Foster carer self-efficacy and the role of attributions and coping in the quality of foster placements

Research Portfolio

Laura Kerr

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The University of Edinburgh
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D Clin Psychol. Declaration of own work

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Research Portfolio Abstract

**Aims:** Children who experience abuse and neglect prior to being fostered and/or adopted are a particularly vulnerable group within society and more research is required to better understand the outcomes for these young people. In relation to this population, this thesis had three aims: to review the impact of attachment based interventions, to evaluate the role of foster carer factors in the provision of quality placements and to assess foster carer and social worker agreement on ratings of placement quality.

**Methods:** Aims are addressed separately in three journal articles. A systematic review of attachment based interventions is presented in journal article 1. The findings from a quantitative cross sectional study involving foster carers (n=91) and social workers (n=87) are presented in journal articles 2 and 3. Correlation and multiple regression analyses explore the relationship between foster carer self-efficacy, coping, attributions and placement quality. The weighted kappa statistic is used to explore the agreement between ratings of placement quality within foster carer/social worker dyads.

**Results:** The systematic review indicated that there is some support for the positive impact of attachment based interventions, particularly with young children (0-6 years) in foster/adoptive care. There are significant limitations of the research in this area and further research is required to establish the efficacy of such interventions. Foster carer self-efficacy emerged as a significant predictor of placement quality. Due to a number of measurement and statistical issues, this finding requires replication. Agreement between foster carers and social workers regarding placement quality was slight to fair, indicating the presence of some discrepancies.

**Conclusions:** The results are discussed in relation to previous research with this population of children/young people. Findings from the systematic review suggest the importance of further intervention studies and the results from the empirical study highlight possible areas for intervention, namely foster carer self-efficacy. A number of issues in relation to future research are raised, specifically the development of a standardized measure of placement quality and the impact of systemic issues, such as foster carer/social worker communication on children and young people’s outcomes.
**Research Portfolio Introduction**

This thesis is presented in portfolio format and is comprised of three journal articles which have the following aims in relation to children/young people in foster/adoptive care:

1. To systematically review the impact of attachment based interventions
2. To evaluate the role of foster carer factors in the provision of quality placements
3. To assess foster carer and social worker agreement on ratings of placement quality

Individual articles provide an introduction to specific background literature; however the political and theoretical context for the overall thesis is outlined here.

*Children and young people in foster/adoptive care: political context*

The United Nations Convention on the Rights of the Child, 1989 (UNCRC) enshrines specific child rights in international law, defining universal principles and standards for all children worldwide. It was endorsed by the British Government in 1992 and provided the basis of Children Acts (1989, 1995 (Scotland) and 2004), on which government policy related to children and young people is based. The Children Act (Scotland) 1995 and the Children Act 2004 spawned two key policies - ‘Every Child Matters (ECM)’ (2004) which covers England and Wales and ‘Getting it Right for Every Child (GIRFEC)’ (2007) which covers Scotland. Based on consultation with children and young people, these policies propose wellbeing outcomes that all children across Britain should be supported to achieve: healthy, safe, included, responsible, respected, active, nurtured and achieving (GIRFEC).
Due to their early developmental experiences, children and young people in foster/adoptive care are identified within these polices as a particularly vulnerable group who require specialist input in order to achieve these outcomes (Care Matters, 2007 & Getting it Right for Every Child in Kinship and Foster Care, 2007). Journal article 1 of this thesis provides a synthesis of the evidence available for one such specialist input, namely attachment theory based interventions. Journal articles 2 and 3 make use of the wellbeing outcomes defined in these policies as a measure of foster placement quality.

*Children and young people in foster/adoptive care: theoretical context*

Children and young people in foster/adoptive care are a heterogeneous group that are united by the experience of being removed from their family of origin rather than a discrete clinical presentation. In considering the outcomes for this population, it is necessary to draw from multiple theoretical positions to account for both individual child difficulties related to pre foster/adoptive care and the impact of foster/adoptive care systems following placement. This thesis is therefore underpinned by theories of child development, adult caregiving and complex social systems.

The difficulties experienced by children/young people in foster/adoptive care have been explained by theories of developmental trauma which draw from a number of psychological and neurobiological constructs. Complex developmental trauma is characterised by affect regulation difficulties and cognitive and behavioural symptoms of post-traumatic stress disorder (van der Kolk, 2005). It is linked to concepts from Attachment Theory (Bowlby, 1988) which is a developmental theory concerned with the impact of early relational
experiences on long term interpersonal functioning. Journal article 1 of this thesis draws on attachment theory with reference to fostered and adopted children/young people. Journal article 2 is concerned with the care provided to children/young people in foster care, who are likely to have experienced developmental trauma. It makes use of concepts from the parenting literature, namely parental self-efficacy, attributions, and coping. These constructs draw from social cognitive and behavioural theories (Bandura, 1977; Coleman & Karraker, 1997; Weiner, 1986). Journal article 3 acknowledges the importance of the relationships between the adults involved in the care of fostered children and is underpinned by ideas from systemic theory (Lewis, 2011).

Summary

This thesis is in keeping with current government policy regarding children and young people in foster/adoptive care and is underpinned by a number of psychological theories related to child development, adult caregiving and complex social systems.
Attachment Interventions with Foster and Adoptive Parents:
A Systematic Review

Submitted for publication to Child Abuse Review
(Appendix 1)
ABSTRACT

Children who have been adopted or fostered are at high risk of experiencing emotional, behavioural and relational difficulties and placement breakdown may occur if these difficulties are not addressed through interventions. The purpose of this review was to identify the impact of attachment theory interventions with foster and adoptive parents on children’s behavioural, emotional and relational functioning. A systematic search process was undertaken; electronic databases were searched; key journals were hand searched, reference lists of included articles were searched and authors who have published work in the field were contacted. Ten studies met inclusion criteria. There is some evidence to support the positive impact of these interventions for children; particularly young children aged 6 months to 6 years. Overall the studies were of relatively poor methodological quality, making conclusions about the efficacy of these interventions difficult. Further research is therefore required to draw clearer conclusions about the impact of attachment theory interventions for fostered and adopted children.

KEY PRACTITIONER MESSAGE

- More research is needed to establish the efficacy of attachment theory interventions targeting fostered and adopted children and their parents/carers.
- Some evidence for interventions with children aged 6 months to 6 years is available, suggesting the possible benefit of early interventions.
- Further research is needed to establish valid and reliable measures of outcomes for this population of children, in particular emotional and relational functioning outcomes.

KEYWORDS

Adoption, attachment, foster care, interventions
Introduction

Fostered & adopted children

In Britain, the primary reason for a child’s placement in foster care is abuse or neglect within the family of origin (Department for Education, 2012; Warman & Roberts, 2003). A significant proportion of adopted children, whether adopted internationally (Tirella et al., 2008; Zeanah et al., 2009) or domestically from within the care system, (Rees & Selwyn, 2009) will also have experienced abuse or neglect. These children experience significantly more emotional and behavioural difficulties than those who are not fostered or adopted (Clausen et al., 1998; Meltzer et al., 2003; Simmel et al., 2001; Wiik et al., 2011).

The rates of breakdown in long term foster placements have been estimated to be between 20 and 50% (Minty, 1999) and breakdown has been associated with poorer psychosocial outcomes for children (Barber & Delfabbro, 2003). In adoption, between 10 to 50% of non-infant adoptions were found to disrupt by Rushton (2003) and Rees & Selwyn (2009) reported that 6 to 11 years post adoption, 38% of 130 children were no longer in a stable placement and 62% of adoptive parents described continuing difficulties with their child. Due to their early developmental experiences and the negative consequences associated with placement breakdown, it has been suggested that interventions specifically targeting the needs of fostered and adopted children are necessary (Barth et al., 2005).

Intervening through caregivers

Interventions targeting parenting in general, have been identified as a key target for policy makers across Britain (e.g. Department of Health, Social Services & Public Safety, 2009;
Lindsay *et al.*, 2010; National Assembly for Wales, 2009; The Scottish Government, 2012). Given the difficulties experienced by adopted and fostered children and the specific challenges in caring for them, interventions aimed at improving foster and adoptive parents’ understanding and management of their children, have also been hypothesized to be necessary (Golding 2008; Howe, 2006; Hughes, 2004).

The evidence available to date indicates that few of the interventions found to be efficacious with biological parents (Barlow *et al.*, 2010; Furlong *et al.*, 2012) have been trialled with foster or adoptive parents specifically (e.g. Dorsey *et al.*, 2008) or where they have been, results suggest limited value (Everson-Hock *et al.*, 2011; Turner *et al.*, 2009). The theoretical basis of the majority of the interventions reviewed to date, has been cognitive-behavioural (e.g. Edwards *et al.*, 2002; MacDonald & Turner, 2005; Pithouse *et al.*, 2002) and the primary intervention format has been a training or skills based approach (Dorsey *et al.*, 2008). However, the fostered/adopted population of children are significantly different from children residing with their biological parents. Rates of abuse and neglect are much higher, as is the prevalence of mental health difficulties (Hodges, 2005; Hoksbergen *et al.*, 2003; Oswald *et al.*, 2010) and therefore it has been argued that these interventions alone should not be expected to impact as positively in this more complex population (Hodges 2005; Hughes, 2004).

*Attachment theory*

Attachment theory (Bowlby, 1988), which is concerned with the importance of parent-infant interactions in social and emotional development, has become an increasingly popular framework for understanding the difficulties experienced by fostered and adopted children.
(Walker, 2008; Zeanah et al., 2011). All infants are born with a facility to seek comfort and protection from preferred caregivers at times of distress and over the first few years of life a range of behaviours, referred to as ‘attachment behaviours’ are developed in order to ensure these needs are met. Individual differences in the way infants organise their attachment behaviour are related to the nature of the care they receive, such that attachment behaviours adapt dependent upon parental responsivity to them (Ainsworth et al., 1978). On the basis of these repeated interactions with primary caregivers, children develop internal representations of self and others which provide a blueprint for future interpersonal functioning, referred to as an internal working model.

Early research into attachment was based on observations of infant behaviour following separation and reunion with primary caregivers using the Strange Situation paradigm (Ainsworth et al., 1978). On the basis of this work, three attachment styles were proposed: secure, avoidant and ambivalent. Where a sensitive caregiver who provides consistent, predictable and attuned care is available, an internal working model of the carer as safe, containing and trustworthy is developed and the infant is thought of as securely attached. Where the caregiver is unresponsive to the child’s attachment behaviours, the child develops a sense that comfort and security is not available via their caregiver, attachment behaviours reduce and outwardly the child appears to become emotionally self-sufficient, this is referred to as an avoidant attachment style. Finally, an ambivalent style is developed when parental responsivity is perceived as inconsistent and so there is a need to increase attachment behaviour and a sense of overdependence on the carer to ensure feelings of safety is developed but comfort is also not readily or easily accepted by the infant. A fourth attachment style, disorganized, which is related to neglectful and abusive parenting and child behaviour which may include secure and insecure attachment strategies, but also includes
lapses in attachment behaviour such as fear, freezing and disorientation in the presence of caregivers, was later added by Main and Solomon (1990).

Sensitivity and responsiveness to an infant is related to a parent’s own attachment history which serves to guide the parents’ interpretation of and response to child behaviours (Main, 1990). Two important meta-analyses have demonstrated the links between parents’ attachment style and sensitive parenting behaviours; parents’ attachment style and the attachment pattern their infants’ demonstrate; and sensitive parenting behaviours and child attachment patterns (van IJzendoorn, 1995; De Wolff & van IJzendoorn, 1997). This research serves to highlight the mechanisms by which attachment styles are passed from one generation to the next, indicating that a parent’s ability to regulate and organize their own thoughts and feelings about relationships is linked to their capacity to regulate, organize, and sensitively respond to the emotional and physical needs of their child. However, although parental sensitivity emerged as an important factor in the development of child attachment style, it explained only a small proportion of the variance. Therefore, in contrast to the original hypothesis of attachment theory (Bowlby, 1988; Ainsworth et al., 1978), parental sensitivity does not appear to be the principle mediator of the effects of parental internal working model on child attachment style. This finding has been referred to as the ‘transmission gap’ within attachment literature (van IJzendoorn, 1995). More recent research has expanded the concept of adult internal working models to include psychological concepts such as ‘reflective functioning’ and ‘insightfulness’, which refer to the way in which parents think about their own and their child’s behaviour and emotions. These concepts have begun to be investigated and have been found to be related to both parental internal representations of attachment and child attachment styles (Koren-Karie et al., 2002; Slade et al., 2005) and
have therefore subsequently become the focus of some attachment based interventions (Slade et al., 2007).

While early categorical conceptualisations of attachment facilitated a significant amount of research into the individual differences in attachment across the lifespan (Cassidy, 2003), more recent studies have questioned the categorization of attachment styles (Cummings, 1990; 2003; Fraley & Spieker, 2003a). A continuous approach to the measurement of attachment, which implies that attachment varies between individuals by degree rather than type, has more recently been explored. A continuous approach provides information about differences between people otherwise categorized as having the same attachment style and also allows more detailed information about individual differences in attachment in general. Further, a continuous approach also reduces the difficulties of classification errors common for individuals who fall on the borderline between two attachment styles and also allows for secure and insecure attachment patterns to be represented by variations along the same dimension which increases researchers’ ability to make statistical comparisons (Cummings, 2003). The measurement of attachment in a continuous manner however depends on clarification of the dimensions which underlie the various categorical attachment styles (Rutter et al., 2009). A study by Fraley and Spieker (2003b) provided a two dimensional approach to the measurement of attachment, with infants on the strange situation varying in degree on their use of two main attachment strategies: proximity seeking and angry and resistant strategies. This approach allows the degree of attachment security/insecurity to be assessed rather than classifying infants as simply secure or insecure in their attachment behaviours.
One further challenge for attachment theory research which is particularly pertinent for adopted and fostered children, relates to the development of a child’s internal working model within the context of multiple attachment relationships. There are three proposed means by which children who form multiple attachment relationships internalize these to produce a working model of relationships. The ‘hierarchical’ account proposes that childrens’ representation of the most salient caregiver is the most influential (Bretherton, 1985), the ‘integrative’ account suggests that children integrate all of their attachment relationships into a single representation (van Ijzendoorn et al., 1992), while the ‘independent’ account posits that the different representations are independent both in quality and in their influence on development (Howes & Spieker, 2008). Research assessing concordance between infants’ attachment styles and various attachment figures broadly supports the integrative account which is promising for the use of adoption and fostering as interventions targeting attachment, however far more research is required to confirm these findings (Howes & Spieker, 2008).

A final important tenet of attachment theory as applied to children and young people in foster and adoptive care, relates to the adaptive function of attachment styles. In general within attachment theory and research, there is a narrative that insecure attachment represents a risk for mental health difficulties and, consequentially that secure attachment is a protective factor (Deklyen & Greenberg, 2008). However, Crittenden (2000b) has argued that insecure attachment should not in itself be viewed as necessarily detrimental. Within this framework, secure attachment is simply an adaptation which occurs in safe environments; however it would not be desirable for a child to develop a secure attachment in some circumstances. Living in a violent and aggressive household would, for example, be easier when insecure attachment strategies such as physical and emotional avoidance of the source of danger, are
used. It is therefore not the attachment pattern itself that is problematic but its’ interaction with a range of other factors. This has significant implications for children removed from abusive and/or neglectful families of origin and placed with securely attached foster and adoptive parents. Within this scenario, conflict can arise between the strategies children have previously used to have their emotional needs met and those they must develop within the context of new, securely attached caregivers. It is often this mismatch between new caregivers’ expectations that a child can accept consistent nurture and responsive care and the child’s ability to do this, which can cause placement breakdowns (Dozier & Rutter, 2008).

The disruptions in care which fostered and adopted children experience within their families of origin make them more likely to develop insecure rather than secure attachment strategies. This was confirmed by a large scale meta-analysis which found less secure attachment styles within fostered and adopted children compared to non-fostered/adopted children. The presence of the disorganized attachment classification was also significantly higher within the fostered and adopted population (Van den Dries et al., 2009). Although disorganized attachment does not necessarily lead to the presence of mental health difficulties, it is highly related to the presence of externalizing behaviour (Guttmann-Steinmetz & Crowell, 2006) and difficulties with emotion regulation, two factors which are likely to impede a child’s ability to form close relationships with new carers (Zeanah et al., 2011).

*Neurodevelopmental research*

Neurodevelopmental research provides an understanding of the mechanisms underlying early attachment and subsequent interpersonal difficulties. Social-emotional brain development occurs in a relational context, where the infant first has his/her emotions
acknowledged and contained by his carer and through this learns how to self-regulate. This process has been referred to as co-regulation (Schore, 2001). When abusive and/or neglectful caregiving is present, co-regulation is unlikely to occur and the infant is therefore exposed to long periods of dysregulated stress. Such experiences have been shown to impact negatively on the developing stress regulatory system of the brain, meaning that children with early experiences of abuse and neglect find it more difficult to regulate their emotions (Perry et al., 1995). Where the caregiving relationship itself is a source of stress, for example in abusive parenting, the experience of interacting with a caregiver can trigger distress (Schore, 2001). The neurodevelopmental impact of these early experiences suggests that for children removed from abusive and neglectful carers, accepting care from new adults may be a highly aversive and difficult process (Howe & Fearnley, 2003).

*Caregiver attachment*

Given the importance of caregiver responsivity on the development of child attachment styles (De Wolff & van IJzendoorn, 1997) there has also been a focus on investigating the impact of caregivers’ attachment style on fostered and adopted childrens’ attachment. Kaniuk et al. (2004) found that adoptive mothers with secure attachment styles, had more successful adoptions than those with insecure attachment styles. Similarly, Dozier et al. (2001) found that for 50 foster carer-infant dyads, the caregivers’ attachment style was concordant with the infants’ attachment status. This suggested that infants who had been exposed to abuse and neglect could develop secure attachments if placed with a carer who was themself securely attached. However where infants were placed with insecurely attached foster carers, their attachment status remained insecure.
Attachment theory based interventions

These threads of research have led to the development of attachment theory based interventions which target carer/parent attachment style and/or the attachment between carer/parent and child. However, despite the extensive use of attachment theory in the fields of fostering and adoption (Barth, 2005), there has been no systematic review of the impact of such interventions.

Systematic review aims

The current review aimed to establish the impact of attachment theory based interventions with fostered and adopted children. As attachment theory is concerned with relational functioning, interventions which target children alone are unlikely to be in keeping with the principles of the theory (Zeanah et al., 2011) and there has been a significant amount of controversy around residential interventions that employ techniques such as ‘holding’ (Chaffin et al., 2006). Such interventions locate problems within the child, rather than understanding the difficulties as relational in nature (Barth, 2005).

Studies targeting parents/carers alone are hypothesized to increase awareness of the role carers play in developing a child’s understanding of relationships. Such interventions should seek to increase parents’/carers’ ability to develop emotion regulation within their child through the process of co-regulation (Schore, 2001). Interventions with both adult and child involved, should seek to do this too, possibly in a more direct and experiential manner. For these reasons, only studies which target parents/carers alone, or those which target parent/carers and children will be included in the review.
Three outcome factors are considered in the current review. Firstly, due to the finding that behavioural difficulties are predictive of placement breakdown (Oosterman et al., 2007), children’s behavioural functioning is included as an outcome variable. Secondly, due to the close link between attachment theory and emotion regulation (Bowlby, 1988), child emotional functioning is included as an outcome variable. Finally, owing to the relational nature of the interventions and the underlying aim of these to improve relationships, child relational functioning is also an outcome variable considered.

