s/he would do or say nothing. Doesn't know what to do or doesn't answer.	
Response: 9		
10. Let's pretend that when you get ready to go to school your mum tells you that you need to take your big black coat and welly boots. When you get to school all the other children have on shorts and trainers. When I see you, I start laughing. What do you say and do?	• Attempts to show the child his/her viewpoint or give a rationale for his/her behaviour ("How would you like it if your mom made you wear this?"). Says to child "I can wear whatever I want and so can you" ("My other raincoat doesn't have any pockets so I had to wear this" "It's supposed to rain, you know"). Attempts to explain the other children's behaviour. • Asks child to stop laughing or pointing. Asks for more information ("What's wrong?"). • Takes off coat, hides it, or goes home to change. Says that the other child is the one dressed inappropriately ("At least I won't get sick like you will"). Says he would laugh with the child. • Tells the teacher. Says s/he would feel bad or turn red. Tells or warns the child to "shut-up" or "get lost"). Says he would feel angry. • Use physical force or threatens to do so "You look dumb too" "I'd hit you" "I'd take the raincoat and put it on you to see how you like it"). Would do nothing.	8 6 4 2 0
Response : 10		
11. Let's pretend that your teacher told the class to write about reptiles. You don't even know what a reptile is or even how you would spell the word. You notice me looking in a book to help me start my work. You come over to see	• Requests specific type of help from peers, teachers, parents ("What is reptile?" "Can I look in the book with you?" "I'd ask what page it's on"). Says s/he would watch the child to see how the child goes about doing the work. • Requests general type of help from peers, teacher, parents ("What are you doing?"). Stands in line to use the book the child was using or looks it up her/himself. Compliments the child on how well she's doing (finding the word). • There is no response scored 4 in this scenario.	8 6 2 0

what's going on. You are really upset because you think you are going to get in trouble. What do you do and say?	• Acts somewhat negatively to the child ("Hurry up I want to use the book" "It's not fair that you get to use the book and I don't" "You can't use the book"). • Does not attempt to solve problem or makes general negative comments. Swears or pretends not to care if s/he finished the report. Says s/he would do nothing.	
Response : 11		
12. Let's pretend that I brought a new toy to school. I let you play with I and said you could use it for the whole of break time. Halfway through break time I come over to you and say, "I want my toy back right now." What do you do and say?	• Point out that a promise was made ('You promised. If you don't keep your promise, I won't trust you anymore,' then I'd wait to see if they kept their promise"). Asks why the child wants the toy back. Asks if they can play with the toy longer, or if they could both play with the toy. • Returns the toy ("I guess you can have it back" "Sure, I'd give it back, after all it's theirs"). Child exclaims "But you said I could have it all break time!"). • Warns the child not to break promise again. Says that they wouldn't be friends anymore or wouldn't borrow toys again. • Shouts at the child. Tells the teacher. Threatens not to let the child play with his/her toys in the future. Cries, "Next time I won't give it to you!" • Refuses to return the toy. Throws the toy out of the reach of the child. Hits or pushes the child. Doesn't know what to do, doesn't answer, or says they would do nothing.	8 6 4 2 0
Response : 12		

Situation	**Response Key**	**Score**
13. Let's pretend that we are doing PE. We are having a running race. I am a really fast runner and end up winning almost every race. At the end of PE the teacher says I will get to race against	• Congratulates or praises child on being fast ("That's really good. I wish I were the fastest" "You're lucky"). Gives the child a present or pat on the back for being fastest. • Comments on the child's speed or on the race ("How/Why do you run so fast?" "You're going to have fun at the races" "Could you beat someone older?"). • Asks the child for coaching ("Can you help me to run fast?"). Says they would practice running.	8 6 4 2

children from other schools. You walk with me back to the classroom. What do you do and say?	• Assumes the child is conceited, or will be conceited and warns them not to be ("I'd congratulate them, but I'd tell them not to show off"). Imagines the child would be teasing others and tells him not to be conceited. • Insists that s/he is the fastest. Shows hostility toward the child her/himself ("I'd hate him/her" "You always have to beat everyone"). Responds out of context. Cries and asks to go to the races. Would do nothing.	0
Response: 13		
14. Let's pretend that we are playing a board game during break time. I am about to win the game. What do you do and say?	• Acknowledges defeat and/or asks to play again ("Wish I'd won" "You're going to win"). Compliments the child ("You can be proud of yourself, you're a good player"). • State's "It's just a game". Asks for instructions from child ("How did you do that?"). • There is not response scored 4 in this scenario. • Tries to avoid losing by persuading the other child to change the rules ("Don't jump over me, OK?" "Let me take a turn first"). Questions the child's reasons for winning ("So why did you have to jump over me?"). • Quits the game or refuses to let the child jump over her his last piece. Throws a checker. Makes an illegal move ("If you jump me I'll just move it back"). Accuses the child of cheating ("That's not fair!"). Threatens to hurt child. Doesn't answer.	8 6 2 0
Response: 14		
15. Let's pretend that the whole class is working on a big picture to hang in the hall. The teacher is going to choose one person to be in charge and decide what we're going to draw on the picture. You would really like to be the person in charge. The teacher says to me "[name], I'm going to let you be in	• Asks if they can draw. Suggests ideas to the leaders. Congratulates the child ("Good luck! Teacher made a good choice!"). • Expresses disappointment in a non-hostile manner ("Aw, shoot!" "I wish I were in charge"). Suggests alternative ways for the project to be led ("We need a leader for the boys and one for the girls" "Teacher should lead" "Well you're lucky"). Asks child if s/he can be second in command. • Asks if s/he can replace the child as leader ("Can I be it please?" "If you don't want to, can I?"). Asks the teacher if he can be chosen next time. • Complains that the child is always picked for special privileges, or says that s/he is better qualified ("She should have picked me" "Don't pick her, pick me!" "I'm the best drawer in the world!"). Asks the child or	8 6 4 2 0

charge. What shall we draw?" What do you do and say?	the teacher why the child was chosen "Why her and not me?"). • Threatens violence ("I'd be mean to you"). Child cries or says they won't cooperate or stay to do the work. Makes an inappropriate/irrelevant response. Doesn't know what to do or doesn't answer.	
Response: 15		

Enter the score for each item in the open box, next to one of the social challenge categories. Add all of the responses horizontally to total for each type of social challenge category. Finally, add all of the category scores for a total measure score. Compare to the score ranges representing performance of a group of typical children to identify possible areas for needed intervention.

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	
A. Peer group entry																	
B. Response to provocation																	
C. Response to failure																	
D. Response to success																	
E. Social expectations																	
F. Teacher expectations																	
														TOTAL SCORE			

Appendix H: Interview Script and Associated Prompts

Section 1: Practice activities / rapport building

Children will be asked to sort a selection of pictures into things they like, things they don't like and things they are not sure of.

What activities do you enjoy doing? What are you good at?

Use pictures to practice the scaling activity (rating scale 1) to ensure children understand the nature of this.

Section 2: Social contexts

Three bits of paper will be placed on the table in front of children. One will say Nurture Group, one will say classroom and one will say playground. Each piece of paper will also have a photograph of each social context so that children understand we will be talking about their school. Children will be asked to choose feelings cards and place them by each picture to show how they feel in each of the settings. Blank cards will also be provided for children to add their own emotions.