Methods

The review was conducted in line with The Centre for Reviews and Dissemination (http://www.york.ac.uk/inst/crd/) guidance on systematic review methodology and reporting. An a priori review protocol was developed and used to guide the search process (appendix 2). In order to ensure a similar review had not recently been undertaken, the Cochrane Database of Abstracts of Reviews of Effects (DARE) and the Cochrane Database of Systematic Reviews were searched in January 2013 using the terms: ‘foster care* or foster parent* or adoptive parent* or looked after child* or adopted child* or foster child*’. This returned 84 records, two of which were reviews of interventions with this population (MacDonald & Turner, 2008; Turner et al., 2009), however neither of these addressed the use of attachment theory based interventions.

Inclusion and Exclusion Criteria

Population
Studies were included if their target population was foster carers and/or adoptive parents of a child between 0-18 years.

**Study design**

Studies were included if they used a quantitative evaluative design. This included pre and post intervention studies, longitudinal follow-ups, controlled studies and randomized controlled studies. Single case descriptions or evaluations of interventions without quantitative analysis were excluded.

**Intervention**

Studies were included if they aimed to evaluate the impact of ‘attachment theory based’ interventions on fostered or adopted children’s’ emotional or behavioural or relational functioning. Interventions were defined as ‘attachment theory based’ if they met one of the following criteria:

- Described the use of attachment theory as underpinning their development
- Aimed to improve the awareness/understanding of attachment theory in carers/parents
- Aimed to improve the attachment relationship between carer and child
- Aimed to improve the carer’s understanding of their own attachment style
- Aimed to improve the ability of the carer to manage the child’s difficulties using attachment theory as a guiding principle.
Interventions which were described as psycho-educational, experiential, therapeutic, group based or individual were included. Didactic training interventions, with no input from carers or parents, interventions focused solely on children and interventions based on residential treatment of children were excluded.

Outcome measures

Studies were included if they measured children’s emotional or behavioural or relational functioning pre and post intervention. Studies which only assessed the impact of the intervention on carers were excluded. Where studies measured multiple outcomes (e.g. carer outcomes, family outcomes, placement outcomes) only the outcome measures related to children’s emotional, behavioural and relational functioning are included.

Search Strategy

Literature searching consisted of electronic database searching, hand searching of selected journals, communication with authors in the field and following this, reference list searching of articles selected for inclusion in the review (see figure 1)

Electronic database searches

The following databases were searched using the search terms (foster care* or foster parent* or adoptive parent* or looked after child* or adopted child* or foster child*) AND (intervention or training or treatment or therapy) AND (attachment or attachment theory) within the domains of title, abstract and keyword/subject heading:
A total of 628 records were found using this search strategy and this number was reduced to 186 potentially relevant records following the removal of duplicate records.

*Hand searching of selected journals*

Articles published within the following journals between the years of 2006 and 2013 (January) were hand searched for relevant article titles:

- Adoption and Fostering
- Infant Mental Health
- Clinical Child Psychology & Psychiatry
- Attachment & Human Development

This search yielded a total of 18 papers which were potentially relevant for inclusion in the current review and had not been identified in previous searches. Six of these were excluded at the screening stage and the remaining 12 were excluded at the eligibility criteria stage.
Communication with published authors in the field

Five authors (appendix 5) in the field of adoption and fostering who have published work on attachment were contacted in order to increase access to unpublished studies and therefore reduce the effects of publication bias. Of those contacted, two responded and 1 study was identified as suitable for inclusion in the review (Wassall et al., 2011).

Figure 1 Flow Chart illustrating search process
Reference list searching

The reference lists of the studies found to meet inclusion criteria for the current review were searched. This yielded a total of 12 papers which were screened for inclusion. Of these 1 study met inclusion criteria and was included in the review (Becker-Weidman, 2006)

Included studies

Two articles (Dozier et al., 2006 & 2009) were found to report on the same sample and as such are considered as one study. Similarly, 3 articles (Juffer et al., 1997, 2005 & Stams et al., 2001) were found to be follow ups of the same sample and are therefore also considered here as one study. In total, 10 studies (13 articles) were included in the review.

Quality Rating of Studies

Quality criteria, based on guidance from The Centre for Reviews and Dissemination (CRD, 2008) was used to assess the included studies. Criteria considered to be important for the current review fell within one of five categories: design & risk of bias; outcome measures, quality of intervention, statistical issues and external validity.

The rating system from The Scottish Intercollegiate Guidelines Network (SIGN 50- Annex C) for RCTs and Cohort Studies was used to provide each study with a quality rating score. This guidance suggests the use of the following qualitative descriptors and related numerical scoring system: ‘well covered’ (2 points), ‘adequately addressed’ (1 point), ‘poorly addressed’, ‘not addressed’, ‘not reported’ and ‘not applicable’ (all 0 points).
for each criterion and related rating was developed and used to guide the quality assessment process (appendix 6). All ten studies were rated by the first author using these criteria. A 50% sample of the studies was also rated by the second author (academic supervisor) and exact agreement between authors was achieved on 80% of the quality criteria (56/70 items compared). The ratings differed by one point (e.g. well covered vs. adequately addressed) on 11% (8/70) of items and by two points (e.g. well covered vs. poorly addressed) on 9% (6/70) of items. The criteria with differences between raters were reviewed and amended where necessary.

**Results**

*Quality of included studies*

Table 1 presents an overview of the ratings assigned to each study for each quality criteria. The rating scale does not allow for direct comparison across studies; however it does indicate the relative methodological strength of each. Overall, most studies were of relatively poor methodological quality. Based on the quality ratings, the results of the studies by Juffer & Stams *et al.,* (1997, 2001, and 2005), Sprang (2009) and Wassall *et al.,* (2011) can be considered to be relatively valid.
### Table 1: Quality ratings of studies

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<tr>
<td>Becker-Weidman (2006)</td>
<td>Adequate</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Not Addressed</td>
<td>Well</td>
<td>Well</td>
<td>Adequate</td>
<td>Poor</td>
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<td>Poor</td>
<td>Poor</td>
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<td>Poor</td>
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<td>Not Addressed</td>
<td>Well</td>
<td>Well</td>
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<td>Adequate</td>
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<td>Adequate</td>
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<tr>
<td>Golding &amp; Picken (2004)</td>
<td>Poor</td>
<td>Not applicable</td>
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<td>Not Addressed</td>
<td>Well</td>
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<td>Not applicable</td>
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<td>Not Addressed</td>
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<td>Poor</td>
<td>Adequate</td>
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<td>Poor</td>
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<td>Poor</td>
<td>Well covered</td>
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<td>Laybourne et al (2008)</td>
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<td>Poor</td>
<td>Well covered</td>
<td>11</td>
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<td>Sprang (2009)</td>
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<td>Adequate</td>
<td>Poor</td>
<td>Well</td>
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<td>Poor</td>
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<td>Wassall et al (2011)</td>
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<td>Poor</td>
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<td>Well</td>
<td>Poor</td>
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<td>Well</td>
<td>24</td>
</tr>
</tbody>
</table>

**Quality Criteria**

1. The study has an adequate control group
2. The assignment of participants to groups is randomized & 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 treatment undertaken or if differences are present they are controlled for (confounds)
5. Attrition from both intervention & control groups is reported and intention to treat analyses undertaken
6. Outcome measure of child emotional functioning is reliable and valid
7. Outcome measure of child behavioural functioning is reliable and valid
8. Outcome measure of child 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 is used and confidence intervals, effect sizes and p-values are reported
13. Follow up evaluation is undertaken (well=6 months, adequate=1–5 months, poor=no follow up)
14. Intervention procedure reflective of interventions undertaken in clinical settings with foster/adopted populations
Characteristics of included studies

Table 2 presents an overview of each study and summarises the main findings. Four studies were randomized controlled trials (Carnes-Holt, 2010; Dozier et al., 2006/2009; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Sprang, 2009), two studies were non randomized controlled trials (Becker-Weidman, 2006; Wassall et al., 2011) and four were uncontrolled evaluations (Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008)

Sample characteristics

In total, ten intervention studies including 490 fostered/adopted children and 479 foster/adoptive parents were included in the review. Children ranged in age from 3 months to 16 years. The total number of parent-child dyads that received treatment was 304 and ranged from 7 to 77 between studies.

In terms of child characteristics, two studies (Dozier et al., 2006/2009 & Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005) included infants who were not reported to be displaying any difficulties, but were considered to be at high risk for future difficulties. The sample in Dozier et al., (2006/2009) were infants, recruited at the start of initial foster care placement, while Juffer et al’s sample (1997, 2001, and 2005) was internationally adopted infants at 6 months of age who were followed up over 7 years. Three studies (Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008) described index children as experiencing attachment difficulties and potential placement disruption pre intervention. One study described index children as having experienced abuse or neglect and displaying
challenging behaviour (Golding & Picken, 2004) and one study described children as experiencing ‘behaviour difficulties’ as reported by adoptive parents (Carnes-Holt, 2010). Two studies described children as having been ‘diagnosed’ with attachment disorders (Becker-Weidman, 2006; Sprang, 2009) and one of these specified Reactive Attachment Disorder (Becker-Weidman, 2006). One study used a sample of fostered and adopted children, recruited through self-selection of foster/adoptive parents, or referral by professional (Wassall et al., 2011).

Description of interventions

Six studies evaluated group interventions, four of these used the 'Fostering Attachments’ group (Golding & Picken, 2004; Gurney-Smith et al., 2010; Laybourne et al., 2008; Wassall et al., 2011), one used ‘Managing Behaviour with Attachment in Mind’ (Holmes & Silver, 2010) and one used a ‘Child-Parent Relationship Therapy’ group (Carnes-Holt, 2010). These interventions involved direct work with parents/carers only.

The remaining four studies used an individual therapy format. Two studies used the ‘Attachment and Biobehavioural Catch-Up’ intervention (Dozier et al., 2006/2009; Sprang, 2009) and one study used ‘Dyadic Developmental Psychotherapy’ (Becker-Weidman, 2006). These interventions involved direct work with parents/carers and index children. The final study (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005) used an intervention based on promoting parental sensitivity and involved direct work with parents and the use of video footage of parent-infant interactions.
<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Participants post intervention (n=)</th>
<th>Index Children Characteristics</th>
<th>Design</th>
<th>Attachment Based Intervention</th>
<th>Child Outcome Measure</th>
<th>Main findings relevant to current review (p-values shown where reported)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becker-Weidman (2006)</td>
<td>Foster carers/adoptive parents (n=64)</td>
<td>Age Range: 5-16 years, Gender: 59% male</td>
<td>Non randomized controlled trial</td>
<td>Dyadic Developmental Psychotherapy (DDP) 2 hour sessions with child, therapist &amp; parent/carer. Average of 23 sessions over 11 months</td>
<td>RADQ CBCL</td>
<td>Immediate: No comparison data. In treatment group: significant decrease between pre and post intervention RADQ scores (p&lt;0.001) and pre and post intervention CBCL scores on each subscale (p values ranging from &lt;0.001 to 0.006) Follow up: Significant difference between treatment and control groups on RADQ scores (p&lt;0.001) and on withdrawn, thought problems, social problems, attention problems, rule breaking, aggressive behaviour on CBCL (p values ranging from &lt;0.001 to 0.01). No significant difference between treatment and control groups on anxious/depressed subscale of CBCL (p=0.28)</td>
</tr>
<tr>
<td>Carnes-Holt (2010)</td>
<td>Adoptive parents (n=61)</td>
<td>Age Range: 2-10 years, Gender: Not reported</td>
<td>RCT Experimental intervention Vs. Wait list control 10 weekly sessions of 2 hours.</td>
<td>Child-Parent Relationship therapy-Group (CPRT)</td>
<td>CBCL-Total problems</td>
<td>Significant difference in reduction of CBCL total problems scores between treatment and control, with intervention group scores reducing significantly more than the control group (p&lt;0.004)</td>
</tr>
<tr>
<td>Dozier et al., (2006/2009)</td>
<td>Foster Carers (n=60)</td>
<td>Age range: 3.6 to 39.4 months, Gender: 50% male</td>
<td>RCT Experimental intervention Vs. control Intervention 10 individual hour long weekly sessions</td>
<td>Attachment and Biobehavioural catch up Parent Attachment Diary (n=46)</td>
<td>PDR/IT (n=60)</td>
<td>Intervention group reported fewer behavioural problems for toddlers than infants (p&lt;0.05), same effect not found in control group. The intervention main effect was not significant overall, or for toddler group alone (p&gt;0.10) Follow up: Main effect of intervention group emerged when avoidant behaviours included as a dependent variable (p&lt;0.05). No main effect of intervention group was found when secure behaviours included as dependent variable (p&gt;0.10)</td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Participants post intervention (n=)</td>
<td>Index Children Characteristics</td>
<td>Design</td>
<td>Attachment Based Intervention</td>
<td>Child Outcome Measure</td>
<td>Main findings relevant to current review (p-values shown where reported)</td>
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<tr>
<td>Golding &amp; Picken (2004)</td>
<td>Foster Carers (n=7)</td>
<td>Age range: 5-15 years</td>
<td>Pre/post Evaluation</td>
<td>Fostering Attachments Group</td>
<td>SDQ</td>
<td>No significant difference between pre and post intervention scores on conduct problems subscale of SDQ (no values reported).</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td></td>
<td></td>
<td></td>
<td>Pen Portrait/Symptom checklist</td>
<td>ICQ-Difficulty of child subscale</td>
</tr>
<tr>
<td></td>
<td>Index Children (n=7)</td>
<td>Gender: 84% male</td>
<td>No control group</td>
<td>Led by-Professional Psychologist/Social Worker</td>
<td></td>
<td>No significant difference between pre and post intervention scores on pen portrait/symptom checklist measure post intervention (p=0.18)</td>
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<td></td>
<td></td>
<td></td>
<td>No follow up</td>
<td></td>
<td></td>
<td>Significant difference between pre and post intervention scores on Peer difficulties (p=0.005), hyperactivity (p=0.05) &amp; total difficulties (p=0.02) SDQ scores.</td>
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<tr>
<td></td>
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<td></td>
<td>Significant difference between pre and post intervention scores on difficulty of child subscale of ICQ (p=0.02)</td>
</tr>
<tr>
<td>Gurney-Smith et al., (2010)</td>
<td>Foster Carers/Adoptive parents (n=13)</td>
<td>Age range: 4-14 years</td>
<td>Pre/post evaluation</td>
<td>Fostering Attachments Group</td>
<td>SDQ</td>
<td>Immediate: No statistically significant changes between pre/post SDQ or EFR scores</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>Gender: 46% male</td>
<td>No control group</td>
<td>18 weekly sessions of 2.5 hours</td>
<td>EFR</td>
<td>Follow up: Significant decrease in pre/post intervention scores on hyperactivity subscale of SDQ (p=0.049). No significant change on pre/post intervention scores on conduct problems (p=0.14), emotional difficulties (p= 0.48), peer problems (p=0.21) or pro-social behaviour (p=0.48) on SDQ.</td>
</tr>
<tr>
<td></td>
<td>Index Children (n=13)</td>
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<td></td>
<td>Led by-Professionals from Social Work/Clinical Psychology</td>
<td>ICQ-Parent Child Relationship (PCR) &amp; Child Responsiveness to Care (CRC) subscales</td>
<td>Significant decrease in pre/post intervention scores on disinhibition subscale of EFR (p=0.008). No significant change on pre/post intervention scores on inhibition (p=0.56) or dysregulation (p=0.57) subscales of EFR. No significant change on pre/post intervention scores on PCR (p=0.19) subscale of ICQ.</td>
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<td></td>
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<td>Significant increase in pre/post intervention scores on CRC subscale of ICQ (p=0.002)</td>
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<tr>
<td>Holmes &amp; Silver (2010)</td>
<td>Foster Carers/Adoptive parents (n=42)</td>
<td>Age range: Not reported</td>
<td>Pre/post evaluation</td>
<td>Managing behaviour with Attachment in mind-Group</td>
<td>ICQ-Relationship &amp; Problem behaviour subscales</td>
<td>Significant positive change in 8 of 12 items on relationship subscale &amp; significant decreases in observation of problem behaviours (p values reported for each item in measure, not replicated here)</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>Gender: Not reported</td>
<td>No control group</td>
<td>6 sessions in group format</td>
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<td>Index Children (n=42)</td>
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<td>No follow up</td>
<td>Led by-Consultant Clinical Psychologist</td>
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<tr>
<td>Author</td>
<td>Participants post intervention (n=)</td>
<td>Index Children Characteristics</td>
<td>Design</td>
<td>Attachment Based Intervention</td>
<td>Child Outcome Measure</td>
<td>Main findings relevant to current review (p-values shown where reported)</td>
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<tr>
<td>Juffer et al. (1997)</td>
<td>Adoptive parents (n= 147)</td>
<td>Age Range: 5-12 months (at intervention)</td>
<td>Non randomized controlled trial</td>
<td>Intervention 1 Book on parental sensitivity &amp; 3 sessions of video feedback on sensitive parenting vs. No intervention control group</td>
<td>Strange Situation Procedure CBCL TRF</td>
<td>Intervention 1 Significant positive effect was found intervention 1 vs. control group in terms of number of infants classified as secure on strange situation (p=0.049). Children in intervention group were less likely to be classified as disorganized than those in the control group and showed lower scores for disorganization than controls at 12 months. Intervention 2 No significant differences were found between intervention 2 group vs. control group on strange situation (p=0.037). No significant effects at 12 months Follow up- Significantly lower rates of internalizing behaviour problems for both sexes in experimental (intervention 1) compared to control group (p=0.02). Attachment security no difference between groups aged 7.</td>
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<tr>
<td>Juffer et al. (2001)</td>
<td>Index Children (n= 147)</td>
<td>7 years at follow up</td>
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<td>Holland</td>
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<td>Gender: 49% male</td>
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<tr>
<td>Juffer et al. (2005)</td>
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<tr>
<td>Laybourne et al. (2008)</td>
<td>Foster Carers (n=7)</td>
<td>Age range: Not provided</td>
<td>Pre/post evaluation</td>
<td>Fostering Attachments Group 18 sessions of 3 hours over 6 months Led by- Clinical Psychologist, assistant psychologist, fostering support officer</td>
<td>SDQ RPQ ICQ-Total score</td>
<td>No significant difference between pre and post intervention scores on SDQ (d= 0.1, p= 0.28) No significant difference between pre and post intervention scores on RPQ (d= 0.04, p=0.48). No significant difference between pre and post intervention scores on ICQ (d=.05, p=0.43)</td>
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<tr>
<td>United Kingdom</td>
<td>Foster Carers (n=7)</td>
<td>Gender: Not Provided</td>
<td>No control group</td>
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<tr>
<td>Sprang (2009) USA</td>
<td>Foster Carers (n=53)</td>
<td>Age range: Mean age 3.5 years</td>
<td>RCT</td>
<td>Attachment and Biobehavioural Catch-up 10 one hour weekly sessions. Led by- Not reported</td>
<td>CBCL-Internalizing CBCL-Externalising</td>
<td>Significant difference in CBCL-I (p=0.05) and CBCL-E (p=0.01) between intervention and control groups post intervention. Significant improvements in CBCL-I (p=0.01) and CBCL-E (p=0.01) in treatment group with 26.4% vs. 5.5% reduction in CBCL-E (treatment vs. control) and 29.2% vs. 5.5% reduction in CBCL-I (treatment vs. control)</td>
</tr>
<tr>
<td></td>
<td>Index Children (n=53)</td>
<td>Gender: 51% male</td>
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<tr>
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<td>Participants post intervention (n=)</td>
<td>Index Children Characteristics</td>
<td>Design</td>
<td>Attachment Based Intervention</td>
<td>Child Outcome Measure</td>
<td>Main findings relevant to current review (p-values shown where reported)</td>
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<tr>
<td>Wassall et al., (2011) United Kingdom</td>
<td>Foster Carers/Adoptive Parent (n=25)</td>
<td>Age range: 9-14 years</td>
<td>Non Randomized Controlled Trial</td>
<td>Fostering Attachments Group</td>
<td>SDQ</td>
<td>No significant difference in SDQ scores post intervention between control/intervention group (p=0.56).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gender: 50% male</td>
<td></td>
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<td></td>
<td>Index Children (n=36)</td>
<td></td>
<td>Experimental intervention vs. Wait list control</td>
<td>18 sessions of 2.5 hours over 6 months</td>
<td>Child Sense of Security Questionnaire (SSQ)</td>
<td>No significant differences on SSQ scores post intervention between control/intervention group (p=0.12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 month follow up</td>
<td>Led by Social Worker/Clinical Psychologist</td>
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</table>

**Key**
- CBCL: Child Behaviour Checklist (Achenbach, 1991)
- EFR: Expression of feelings in Relationships Questionnaire (Quinton et al., 1998)
- ICQ: Intervention Carer Questionnaire (Golding & Picken, 2004)
- RADQ: Randolph Attachment Disorder Questionnaire (Randolph, 2000)
- RPQ: Relationship problems Questionnaire (Minnis et al., 1999)
- SDQ: Strengths and Difficulties Questionnaire (Goodman, 1997)
- SSQ: Sense of Security Questionnaire (Kerns et al., 1996)
- TRF: Teacher Report Form of CBCL (Verhulst et al., 1997)
Outcome measures

In all studies with the exception of two, (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Wassall et al., 2011) child outcomes were measured using parent/carer self-report questionnaires. Juffer et al., (1997, 2001, and 2005) also used the ‘Strange Situation Procedure’, an observational tool which codes attachment behaviour in infants, and a teacher report of behaviour (Teacher’s Report Form) and Wassall et al., (2011) included a child self-report measure of attachment to carer/parent.

Six studies included measures of emotional, behavioural and relational functioning (Becker-Weidman, 2006; Golding & Picken, 2004; Gurney-Smith et al., 2010; Laybourne et al., 2008; Juffer et al., 1997/Stams et al., 2001/Juffer et al. 2005; Wassall et al., 2011), two studies included measures of behavioural and relational functioning (Dozier et al., 2006/2009; Holmes & Silver, 2010), one study included measures of emotional and behavioural functioning (Sprang, 2009) and one study included only a behavioural measure (Carnes-Holt, 2010).

Standardized measures

The Child Behaviour Checklist (Achenbach, 1991) was used to measure behavioural and emotional difficulties in three studies (Becker-Weidman, 2006; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Sprang, 2009) and was used by one study as a pure behavioural measure (Carnes-Holt, 2006). The Parent Daily Report (Infant/Toddler version; Chamberlain & Reid, 1987) was also used in one study as a behavioural measure (Dozier, et al., 2006/2009). The Strengths and Difficulties questionnaire (Goodman, 1997) was used to
measure emotional and behavioural functioning in four studies (Golding & Picken, 2004; Gurney-Smith et al., 2010; Laybourne et al., 2008; Wassall et al., 2011). One study used the Expression of Feelings in Relationships Questionnaire (Quinton et al., 1998) to assess carers/parents’ perception of their child’s ability to express emotions (Gurney-Smith et al., 2010).


Non-standardized measures

Four studies (Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008) used the ‘Carer Intervention Questionnaire’ which was developed by Golding & Picken (2004) to assess the impact of the ‘Fostering Attachments’ group on aspects of the carer-child relationship. Although this measure is highly relevant to the hypothesized aims of the ‘Fostering Attachments’ group, no psychometric data for the properties of the scale are available as of yet. The measure was also scored in a number of different ways across the studies which used it (see table 2). One study (Golding & Picken, 2004) also used a ‘pen portrait’ for carers to indicate the presence of attachment difficulties.
Statistical analyses

A range of statistical analyses were used across studies. Five studies used t-tests (Becker-Weidman, 2006; Golding & Picken, 2004; Laybourne et al., 2008; Sprang, 2009; Wassall et al., 2011). Three studies used ANOVA (Carnes-Holt, 2010; Dozier et al., 2006/2009; Gurney-Smith et al., 2010), one study used MANOVA & ANCOVA (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005) and one study used Wilcoxon’s Signed Ranks tests (Holmes & Silver, 2010). There was variability in the detail of reporting of statistical analyses across studies. None of the studies reported a power calculation in order to guide sample size, and most of the studies were conducted on small samples. Only two studies undertook intention to treat analyses (Dozier et al., 2006/2009 and Sprang, 2009) and only one study (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005) considered and adjusted analyses for confounding variables between groups.

Effect sizes

Effect sizes for statistically significant findings were recalculated using the formula for Cohen’s d (treatment mean-control mean/pooled standard deviation). Of the 10 included studies, all measured child behavioural functioning and 7 of these reported statistically significant improvements in this outcome (Becker-Weidman, 2006; Carnes-Holt, 2010; Dozier et al., 2006/2009; Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Sprang, 2009) (see table 3).
### Table 3 Effect Sizes for Behavioural Functioning Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Behavioural Outcome Measure</th>
<th>Effect size (d=)</th>
<th>Descriptor</th>
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</thead>
<tbody>
<tr>
<td>Becker-Weidman (2006)</td>
<td>Social Problems subscale</td>
<td>-0.68</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Thought Problems subscale</td>
<td>-0.94</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Attention Problems subscale</td>
<td>-0.92</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Rule Breaking subscale</td>
<td>-1.78</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Aggressive Behaviour subscale</td>
<td>-1.76</td>
<td>Large</td>
</tr>
<tr>
<td>Carnes-Holt (2010)</td>
<td>CBCL-Total problems subscale</td>
<td>-0.02</td>
<td>Small</td>
</tr>
<tr>
<td>Dozier et al., (2006/2009)</td>
<td>Parent Daily Report/Infant, Toddler</td>
<td>Unable to calculate due to insufficient information</td>
<td>N/A</td>
</tr>
<tr>
<td>Golding &amp; Picken (2004)</td>
<td>SDQ-Peer difficulties subscale</td>
<td>1.35</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Hyperactivity subscale</td>
<td>0.66</td>
<td>Medium</td>
</tr>
<tr>
<td>Gurney-Smith et al., (2010)</td>
<td>SDQ-Hyperactivity subscale</td>
<td>0.59</td>
<td>Medium</td>
</tr>
<tr>
<td>Holmes &amp; Silver (2010)</td>
<td>ICQ-Problem behaviour 1</td>
<td>0.65</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Problem behaviour 2</td>
<td>0.65</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Problem behaviour 3</td>
<td>0.62</td>
<td>Medium</td>
</tr>
<tr>
<td>Sprang (2009)</td>
<td>CBCL-Externalizing Subscale</td>
<td>-1.81</td>
<td>Large</td>
</tr>
</tbody>
</table>

Of the 10 included studies, 7 measured child emotional functioning (Becker-Weidman, 2006; Golding & Picken, 2004; Gurney-Smith et al., 2010; Laybourne et al., 2008; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Sprang, 2009; Wassall et al., 2011) and 5 of these reported statistically significant improvements in this outcome area (Becker-Weidman, 2006; Golding & Picken, 2004; Gurney-Smith et al., 2010; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005)(see table 4).
### Table 4 Effect Sizes for Emotional Functioning Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Emotional Outcome Measure</th>
<th>Effect Size (d=)</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becker-Weidman (2006)</td>
<td>CBCL-</td>
<td>-1.14</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Withdrawn subscale</td>
<td>-0.22</td>
<td>Small</td>
</tr>
<tr>
<td>Golding &amp; Picken (2004)</td>
<td>SDQ-</td>
<td>0.96</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Total Difficulties subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gurney-Smith et al., (2010)</td>
<td>EFR-</td>
<td>0.60</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Disinhibition subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juffer/Stams et al., (1997,2001,2005)</td>
<td>CBCL-</td>
<td>-0.68</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Internalizing subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprang (2009)</td>
<td>CBCL-</td>
<td>-1.61</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Internalizing subscale</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of the 10 included studies, 8 measured child relational functioning (Becker-Weidman, 2006; Dozier et al., 2006/2009; Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Wassall et al., 2011) and 6 of these reported statistically significant improvements in this outcome area (Becker-Weidman, 2006; Dozier et al., 2006/2009; Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005) (see table 5).
### Table 5 Effect Sizes for Relational Functioning Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Relational Functioning Outcome Measure</th>
<th>Effect size (d=)</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becker-Weidman (2006)</td>
<td>RADQ- Total Score</td>
<td>-3.13</td>
<td>Large</td>
</tr>
<tr>
<td>Dozier et al., (2006/2009)</td>
<td>Parent Attachment Diary</td>
<td>-0.69</td>
<td>Medium</td>
</tr>
<tr>
<td>Golding &amp; Picken (2004)</td>
<td>ICQ- Perception of child difficulty scale</td>
<td>1</td>
<td>Large</td>
</tr>
<tr>
<td>Gurney-Smith et al., (2010)</td>
<td>ICQ- Child Responsiveness to care scale</td>
<td>-0.49</td>
<td>Medium</td>
</tr>
<tr>
<td>Holmes &amp; Silver (2010)</td>
<td>ICQ- Relationship scale</td>
<td>-0.82</td>
<td>Large</td>
</tr>
</tbody>
</table>

### Discussion

#### Main findings

There is some evidence that attachment theory based interventions targeting foster and adoptive parents may have a positive impact on child behavioural, emotional and relational functioning. However, despite the high number of positive outcomes reported, results should be interpreted with caution due to the poor methodological strength of the majority of included studies.

Using the quality criteria described here, the strongest studies with positive outcomes (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005; Sprang, 2009) support the use of interventions which focus on increasing parental attunement to very young children (6 months - 6 years) in foster or adoptive care. These can be described as early interventions.
Four of the five British studies (Golding & Picken, 2004; Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008) reported relatively positive outcomes from parent/carer group pre/post evaluations of interventions. However, the methodologically strongest of these (Wassall et al., 2011) found no statistically significant improvements in child behavioural, emotional or relational functioning. The authors conclude that the ‘Fostering Attachments’ group may not be an intensive enough intervention to promote change in the difficulties this population of children present.

Overall, there is more evidence to indicate a positive impact of the included interventions on child behavioural and relational functioning compared to limited evidence regarding emotional functioning. This is due, in part, to fewer studies including specific measures of child emotional functioning and therefore fewer statistically significant findings being reported. However, the effect sizes produced for behavioural and relational functioning compared to emotional functioning require consideration. Much larger effect sizes were found for behavioural and relational outcomes compared to emotional outcomes (see tables 3-5). Previous research has suggested that concrete, observable and unambiguous items, such as those on behavioural psychometric measures, may account for parental over focus on behavioural versus emotional difficulties (Herjanic et al., 1997). Further, priming effects, such as the child’s behaviour immediately prior to parental completion of outcome measures, may also explain the discrepancies in effect sizes. The saliency of items on child outcome measures has also been related to patterns of parental/carer response (Karver, 2006). Within the interventions reviewed here, the saliency of relational items for foster and adoptive parents, such as how improved the parent-child relationship is following intervention, may account for the larger effect sizes reported in this outcome area.
The lack of psychometric measures specifically targeting emotional functioning highlights a current difficulty for the evaluation of attachment theory based interventions due to the theoretical link between attachment, emotion regulation and relational functioning (Schore, 2001). If these interventions work as they are hypothesized to, by improving carer/child emotional co-regulation in response to stress, then being able to measure this outcome in a valid way is an important consideration.

The strongest measures of relational functioning (Strange Situation Procedure/Parent Attachment Diary) have validity and reliability for infants only, which also makes measurement of changes in this domain difficult in children older than around 3 years. However, the focus on attachment outcome measures in child welfare parenting interventions has recently been criticized (Barth, 2012). Barth argues that too strong an emphasis is placed on measuring attachment changes and that scientific parsimony should encourage researchers to interpret their findings in the simplest way, rather than imposing an attachment paradigm if results do not suggest this. He also discusses the tendency of researchers to attribute a lack of attachment change to difficulties in the measurement of this construct, rather than considering that interventions may not impact directly on attachment status but can nevertheless improve child outcomes.

A final issue related to the measurement of outcomes in the current review, is the over reliance on self-report by carers. Only two studies (Juffer et al., 1997/Stams et al., 2001/Juffer et al., 2005 & Wassall et al., 2011) made use of outcome measures beyond parent/carer self-report. This issue limits the validity of the outcomes reported and highlights the need for research within this population to consider outcome measurement from a more systemic viewpoint.
Strengths of review

The review used a comprehensive search strategy which included a number of methods of searching. Attempts were also made to reduce the impact of publication bias by contacting authors in the field for unpublished work.

Limitations of review

The review had a narrow remit; to evaluate the impact of interventions on three key outcome variables. These variables were selected following consideration of the theoretical underpinning of the interventions and the difficulties this population present in clinical settings (Meltzer et al., 2003). However, it may be that other studies could have been included if these criteria were less specific. For example, studies which evaluate placement stability or carer retention and satisfaction, would also be important to consider in future syntheses of the literature. Secondly, there was one potentially relevant article which could not be accessed in full text (Benjamin, 2010). Inclusion of this study would have increased the overall sample size. Finally, the heterogeneity of the included studies in terms of design, sample size, intervention procedures and outcome measures means that firm conclusions are difficult to establish. The calculation of weighted average effect sizes, as utilized within meta-analyses, would have somewhat compensated for this heterogeneity and aided interpretation of the effect sizes reported. Weighted average effect sizes are calculated by statistically synthesizing the effect sizes across included studies. Larger studies provide more precise effect size estimates than smaller studies, as do studies which are have better internal validity. Therefore, calculation of weighted average effect sizes produces an overall effect size estimate for the interventions reviewed, with more or less importance placed on the
effect sizes reported in individual studies dependent on their sample size and quality. This approach was not undertaken in the current review however due to the considerable differences in interventions and populations targeted. As research into attachment based interventions expands however, the use of meta-analytic strategies focused on specific populations (for example those fostered/adopted at birth, or those fostered/adopted in mid childhood) and specific interventions (for example group work with foster carers, or direct therapeutic work with children/carers) will be vital in drawing conclusions about the effectiveness of this approach.

Implications for future research

In order to establish the efficacy of attachment theory based interventions with fostered and adopted children, more methodologically sound studies are required. In practice, this should involve more controlled trials, with treatment and control participants matched at baseline.

Achieving this gold standard of efficacy research with this particular population is difficult however due to a number of factors. Firstly, in the case of fostered children there can be issues with obtaining the consent of biological parents which protracts and complicates the provision of standardized research practice to this population. Secondly, matching participants between groups would involve thorough assessment and there are few standardized measures which could meaningfully do this. Similarly, the use of standard psychiatric diagnostic labels with this population of children fails to account for the complexity of the relational trauma experienced prior to placement for fostering/adoption (De Jong, 2010; Tarren-Sweeney, 2013).
Tarren-Sweeney (2013) argues that significant changes must be made to the research approach with this population of children and young people. Specifically, he proposes the need for follow up studies spanning several years and more clinically relevant reporting of outcomes. An example of this would be detailing the proportion of children who benefit from the interventions, as well as the differential profiles of this group and the group that do not benefit. These assertions are in keeping with the conclusions drawn from the current review.

A further consideration for future research in this field would be the evaluation of attachment theory based interventions, such as ‘Mellow Parenting’ (Puckering et al., 1994, 1996, 2011), ‘Child-Parent Psychotherapy’ (Lieberman et al., 2005) and ‘Circle of Security’ (Marvin et al., 2002) in the fostered and adopted populations specifically. These interventions are recommended within the NHS Scotland Psychological Therapies Matrix (2011) as evidence based interventions for early relationship difficulties between children and their caregivers. The studies these recommendations are based on however, do not focus specifically on fostered or adopted children and therefore research which does would enable clearer conclusions to be made.

**Implications for clinical practice**

A key clinical implication arising from the current review relates to the timing of attachment based interventions with fostered and adopted children. Although the studies included in the review covered a range of child age groups, the most valid studies with positive findings indicated the benefit of earlier interventions (e.g. ‘Attachment and Biobehavioural Catch-Up’ & promoting parental sensitivity), which can be viewed as preventative rather than reactive in
nature. This is unsurprising given both the theoretical underpinning of attachment processes and the neurodevelopmental research indicating the importance of the first three years of life in later relational functioning (Kaufman & Charney, 1999; Perry et al., 1995, 1997, 1998). This evidence suggests that interventions focused on child interpersonal functioning should be undertaken early in new placements in order to maximise outcomes. It also supports the proposal to place children with long term foster carers/adoptive parents earlier and reduce ‘foster care drift’, where children have a significant number of carers before being placed permanently (e.g Minnis et al., 2010; Zeanah et al., 2001).

Conclusions

There is some evidence to suggest that interventions that target foster and adoptive parents using attachment theory as a guiding principle, can impact positively on children’s behavioural and relational functioning. There is a smaller amount of evidence to indicate positive outcomes on children’s emotional functioning, although further consideration of this in intervention studies is warranted. Future research should seek to address the methodological limitations described above before firm conclusions can be made.
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Journal Article 2

TITLE

Foster carer self-efficacy and the role of attributions and coping in the quality of foster placements

WORD COUNT

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Prepared in accordance with guidelines for submission to –

Children and Youth Services Review

(Appendix 7)
ABSTRACT

Due to abuse and neglect which precipitate entry into foster care and subsequent placement instability within the foster care system, outcomes for children and young people in foster care are generally poor. Previous research has highlighted the need to provide stable placements as measured by duration of placement; however, less research has focused on the quality of placements provided. The current study explored the role of foster carer parenting in placement quality. Three constructs were explored: parental self-efficacy, attributions and coping strategies. Foster carers (n=91) completed self-report questionnaires measuring these constructs and a measure of placement quality. Supervising social workers (n=87) also completed a measure of placement quality. High parental self-efficacy was found to be associated with the use of positive coping strategies, in particular positive reframing. Foster carer parental self-efficacy was predictive of placement quality as judged by foster carers and supervising social workers. Future research is required to further explore the predictors of placement quality for children and young people in foster care.

HIGHLIGHTS

- Foster carer parental self-efficacy was associated with the use of positive coping strategies, in particular positive reframing.
- Placement quality, as measured by foster carers and social workers, was predicted by foster carers’ high parental self-efficacy for managing difficult behaviour.