1. What makes you feel (reference to the flashcards children have chosen) in the Nurture Group/ classroom / playground?

2. How do you feel about the Nurture Group / classroom / playground? (rating scale 1)
- *What do you like/dislike?*
- *What do you enjoy the most?*

3. Has being in the Nurture Group helped you at school?
- *How has it helped*? *What has changed?*

4. What would you tell other people about [name of Nurture Group]?

Section 3: Social skills

Additional words have been added to the rating scales for the questions in these sections to provide extra clarity, these will be read to children.

1. How do you feel about sharing with other children in the Nurture Group/playground/classroom? (rating scale 1)
- *Why did you put it there? What makes it a …?*
- *Has it always been a …?*
- *I know you've been coming to [name of Nurture Group], has that helped you with sharing? What has helped you?*
- *Tell me about a time when you did some good sharing.*

2. How do you feel about taking turns when you are playing in the Nurture Group/playground/classroom? (rating scale 1)
- *Why did you put it there? What makes it a …?*
- *Has it always been a …?*

- *I know you've been coming to [name of Nurture Group], has that helped you with taking turns? What has helped you?*
- *Tell me about a time when you did some good turn taking.*

3. How do you feel about talking to other children in the Nurture Group/ playground/classroom? (rating scale 1)

- *Why did you put it there? What makes it a …?*
- *Has it always been a …?*
- *I know you've been coming to [name of Nurture Group], has that helped you with good talking? What has helped you?*
- *Tell me about a time when you did good talking to other children.*

4. When you make a mistake or do something wrong in the Nurture Group/playground/classroom, how well do you cope/manage? (rating scale 2)

- *Why did you put it there? What makes it a …?*
- *Has it always been a …?*
- *Tell me about what you do when you make a mistake/do something wrong in the Nurture Group/playground/classroom?*
- *I know you've been coming to [name of Nurture Group], has that helped you when you make a mistake or do something wrong? What has helped you?*

5. When other children upset you/ are unkind in the Nurture Group/playground/classroom, how well do you cope/manage? (rating scale 2)

- *Why did you put it there? What makes it a …?*
- *Has it always been a …?*
- *Tell me about what you do when other children upset you/are unkind in the Nurture Group/playground/classroom.*
- *I know you've been coming to [name of Nurture Group], has that helped you cope/manage when other children upset you or are unkind? What has helped you?*

<u>Positive mood question (to end)</u>

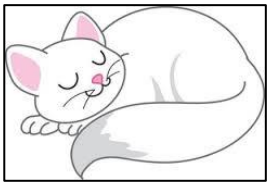
Tell me about your favourite television programme.

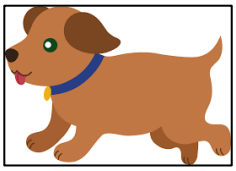
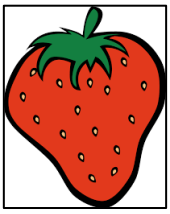
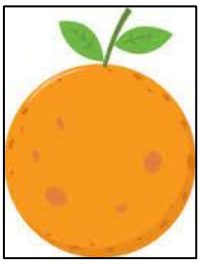
At the end of the interview, children will be verbally asked whether they are still happy for me to keep the tape recording.

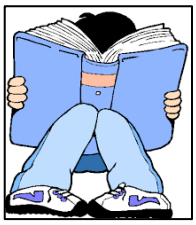
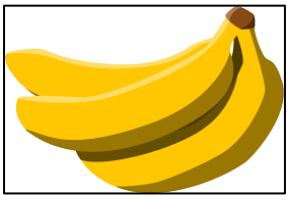
Appendix I: Visual Materials for Interviews

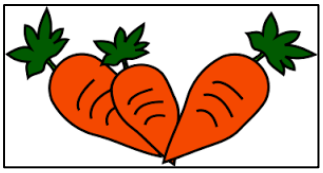
Picture sorting activity materials

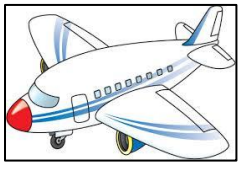
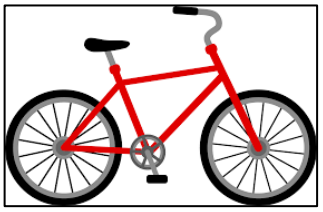


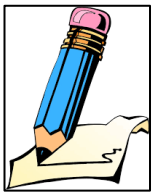



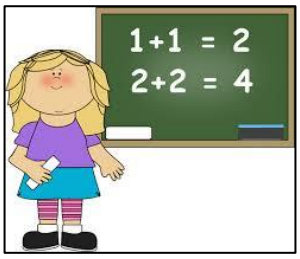




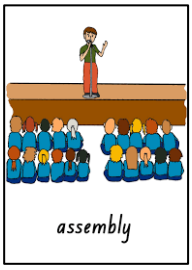



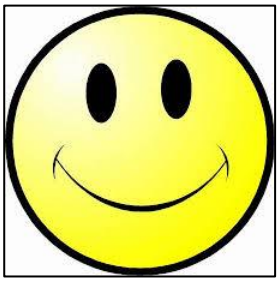






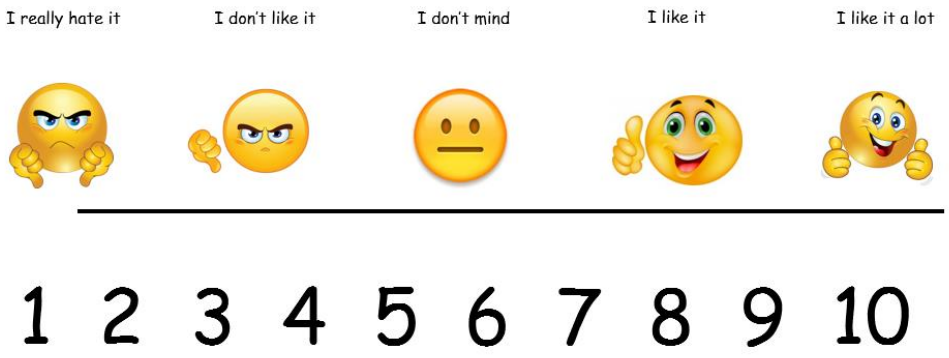


Feelings Flashcards, created by Todd Parr.

APPENDIX I

Rating Scales.

Rating scale 1: Section 1, 2 and 3 (questions 1 – 3) of the interview

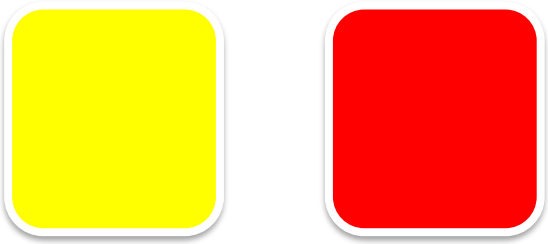


1 2 3 4 5 6 7 8 9 10

Rating scale 2: Section 3 (questions 4 – 5) of the interview

1 2 3 4 5 6 7 8 9 10

Interview signal cards



Yellow card – for if children do not want to answer a question, red card – for if children want to end the session completely.

Appendix J: Confidentiality Agreement

CONFIDENTIALITY AGREEMENT (Version 1, 19/02/2017)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

Researcher name: Larissa Cunningham

ERGO Study ID number: 24745

CONFIDENTIALITY AGREEMENT

Study: Do Nurture Groups Enhance Children's Social Competence?

I _____, agree to maintain full confidentiality in regards to any and all audio files and documentation received with regards to the above study. Furthermore, I agree:

1. To hold in strictest confidence the identification and / or identifiable information of any individual that may be inadvertently revealed during the transcription or listening of the audio-taped interviews, or in any associated documents.
2. To not make copies of any audio files or other study related documents.
3. To ensure that study related audio tapes, files and materials I am required to work with are stored in a safe, secure location when not in use.

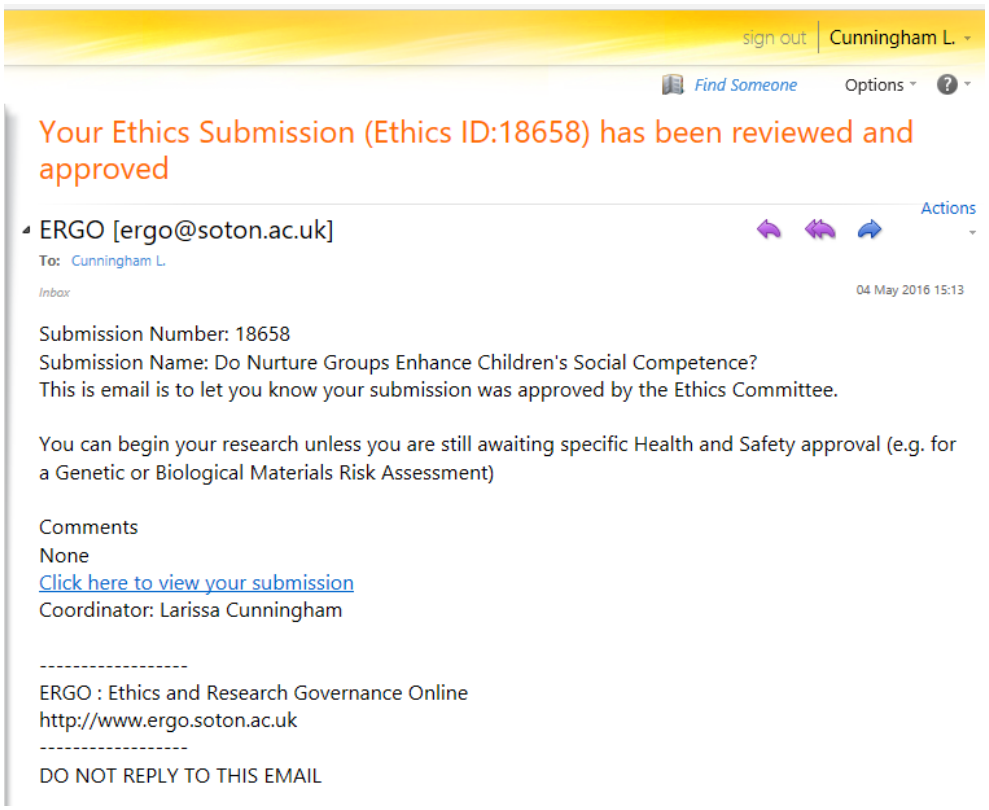
I am aware that I can be held legally liable for any breach of this confidentiality agreement, and for any harm incurred by individuals if I disclose identifiable information contained in the audio-tapes and/or files to which I will have access.

Name (printed) _____

Signature _____

Date _____

Appendix K: Ethical Approval



sign out | Cunningham L.

Find Someone Options

Your Ethics Submission (Ethics ID:18658) has been reviewed and approved

Actions

ERGO [ergo@soton.ac.uk]

To: Cunningham L.

Inbox 04 May 2016 15:13

Submission Number: 18658
Submission Name: Do Nurture Groups Enhance Children's Social Competence?
This is email is to let you know your submission was approved by the Ethics Committee.

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment)

Comments
None
Click here to view your submission
Coordinator: Larissa Cunningham

ERGO : Ethics and Research Governance Online
http://www.ergo.soton.ac.uk

DO NOT REPLY TO THIS EMAIL

Appendix L: School Recruitment Letters

UNIVERSITY OF Southampton

Nurture Group School Recruitment Letter (Version 1, 20/02/16)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

October 2016

Dear Headteacher / SENCo

My name is Larissa Cunningham and I am a trainee Educational Psychologist studying at the University of Southampton. As part of my course I am required to complete a piece of research for my thesis. My project is considering the impact of Nurture Group intervention on children's social development. As a school within Hampshire who runs a Nurture Group, I am writing to ask if you would be interested in taking part in my research project.

Background to the study

Nurture Groups are an intervention provided by schools to support children's social, emotional and behavioural development. Previous research into Nurture Groups has found them to be an effective intervention. However, no study has focused on exploring how Nurture Groups may specifically benefit children's social development, including children's relationships with their parents and peers.

What does the study involve?

Taking part in the project will require some commitments which are listed below. Please consider these carefully before agreeing to take part.

1. Identification and assessment of participants

I am asking schools to identify any children who will be joining the Nurture Group from September/October 2016. Once parental consent has been obtained, class teachers will be asked to complete a short questionnaire about children's social skills in school. Parents will be asked to complete a short questionnaire about their relationship with their child at home. I will also complete a short task with each child individually in school. This will involve me presenting children with a series of different social situations and asking them how they would respond to each. I estimate that this should take about 15 minutes to complete.

To explore how the Nurture Group impacts on children's peer relationships, all children in each Nurture Group child's class will be asked to complete a short survey which assesses how willing children are to associate with their peer group. This can be completed as a whole class exercise and should take no more than 15 minutes. Staff, parents and children will then complete the same questionnaires and tasks just before the February half-term break.

APPENDIX L

2. Paperwork

Some support will be required in the distribution of information letters and consent forms, which I will send copies of beforehand for your approval. Printed copies of all letters will be provided.

What happens to the data?

All information collected from your child will remain fully confidential and assigned an anonymous number. All data are kept on a password protected computer at the University of Southampton and only myself and my supervisor Dr. Jana Kreppner will have access. Paper copies of the data and consent forms will be stored securely in the file store at the University of Southampton. The data will be used purely for research purposes, and in accordance with the Data Protection Act of 1998 and data storage policy at the University of Southampton, it will be kept for 10 years following completion of the study before being securely destroyed. Once the project has been completed schools will be sent a summary of the final research report. All information gathered will be strictly confidential and no names will be mentioned in the write up of this research.

Has this study been given ethical approval?

This project has been reviewed by the University of Southampton Ethics Committee and has been given independent ethical approval to proceed. I have been checked by the Criminal Records Bureau and have been given permission to work with children.

What happens if something goes wrong?

Should any concerns arise or you feel the need to make a complaint you may contact the chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 3856, email: fshs-rso@soton.ac.uk

If you are interested in taking part in this project or would like to find out more information, please contact me by email (contact details below).

Thank you very much for taking the time to read my letter and I look forward to hearing from you.