KEYWORDS

Foster care, self-efficacy, foster placement quality, looked after children
1. Introduction

1.1 Children & young people in foster care

Approximately 75% of children under local authority care in Britain are placed with foster carers and the prime reason for placement is abuse and/or neglect in the family of origin (Department for Education, 2012). The impact of such maltreatment by primary caregivers has been shown by neurodevelopmental research to have negative repercussions for long term psychological wellbeing (e.g. Dube et al., 2001; Heim & Nenerott, 2000; Kotch et al., 2008; Perry et al., 1997 & 1998; Schore, 2001; Springer et al., 2007). Children in foster care are therefore predisposed by their early developmental experiences to encounter emotional, behavioural and relational difficulties throughout their lives (Clausen et al., 1998; Minnis et al., 2006).

Once placed in foster care, instability, such as changes in placement, primary caregivers and social workers (Ward, 2009) can further disrupt childrens’ abilities to form secure and lasting bonds, a key developmental process asserted by attachment theory (Bowlby, 1988). In particular, the unplanned ending of placements, referred to as placement breakdowns, have been related to poorer psychosocial outcomes for children (Barber & Delfabbro, 2003; Newton et al., 2000; Rubin et al., 2007; Unrau et al., 2008) and are therefore a key focus for policy makers and practitioners (Schofield et al., 2007).

1.2 Placement breakdown-risk factors

Qualitative research suggests that the reasons for placement breakdown are multifactorial, with child, foster carer and system factors highlighted (Hyde & Kammerer, 2009; Norgate et
al., 2012; Schofield & Beek, 2005). However, a meta-analysis of placement breakdown with over 20,000 children identified large effect sizes for difficult child behaviour and small/medium effect sizes for a number of other variables, such as age at placement and number of previous placements (Oosterman et al., 2007). There is not yet a clear understanding of the pathway between child behavioural difficulties and placement breakdown (Newton et al., 2000), however, it appears that placements typically end at times of stress or crisis, where the behaviour displayed is perceived as too difficult to manage, or the impact of sustaining the placement is negative for the child or foster carer (Farmer et al., 2005; Fratter, 1991; Oosterman et al., 2007; Rowe, 1989; Ward & Skuse, 2001).

1.3 Placement stability - protective factors

There are a number of studies which have shown that protective factors can mitigate the impact of problem behaviour. For example, foster carers’ warmth, ability to nurture and to set limits have been linked to less placement breakdown (Sinclair and Wilson, 2003) as has the degree of support available to foster carers (Crum, 2010; Kalland & Sinkkonen, 2001) and the emotional connection between carer and child (Walsh & Walsh, 1990). Less foster carer strain has been linked to more sensitive parenting and subsequent placement stability (Farmer et al., 2005), and a child’s degree of integration into a foster family has been found to reduce the likelihood of subsequent breakdown (Leathers, 2006).

Overall however, there is little consensus in the literature around protective foster carer factors compared to the findings on child risk factors. This has been attributed to a lack of multivariate approaches used in these studies (Oosterman et al., 2007), but may also reflect the difficulty in measuring the constructs hypothesized to be important. Measurements of
parenting, for example, have tended to be non-standardized and idiosyncratic (e.g. Farmer et al., 2005; Sinclair & Wilson, 2003; Walsh & Walsh, 1990) and have lacked the theoretical underpinning of measures from the literature pertaining to parenting of biological children (here on in referred to as biological parenting). This issue was highlighted in a recent study (Berrick & Skiveness, 2012) which analysed the content of interviews with foster carers for evidence of ‘good parenting’ as defined by the biological parenting literature. The role of foster carers in promoting positive outcomes for children is therefore worthy of further exploration (Oosterman et al., 2007).

1.4 Foster carer parenting

The role of foster carer parenting and coping has not yet been examined using standardized measures that are underpinned by theoretical constructs from the biological parenting literature (Berrick & Skiveness, 2012; Jones-Harden et al., 2008). Although the correlates of successful placements are likely to be multiple, the current study attempts to build on existing literature by examining aspects of foster carer parenting and coping in relation to placement quality, rather than placement breakdown. Specifically, three constructs that have been related to positive outcomes in the parenting literature, and are theoretically and practically relevant to the role of foster carers, will be explored.

1.4.1 Parental self-efficacy

Parental self-efficacy is a cognitive construct related to the level of confidence and assurance a parent holds regarding their ability to parent positively and effectively (Ardelt & Eccles, 2001; Coleman & Karraker, 1997; Jones & Prinz, 2005). In the biological parenting
literature, high parental self-efficacy has been related to the use of more positive parenting practices, greater acceptance of child difficulties and parental role satisfaction (Coleman & Karraker, 2000). Parental self-efficacy in foster carers has also been related to foster carer well-being and intention to continue fostering (Whenan et al., 2009). High parental self-efficacy in foster carers has been shown to mediate the impact of challenging behaviour on foster carer stress (Morgan & Baron, 2011), indicating the importance of self-belief cognitions in foster carers’ response to difficult behaviour. Although this study did not make a direct link between parenting self-efficacy and placement outcome, the authors hypothesize that carers who have a strong belief in their ability to parent effectively may be more likely to sustain placements. Taylor (2009) investigated this hypothesis but found no significant relationships and attributed this to methodological issues. In particular the measure of self-efficacy employed in this study may have lacked resonance for foster carers, including items such as ‘Being a good foster carer is manageable, and any problems are easily solved’ (PSOC; Johnston & Mash, 1989). The role of parental self-efficacy in foster carers merits further exploration with a more sensitive and relevant measure. Due to the link between behaviour difficulties and placement breakdown and the relevance therefore of foster carer coping in response to difficult behaviour, a self-efficacy measure tapping this domain was selected. In order to better understand parental self-efficacy in foster carers, potential correlates (coping and attributions) were also explored.

1.4.2 Parental attributions

A related cognitive construct that has also been shown to impact on parenting practices in biological parent-child dyads, is parental attribution regarding child behaviour. Attributions are concerned with assigning meaning to events, and Attribution Theory (Weiner, 1986)
asserts that the type of meaning assigned, influences the behavioural and affective response initiated. Research has shown parental attributions impact on parenting behaviour, parental affect and child development (Miller, 1995). Where negative child behaviour is perceived as intentional and parents perceive themselves as powerless, more coercive and harsh parenting strategies are used and parents are more authoritarian and controlling (Bradley & Peters 1991; Bugental et al., 1989; Silvester et al., 1995; Smith & O’Leary 1995). In a longitudinal study, blame orientated attributions were found to predict child aggression as mediated by harsh parenting tactics at four year follow up, indicating the impact cognitive processes have on parenting and child outcomes (Nix et al., 1999). Attributions have not been well researched within the foster carer population. One study to date has assessed foster carer attributions regarding oppositional behaviour and found that negative emotional responses, such as anger, were more likely when control over behaviour was attributed to the child (McGuiness, 2007). Research into the degree of control foster carers view themselves as having over adult-child interactions may impact on their feelings of self-efficacy and the quality of the placement provided.

1.4.3 Parental coping

Parenting children with emotional and behavioural difficulties has been related to increased parental stress (Hastings & Brown, 2002; Paczkowski & Baker, 2007; Scheel & Rieckmann, 1998) which has been linked to the use of more punitive parenting strategies (Olson et al., 2002) and increased child behaviour difficulties (Kuhn & Carter, 2006). However, there is evidence that positive coping strategies can mitigate the impact of these difficulties on parental stress (Dunn et al., 2001; Hastings & Johnson, 2001; McCubbin & Patterson, 1983). Given the evidence that placements tend to breakdown at times of increased stress (Newton et
al., 2000) it is important to be able to identify coping strategies that allow carers to manage stressful experiences and continue with placements. In terms of foster carers, only one aspect of coping has been sufficiently investigated to date. Kalland and Sinkkonen (2001) and Crum (2010), found that the use of social support by foster carers led to more placement stability. Farmer and colleagues (2005) also found that foster carers who experienced more strain and placement breakdowns had less social support than those with fewer breakdowns and less self-reported strain. The current study will investigate the use of a number of coping strategies by foster carers in relation to self-efficacy and placement quality.

1.5 Foster placement quality - measurement issues

The measurement of foster placement quality is complex and has been the subject of much debate within the literature (e.g. Quinton et al., 1998; Sellick et al., 2004; Triseliotis et al., 1995; Walsh & Walsh, 1990; Whitaker et al., 1985). The reasons for entry into foster care, difficulties displayed by young people, aims of foster care placements and the differing perspectives over success are highly individual constructs which makes meaningful measurement of placement quality in a quantitative research paradigm difficult. Where quality measures have been employed (e.g. Farmer et al., 2005; Lipscombe et al., 2003; Sinclair & Wilson, 2003) these have been non standardized ratings by researchers based on review of case notes/participant interview or based solely on supervising social worker judgements (e.g. Walsh & Walsh, 1990). More recently, attempts have been made to standardize the assessment of placement quality by using Government published outcome frameworks e.g. (Taylor, 2009) and this approach has also been utilised within the current study. The majority of research however, employs a longitudinal follow up design and uses the unplanned ending of a placement (placement breakdown) as an outcome measure (e.g.
Farmer et al., 2005; Sinclair & Wilson, 2003). This approach has successfully led to an understanding of the risk factors for placement breakdown (Oosterman et al., 2007) but does not contribute to an understanding of factors that promote quality placements.

1.6 The current study

The current study investigates aspects of foster carer parenting and coping using constructs from the biological parenting literature and a quantitative design. It uses a strengths based approach which focuses on identifying factors that promote positive outcomes, rather than identifying risk factors. This approach is increasingly being employed with this population (e.g. Odell, 2008; Oke et al., 2011), and is important due to the need to recruit and retain foster carers (Sebba, 2012; The Scottish Government, 2008). A greater understanding of the protective factors within foster carers that lead to quality placements can contribute to the assessment processes around recruitment, the training of foster carers and the development of interventions for placements that are at risk.

1.7 Aims & hypotheses

The study has two aims: firstly, to explore the relationships among foster carer self-efficacy, attributions and use of coping strategies and secondly to examine the ability of the aforementioned parenting constructs to predict placement quality for children in current foster placements. The following hypotheses are made in relation to these aims:

1. High adult controllability attributions will be associated with high parental self-efficacy.
2. High parental self-efficacy will be associated with the identification of multiple positive coping strategies.

3. Placements of high quality, as judged by foster carers, will be predicted by high parental self-efficacy, high adult controllability attributions and the presence of positive coping strategies.

4. Placements of high quality, as judged by social workers, will be predicted by high parental self-efficacy, high adult controllability attributions and the presence of positive coping strategies.

2. Method

2.1 Design

The study used a cross-sectional quantitative design with variables measured via self-report questionnaires completed by foster carers and supervising social workers.

2.2 Participants

Participants were foster carers (n=91) and their supervising social workers (n=87) employed by five local authorities across central Scotland. Foster carers were included in the study if they had a child aged between 3 and 16 placed with them for a minimum of 6 months at the time of recruitment. The upper and lower age limits were based on the reliability and validity.
of the child measure used in the study. The minimum duration of placement was selected in order for the foster carer to have developed some form of a relationship with the child and therefore be able to complete the measures. 476 foster carers within the five participating social work departments met these criteria, 91 of whom took part in the study (19.1% response rate). No data was collected for those who opted not to participate.

2.3 Measures

2.3.1 Covariates

2.3.1.1 Demographics

Demographic factors across three categories (foster carer factors, child factors and placement factors) were collated using a questionnaire designed for the purposes of the study (appendix 8). The variables selected for inclusion were based on their theoretical validity and previous research indicating their potential impact on placement outcomes (Oosterman et al., 2007).

2.3.1.2 Depression and Anxiety Stress Scales 21 (DASS-21) (Lovibond & Lovibond, 1995)

A measure of foster carer psychological distress was included as a potential covariate due to the impact that general psychological distress can have on parenting and coping. The DASS-21 (appendix 9) has three subscales of depression, anxiety and stress and an overall psychological distress scale, which was used in the current study. This scale has high internal reliability (0.93) and good convergent and discriminant validity (Crawford & Henry, 2003;
Henry & Crawford, 2005). In the current study, internal reliability for the ‘psychological distress’ scale was .87.

2.3.1.3 Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997)

Due to the established link between behavioural difficulties and placement outcomes (Oosterman et al., 2007) a measure of child difficulties was included as a potential covariate. The SDQ (appendix 10) is a 25 item measure of emotional and behavioural difficulties completed by a primary caregiver. Different versions are available for children aged 3 and those aged 4-16. It provides a ‘total difficulties’ scale (based on 20 items) which was used in the current study and has adequate internal reliability (0.73) and a test retest reliability of .62 (Goodman, 2001). In the current study, internal reliability for the ‘total difficulties’ scale was .85.

2.3.2 Predictor variables

2.3.2.1 Difficult Behaviour Self-Efficacy Scale (DBSES) (Hastings & Brown, 2002a)

The DBSE scale (appendix 11) is a five item self-report measure of self-efficacy in which respondents indicate on a 7-point scale, their degree of confidence/satisfaction in dealing with difficult child behaviour. These items are totalled and provide an overall self-efficacy score. The scale has been shown to have high internal reliability, ranging from .84 to .97, when used with biological parents (Hastings & Brown, 2002a, 2002b, Hastings & Symes, 2002) and foster carers (Morgan & Baron, 2011 & Whenan et al., 2009). In the current study internal reliability for the ‘self-efficacy’ scale was .80.
2.3.2.2 Parent Attribution Test (PAT) (Bugental et al., 1984, 2004)

The PAT (appendix 12) is a self-report instrument that requires participants to read a short vignette in which they imagine themselves spending time with a ‘neighbour’s child’ and not getting along well with that child. Respondents then rate the importance of a number of potential reasons for the negative/unsuccesful interaction with the child. The items rated fall into four categories: causes that are controllable by adults (e.g. using the wrong approach with the child), causes that are controllable by children (e.g. child being stubborn), causes that are uncontrollable by adults (e.g. not feeling well that day) and causes that are uncontrollable by children (e.g. child was tired). The measure gives rise to two scores: ‘adult control over failure’ (ACF) and ‘child control over failure’ (CCF) which are used to calculate a total ‘perceived control over failure’ score (PCF) by subtracting CCF from ACF. The PCF score gives a measure of the respondent’s perceived balance of power over unsuccessful caregiving interactions. Adults with low PCF are those who attribute high control/power to children and low control/power to adults (Bugental et al., 2004). The PCF measure has a test-retest reliability of .63 and good criterion validity as a predictor of punitive parenting styles (Mills, 1998). Analysis of the internal consistency of the PCF score is not possible as it reflects a composite measure of two interactive constructs (Bugental, 2004).

2.3.2.3 Family Crisis Orientated Personal Scales (F-COPES) (McCubbin et al., 1991)

The FCOPES (appendix 13) is a thirty item self-report measure of behavioural and problem solving attitudes employed by parents in difficult situations related to family life. It provides a total score which indicates how many overall positive strategies are being used and has an internal reliability alpha of .86 and test retest mean of .81. Individual subscales measuring
use of social support, positive reframing, spiritual faith, professional help seeking and passive acceptance (reverse scored) have internal reliability alphas of between .63 to .83 when used with biological parents (McCubbin et al., 1991) and foster carers (Bonfield et al., 2010). In the current study, the total score scale had an internal reliability alpha of .83 and the internal reliability alphas for the subscales ranged from .54 to .88.

2.3.3 Outcome variable

2.3.3.1 Placement Quality-Child Well-being Indicators (The Scottish Government, 2007)

‘Getting it Right for Every Child’, a Scottish Government policy, sets out eight well-being indicators that are recommended for use by professionals working within children’s services in order to monitor child wellbeing (table 1). These indicators were selected as a measure of placement quality to provide an overarching sense of the experiences a child is having in their current foster placement. The indicators are closely linked to parenting domains highlighted in the literature as important for foster carers to achieve (e.g. Buehler et al., 2006).
Table 1 Well Being Indicators from ‘Getting It Right for Every Child’ (2007)

<table>
<thead>
<tr>
<th>Well Being Indicator</th>
<th>Vignette/Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Does the child have opportunities to take part in activities such as play, recreation and sport which contribute to healthy growth and development?</td>
</tr>
<tr>
<td>Healthy</td>
<td>Does the child have the highest attainable standards of physical and mental health, access to suitable healthcare and support in learning to make healthy and safe choices?</td>
</tr>
<tr>
<td>Nurtured</td>
<td>Does the child have a nurturing place to live, in a family setting with additional help if needed?</td>
</tr>
<tr>
<td>Safe</td>
<td>Does the child have protection from abuse, neglect or harm at home?</td>
</tr>
<tr>
<td>Included</td>
<td>Does the child have help to overcome social, educational, physical and economic inequalities and is accepted as part of the community in which they live?</td>
</tr>
<tr>
<td>Achieving</td>
<td>Is the child supported and guided in his/her learning and in the development of their skills, confidence and self-esteem at home?</td>
</tr>
<tr>
<td>Responsible</td>
<td>Does the child have opportunities and encouragement to play active and responsible roles in their community?</td>
</tr>
<tr>
<td>Respected</td>
<td>Does the child have the opportunity, along with carers, to be heard and involved in decisions which affect them?</td>
</tr>
</tbody>
</table>

Foster carers and supervising social workers rated the 8 wellbeing indicators using a five point Likert scale (appendix 14), with the qualitative descriptor ‘not at all’ (1) to ‘completely’ (5). A total score out of 40, with higher scores indicating more successful placements, was calculated to provide a quantitative measure of placement quality from the point of view of foster carers and social workers separately. Internal reliability for this measure was .88 and .67 with social workers and foster carers respectively.

2.4 Procedures

2.4.1 Ethical procedures

Ethical approval was initially provided by the author’s academic institution (appendix 15) and following this, by the Research and Ethics Departments of the individual local authority social work teams who participated in the study (appendix 16).
2.4.2 **Statistical procedures**

A power calculation was conducted to establish the sample size necessary to ensure statistical power on the basis of 3 predictor variables plus 2 covariates being included in the model. Previous research indicates that foster carer factors in placement outcome yield medium effect sizes (Oosterman et al., 2007). According to Cohen (1992), using multiple regression with 5 predictor variables and an alpha of .05, requires 91 participants to detect a medium effect size.

2.4.3 **Recruitment procedures**

The researcher attended social work team meetings to inform individual workers about the study. Each worker then provided foster carers who met the inclusion criteria with information regarding the study and the researcher’s contact details (appendix 17). Foster carers who requested more information received a telephone call from the researcher (n=17) and two foster carer support groups were also attended by the researcher. Foster carers who indicated that they wanted to participate, were provided with consent forms (appendix 18) and questionnaires via post and returned these in a sealed envelope to their local social work department where they were collected by the researcher. Individual social workers were then contacted by the researcher to complete the measure related to placement quality for the foster carers they supervised.
2.5 **Statistical analysis**

2.5.1 **Data exploration**

The Statistics Package for the Social Sciences (IBM SPSS Statistics 19.0, 2010) was used for all statistical analyses. Prior to statistical analyses of hypotheses, data exploration was undertaken. Where continuous variables were not normally distributed, transformations were applied and where transformations were unsuccessful, non-parametric statistical analyses were employed (appendix 19). Missing data was analysed and imputed using the regression imputation method (appendix 20).