Yours faithfully,

Larissa Cunningham
Trainee Educational Psychologist
University of Southampton

Contact details

Larissa Cunningham — lc1g14@soton.ac.uk

Supervisor: Dr Jana Kreppner — j.kreppner@soton.ac.uk

School Information Sheet – Phase 2 (Version 2, 06/12/2016)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

January 2017

Dear Headteacher / SENCo

You recently gave your permission for your school to be included in my study which is considering the impact of Nurture Group intervention on children's social development. In addition to the information I am collecting from the teacher/parent questionnaires and the short task which I am completing with the children, I am writing to ask your permission to interview some of the children during the second stage of data collection in the spring term. Additional permission will only be sought from parents of children in the Nurture Group who have already given their consent for their child to take part in my study.

During the interview children will be asked to talk about the Nurture Group and various social skills. Interviews will take place within school and I anticipate them to last no longer than 30 minutes. It is important to note that anything that is said by the children during the interview will be kept between myself and the child, remaining anonymous and confidential, unless they tell me something that would mean either themselves or somebody else is in danger.

I have attempted to ensure that any risks involved in children's participation in an interview have been minimised. However, unfortunately it is not possible to guarantee that children will not experience any discomfort or stress. Therefore, before taking part in the interview children will be told that they are free to talk to either myself or a trusted adult within school if anything has made them feel upset. I will also be careful to monitor children's perceived well-being and to liaise with school staff if necessary.

What happens to the data?

Interviews will be audio-recorded and transcribed. All information will remain fully confidential and assigned an anonymous number. Participants will therefore be referred to by number within the written transcripts and where data is reported. Anonymised interview transcripts will be stored securely in the file store at the University of Southampton. In accordance with the Data Protection Act of 1998 and data storage policy at the University, they will be kept for 10 years following completion of the study before being securely destroyed. Audio recordings of individual interviews will be destroyed immediately following completion of the research.

What happens if something goes wrong?

APPENDIX L

Should any concerns arise or you feel the need to make a complaint you may contact the chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 3856, email: fshs-rso@soton.ac.uk

Should you have any further questions about this aspect of the study, please do not hesitate to contact either myself or my supervisor, Dr. Jana Kreppner (contact details below).

Yours faithfully,

Larissa Cunningham

Trainee Educational Psychologist
University of Southampton

Contact details

Larissa Cunningham

lc1g14@soton.ac.uk

Dr Jana Kreppner (Supervisor)

j.kreppner@soton.ac.uk

UNIVERSITY OF Southampton

HEADTEACHER/SENCO CONSENT FORM – Phase 2 (Version 2, 06/12/2016)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

Researcher name: Larissa Cunningham

ERGO Study ID number: 18658

Please initial the boxes if you agree with the statements:

I have read the school information letter (Version 2, 06/12/2016) relating to the above study and have been given a copy to keep. The purpose of the study and the school's involvement in this has been clearly explained to me and I have had the opportunity to discuss the details and ask any questions.	☐
I understand that the school's involvement and the data obtained from this study will remain strictly confidential and I am aware that I have the right to see what has been written following completion of the research.	☐
I understand that arrangements have been made for the secure storage of data and for its secure disposal.	☐
I have been given the opportunity to ask any questions that I may have about the study and these have been answered to my satisfaction.	☐

Headteacher / SENCO's signature _____

Name _____

Date _____

Appendix M: Parent Information Letters and Consent Forms

Nurture Group Parent Information Sheet (Version 2, 08/04/16)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

Date

Dear Parent/Guardian

My name is Larissa Cunningham and I am a trainee Educational Psychologist studying at the University of Southampton. As part of my course I am required to complete a piece of research for my thesis. My project is considering the impact of Nurture Group intervention on children's social development.

[NAME OF SENCo] has indicated that your child will be joining the Nurture Group at [name of school] from September 2016. I am therefore writing to ask for your permission to include your child in my study. I hope to provide all the information that you will need about the study in order for you to make an informed decision about whether you would be happy for your child to participate or not. However, if you have any further queries or would like to discuss any aspect of the study, please do not hesitate to contact either myself or my supervisor, Dr. Jana Kreppner (contact details below).

Background to the study

Nurture Groups are an intervention provided by schools to support children's social, emotional and behavioural development. Previous research into Nurture Groups has found them to be an effective intervention. However, no study has focused on exploring how Nurture Groups may specifically benefit children's social development, including children's relationships with their parents and peers.

What does the study involve?

Prior to your child joining the Nurture Group their class teacher will complete a short questionnaire about their social skills in school. Parents will be asked to complete a short questionnaire about their relationship with their child at home. I will also complete a short task with each child individually. This will involve me presenting children with a series of different social situations and asking them how they would respond to each. I estimate that this should take about 15 minutes to complete. Children will be taken from lessons at their teacher's discretion so they should not miss any important classwork. To explore how the Nurture Group impacts on children's peer relationships all children in your child's class,

including your child, will be asked to complete a short survey which assesses how willing children are to associate with their peer group. Teachers, parents and children will then complete the same questionnaires and task at the end of the 15 week intervention period.

Are there any risks involved in my child's participation?

The researcher has attempted to ensure that any risks involved in your child's participation in this study have been minimised. In the unlikely event that children may feel upset when rating their peers, I will work with class teachers to ensure this task is completed at an appropriate time and I have incorporated some positive questions at the end of the task to ensure children have discussed an activity they really enjoy doing.

What happens to the data?

All information collected from your child will remain fully confidential and assigned an anonymous number. All data are kept on a password protected computer at the University of Southampton and only myself and my supervisor Dr. Jana Kreppner will have access. Paper copies of the data and consent forms will be stored securely in the file store at the University of Southampton. The data will be used purely for research purposes, and in accordance with the Data Protection Act of 1998 and data storage policy at the University of Southampton, it will be kept for 10 years following completion of the study before being securely destroyed. Once the project has been completed schools will be sent a summary of the final research report. All information gathered will be strictly confidential and no names will be mentioned in the write up of this research.

Does my child have to participate?

No. Participation in this study is entirely voluntary and you are under no obligation to allow your child to participate. Should you give permission for your child to participate but subsequently change your mind, you may withdraw your child from the study at any point without giving any reason. All children who have been given their parents' permission to participate in this study will be verbally asked if they want to participate before they complete any tasks. They will also be reminded that they can choose to discontinue at any point.

Has this study been given ethical approval?

This project has been reviewed by the University of Southampton Ethics Committee and has been given independent ethical approval to proceed. I have been checked by the Criminal Records Bureau and have been given permission to work with children. [NAME OF HEADTEACHER] has also given permission for this research to be undertaken at [NAME OF SCHOOL].

What happens if something goes wrong?

Should any concerns arise or you feel the need to make a complaint you may contact the chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 3856, email: fshs-rso@soton.ac.uk

If you are happy for your child to take part in this project we would appreciate if you could complete the attached parent consent form and return this to your child's class teacher by [DATE].