2.5.2 **Overview of analyses**

Statistical analyses for hypotheses 1 and 2 involved a series of parametric bivariate correlations, which were one tailed due to the directional nature of the hypotheses (Field, 2009). Statistical analyses of hypotheses 3 and 4 consisted of two hierarchical multiple regression analyses using foster carer rating of placement quality (hypothesis 3) and social worker rating of placement quality (hypothesis 4), as the outcome variables. Prior to the main analyses, the relationships between demographics, covariates, predictors and the outcome variables were examined using correlation analyses. A conservative p-value of .01 was used for the correlation analyses in order to manage the type 1 error rate related to undertaking multiple analyses. This method was chosen over the Bonferroni method which is more likely to increase the type 2 error rate (Perneger, 1998) and because the analyses undertaken were planned and based on previous research. A p-value of .05 was used for the
regression analyses as these involved fewer variables and analyses and therefore less risk of significant findings due simply to chance.

3. Results

3.1 Demographic information

Demographic information for foster carers, children/young people and placements is shown in tables 2 and 3.

Table 2 Foster Carer Demographics

<table>
<thead>
<tr>
<th>Foster Carers</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>12.1</td>
</tr>
<tr>
<td>Female</td>
<td>80</td>
<td>87.9</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, British</td>
<td>84</td>
<td>92.3</td>
</tr>
<tr>
<td>Asian South</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, European</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mixed Heritage</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Missing Data</td>
<td>6</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Type of carer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>20</td>
<td>22.0</td>
</tr>
<tr>
<td>Joint</td>
<td>71</td>
<td>78.0</td>
</tr>
<tr>
<td><strong>Age in years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 50 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 7.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Years fostering</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 7 years 6 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 6.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other fostered children in home</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 1.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 1.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3 Child/Young Person Demographics

<table>
<thead>
<tr>
<th>Child/Young Person</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>56.0</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>44.0</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, British</td>
<td>81</td>
<td>89.0</td>
</tr>
<tr>
<td>Asian South</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, European</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mixed Heritage</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Missing Data</td>
<td>7</td>
<td>7.7</td>
</tr>
<tr>
<td><strong>Type of placement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent</td>
<td>54</td>
<td>59.3</td>
</tr>
<tr>
<td>Temporary</td>
<td>37</td>
<td>40.7</td>
</tr>
<tr>
<td><strong>Age in years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 9 years 9 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 3.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age at entry into current placement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 6 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Length of placement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 3 years 9 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of previous foster placements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean: 1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: 1.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2  *Descriptive statistics*

Table 4 shows the mean scores and standard deviations for each of the variables (untransformed) included in analyses for the overall sample. Descriptive statistics for transformed variables are reported in appendix 19.
Table 4 Descriptive Statistics Predictor & Outcome Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predictor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DASS-21</td>
<td>4.55</td>
<td>5.33</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>DBSE</td>
<td>29.14</td>
<td>3.82</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>FCOPES-Total</td>
<td>104.01</td>
<td>12.20</td>
<td>76</td>
<td>129</td>
</tr>
<tr>
<td>FCOPES-Social</td>
<td>31.87</td>
<td>7.73</td>
<td>12</td>
<td>45</td>
</tr>
<tr>
<td>FCOPES-reframe</td>
<td>31.23</td>
<td>4.23</td>
<td>21</td>
<td>39</td>
</tr>
<tr>
<td>FCOPES-spiritual</td>
<td>9.33</td>
<td>4.04</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>FCOPES-help seeking</td>
<td>15.50</td>
<td>3.12</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>FCOPES-Passive</td>
<td>16.07</td>
<td>2.90</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>PCF</td>
<td>0.51</td>
<td>0.93</td>
<td>-2.5</td>
<td>4.17</td>
</tr>
<tr>
<td>SDQ-total</td>
<td>14.65</td>
<td>7.31</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC-placement quality</td>
<td>38.30</td>
<td>2.04</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>SW-placement quality</td>
<td>36.43</td>
<td>3.80</td>
<td>22</td>
<td>40</td>
</tr>
</tbody>
</table>

FC= foster carer, SW= social worker

3.2.1 Foster carer factors

The mean score for psychological distress in the sample of foster carers was low, using the categories suggested by Lovibond and Lovibond (1995). However, the range indicates that some foster carers were experiencing moderate to high psychological distress. These findings are in keeping with previous research using the DASS-21 with foster carers, where a mean of 8.48, (SD=7.63) and range of 0-31 was reported (Whenan et al., 2009). The mean self-efficacy score in this sample of foster carers was higher than that reported by Morgan & Baron, 2011 (27.27, SD=5.03) and Whenan and colleagues, 2009 (23.45, SD=5.98) using the Difficult Behaviour Self-Efficacy measure. Relative to the norms for the general population (mean 93.34, SD=13.62, n= 2582, McCubbin et al., 1991) overall foster carer coping was also high, although this in keeping with previous research with foster carers specifically (e.g Bonfield et al., 2010- mean of 101.36, SD=17.5). The ‘perceived control over failure’ scale
(PCF), has not previously been used with foster carers and therefore no comparisons are possible.

3.2.2 Child factors

The current sample of children in foster care showed a higher mean total difficulties score (14.65, SD=7.31) compared with the norms for children in the general population (8.4, SD=5.8, n=10438, Goodman, 2001). However, relative to recent studies using the SDQ with children in foster care, the mean total difficulties score was lower than that reported by Bonfield and colleagues (15.44, SD= 7.04) and Morgan & Baron (18.23, SD= 8.18). There was no difference between male and female children/young people, in terms of SDQ scores, $t(78) = .829, p=.409$, within the current sample. Table 5 shows the number and associated percentage of children in the current sample by SDQ category score (Goodman, 2001).

<table>
<thead>
<tr>
<th>Table 5 SDQ Category Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (0-13)</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>SDQ-Total Difficulties</td>
</tr>
</tbody>
</table>

3.3 Main statistical analyses

3.3.1 Hypothesis 1

A one tailed Pearson correlation analysis was undertaken to test the hypothesis that high foster carer self-efficacy would be associated with attributions regarding high adult control
over caregiving failure. No significant relationship was found between foster carer self-efficacy and perceived control over caregiving, $r = -.112$, $p$ (one-tailed) = .145.

3.3.2 Hypothesis 2

Six one tailed Pearson correlations between foster carer self-efficacy, overall coping and the subscales of the FCOPES (social support, positive reframing, spiritual faith, professional help seeking & passive acceptance) were undertaken to test the hypothesis that high self-efficacy would be associated with multiple positive coping strategies. The relationship between foster carer self-efficacy and overall positive coping approached significance, $r = .223$, $p$ (one-tailed) = .017 and there was a significant positive relationship between positive reframing and foster carer self-efficacy, $r = .316$, $p$ (one tailed) =.001. No other significant relationships between difficult behaviour self-efficacy and coping were found.

3.3.3 Analyses prior to regression

Results from a series of bivariate and point-biserial correlations between the outcome variables and demographic, covariate and predictor variables are shown in table 6. Child total difficulties ($r = .286$, $p = .006$) and foster carer self-efficacy ($r = -.438$, $p < .001$) correlated significantly with the foster carer placement quality outcome variable.

Non parametric correlation analyses were used for the social worker placement quality variable. Foster carer self-efficacy ($\tau = .336$, $p < .001$) and child total difficulties ($\tau = -.225$, $p = .004$) correlated significantly with the social worker placement quality outcome variable.
All variables that correlated significantly with the outcome variables were included in subsequent regression models.

Table 6 Correlations between demographic, covariate, predictor and outcome variable(s)

<table>
<thead>
<tr>
<th></th>
<th>Foster Carer Placement Quality</th>
<th>Social Worker Placement Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foster carer age</td>
<td>-.098</td>
<td>.008</td>
</tr>
<tr>
<td>Foster carer gender</td>
<td>-.165</td>
<td>.176</td>
</tr>
<tr>
<td>Time as foster carer</td>
<td>-.029</td>
<td>-.019</td>
</tr>
<tr>
<td>Single/Joint foster carer</td>
<td>-.100</td>
<td>-.058</td>
</tr>
<tr>
<td>Child age</td>
<td>.079</td>
<td>-.077</td>
</tr>
<tr>
<td>Child gender</td>
<td>-.061</td>
<td>.156</td>
</tr>
<tr>
<td>Child age at entry into placement</td>
<td>.079</td>
<td>-.102</td>
</tr>
<tr>
<td>Number of previous placements</td>
<td>.179</td>
<td>.053</td>
</tr>
<tr>
<td>Permanent/Temp placement</td>
<td>-.089</td>
<td>.159</td>
</tr>
<tr>
<td>Length of placement</td>
<td>-.079</td>
<td>.066</td>
</tr>
<tr>
<td>Number other fostered children in the home</td>
<td>-.037</td>
<td>.106</td>
</tr>
<tr>
<td><strong>Covariates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child total difficulties</td>
<td>.286*</td>
<td>-.225*</td>
</tr>
<tr>
<td>Carer psychological distress</td>
<td>.140</td>
<td>-.101</td>
</tr>
<tr>
<td><strong>Predictor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficult behaviour self-efficacy</td>
<td>-.438**</td>
<td>.336**</td>
</tr>
<tr>
<td>Coping</td>
<td>-.203</td>
<td>.182</td>
</tr>
<tr>
<td>Perceived control over caregiving failure</td>
<td>.100</td>
<td>.004</td>
</tr>
</tbody>
</table>

*p<.01, **p<.001

To evaluate the inter-relationships between potential covariate and predictor variables, a series of parametric correlations were also undertaken (table 7). On the basis of these analyses, both potential covariate variables were retained for inclusion in the regression models. The hypothesized predictor variable, perceived control over caregiving failure (PCF) was excluded from subsequent regression analyses as it demonstrated no relationship with either outcome variable, potential covariates or predictor variables. Similarly, none of the
demographic factors were included in subsequent regression analyses. The predictor variable foster carer coping was retained because its relationship with parental self-efficacy and both the outcome variables approached significance.

Table 7 Correlations between covariates and predictor variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child total difficulty</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Psychological distress</td>
<td>.326*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Diff. behave self-efficacy</td>
<td>-.412**</td>
<td>-.396**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Coping</td>
<td>.150</td>
<td>.004</td>
<td>.223</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Perceived control caregiving</td>
<td>.072</td>
<td>- .166</td>
<td>-.112</td>
<td>.109</td>
<td>.000</td>
<td>1</td>
</tr>
</tbody>
</table>

*p < .01, **p < .001

3.3.4 Hypothesis 3

A hierarchical multiple regression analysis was undertaken with foster carer rated placement quality as the outcome variable. Child difficulties and foster carer psychological distress were entered in step 1 and foster carer self-efficacy and overall coping were entered in step 2. This allowed an analysis of the effects of the covariates (step 1) on the variance in the outcome variable, followed by an analysis of the additional effects of the predictor variables.

Casewise diagnostics were used to establish whether any cases were having a large effect on the regression model. 4% of cases were found to have standardized residuals less than -2 or greater than 2. All cases were examined in terms of Cook’s distance, Mahalanobis Distance and Centred Leverage values. To assess whether any cases were having a large influence on the regression parameters, the Dfbeta statistics and the covariance ratio were also examined. On the basis of these data checks, no cases were deemed to be exerting an unduly large
influence on the model and the regression is therefore based on the complete data set of 91 cases.

The Durbin-Watson statistic indicated that the assumption of independent errors was tenable and the Variance Inflation factor indicated that there was no multicollinerarity between predictor variables. Examination of residuals plots indicated that the assumptions of homoscedasticity and linearity were met. Visual inspection of the normal P-P plot of standardized residuals indicated that the assumption of normally distributed residuals was also met.

Using the enter method in a two-step hierarchical multiple regression a significant model emerged for the effects of child difficulties and foster carer psychological distress at step 1 \( R^2 = .08, \text{Adjusted } R^2 = .06, F(2,88) = 4.06, p=.021 \). Inclusion of self-efficacy and coping at step 2, led to a significant increase in the proportion of the variance in placement quality accounted for, \( R^2 = .23, \text{Adjusted } R^2 = .19, F(4,86) = 6.38, p<.001 \). Using child difficulties and foster carer psychological distress as predictor variables, explained 6% of the variance in placement quality and this was increased to 19% with the addition of foster carer self-efficacy and coping. Only foster carer difficult behaviour self-efficacy independently contributed to the final model (see table 8).
Table 8 Regression Model- Predicting foster carer rated placement quality

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E B</th>
<th>β</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>0.08</td>
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<td>-</td>
</tr>
<tr>
<td>SDQ</td>
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<td>0.01</td>
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<td>.014*</td>
</tr>
<tr>
<td>DASS21</td>
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<td>0.09</td>
<td>.05</td>
<td>.629</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>-</td>
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<tr>
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<td>.098</td>
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</tr>
<tr>
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<td>.136</td>
</tr>
<tr>
<td>DBSE</td>
<td>-0.03</td>
<td>0.01</td>
<td>-.35</td>
<td>.003**</td>
</tr>
</tbody>
</table>

*R^2=.23, Δ R^2=.19, *p<.05, **p<.01

3.3.5 Hypothesis 4

A second hierarchical multiple regression analysis was undertaken with social worker rated placement quality as the outcome variable. Child difficulties and foster carer psychological distress were entered in step 1 and foster carer self-efficacy and overall coping were entered in step 2.

Casewise diagnostics were used to establish whether any cases were having a large effect on the regression model. 5% of cases were identified as having standardized residuals less than -2 or greater than 2. All cases were examined in terms of Cook’s distance, Mahalanobis Distance and Centred Leverage value. To assess whether any cases were having a large influence on the regression parameters, the Dfbeta statistics and the covariance ratio were also examined. On the basis of these data checks, no cases were found to be exerting an unduly large influence on the model and the regression is therefore based on the complete dataset of 87 cases.
The Durbin-Watson statistic indicated that the assumption of independent errors was tenable and the Variance Inflation factor indicated that there was no multicollinearity between predictor variables. Examination of residuals plots indicated that the assumptions of homoscedasticity and linearity were met. Examination of the normal P-P plot of standardized residuals and a Kolmogorov-Smirnov test, D (87) = .112, p = .009, indicated that the residuals demonstrated a slight negative skew. The assumption of normally distributed residuals was therefore violated meaning that the results of the model cannot be generalized beyond the current sample.

Using the enter method in a two-step hierarchical multiple regression, a significant model emerged for the effects of foster carer psychological distress and child difficulties at step 1 $R^2=.09$, $Adjusted \ R^2 = .06$, $F(2, 84) = 3.91$, $p = .024$. This model accounted for 6% of the variance in placement quality. The addition of self-efficacy and coping produced a significant model that accounted for 20% of the variance in placement quality $R^2 = .24$, $Adjusted \ R^2 = .20$, $F(4, 82) = 6.48$, $p<.001$. Only foster carer difficult behaviour self-efficacy independently contributed significantly to the final model (see table 9).

Table 9 Regression Model- Predicting social worker rated placement quality

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>S.E $B$</th>
<th>$B$</th>
<th>$p$-value</th>
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<tbody>
<tr>
<td><strong>Step 1</strong></td>
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<tr>
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<td>-.07</td>
<td>.537</td>
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<td>.839</td>
</tr>
<tr>
<td>FCOPES</td>
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<td>0.03</td>
<td>.18</td>
<td>.082</td>
</tr>
<tr>
<td>DBSE</td>
<td>0.34</td>
<td>0.12</td>
<td>.34</td>
<td>.004**</td>
</tr>
</tbody>
</table>

$R^2 = .24$, $\Delta R^2 = .20$, *$p<.05$, **$p<.01$
3.3.6 Regression models- overview

The regression models provide partial support for hypotheses 3 and 4, with one of the hypothesized variables (foster carer self-efficacy) explaining variance in placement quality above that explained by child difficulties and foster carer psychological distress. The R squared values obtained are however likely to be overestimated due to foster carer self-efficacy being the only significant predictor variable in the model and the negatively skewed residuals within the social worker model. The inclusion of foster carer self-efficacy resulted in child difficulties no longer contributing significantly to the model. This finding indicates that these two measures share variance and highlights the possibility that foster carer self-efficacy may impact on placement quality indirectly via its relationship with child difficulties. The potential indirect effects between these variables require to be formally tested using mediation/moderation analyses.

4. Discussion

4.1 Main findings

The aims of this study were twofold. Firstly, to explore factors associated with foster carer self-efficacy and secondly to explore the relationships among three parenting constructs (self-efficacy, coping and attributions) and the quality of foster placements provided.
4.1.1 Foster carer self-efficacy

It was hypothesized that foster carer self-efficacy would be related to high perceived control over difficult caregiving situations and the use of positive coping strategies in response to stressful family situations.

Within the current sample, no relationship between perceived control attributions and foster carer self-efficacy was identified. This suggests that foster carers with high self-efficacy in the current study were inclined to attribute control over caregiving outcomes equally between adults and children. One hypothesis to explain this would be that foster carers acknowledge the likelihood that children who are fostered may intentionally exhibit difficult behaviour as a means of self-protection or due to re-enactment of past traumatic experiences (Clausen et al., 1998). However, attributing child behaviour as intentional may not impact on foster carer beliefs about their ability to effectively manage behaviour due to their training and understanding of child behaviour. For example, much foster carer training is focused on helping carers attribute difficult behaviour as a child’s ‘survival strategy’ and focus is also given to not taking negative behaviour personally (Golding & Picken, 2004). Previous research within the biological parenting literature has also highlighted the lack of clarity regarding these two cognitive constructs (Jones & Prinz, 2005) and therefore future research is required to further understand the role of attributions of perceived control within foster carers.

Self-efficacy was found to be associated with positive reframing as a coping strategy. This means that foster carers with higher self-efficacy identified the use of positive reframing more than those with lower self-efficacy, indicating that the ability to redefine difficulties as
challenges and view them in a more positive light is associated with higher self-efficacy. Within the biological parenting literature, positive reframing has also been found to be related to parental role satisfaction and lower levels of parenting stress (Podolski & Nigg, 2001; Pottie & Ingram 2008). The findings in the current study do not indicate the direction of causality between these two constructs however, and therefore self-efficacy may be both a reason why more positive reframing is used and also a consequence of this.

4.1.2 Predictors of placement quality

One of the three parenting constructs hypothesized to be predictive of placement quality, as judged by foster carers and social workers separately, was supported by the current study. Namely, foster carers’ self-efficacy for managing difficult behaviour emerged as a significant predictor of placement quality. Importantly, this construct was predictive of placement quality when the effect of child difficulties, which has previously been related to placement outcomes, was controlled for (Oosterman et al., 2007). This suggests that even when child difficulties are present, where foster carers’ have high self-efficacy regarding the management of difficult behaviour; the provision of high quality placements is possible.

This finding suggests that foster carers who feel confident in their abilities to manage difficult behaviour judge themselves, and are judged by their supervising social workers, as better able to meet fostered children’s core needs. The role of cognitive constructs, such as self-efficacy, are well established within the biological parenting literature and have been used to decipher individual differences in parenting outcomes (Azar et al., 2008). One conceptual model of parental self-efficacy (Ardelt & Eccles, 2001) suggests that parents who feel self-efficacious are more likely to engage in positive parenting strategies which increase the likelihood of
their child’s success. Within the current study therefore, foster carers with high difficult behaviour self-efficacy may find it easier to help their children achieve on the wellbeing indicators due to the use of more positive parenting strategies. Alternatively, as parental self-efficacy has previously been linked to greater acceptance of child difficulties (Coleman & Karraker, 2000), those foster carers with high parental self-efficacy may be better able to build relationships with the children in their care which allows them to promote positive child wellbeing. Parental self-efficacy has also been shown to mediate the impact of difficult behaviour on foster carer stress (Morgan & Baron, 2011), and although this hypothesis was not directly tested in the current study, a significant inverse relationship between these two variables was found, indicating that high self-efficacy was associated with lower foster carer psychological distress. By focusing on a cognitive construct, these findings add to previous research which suggests that aspects of foster carer psychological functioning can protect against the negative impact of child behaviour difficulties within placements (Cole, 2005; Crum, 2010; Sinclair and Wilson, 2003; Vanderfaeillie et al., 2012; Walsh & Walsh, 1990).

4.2 Strengths of study

4.2.1 Strengths based approach

The current study extends research from the biological parenting literature to foster carers and measures the impact of this on placement quality, a key outcome for fostered children. The study uses a positive psychology approach where evidence of strengths and resilience are sought in order to provide answers to the question ‘what helps?’, rather than ‘what hinders?’
(Snyder & Lopez, 2007). This is an approach which is needed within child protection literature, as numbers of children placed in foster care increase and numbers of foster carers decrease (Sebba, 2012; The Scottish Government, 2008).

4.2.2 Measurement of parenting constructs/placement outcomes

The use of valid and reliable measures of self-efficacy and coping represent a relative strength of the current study and add to the growing literature on the importance of parenting in foster carer. A further strength relates to the measurement of placement quality by foster carers and social workers. Previous studies have generally relied on social workers’ ratings of placement (e.g Walsh & Walsh, 1990) and on placement stability, often assuming that the longer the placement, the better the outcome (Oosterman et al., 2007). However, as more research has been conducted, particularly with the population of children in long term foster care, findings that 5% of children experience abuse or neglect in foster care have highlighted a need to measure quality at least as consistently as stability (Biehal et al., 2010). The current study focuses on placement quality through the use of Government defined wellbeing indicators measured by both foster carers and social workers. The models of placement quality provided by both groups in the current study indicate the importance of the same construct, increasing the confidence with which these results can be interpreted.

4.3 Implications for future research

Replication of these findings is required to confirm the importance of the factors that emerged from the analyses. Specifically, longitudinal designs that have been used to develop an understanding of placement breakdown (Oosterman et al., 2007) should be used to address
the question of placement quality in a more robust manner. Factors that were beyond the scope of the current study, but that the literature suggest may be important to explore in relation to placement quality include: training and support offered to foster carers (Murray et al., 2011), the quality of the relationship between foster carers and social workers (Brown & Bednar, 2006; Fisher et al, 2001; Maclay et al., 2006; Samrai et al., 2011), the degree and quality of the contact between children and biological parents (Sen & Broadhurst, 2011) and the relationship between foster carer and child from the child’s perspective (Luke & Coyne, 2008).

A related issue will be the development of a measure of placement quality that can be used validly and reliably within quantitative designs. The progression of this literature from qualitative to quantitative is important due to the need within social and health based research to ground practice within an evidence base (Aarons & Palinkas, 2007; Fisher et al., 2009). The development of such a measure is likely to involve a number of stakeholders including foster carers, social workers, biological parents and children and young people.

A further consideration will be research that explores why certain foster carers have high self-efficacy and others do not. This research would involve consideration of a number of potential foster carer intrapersonal and interpersonal factors, in combination with relevant child factors. One such factor that is worthy of further study in foster carers is adult attachment status. Within the adult mental health literature, ‘secure’ or ‘autonomous’ adult attachment has been related to positive outcomes across a number of domains, such as mental well-being (Fonagy et al., 1996; Ward et al., 2006) and interpersonal relationships (McCarthy & Maughan, 2010). Within the biological parenting literature, autonomous adult attachment is predictive of secure attachment patterns in infants (van Ijzendoorn, 1999) and within the
adoptive parenting literature, securely attached adoptive mothers have been found to have more successful adoptions than those with insecure attachment styles (Kaniuk et al., 2004; Pace et al., 2012). To date, only two studies have investigated this hypothesis with foster carers specifically. Dozier and colleagues (2001) found that foster carers’ attachment style was concordant with their fostered infants’ attachment status, however Caltabiano and Thorpe (2007) found no relationship between foster carers’ attachment status and the quality of the care they provided to their fostered children. Future research should use valid and reliable measures of adult attachment, such as the Adult Attachment Interview (Main et al., 1985) so as to replicate the studies undertaken with adoptive/biological parents.

4.4 Limitations of study

4.4.1 Design

The cross sectional design means that causality cannot be established in the current study. Therefore while it can be said that foster carer self-efficacy is associated with placement quality, it cannot be concluded that this factor causes or produces high quality placements.

4.4.2 Measurement issues

A significant limitation of the study relates to the use of self-report measures for all included variables and, in particular, the outcome variable of placement quality. These measurement methods are sensitive to socially desirable responding and it is possible that foster carers, given their role as paid employees of local authorities, may be prone to present themselves as particularly confidant and efficient in terms of their parenting abilities (Rostill-Brookes et al.,
Secondly, although supervising social workers were included to provide a more objective measure of placement quality, their primary role as supporting foster carers may have led to positively biased responses. To combat this, future research could combine responses from supervising social workers and child social workers, who may be better placed to provide objective accounts of child wellbeing.

A final measurement issue relates to the use of an outcome measure for which there was no prior psychometric data. As previously discussed (section 1.5) there are a lack of quantitative measures for placement quality in the literature and therefore the measure used in the current study was selected. In support of this, the measure matched specific parenting domains identified as important for foster carers (e.g. Buehler et al., 2006) and was derived from Government indicators based on current legislation. The psychometric data derived for the measure in the current study was also acceptable (Cronbach’s alpha of .88 and .67 with social worker and foster carers respectively), however further analyses of its’ validity and reliability are clearly required.

4.4.3 Statistical issues

The presence of skewed distributions on four of the primary psychometric measures used within the current study provided a challenge in terms of both the statistical and conceptual interpretation of results. Foster carer psychological distress, as measured by the DASS-21 and attributions of control over caregiving outcomes, as measured by the PAT both demonstrated significant positive skew. Within this population therefore, psychological distress was low and attributions over caregiving outcomes were perceived as being equal between adults and children. The presence of such skewed responses may be due to the use
of clinical tools within a non-clinical population and indicates that the population of foster carers in the current study were a healthy sample in terms of psychological wellbeing and parenting cognitions.

Both the foster carer and social worker outcome measures demonstrated significant negative skew, which resulted from a disproportionate number of high scores for placement quality from both groups. Conceptually, this finding may be indicative of a number of factors. Firstly, the foster carers who were motivated to opt in to the study may have been those experiencing few placement difficulties reflecting both the foster carer and social worker high placement quality scores. If this is the case then the current sample may not have been representative of the foster carer population as a whole, given that approximately 20% of foster placements breakdown due to placement difficulties (Ward, 2009). Secondly, a lack of definition regarding the response categories within the outcome measure, may have allowed highly subjective responses based on individual interpretations of child wellbeing. Previous research has indicated that foster carers may become habituated to caring for children with significant social, emotional and cognitive difficulties (Minnis & Del Priori, 2001) and thus their perception of child wellbeing may itself be skewed, with objectively low levels of wellbeing being perceived as normal. Social workers generally rely on foster carer reports of child wellbeing for care planning (Simms et al., 2000) and this may therefore explain the disproportionally high ratings for placement quality within both groups. Finally, socially desirable responding by both social workers and foster carers may have resulted in positively biased responses which are not necessarily reflective of actual child wellbeing. The impact of negative skew in the social worker outcome measure resulted in the assumption of normality of residuals being violated and therefore while these results are applicable to the current sample, they cannot be generalized beyond this.
4.4.4 Recruitment

Although all foster carers who met inclusion criteria for the study were invited to take part, no data is available regarding those who chose not to. A final and significant limitation of the current study is the lack of data from the perspective of children/young people in the placements studied.

4.5 Implications for clinical practice

The current study suggests that the way foster carers feel about their ability to manage the behavioural difficulties their child presents with is an important factor in the provision of high quality placements. This finding has implications across a number of domains including foster carer assessment and training, placement planning and clinical interventions for high risk placements.

In relation to foster carer assessment, it will be beneficial to assess the extent to which potential foster carers are confident in their ability to manage difficult child behaviour. Using the conceptual model proposed by Ardelt and Eccles (2001), those people best placed to exhibit self-efficacy in this domain will have had previous positive experiences of managing challenging child behaviours and have an understanding of the specific skills they successfully used to do so. Where potential foster carers do not exhibit these qualities, extensive training regarding positive parenting strategies would be recommended, as parental self-efficacy is based on feelings of mastery and ability alongside knowledge of appropriate skills and strategies (Jones & Prinz, 2005). In order to maximise foster carer self-efficacy, training should also highlight the impact of abuse and neglect on child behavioural
functioning and emphasise the slow progress children in foster care are likely to make. This will enable small changes to be acknowledged as important and thus increase feelings of parental self-efficacy via feedback loops from positive child outcomes (Ardelt & Eccles, 2001).

In terms of placement planning, consideration should be given to foster carers’ self-efficacy in order to build feelings of competence and mastery rather than deplete these. For example, foster carers with low self-efficacy should have placements that are less challenging so as to build feelings of parental competence and efficacy through positive reinforcement of the child’s progress. Consideration should also be given to the range of challenges foster carers are managing across the children within their home. The positive association between child difficulty and carer psychological distress found in the current study and previous findings indicating that carer stress is related to reduced self-efficacy (Morgan & Baron, 2011) highlight the need for consideration to be given to the impact of contextual factors on self-efficacy within placement planning. When particularly challenging children require placements therefore, foster carers with high parental self-efficacy who are not already managing difficult placements should be sought, rather than overloading foster carers which may result in increased parenting stress and reduced feelings of self-efficacy.

Finally, clinical interventions based on promoting parental self-efficacy for managing difficult behaviour within foster carers should be developed and evaluated. Due to the multifaceted nature of parental self-efficacy, such interventions should combine the provision of skills and strategies regarding positive parenting, alongside activities where feelings of parental mastery and success can be experienced. The timing of interventions is also likely to be important as the results from evaluations of interventions to date (see Turner et al., 2009
for review) have been poor in terms of their impact on foster carers’ self-efficacy. A critical issue relating to interventions developed thus far has been the recruitment of foster carers who present to services at a time of placement crisis (e.g. Gurney-Smith et al., 2010; Holmes & Silver, 2010; Laybourne et al., 2008). Due to the transactional nature of parental self-efficacy, sustained placement difficulties are likely to significantly reduce feelings of efficacy which may explain why the interventions reviewed to date, which have short follow up periods, have been relatively unsuccessful at increasing parental self-efficacy. Drawing on the biological parenting literature, early intervention has been shown to produce the most positive impact on both increased parental self-efficacy and child behavioural outcomes (e.g. Barlow et al., 2010; Furlong et al., 2012). Therefore, interventions that take place early on in high risk placements are likely to effect the most positive changes in foster carer self-efficacy.

5. **Conclusions**

The current study adds to previous research on foster carer self-efficacy by exploring, firstly its association with positive coping strategies and secondly, its relationship with foster placement quality. Parental self-efficacy for managing difficult behaviour in foster carers was associated with the use of positive reframing as a coping strategy. Parental self-efficacy for managing difficult behaviour also emerged as a predictor of placement quality in the current sample. Due to the limitations of the current study, future research is required to replicate these findings and also to develop an understanding of the factors that allow foster carers to feel self-efficacious. Further research is also required to develop and evaluate interventions that target this construct within the foster carer population.
6. References


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An analysis of the agreement between social workers’ and foster carers’ ratings of placement quality

Prepared in accordance with guidelines for *Child Abuse Review* (Appendix 1)
ABSTRACT

Previous research has focused on multiple factors implicated in foster placement breakdown and has shown that when breakdown occurs, there is often conflict between foster carers and social workers. Less research has been directed towards such systemic factors in relation to foster placement quality. This study is an exploration of the agreement between foster carers and their supervising social workers, on aspects of placement quality as measured by child wellbeing indicators. Overall, both parties rated child wellbeing as high across all eight indicators. Agreement between foster carers and social workers was rated as ‘fair’ for three indicators and ‘slight’ for five indicators. The results reinforce the need for social workers to closely monitor and assess child wellbeing and have regular discussions with foster carers regarding this. Further research is required to investigate whether discrepancies between foster carers and social workers are predictive of placement difficulties and whether placements are more successful when there is a shared understanding of the placement strengths and weaknesses. This approach represents a step towards a more systemic understanding of the issues around children and young people in foster care, as has been proposed necessary by previous research.

KEY PRACTITIONER MESSAGE

- Agreement between foster carers and social workers was ‘fair’ for 3 indicators and ‘slight’ for 5 indicators.
- Further research is required to explore the impact of agreement and discrepancies between foster carers and social workers on placement quality and outcomes.

KEYWORDS: Foster placement quality, foster carer, social worker.
Introduction

The role of social workers who support and supervise foster carers has been linked to two important factors: placement breakdown (Kalland & Sinkkonen, 2001; Stone & Stone, 1983) and foster carer retention (McClay et al., 2006). Together, these factors represent key targets for Governments in relation to their care of fostered children across Britain (Department for Education, 2012; Institute of Public Care, 2008; The Scottish Government, 2007). Priority has been given to these issues because placement breakdown leads to poorer outcomes for young people (Barber & Delfabbro, 2003) and because fostering is the preferred placement choice on entry into care, yet the number of children requiring placement outweighs the number of foster carers available (Department for Education, 2012).

The role of social workers

Research into the role of supervising social workers has shown that a lack of support to foster carers, or foster carer dissatisfaction with the support offered, has been implicated in placement breakdown (Fees et al., 1998; Kalland & Sinkkonen, 2001; Rowe et al., 1991; Stone & Stone, 1983). Studies assessing foster carer satisfaction with support from social workers, suggest a generally low level of satisfaction for the majority of carers (Cummins, 1994; Fees et al., 1998; Triseliotis, 1998) although Kirton et al., (2003) found a positive perception of support received. Poor communication, lack of responsiveness and feeling unrecognized for their input, are some factors which have been linked to foster carer dissatisfaction and subsequent drop out from fostering (Rhodes et al., 2001).
Positive relationships between social workers and foster carers have been shown to predict foster carer intention to continue fostering and are associated with more positive placement experiences for children (Brown, 2008; Fisher et al., 2001; Samrai et al., 2011). Specific factors which have been highlighted as being important for positive relationships, include availability and ease of access to social workers (Rhodes et al., 2003), feeling valued by social workers (Farris-Manning & Zandstra, 2003; Hudson & Levasseur et al., 2002), positive rapport and open communication between foster carers and social workers (MacGregor et al., 2006; Rhodes et al., 2001; Sanchirico et al., 1998).

Communication between foster carers and social workers

Open communication refers to issues such as foster carers being informed about important aspects of a child’s history, an honesty about placement difficulties and a commitment to work together to improve outcomes for children (MacGregor et al., 2006). The ability of social workers to acknowledge and discuss the strengths and weaknesses of placements in a sensitive manner so as to maintain rapport and enable the foster carer to feel they are a valued member of the team, is therefore crucial (Choice Protects, Department of Health, 2002).

One factor which may indicate the presence of open communication and positive working relationships, is agreement or correspondence between foster carer and social worker dyads regarding the quality of foster placements. Measurement of placement quality (as opposed to stability) is a complex notion that has not yet been satisfactorily met by the literature in this area (e.g. Quinton et al., 1998; Sellick et al., 2004; Triseliotis et al., 1995; Walsh & Walsh, 1990; Whitaker et al., 1985). However, one recent longitudinal study of outcomes for children in foster care highlighted the importance of organisational factors such as
communication and relationships between key stakeholders (Wigley et al., 2011). In this study, social workers and foster carers rated factors hypothesized to be important to outcomes for this population of children, including the provision of caregiving by foster carers. Social workers tended to rate practical aspects of caregiving higher than emotional aspects and foster carers’ ratings for all aspects of caregiving tended to be more positive than social workers. This study did not directly link these discrepancies to outcomes, but does emphasize the role of open and honest communication between the adults involved in the lives of fostered children.

The current study

Agreement between the adults in fostered children’s lives is hypothesized to be important because studies have indicated that when placements breakdown, there are often conflicts of opinion between social workers and foster carers regarding the source of the difficulties (Brown & Bednar, 2006; Norgate et al., 2012; Rostill-Brookes et al., 2011). Findings such as this can be understood within a systemic framework which highlights the potential impact the nature of the relationship between two people can have on a third related person, i.e. the fostered child (Dallos & Vetere, 2012). A systemic approach promotes consideration of contextual factors around fostered children which can impact on outcomes, rather than focusing on individual child difficulties (Morrissette, 1996). When systems work well together, foster carers and social workers are likely to share an understanding of the placement’s strengths and weaknesses and interventions based on these, with both parties engaged, may be able to sustain placements (Rostill-Brookes et al., 2011).
The study reported here explored the agreement between foster carer/social worker dyads on ratings of placement quality using eight child wellbeing indicators (‘Getting it Right for Every Child’, The Scottish Government, 2007). These indicators were selected as a measure of placement quality to provide an overarching sense of the experiences a child is having in their current foster placement. The indicators are closely linked to parenting domains highlighted in the literature as important for foster carers to achieve (e.g. Buehler et al., 2006). Individual child factors are captured by the indicators: healthy, active and achieving. Foster carer factors are captured by the indicators: safe and nurtured and systemic factors, such as the way in which the child is considered during decision making processes, are captured by the indicators: included and responsible. This study is exploratory and represents an initial investigation of the agreement between foster carers and their supervising social workers regarding quality of current foster placements.

Methods

Design

The findings reported here are part of a larger study investigating foster carer factors in placement quality, the results of which are described elsewhere (see journal article 2). The study used a cross-sectional quantitative design to compare the responses of foster carers and their supervising social workers on a self-report measure of child wellbeing in relation to current foster placements.
Ethics

Ethical approval was initially provided by the author’s academic institution (appendix 15) and following this, by the Research and Ethics Departments of the individual social work departments who participated in the study (appendix 16).

Participants

Participants were foster carers and supervising social worker dyads (n=87), employed by five local authorities across central Scotland. Foster carers were included in the study if they had a child aged between 3 and 16 placed with them for a minimum of 6 months at the time of recruitment. The minimum duration of placement was selected in order for the foster carer to have developed a relationship with the child and therefore be able to complete the outcome measure. 476 foster carers within the five participating social work departments met these criteria, 91 of whom took part in the study (19.1% response rate). However, only 87 responses were gathered from supervising social workers and therefore only 87 foster carers are included in the current analyses. No data was collected for those foster carers or social workers who opted not to participate.