APPENDIX M

Yours faithfully,

Larissa Cunningham

Trainee Educational Psychologist
University of Southampton

Contact details

Larissa Cunningham lc1g14@soton.ac.uk

Supervisor

Dr. Jana Kreppner

E: j.kreppner@soton.ac.uk T: 023 80594603

UNIVERSITY OF Southampton

PARENTAL CONSENT FORM (Version 1, 20/02/16)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

Researcher name: Larissa Cunningham

ERGO Study ID number: 18658

Please initial the boxes if you agree with the statements:

I have read the parent information letter (Version 1, 20/02/16) and clearly understand the purpose of the study and I understand that my child's participation in this study is completely voluntary and that I may withdraw him/her at any point during the study without reason or penalty.	☐
I clearly understand what will be required of my child I also understand that my child's permission to participate in the study will be verbally sought and my child can choose to discontinue with the study if they so wish.	☐
As part of my child participating in this research I agree to complete a short questionnaire about my relationship with my child at home before and after the 15 week intervention period.	☐
I understand that arrangements have been made to ensure my child's confidentiality and privacy I am aware that I have the right to see what has been written about my child. The researcher has made clear any risks which may be involved in my child's participation in this study. I understand that arrangements have been made for the secure storage of data and for its disposal.	☐
I have been given the opportunity to ask any questions that I may have about the study and my child's participation in the study and these have been answered to my satisfaction.	☐

Parent/Guardian's signature _____

Name _____

Date _____

Child's name _____

PLEASE RETURN TO YOUR CHILD'S CLASS TEACHER BY (INSERT DATE)

APPENDIX M

Parent Information Sheet – Phase 2 (Version 3, 15/12/2016)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

January 2017

Dear Parent/Guardian

You recently gave your permission for your child to be included in my study which is considering the impact of Nurture Group intervention on children's social development. In addition to the questionnaire based data I would like to interview some children during the second stage of data collection to gather their views on the Nurture Group and various social skills.

I am therefore approaching all parents involved in the current questionnaire study to ask if they would consent to their child being interviewed. Before you decide it is important to understand that:

- You are not obliged to give consent, and your child is under no obligation to participate.
- If you choose not to give consent this will not affect participation in the current questionnaire study.
- Not all children whose parents give consent will be interviewed, as only six interviews will be conducted and these children will be chosen at random.

Please read the following information and sign the attached consent form only if you agree that your child may be interviewed

What will happen to my child?

Interviews will take place within school and last no longer than 30 minutes. It is important to note that anything that is said by your child during the interview will be kept between myself and the child, remaining anonymous and confidential, unless they tell me something that would mean either themselves or somebody else is in danger.

Before the interview I will confirm your child is happy to take part, and understands they may stop at any time. Children will also be told that they are free to talk to either myself or a trusted adult within school if anything has made them feel upset during or after the interview.

What will happen to the data?

Interviews will be audio-recorded if you and your child agree to this. Audio tapes will be destroyed after they are transcribed, and all the research data will be coded to maintain anonymity. All data will be stored safely and securely in accordance with the Data

Protection Act of 1998 and data storage policy at the University. Participants will not be identifiable in any written report or publication arising from this research.

What happens if something goes wrong?

Should any concerns arise or you feel the need to make a complaint you may contact the chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 3856, email: fshs-rso@soton.ac.uk

Should you have any further questions about this aspect of the study, please do not hesitate to contact either myself or my supervisor, Dr. Jana Kreppner (contact details below).

If you are happy for your child to take part in an interview, I would appreciate if you could complete the attached parent consent form and **return this to [name of staff]. Please retain this parent information letter for reference.**

Thank you in anticipation.

Yours faithfully,

Larissa Cunningham
Trainee Educational Psychologist
University of Southampton

Contact details

Larissa Cunningham
lc1g14@soton.ac.uk

Dr Jana Kreppner (Supervisor)
j.kreppner@soton.ac.uk

APPENDIX M

PARENTAL CONSENT FORM – PHASE 2 (Version 3, 15/12/2016)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

Researcher name: Larissa Cunningham

ERGO Study ID number: 18658

Please initial the boxes if you agree with the statements:

I have read the parent information letter (Version 3, 15/12/2016) relating to phase 2 of the above study and have been given a copy to keep. I clearly understand the purpose of this aspect of the study and I understand that my child's participation is completely voluntary and that I may withdraw him/her at any point without reason or penalty.	☐
I understand what will be required of my child and I also understand that my child's permission to participate in an audio-taped interview will be verbally sought and that my child can choose to decline taking part if they so wish.	☐
I understand that arrangements have been made to ensure my child's confidentiality and privacy and I am aware that I have the right to see what has been written about my child. The researcher has made clear any risks which may be involved in my child's participation in this study. I understand that arrangements have been made for the secure storage of data and for its disposal.	☐
I have been given the opportunity to ask any questions that I may have about the study and my child's participation in the study and these have been answered to my satisfaction.	☐

Parent/Guardian's signature _____

Name _____

Date _____

Child's name _____

Appendix N: Child Assent Forms

ERGO Study ID number: 18658

CHILD ASSENT FORM (to be read to children) (Version 1, 20/02/16)

Hello!

My name is Larissa and I am a student at Southampton University. As part of my studies, I must complete a project about friendships and ways that I can help children who sometimes find making friends more difficult. I would be really grateful if you could help me with my project. I will ask you some questions about friendships and will need you to tell me your answer to each of the questions.

The task will take about 15 minutes to complete. It doesn't matter how well you do in the task, and it doesn't count towards your school report but if you try and do the best that you can, that would be fantastic.

It is up to you whether you would like to help me out; it's not a problem if you don't want to. If you start the task and then change your mind and don't want to carry on then you can stop at any time, just let me know.

Please ask me if you have any questions or if there is anything you are worried about.

If you are happy to help me, please answer the questions below and write your name.

Please circle the answer you agree with:

Has somebody explained this project to you?	YES / NO
Do you understand what the project is about?	YES / NO
Has somebody answered your questions in a way you understand?	YES / NO
Do you understand it's ok to stop taking part at any time?	YES / NO

If you answered **yes** to all the questions, please write your name to show you are happy to take part

Name _____

Thank you so much for your help!

APPENDIX N

ERGO Study ID number: 18658

CHILD ASSENT FORM – Phase 2 (to be read to children) (Version 2, 06/12/2016)

Hello!

My name is Larissa and I am a student at Southampton University which is like a big school for grown-ups.

You might remember that I came into school before Christmas and you helped me out with a task about friendships. As part of my project I would also like to look at your school's Nurture Group. I hope that this will help your teacher's make [name of Nurture Group] even better.

With your help I would like to find out whether the Nurture Group helps you get on better with other children and school staff. I would also like to know what you think about [name of Nurture Group].

If you would like to help me this is what will happen:

I will ask you and the children in [name of Nurture Group] to talk to me about [name of Nurture Group] and tell me what you think about it. I will record this onto a tape so I don't forget what you have told me when I get back to school. The only time I will tell someone else what you have said is if you tell me something that means you or somebody else might be in danger. After I have talked to the other children I will write about what I found from my project so that I can try and help schools to make Nurture Groups even better.

It is up to you whether you would like to help me out and it's not a problem if you don't want to. If you get upset talking about anything or you change your mind and don't want to carry just let me know and we will stop straight away (introduce the red and yellow cards).

Please ask me if you have any questions or if there is anything you are worried about.

If you are happy to help me, please answer the questions below and write your name.

Please circle the answer you agree with:

1. Do you understand what Larissa's project is about?

   YES / NO

2. Do you understand that you don't have to answer any questions that you don't want to and that you can stop talking whenever you like?

   YES / NO

3. Do you understand that your answers to the questions will be recorded onto a tape?

   YES / NO

4. Do you understand that the only time Larissa will tell somebody else about anything you have said is if you say something which means that somebody will be in danger?

   YES / NO

5. Has Larissa answered any questions you have in a way that you understand?

   YES / NO

If you answered **yes** to all the questions, please write your name to show you are happy to take part.

Name _____

Thank you so much for your help!