Procedure

The researcher attended social work team meetings to inform individual workers about the study. Each worker then provided foster carers who met inclusion criteria with information regarding the study and the researcher’s contact details (appendix 17). Foster carers who requested more information received a telephone call from the researcher (n=17) and two
foster carer support groups were attended by the researcher. Foster carers who indicated to either their social worker or the researcher that they wanted to participate, were provided with consent forms (appendix 18) and questionnaires via post and returned these in a sealed envelope to their local social work department where they were collected by the researcher. Individual social workers were then contacted by the researcher to complete the measure related to placement quality for the foster carers they supervised.

**Measures**

**Demographics**

Demographic factors across three categories (foster carer factors, child factors, placement factors) were collated using a questionnaire designed for the purposes of the study (appendix 8).

**Placement quality**

‘Getting it Right for Every Child’, a Scottish Government policy sets out eight well-being indicators that are recommended for use by all professionals working within children’s services across Scotland in order to monitor child wellbeing. Using a five point Likert scale (appendix 14), with the qualitative descriptor ‘not at all’ (1) to ‘completely’ (5) foster carers and social workers rated how active, healthy, nurtured, safe, included, achieving, responsible, and respected children/young people are in their current placement. The vignettes related to each well-being indicator (table 1) were taken from a Government policy ‘Getting it right for every child in foster or kinship care’ (The Scottish Government, 2007) and were used to
provide a definition for the indicators. Ratings for each indicator ranged from 1 to 5, with 5 signifying that the indicator is fully achieved in the current foster placement. Internal reliability for this measure was .88 and .67 with social workers and foster carers respectively.

<table>
<thead>
<tr>
<th>Well Being Indicator</th>
<th>Vignette/Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Does the child have opportunities to take part in activities such as play, recreation and sport which contribute to healthy growth and development?</td>
</tr>
<tr>
<td>Healthy</td>
<td>Does the child have the highest attainable standards of physical and mental health, access to suitable healthcare and support in learning to make healthy and safe choices?</td>
</tr>
<tr>
<td>Nurtured</td>
<td>Does the child have a nurturing place to live, in a family setting with additional help if needed?</td>
</tr>
<tr>
<td>Safe</td>
<td>Does the child have protection from abuse, neglect or harm at home?</td>
</tr>
<tr>
<td>Included</td>
<td>Does the child have help to overcome social, educational, physical and economic inequalities and is accepted as part of the community in which they live?</td>
</tr>
<tr>
<td>Achieving</td>
<td>Is the child supported and guided in his/her learning and in the development of their skills, confidence and self-esteem at home?</td>
</tr>
<tr>
<td>Responsible</td>
<td>Does the child have opportunities and encouragement to play active and responsible roles in their community?</td>
</tr>
<tr>
<td>Respected</td>
<td>Does the child have the opportunity, along with carers, to be heard and involved in decisions which affect them?</td>
</tr>
</tbody>
</table>

**Table 1 Well Being Indicators from ‘Getting It Right for Every Child’ (2007)**

*Data analysis*

Statistical analyses were undertaken using The Statistics Package for the Social Sciences (IBM SPSS Statistics 19.0, 2010) and the weighted kappa was calculated using the Vassar Stats Calculator. Descriptive statistics provide an overview of the ratings by foster carers and social workers for each indicator.

Agreement between raters can be analysed in a number of ways depending on the data and purpose of the analyses (Tooth & Ottenbacher 2004). The most common analyses are intraclass correlations (ICC) for use with interval or continuous data, simple Kappa statistic
(Cohen, 1960) for use with categorical data and the weighted kappa statistic (Cohen, 1968) for use with ordinal data. The data from Likert scales is commonly treated as interval, although statistically it represents ordinal level data (Jamieson, 2004). Where Likert data is normally distributed however, it has been argued that it can be treated as interval level (Jaccard & Wan, 1996). The data provided from the Likert scales for each wellbeing indicator was not normally distributed and therefore the weighted kappa statistic was selected for use in the current study and descriptive statistics appropriate for ordinal level data are therefore presented.

The weighted kappa statistic is used when agreement is assessed across a number of categories which have a meaningful difference between them as it allows partial credit for ratings closer together. This specific kappa statistic was selected because ratings of 5 versus 1 between dyads would be of more clinical interest than ratings of 4 versus 5. The weighted kappa provides less weight to agreements as categories are further apart. There are two possible weightings that can be selected in calculating a weighted kappa statistic. Quadratic weightings are most commonly used as they have been shown to produce coefficients equivalent to intraclass correlations (Fleiss & Cohen, 1973). However, they are also sensitive to the number of categories within a measure and have been shown to increase as a consequence of increased categories (Brenner & Kliebsch, 1996). Linear weightings are less sensitive to this and due to the high number of categories in the outcome measure, were selected for use in the current study.
Interpretation of analysis

The weighted Kappa statistic provides a value that indicates the extent to which two raters agree with each other when chance agreement is accounted for and is therefore preferable to simple percentage agreement. It provides a value between 0 and 1, with 1 indicating perfect agreement. The classification system proposed by Landis and Koch (1977) is most commonly used to aid interpretation, where a value less than 0.00 is considered ‘poor’, less than 0.2 ‘slight’, less than 0.4 ‘fair’, 0.4 to 0.6 ‘moderate’ and above .61 ‘good’ evidence of agreement. The weighted kappa statistic is however vulnerable to the prevalence of the underlying construct being rated, and will be low for groups that are homogenous or for groups that are heterogeneous but show infrequent or small differences (Tooth & Ottenbacher, 2004; Viera & Garrett, 2005). To combat this, having at least 10 cases per category (Nelson & Cicchetti, 2000) and reporting percentage agreements is recommended (Kottner et al., 2011).

Sample size

A sample size calculation for use of the weighted kappa statistic was undertaken based on the formula \((2k^2)\) where \(k\) equals the number of categories available to raters (Cicchetti, 1981). On this basis a sample size of 50 was required for the current study.

Results

Demographic information
The majority of foster carers were female (87.4%) and ranged in age from 29 to 69. The average length of time as a foster carer was 7 years 6 months and ranged from 9 months to 32 years. Children/young people ranged in age from 3 to 16 years 6 months and the length of current placement ranged from 6 months to 12 years. Full demographic details for foster carers, children/young people and placements are shown in tables 2 and 3. No demographic details were collected for participating social workers.

Table 2 Foster Carer Demographics

<table>
<thead>
<tr>
<th>Foster Carer</th>
<th>Mean</th>
<th>St. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>50 years</td>
<td>7.23</td>
</tr>
<tr>
<td>Time as carer</td>
<td>7 years 6 months</td>
<td>7.04</td>
</tr>
<tr>
<td>Other foster children in home</td>
<td>1.04</td>
<td>1.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>11</td>
<td>12.6</td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>87.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, British</td>
<td>83</td>
<td>95.4</td>
</tr>
<tr>
<td>Asian South</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, European</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mixed Heritage</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Missing Data</td>
<td>3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of carer</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>20</td>
<td>22.9</td>
</tr>
<tr>
<td>Joint</td>
<td>67</td>
<td>77.1</td>
</tr>
</tbody>
</table>
Descriptive statistics

The mode, median, minimum and maximum scores for foster carer and social worker ratings of each wellbeing indicator are shown in table 4. Ratings by both foster carers and social workers were high across all indicators, given that 5 was the maximum score obtainable.

<table>
<thead>
<tr>
<th>Table 3 Child/Young Person Demographics</th>
<th>Mean</th>
<th>St. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td>9 years 9 months</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Age at entry into current placement</strong></td>
<td>5 years 11 months</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Length of placement</strong></td>
<td>3 years 9 months</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Number of previous foster placements</strong></td>
<td>1.2</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>48</td>
<td>55.2</td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
<td>44.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Mean</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, British</td>
<td>80</td>
<td>92</td>
</tr>
<tr>
<td>Asian South</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, European</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mixed Heritage</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Missing Data</td>
<td>4</td>
<td>4.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of placement</th>
<th>Mean</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>50</td>
<td>57.5</td>
</tr>
<tr>
<td>Temporary</td>
<td>37</td>
<td>42.5</td>
</tr>
</tbody>
</table>
Table 4 Foster Carer and Social Worker Ratings on Wellbeing Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Foster Carer</th>
<th></th>
<th></th>
<th>Social Worker</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mode</td>
<td>Min</td>
<td>Max</td>
<td>Median</td>
<td>Mode</td>
</tr>
<tr>
<td>Active</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Healthy</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Nurtured</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Safe</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Included</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Achieving</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Responsible</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Respected</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Analysis of agreement

Weighted kappa coefficients for each of the 8 wellbeing indicators are shown in table 5 alongside the classification system proposed by Landis & Koch (1977). Based on the kappa analyses, agreement between foster carer and social worker dyads was low, with three of the indicators receiving a classification of ‘fair’ and five indicators receiving a classification of ‘slight’. Percentage values for instances of exact agreement between dyads are also displayed in order to aid interpretation, in keeping with guidelines for reporting of results within agreement studies (Kottner et al., 2011). A classification system proposed by Cicchetti (2001) for percentage agreement considers agreement below 70% as poor, between 70 and 79% as fair, 80-89% as good and 90-100% as excellent. On this basis, the indicators active, healthy, included, achieving, responsible and respected demonstrated poor agreement, the indicator nurtured showed fair agreement and the indicator safe showed good agreement.
Table 5 Percentage and kappa coefficient for agreement on wellbeing indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% Exact Agree</th>
<th>Weighted Kappa Coefficient (k)</th>
<th>Confidence Interval (95%)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>59.7</td>
<td>0.22</td>
<td>0.04 - 0.40</td>
<td>Slight</td>
</tr>
<tr>
<td>Healthy</td>
<td>62.0</td>
<td>0.15</td>
<td>0.00 - 0.32</td>
<td>Slight</td>
</tr>
<tr>
<td>Nurtured</td>
<td>77.0</td>
<td>0.27</td>
<td>0.08 - 0.45</td>
<td>Fair</td>
</tr>
<tr>
<td>Safe</td>
<td>80.5</td>
<td>0.37</td>
<td>0.21 – 0.54</td>
<td>Fair</td>
</tr>
<tr>
<td>Included</td>
<td>63.2</td>
<td>0.19</td>
<td>0.01 - 0.38</td>
<td>Slight</td>
</tr>
<tr>
<td>Achieving</td>
<td>62.1</td>
<td>0.13</td>
<td>0.00 – 0.27</td>
<td>Slight</td>
</tr>
<tr>
<td>Responsible</td>
<td>56.0</td>
<td>0.18</td>
<td>0.04 – 0.32</td>
<td>Slight</td>
</tr>
<tr>
<td>Respected</td>
<td>67.4</td>
<td>0.31</td>
<td>0.15 – 0.48</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Discussion

Main findings

This study provides an initial investigation of the agreement between foster carers and their supervising social workers regarding the quality of foster placements, as measured by Scottish Government child wellbeing indicators.

Child wellbeing

Both foster carers and social workers rated child wellbeing as high across all eight wellbeing indicators with the most frequent rating being 5, the maximum obtainable score. This finding is somewhat in contrast to previous studies that have sought to measure the wellbeing of children/young people in foster care (e.g Clausen et al., 1998; Jackson, 2001; McCarthy et al., 2003). This discrepancy may be attributable to a number of factors. Firstly, the outcome measure in the current study consisted of wellbeing indicators which assessed the quality of
the placement provided as opposed to measuring child psychopathology, as previous research has tended towards. Secondly, the self-selecting recruitment process used in the current study may have been biased towards foster carers who were experiencing few placement difficulties at the time of recruitment. Finally, socially desirable responding by both foster carers and social workers may have provided positively skewed responses with regards to the measure of placement quality.

*Foster carer/social worker agreement*

Even within a sample where child wellbeing was rated high, there were significant discrepancies between foster carer and social worker ratings. In terms of the agreement within these dyads, based on the kappa analyses this was classified as ‘slight’ for 5 indicators (active, healthy, included, achieving and responsible) and ‘fair’ for 3 indicators (nurtured, safe and respected). However, due to the validity of the kappa statistic being vulnerable to groups that show little variance, (see table 4) and the inclusion of categories that are not used by raters (‘not at all’ category) this finding should be interpreted with caution. Exact agreement percentages ranged from poor to good and reflect a more realistic measurement of agreement given the limitations of the weighted kappa statistic in relation to the current data set (Tooth & Ottenbacher, 2004).

In common with prior inter rater agreement studies focused on children in foster care, discrepancies between raters can be attributed to two main factors – differences in knowledge and differences in the motivation of individual raters (McAuley & Trew, 2000; Tarren-Sweeney et al., 2003). Within the current sample, discrepancies may reflect the differences in practical knowledge held by foster carers versus social workers regarding the index child.
For example, foster carers would be likely to have more knowledge about the child’s day to day functioning in school or social situations which they could draw on to rate the indicators. However, as the role of a supervising social worker is to monitor the quality of the placement, they should equally be aware of areas of particular strength or difficulty for individual children. In terms of knowledge therefore, the discrepancies are more likely to reflect the differences between foster carers’ and social workers’ knowledge of appropriate child wellbeing. Both within dyads and overall, social workers were less optimistic in their ratings of child wellbeing. This indicates that social workers completed the wellbeing indicators more critically, possibly using professional knowledge of child wellbeing to rate placement quality. Although this finding may be expected due to the differential professional training of social workers and foster carers, there are nevertheless practical implications of this for children within foster care.

The findings of the current study suggest that foster carers are more likely than their supervising social workers to indicate that children are functioning well within their current placements. Practically this means that foster carers may have difficulty recognising when child wellbeing is compromised and when interventions are required to promote wellbeing. Previous research has indicated that despite the presence of numerous risk factors, children within foster care are underrepresented within specialist children’s services such as child and adolescent mental health (Minnis & Del Priori, 2001; Meltzer et al., 2002; Bonnet & Welbury, 2004). For children in foster care, referrals to specialist services are most commonly made by social workers on the basis of foster carer reports (Simms et al., 2000). Therefore access to services relies on foster carers making sound judgements regarding child wellbeing. It has previously been suggested that foster carers may become habituated to caring for children with significant social, emotional and cognitive difficulties (Minnis & Del
Priori, 2001) and thus their perception of child wellbeing may be skewed, with objectively low levels of wellbeing being perceived as normal. Similarly, a fear of children being ‘labelled’, a belief that emotional difficulties are a natural phenomenon within children removed from their birth parents (Arcelus, 1999) and lower levels of education have also all been related to poorer help seeking by foster carers for their fostered children (Bonfield et al., 2010). Considering this previous research, the findings of the current study reinforce the need for child wellbeing to be monitored closely and directly by social workers who are likely to use more objective and standardized approaches to assessing child wellbeing.

A second explanation of the discrepancies between foster carers and social workers relates to the motivation of each in assessing child wellbeing. The relationship between foster carers and supervising social workers is an evaluative one and foster carers may therefore be keen to present placements in a positive light. In their supervisory role, it is the responsibility of the social worker to enable foster carers to become aware of placement strengths and weaknesses so that where necessary, interventions can be instigated to improve foster carers’ knowledge and skills and via this, foster placement quality (Maclay et al., 2006). Drawing from systemic theory applied to the child welfare system, it is not the presence of differing opinions that is problematic but the inability to communicate openly and productively regarding these (Lewis, 2011). The findings of the current study highlight the need for social workers and foster carers to have regular discussions regarding child wellbeing in relation to their current placement. Supervision skills such as flexibility and openness (Carifio & Hess, 1987) will be key in allowing social workers to have these discussions while maintaining a positive rapport with foster carers.
Concordance between social workers and foster carers regarding child wellbeing is likely to vary as a product of a number of variables. In particular, variables such as the length of placement, child behaviour difficulties and foster carer stress may impact on agreement between foster carers and social workers. Where placements are stable and long lasting, foster carers may require less frequent support from supervising social workers and therefore social worker reports of child wellbeing may be less reliable. However, within placements where children present with behavioural difficulties and foster carers are highly stressed, their ability to reliably assess child wellbeing is likely to be reduced. Research assessing concordance between biological parents and their adolescents has shown that parental reports of child wellbeing are significantly related to their own self-rated wellbeing, with highly stressed parents rating their adolescents as more stressed than the adolescents’ rate themselves (Cremeens et al., 2006). Future research should therefore focus on how concordance between foster carers and social workers varies as a product of variables such as child difficulties and foster carer stress.

The closest agreement within the dyads was found on indicators which can be described as key for children and young people in foster care. Specifically, the definitions provided for the indicators nurtured, safe and respected, highlight issues such as protection from abuse and neglect, provision of a nurturing environment and inclusion in decision making processes. Qualitative studies reviewing placements from multiple perspectives (e.g Brown & Bednar, 2006; Norgate et al., 2012; Rostill-Brookes et al., 2011) consistently highlight the importance of factors such as these for placement success, and it is therefore a positive finding of the current study that foster carers and social workers were in agreement regarding these factors.
Implications for clinical practice

The findings from the current study reinforce the importance of the role of supervising social workers in ensuring the wellbeing of children in foster care via both their direct assessment of children and the support they provide to foster carers (Department for Education, 2011). The current study also has implications in terms of training for both foster carers and supervising social workers. In order to make reliable judgements regarding child wellbeing, foster carers should be provided with regular training regarding child development and the impact of abuse and neglect on this. To combat foster carers becoming habituated to low levels of wellbeing within fostered children, regular supervision which is child focused and based on standardized measures of child functioning should be prioritised. In order to provide this high level of supervision, social workers will be required to spend significant time with foster carers and children in order to both observe and reflect on placement strengths and weaknesses. Consideration should also be given to the development and maintenance of supervision skills such as constructive feedback and open communication (Carifio & Hess, 1987) in order to improve the concordance between social workers and foster carers.

More broadly, systemic interventions such as mental health consultations (e.g Golding, 2004) and team parenting approaches involving foster carers, social workers, health, education and probation services (e.g Chamberlain & Smith, 2003) are becoming more common in services for looked after and accommodated children. Approaches such as these provide a forum for reflection between professionals involved in the care of children with complex histories and presenting difficulties. When they operate well, such systems can provide a network around foster carers which leads to improved outcomes for children and young people (NICE, Public Health Guidance 28, 2010).
Implications for future research

Further research assessing the impact of discrepancies between foster carers and supervising social workers will allow the role of systemic factors, such as the communication between the adults involved in the care of fostered children, to be further investigated. Of particular interest would be a qualitative exploration of how conflict or placement weaknesses are successfully managed within foster carer/social worker dyads. Future research could also explore agreement between foster carers, supervising social workers, children’s social workers and professionals from health and education, to assess the impact of wider systemic issues on placement quality and outcomes.

Finally, while the current findings may reflect differences between foster carers and social workers in terms of their perception of placements, it may also be that the discrepancies are reflective of the inadequacy of the outcome measure to clearly conceptualize the indicators and provide a response system that was meaningful for raters. This may have resulted in arbitrary responding by both foster carers and social workers. Further research regarding the psychometric properties of the measure is therefore required.