Appendix O: Parent Debrief Letter

PARENT DEBRIEF FORM (Version 3, 20/04/16)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

Dear Parent/ Guardian

Thank you for giving me permission to work with your child as part of my research. The purpose of this study was to explore the impact of Nurture Group intervention on the development of children's social skills. The aim of gathering this information was to see whether Nurture Groups are a beneficial intervention in supporting children's social interactions with both staff and peers in the Nurture Group, with their peers in the classroom and with their parents.

Following data analysis and completion of the research, a summary of the project will be shared with all schools who took part in the study. This report may include anonymised data of the children who took part in the research. As previously stated, please be reassured that individual's will not be named in any data shared with the schools or with Southampton University.

I do hope that your child enjoyed being a part of this study. Should any concerns arise or you feel the need to make a complaint you may contact the chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 3856, email: fshs-rso@soton.ac.uk.

Should any aspect of this study, including completion of the parent-child relationship questionnaire, have caused you to feel upset in anyway and you would like some further support, please do not hesitate to contact Family Lives who offer a confidential support and advice service for families. Phone: 0808 800 2222, website: www.familylives.org.uk.

Once again, thank you for your co-operation in this study and if you have any queries, please do not hesitate to contact me (details below).

Yours faithfully,

Larissa Cunningham
Trainee Educational Psychologist
University of Southampton

Contact details

Larissa Cunningham lc1g14@soton.ac.uk

Appendix P: Child Debrief Letter

ERGO Study ID number: 18658

NG CHILD DEBRIEF FORM (Version 1, 20/02/16)

Hello!

Thank you for helping me with my science project. I hope you have enjoyed helping me.

I wanted to see if being part of a Nurture Group helped you with making friends.

If you have any questions about the project please talk to your class teacher or (Named Person as identified by school).

Thank you,

Larissa

Appendix Q: Child Certificate

Certificate of participation for children (Version 1, 20/02/16)

DO NURTURE GROUPS ENHANCE CHILDREN'S SOCIAL COMPETENCE?

ERGO Study ID number: 18658

This is to certify that

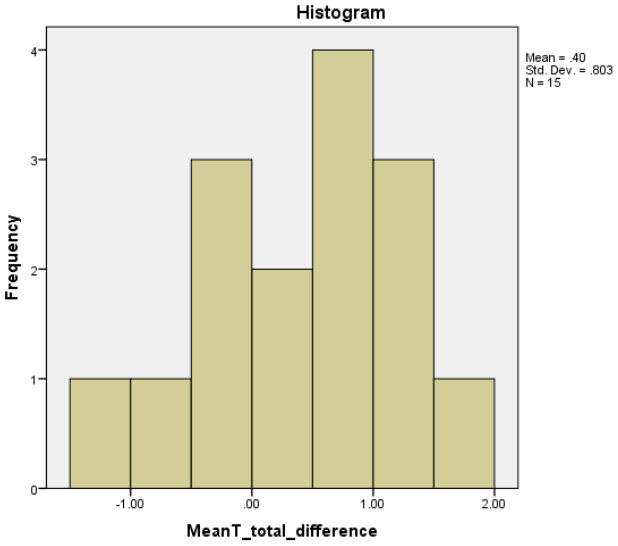
Name Surname

helped with my science project on friendships in school!

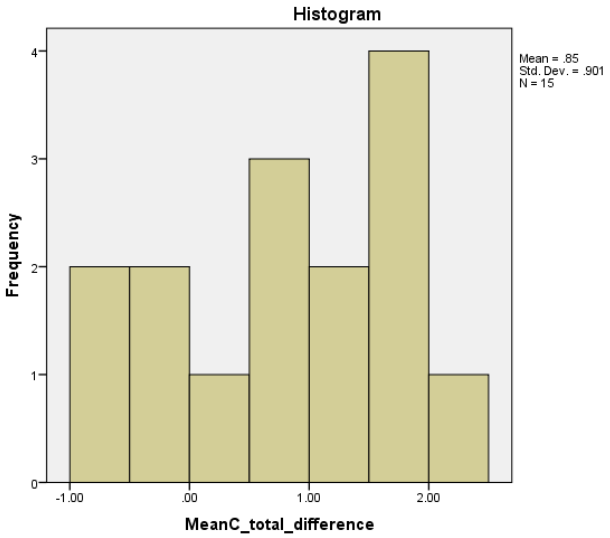
Thank you so much for all your hard work!

Larissa Cunningham, March 2017

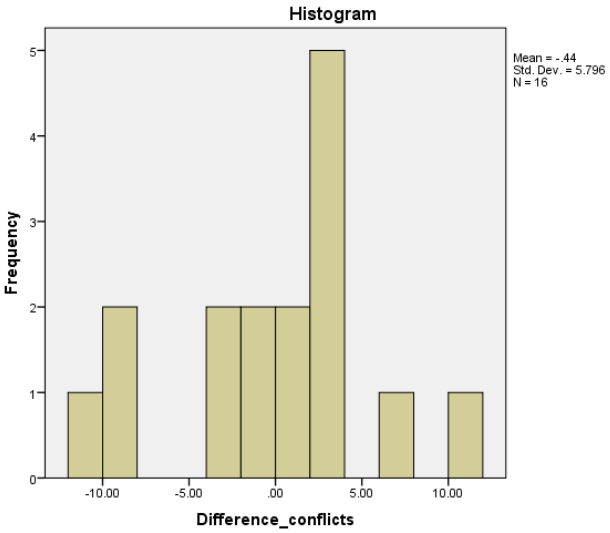
Appendix R: Histograms



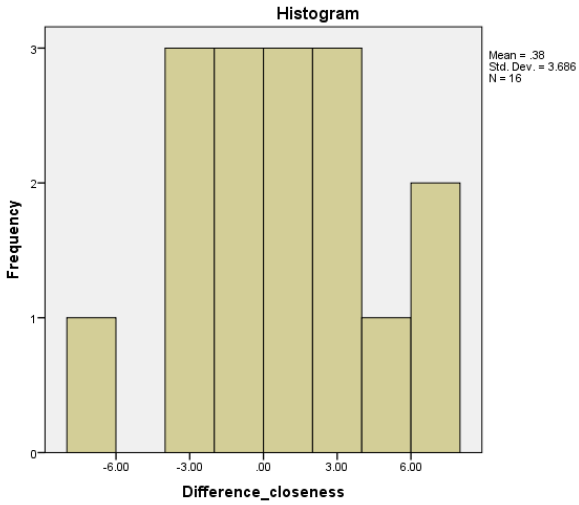
TOPSS data



CRPM data



CPRS-SF (conflicts)



CPRS-SF (closeness)

Appendix S: Examples of Transcript Coding

I: **The nurture group helps you. What helps you?**

A: The teachers help me with being kind and friendly to other people.

Larissa
Teacher support

I: **And what about in the playground, talking to other children in the playground?**

A: I've got no-one to play with so…

Larissa
Lack of friends

I: **So that one's a tricky one to answer as well, yeah.**

A: Yeah.

I: **Okay. And can you tell me about a time when you did good talking to other children?**

A: I can't really remember. [sighs]

I: **No?**

A: No.

I: **Okay. And when you make a mistake or do something wrong in the nurture group, how do you cope with it?**

A: I know I can improve and lift my name up again.

Larissa
Confident in own ability

Larissa
Reward system

I: **Okay, so if your name's had to go down, you know you can improve. And how do you feel you can cope with it, if you have to do that?**

I: **So one means that was I really, really don't like it, wasn't it? And ten means I like it…?**

A: Very, very, very, very, very, very a lot.

I: **Okay. So how do you feel about nurture group? Where would you put nurture group on my scale? A ten, yeah. Why did you choose that one?**

Larissa
Positive feelings towards NG

A: 'Cause I've got my best friend in xxx.

Larissa
Friendships

I: **Your best friend comes along to nurture group.**

A: Yeah, and his name's xxx and he's in Year Four.

I: **A seven before. And what's helped it move from a seven to a nine?**

A: Well, when it was a seven it was probably when I didn't do nurture and I couldn't share my feelings to anyone that I knew would keep it to themselves.

Larissa
Positive impact of NG

I: **Okay. Yeah.**

A: But now I know that they're not going to share it to anyone else.

Larissa
Trust/respect between children

I: **Okay.**

A: It's just going to keep with me and them.

I: **So when it was a seven, you didn't talk about it so much with other children.**

A: No.

I: **Is that right?**

A: Yeah.

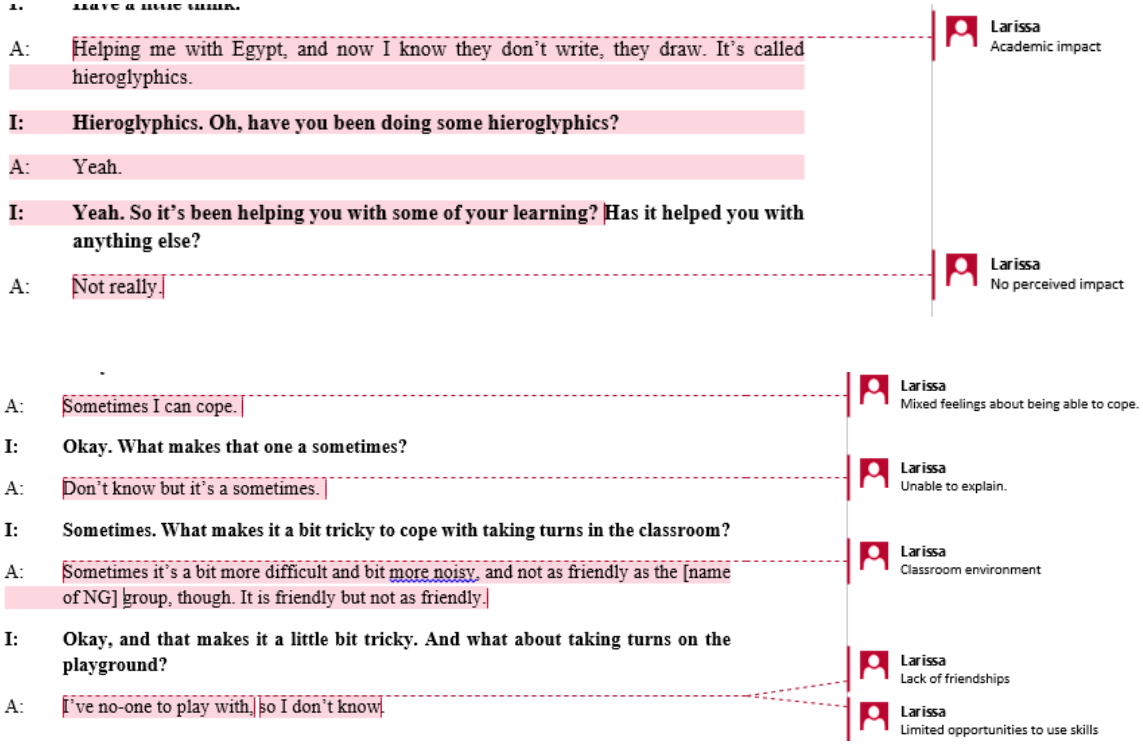
I: **Okay. And what about talking to other children in the classroom, how do you feel about that?**

A: We can't really talk in the classroom because we get told off for it.

Larissa
Sanction

Larissa
Classroom environment

I: **When you're not doing lessons, what about when you've just come in after break**


I: Have a little think.
A: Helping me with Egypt, and now I know they don't write, they draw. It's called hieroglyphics.
I: Hieroglyphics. Oh, have you been doing some hieroglyphics?
A: Yeah.
I: Yeah. So it's been helping you with some of your learning? Has it helped you with anything else?
A: Not really.
Larissa
Academic impact
Larissa
No perceived impact
A: Sometimes I can cope.
I: Okay. What makes that one a sometimes?
A: Don't know but it's a sometimes.
I: Sometimes. What makes it a bit tricky to cope with taking turns in the classroom?
A: Sometimes it's a bit more difficult and bit more noisy, and not as friendly as the [name of NG] group, though. It is friendly but not as friendly.
I: Okay, and that makes it a little bit tricky. And what about taking turns on the playground?
A: I've no-one to play with, so I don't know.
Larissa
Mixed feelings about being able to cope.
Larissa
Unable to explain.
Larissa
Classroom environment
Larissa
Lack of friendships
Larissa
Limited opportunities to use skills

Appendix T: Coding Manual (Final Version)

Theme	Sub-theme	Sub-theme description	Subordinate sub-themes	Subordinate sub-theme description	Example quotes
Child-Related Factors	Perceptions and Feelings	Reference to any feelings shared by the children (comfortable or uncomfortable). Also included reference to children's own awareness of their feelings or of different situations.	Social environments	Children's feelings about different social contexts in school including the NG, classroom and the playground.	*It's a lovely place to be.* (Participant 5) *I feel all the horrible ones.* (Participant 1) *Comfortable, classroom. Busy, classroom as well.* (Participant 2)
			Self-confidence .	Children's perceived levels of self-confidence in their skills and abilities to manage	*The only thing which is really annoying is that I'm leaving it [the NG]. After*

		different social situations (i.e. sharing, turn-taking, talking to other children, coping when they make a mistake and coping when other children are unkind) in different social contexts.	*Easter I'm not coming anymore*. (Participant 4) *I feel quite confident about it.* (Participant 3) *Sometimes I can manage it.* (Participant 2) *Minus zero.* (Participant 5) P: *So I say, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, hundred.* I: *So it would be higher than a 10?* P: *1000* (Participant 6)

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			Sense of belonging	Children's feelings and perceptions and feelings in relation to other children in different social contexts. Included reference to: • Perceived similarities/differences between children. • Friendships. • Feelings of inclusion and exclusion.	*Like people that have the same feelings as you.* (Participant 3) *You get to make new friends.* (Participant 6) *Like everybody includes each other in the game.* (Participant 3) *Because no-one wants to play with me.* (Participant 4)
Child-Related Factors	Personal Development	This sub-theme refers to children's own perceptions of the impact that NG has had on them in terms of their own development.	Socio-emotional skills	Any reference to children's recognition of an improvement in their social skills (e.g. sharing, turn-taking, taking to other children).	*I can know what other people go through.* (Participant 3)

		Any reference to children's recognition of an improvement in their emotional vocabulary, their ability to express and share emotions and to better understand the feelings of others'.	*It helped me care [for] little kids and big kids if they're hurt.* (Participant 1) *It helps me to like… I used to not share in Year 2 and it gave me a lesson to share.* (Participant 6)
	Behaviour	Comments from children which indicate that they feel their behaviour has improved.	*'Cause what I used to be, like back in September, when we first came in here, I was very pushy and shouty and in the classroom, I always ended up in the break time room because I was shouting in the classroom.* (Participant 4)

			Learning	Comments from children which indicate that their learning or school work has got better. This also includes reference to homework.	*Helping me with Egypt. Now I know they don't write, they draw.* (Participant 6) *And my homework has improved.* (Participant 4)
Child-Related Factors	Coping Strategies	This sub-theme captures the strategies used by children in potentially difficult social situations, including how they cope and what they do. Specifically: • Passive responses (e.g. acceptance).			*So I just say, well, xxx, why were you being so mean to me, so much?* (Participant 1) *I have to put up with it.* (Participant 4)

		• Active responses (e.g. being assertive). • Involving other adults. • Use of systems in place at school.			*I would just tell [name of teacher]*. (Participant 5) *I usually put a letter in the worry box.* (Participant 3)
Social and Environmental Factors	Other People	Any comments made by children that staff or other children had helped or hindered them in developing their social skills.	Inside the NG	This subordinate sub-theme specifically refers to comments about staff and children inside the NG.	*The teachers help me with being kind and friendly to other people.* (Participant 4) *Me speaking to xxx.* (Participant 1) *You know they're not going to tell anybody.* (Participant 3)
			Outside the NG		

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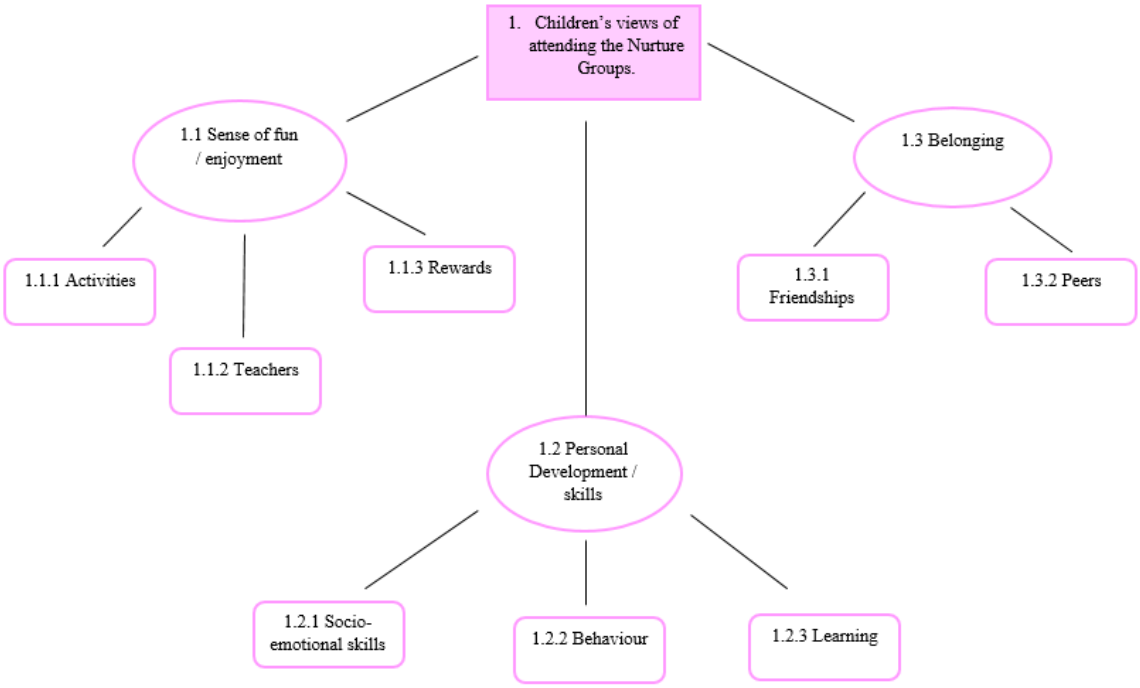
				This subordinate sub-theme refers specifically to staff and children outside the NG.	*We can't really talk in the classroom because we get told off for it.* (Participant 3) *Well, they're trying to say that but soon I hear two other people join in when they say there was no more characters left, so what they're doing is saying they don't want me to play.* (Participant 4)
Social and Environmental Factors	Nurture Group	This sub-theme relates to aspects of the NG environment which children talked about that seemed to have supported the development of their social skills.	Activities	Comments made by children about different activities that had been helpful in supporting them to develop their skills.	*Doing the game outside, we always to one touch.* (Participant 3) *Playing with my friends.* (Participant 2)
			Rewards	Comments made by children about the reward system and	

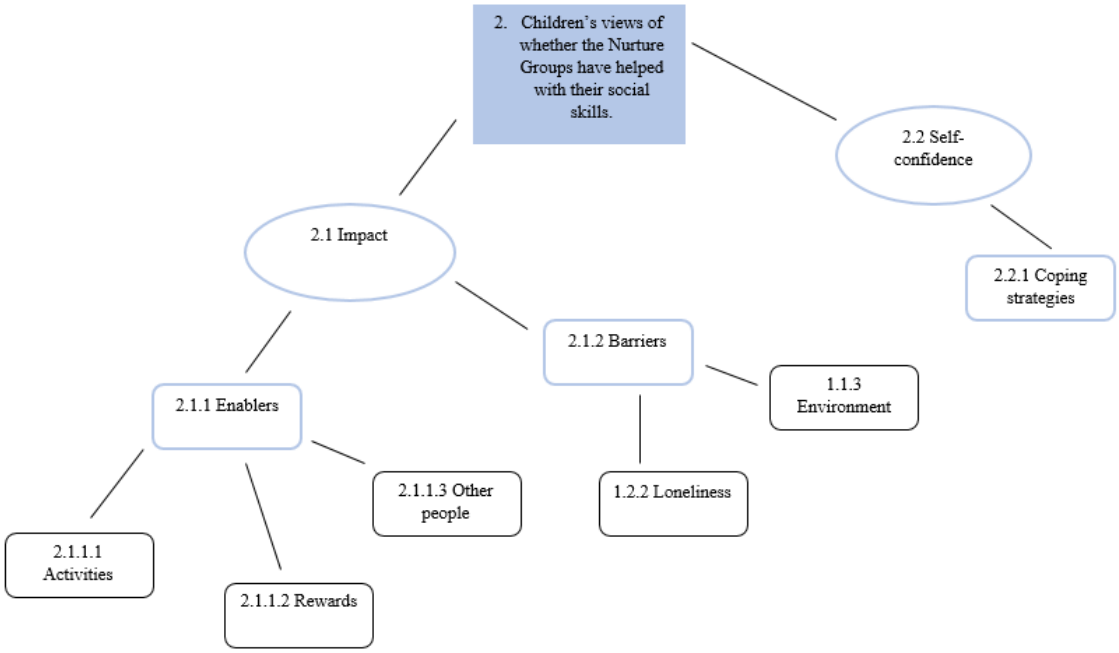
		the different rewards they receive. Also included comments relating to any praise received.	*They always say well done.* (Participant 4) *Because when I get to the star, I get to choose something out of the star box.* (Participant 6)

Appendix U: Initial Thematic Maps

Thematic Map 1



Thematic Map 2



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