Summary & conclusions

The current study is an initial exploration of the agreement between foster carers and their supervising social workers on aspects of placement quality, as measured by child wellbeing indicators. Overall, both parties rated child wellbeing as high across all eight indicators. However, agreement between foster carers and social workers was low overall, with three
indicators showing ‘fair’ agreement and five indicators showing ‘slight’ agreement. The results reinforce the need for social workers to closely monitor and assess child wellbeing and have regular discussions with foster carers regarding this. Further research is required to investigate whether placements are more successful when foster carers and social workers have a shared understanding of the placement strengths and weaknesses. This approach represents a step towards a more systemic understanding of the issues around children and young people in foster care as has been proposed necessary by previous qualitative research (Rostill-Brookes et al., 2011).
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The Children Act (1989) accessed at

The Children (Scotland) Act (1995) accessed at

The Children Act (2004), accessed at

The Scottish Government (2007). Getting It Right for Every Child accessed at
http://www.scotland.gov.uk/Topics/People/Young-People/gettingitright/background on 12/03/2013

The Scottish Government (2007). Getting It Right for Every Child in Kinship and Foster Care, accessed at

http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx on 20/04/2013


Appendix 1. Child Abuse Review Submission Guidelines

CHILD ABUSE REVIEW
Instructions to Authors

1. Initial Manuscript Submission. All papers submitted to the journal are subject to blind peer review. Submit all manuscripts (including copies of tables and illustrations) by email to the Editors, Nicky Stanley and Jane Appleton c/o the Editorial Manager, Julia Walsh to: julia.walsh@southwarkpct.nhs.uk

Authors must also supply:
- an electronic copy of the final version (see section below),
- a Copyright Transfer Agreement with original signature(s) - without this, we are unable to accept the submission, and
- permission grants - if the manuscript contains extracts, including illustrations, from other copyright works (including material from on-line or intranet sources) it is the author's responsibility to obtain written permission from the owners of the publishing rights to reproduce such extracts using the Wiley Permission Request Form. Permission grants should be submitted with the manuscript.

Submitted manuscripts should not have been previously published and should not be submitted for publication elsewhere while they are under consideration by Wiley. Submitted material will not be returned to the author unless specifically requested.

2. Electronic submission. The electronic copy of the final, revised manuscript must be sent to the Editors c/o the Editorial Manager. We are able to use most word processing packages, but prefer Word. Illustrations must be submitted in electronic format where possible. Save each figure as a separate file, in TIFF or EPS format preferably, and include the source file. We favour dedicated illustration packages over tools such as Excel or Powerpoint.

3. Manuscript style. The language of the journal is English. All submissions must have a title, be double-line spaced and have a margin of 3cm all round. Illustrations and tables must appear on separate sheets after the references, and not be incorporated into the text. Their proposed location should be indicated in the text.

The paper must include:
- A title page with the full title, the names and affiliations of all authors and a running headline. Give the full address, including email, telephone and fax, of the author who is to check the proofs.
- The name(s) of any sponsor(s) or research funder(s), along with grant number(s).
- An unstructured abstract of up to 200 words for all Papers. An abstract is a concise summary of the whole Paper, not just the conclusions, and is understandable without reference to the rest of the Paper. It should contain no citation to other published work.
- Up to four keywords that describe your Paper, for indexing purposes.
- The word-length of their manuscript at the end.

Papers (excluding tables and references) should be between 3,000 and 5000 words, Short Reports and Case Studies should be between 1,000 and 2,500 words.

4. Ethics, Confidentiality and Consent. Authors must indicate how they addressed any ethical issues relating to the content of their paper, including the endorsement of any organisation or group, such as a professional association or ethics committee. References to people and places must be anonymised.

Whenever publishing case material, if there is a possibility of identifying any individual, including clients or professionals, consideration needs to be given to informed consent. Where it is impossible or impractical to get informed consent, then care must be taken to ensure the case is truly anonymous and disguised, without compromising the validity of the substantive issues. Complete anonymity is difficult to achieve and informed consent should be obtained if there is any doubt. Consent for the publication of quotes from individuals (clients and professional) should also be obtained (e.g. at the time of a research interview). Consent is not necessary if material is already legitimately in the public domain. Authors should clearly state the approach taken in obtaining consent and the nature of any disguise should be described.

5. Reference style. References should be quoted in the text as name and year within brackets and listed at the end of the Paper alphabetically. Where reference is made to more than one work by the same author published in the same year, identify each citation in the text as follows: (Collins, 1998a), (Collins, 1998b). Where three or more authors are listed in the reference list, please cite in the text as (Collins et al., 1998). References should be cited in alphabetical not chronological order within the text separated by a semi-colon, e.g. (Brown, 2003;
Smith, 2002; Thomas, 2001) but in chronological order where an author has two or more entries, separated by a comma e.g. (Collins, 1998, 1999, 2001).

All references must be complete and accurate. Where possible the DOI* for the reference should be included at the end of the reference. Online citations should include date of access. If necessary, cite unpublished or personal work in the text but do not include it in the reference list. References should be listed in the following style:


*The Digital Object Identifier (DOI) is an identification system for intellectual property in the digital environment. Developed by the International DOI Foundation on behalf of the publishing industry, its goals are to provide a framework for managing intellectual content, link customers with publishers, facilitate electronic commerce, and enable automated copyright management.

6. Illustrations. Illustrations can either appear at the end of the electronic submission of the manuscript or in a separate file in black and white only. Supply original photographs; photocopies or previously printed material will not be used. Line artwork must be high-quality laser output (not photocopies). Tints (grey shadings) are not acceptable; lettering must be of a reasonable size that would still be clearly legible upon reduction, and consistent within each figure and set of figures. Supply artwork at the intended size for printing. The PDF will appear on the [Wiley InterScience](http://www.interscience.wiley.com) website.

7. Copyright. To enable the publisher to disseminate the author’s work to the fullest extent, the author must sign a Copyright Transfer Agreement, transferring copyright in the Paper from the author to the publisher, and submit the original signed agreement with the Paper presented for publication. A copy of the agreement to be used (which may be photocopied) can be found in the first issue of each volume of [Child Abuse Review](http://www.interscience.wiley.com) and on the Wiley InterScience website at [www.interscience.wiley.com](http://www.interscience.wiley.com). Copies may also be obtained from the journal editors or the publisher.

8. Further information. Most papers will require some revisions. Proofs will be sent to the author for checking. This stage is to be used only to correct errors that may have been introduced during the production process. Prompt return of the corrected proofs, preferably within two days of receipt, will minimise the risk of the Paper being held over to a later issue. A PDF of the printed article will be provided to the author who checked the proofs, unless otherwise indicated. Offprints and copies of the journal may be ordered.
# Appendix 2. Systematic Review Protocol- March 2012

**Review Question:** Do attachment based interventions with foster carers and adoptive parents improve children’s

(a) emotional functioning  
(b) behavioural functioning  
(c) relational functioning

**Population:** Foster carers/Adoptive parents of children (0-18) with some difficulty in emotional, behavioural or relational functioning.

**Intervention:** Attachment based interventions with foster carers /adoptive parents  
(Group, individual, psychoeducational, experiential, therapeutic)

**Comparators:** No treatment, wait list control, behavioural/cognitive behavioural training interventions, support groups.

**Outcomes:** Emotional, behavioural, relational functioning in children

**Study Design:** Quantitative evaluation designs: RCT, quasi experimental, pre/post evaluation.

**Inclusion Criteria:** Attachment based intervention (as defined above)  
Formal pre/post measure of child emotional, behavioural or relational functioning.

**Search Strategy:** Terms: foster/adoptive parent (synonyms) OR foster/adoptive child (synonyms) AND intervention, treatment, therapy, training AND attachment OR attachment theory.  
Databases: PsychINFO, Embase, Medline, CINAHLplus, Sociological Abstracts, ASSIA  
Hand Search of journals- tbc on basis of no of hits from searches  
Contact authors published on attachment in foster/adopted children

**Data extract:** Extraction tool developed based on quality criteria

**Quality Assessment:** CRD guidance for RCTs/Quasi experimental designs. SIGN- 50 rating system

**Data Synthesis:** Narrative synthesis focusing on quality & validity of findings

**Dissemination:** Written up as Chapter 1 of DClinspsy Thesis, submitted for publication to Child Abuse Review.
Appendix 3. Excluded Studies

Electronic Database Searches/Hand Search of journals/Authors contacted/Ref list searches
(*= found via hand search, **=found via contact with authors, *** found via ref list searches)

- 126 records were excluded as irrelevant based on title/abstract screening.
- 2 potentially relevant records could not be accessed in full text:
  

- 65 articles excluded as below:

  (a) *No emotional, behavioural, relational child outcome measures* (4)


  (b) *Intervention does not involve carer/parent directly* (3)


  (c) *Discussion only paper* (22)

  Ammen, S. (1994). The good feeling-bad feeling game: A technique to facilitate attachment, communication, and therapeutic process between foster parents (and parents) and children, 283-294.


(d) Duplicate finding published (1)


(e) No quantitative evaluation (12)


(f) Intervention criteria not met (14)


*(g) Case descriptions (7)*


**(h) Non fostered/adopted population (3)**


Appendix 4. Included Studies

Electronic Database Searches/Hand Search of journals/Authors contacted/Ref list searches
(*=found via hand search, **=found via contact with authors, *** found via ref list searches)


Gurney-Smith, B., Granger, C., Randle, A., & Fletcher, J. (2010). 'In time and in tune' -- the fostering attachments group. Adoption & Fostering, 34(4), 50-60.


Appendix 5. Correspondence with published authors
* = replied, ** = papers identified

*1. Professor David Howe (Social Work) University of East Anglia, Norwich

**2. Dr Kim Golding, Consultant Clinical Psychologist, Integrated Services for Looked After Children, Worcestershire

3. Professor Gillian Schofield, Professor of Child and Family Social Work, Co-Director of the Centre for Research on the Child and Family, School of Social Work and Psychology, University of East Anglia, Norwich

4. Dr Mary Dozier (Clinical Psychology) University of Delaware

5. Dr Helen Minnis (Consultant Psychiatrist) University of Glasgow/NHS Greater Glasgow & Clyde
Appendix 6. Systematic Review Quality Criteria- Operationalisation

1- The study has an adequate control group

<table>
<thead>
<tr>
<th>Quality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>The study has a matched control group, recruited in the same way as the treatment group</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>The study has a control group which was not recruited in the same way as the treatment group &amp; may not be matched</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>The study has no control group</td>
</tr>
</tbody>
</table>

2- The assignment of participants to groups is randomized & an adequate concealment method is used

<table>
<thead>
<tr>
<th>Quality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Randomization is well described: includes a description of the method used and it is clear that concealment of identity &amp; group is ensured during the process</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Randomization is not well described: less clear from the description how exactly the process was undertaken &amp; it may not involve stringent concealment</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Inadequate randomization and concealment process or non-randomized allocation to groups</td>
</tr>
</tbody>
</table>

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

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

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

<table>
<thead>
<tr>
<th>Quality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Carer demographic factors &amp; child baseline measures of behavioural, emotional and relational functioning are fully assessed and compared between control and intervention groups. Where differences occur, these are considered in analyses.</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Carer demographics and child baseline measures of behavioural, emotional and relational functioning are fully assessed and compared between control and intervention groups. Where differences occur conclusions are interpreted and adjusted accordingly in light of this</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Comparisons between carer demographics and child baseline measures of behavioural, emotional and relational functioning are fully assessed and compared between control and intervention 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</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Quality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Attrition from both control and intervention groups is reported and similar between groups, where differences occur intention to treat analyses are conducted appropriately</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Attrition is reported but is different between groups and intention to treat analyses are undertaken but less well described</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Attrition between groups is reported and is different between groups and no intention to treat analyses are undertaken</td>
</tr>
</tbody>
</table>

### 6- Outcome measure of child emotional functioning is reliable, valid and standardized

<table>
<thead>
<tr>
<th>Well covered</th>
<th>Psychometric properties of outcome measure demonstrate high validity and reliability. Outcome measure is standardized and commonly used with the fostered/adopted population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequately addressed</td>
<td>Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less standardized and less commonly used with fostered/adopted population</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Psychometric properties of outcome measure have low validity and reliability is not evident OR Non standardized measure with no established psychometric properties is used</td>
</tr>
</tbody>
</table>

### 7- Outcome measure of child behavioural functioning is reliable, valid and standardized

<table>
<thead>
<tr>
<th>Well covered</th>
<th>Psychometric properties of outcome measure demonstrate high validity and reliability. Outcome measure is standardized and commonly used with the fostered/adopted population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequately addressed</td>
<td>Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less standardized and less commonly used with fostered/adopted population</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Psychometric properties of outcome measure have low validity and reliability is not evident OR Non standardized measure with no established psychometric properties is used</td>
</tr>
</tbody>
</table>

### 8- Outcome measures of child relational functioning is reliable, valid and standardized

<table>
<thead>
<tr>
<th>Well covered</th>
<th>Psychometric properties of outcome measure demonstrate high validity and reliability. Outcome measure is standardized and commonly used with the fostered/adopted population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequately addressed</td>
<td>Psychometric properties of outcome measure are acceptable and validity and reliability is evident. Outcome measure is less standardized and less commonly used with fostered/adopted population</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Psychometric properties of outcome measure have low validity and reliability is not evident OR Non standardized measure with no established psychometric properties is used</td>
</tr>
</tbody>
</table>

### 9- Intervention is described in detail

<table>
<thead>
<tr>
<th>Well covered</th>
<th>Intervention is described in detail with reference to theoretical underpinning and hypothesized impact on fostered/adopted 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequately addressed</td>
<td>The content and procedures of the intervention are described in lesser detail and the</td>
</tr>
</tbody>
</table>
The theoretical underpinnings and hypothesized impact on fostered/adopted children is less clearly described.

The content and procedures of the intervention and the theoretical underpinning and hypothesized impact on fostered/adopted children are not described in detail.

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

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Intervention is operationalized (e.g. follows manual) AND some check on fidelity is undertaken e.g. supervision, video recording &amp; rating of fidelity</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Intervention is operationalized (e.g. follows manual) BUT no fidelity checks are undertaken.</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Intervention is not operationalized and no checks on fidelity are undertaken</td>
</tr>
</tbody>
</table>

### 11- Sample size & power adequate

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Power calculation undertaken &amp; reported using reasonable effect size estimation and subsequent sufficient number of participants in each group.</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Sample size adequate for statistical power but undertaken using arbitrary effect size, or no calculation undertaken</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Low sample size and low power to detect statistically significant difference</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Appropriate quantitative analyses used. Confidence intervals, effect sizes and p-values reported for every analysis</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Appropriate quantitative analyses used but less fully described and reporting of confidence intervals, effect sizes and p-values is less clear</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>Poor method of statistical analyses used, not well described, confidence intervals, effect sizes and p-values not reported for any analysis</td>
</tr>
</tbody>
</table>

### 13- Follow up evaluation is undertaken

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Follow up evaluation using the same outcome measures is undertaken at 6 months or more following intervention</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Follow up evaluation using the same outcome measures is undertaken between 1-6 months following intervention</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>No follow up evaluation undertaken OR follow up undertaken using different outcome measures</td>
</tr>
</tbody>
</table>

### 14- Intervention undertaken in clinical setting

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well covered</td>
<td>Intervention undertaken in clinical setting such as health or social care &amp; paper addresses external validity and applicability of intervention in clinical setting</td>
</tr>
<tr>
<td>Adequately addressed</td>
<td>Paper addresses external validity and applicability of the intervention in clinical setting</td>
</tr>
<tr>
<td>Addressed</td>
<td>But is not conducted in this setting</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Poorly addressed</td>
<td>The paper does not address the external validity of the intervention <strong>AND</strong> is not conducted in a clinical setting</td>
</tr>
</tbody>
</table>
Appendix 7. Children and Youth Services Review Submission Criteria

Children and Youth Services Review (CYSR) is an interdisciplinary forum for critical scholarship regarding service programs for children and youth.

Types of Paper
The journal publishes full-length articles, current research and policy notes, and book reviews. There are no submission fees or page charges. Submissions will be reviewed by the editor, Duncan Lindsey.

Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop http://webshop.elsevier.com/languagediting/ or visit our customer support site http://support.elsevier.com for more information.

Article structure

Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Theory/calculation

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

Results

Results should be clear and concise.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.
Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

• Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors’ affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author’s name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. Ensure that phone numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address. Contact details must be kept up to date by the corresponding author.

• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a ‘Present address’ (or ‘Permanent address’) may be indicated as a footnote to that author’s name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). See http://www.elsevier.com/highlights for examples.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, ‘and’, ‘of’). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Math formulae

Present simple formulae in the line of normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

References

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either ‘Unpublished results’ or ‘Personal communication’. Citation of a reference as ‘in press’ implies that the item has been accepted for publication.

Web references

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Reference style

List: references should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters ‘a’, ‘b’, ‘c’, etc., placed after the year of publication.

Supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier Web products, including ScienceDirect: http://www.sciencedirect.com. In order to ensure that your submitted material is directly usable, please provide the data in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file.
Appendix 8. Demographic Questionnaire

Information Form

After reading the Participant Information Leaflet dated ‘March 2012’, please complete the following questionnaires; some of them have questions on both sides of the sheet. If you have more than one foster child that meets the criteria of the study (i.e. aged between 3 and 16 & placed with you for at least 6 months) please complete the questions in relation to the child who has been with you the longest. Only one foster carer per household (the one considered the ‘main carer’) should complete the questionnaires.

Your age: _______ Your gender: _______

Your Ethnicity (Please circle)
White, British South Asian Chinese Mixed Race
Other White, European Black

Child’s age: ______years ______months Child’s gender: _______

Child’s Ethnicity (Please circle)
White, British South Asian Chinese Mixed Race
Other White, European Black

Are you the only foster carer or is there another carer in the home too?

Please circle Single Joint

What type of placement does the child have with you?

Please circle Permanent Temporary

How many other foster placements do you currently have? _______

How long has the child in question been placed with you: _______months

How long have you been a foster carer: _______ months

How many previous foster placements has the child in question had: _______

Thank you- please now complete the remaining questionnaires.
Appendix 10. Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997)
11. Difficult Behaviour Self-Efficacy Scale (DBSES) (Hastings & Brown, 2002a)
Appendix 13. Family Crisis Orientated Personal Scales (F-COPES) (McCubbin et al., 1991)

Child Well Being

The following questions use the child well-being indicators that are outlined in The Scottish Government Policy ‘Getting it Right for Every Child’. Please answer each question by thinking about how the child is in relation to their current foster placement.

1. How active is the child in his/her current foster placement. By this we mean, does the child have opportunities to take part in activities such as play, recreation and sport which contribute to healthy growth and development?

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
Not at all & completely
\end{array}
\]

2. How healthy is the child in his/her current foster placement. By this we mean, does the child have the highest attainable standards of physical and mental health, access to suitable healthcare and support in learning to make healthy and safe choices.

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
Not at all & completely
\end{array}
\]

3. How nurtured is the child in his/her current foster placement. By this we mean, does the child have a nurturing place to live, in a family setting with additional help if needed?

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
Not at all & completely
\end{array}
\]

4. How safe is the child in his/her current foster placement. By this we mean, does the child have protection from abuse, neglect or harm at home?

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
Not at all & completely
\end{array}
\]

5. How included is the child in his/her current foster placement. By this we mean, does the child have help to overcome social, educational, physical and economic inequalities and is accepted as part of the community in which they live.

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
Not at all & completely
\end{array}
\]

6. How achieving is the child in his/her current foster placement. By this we mean, is the child supported and guided in his/her learning and in the development of their skills, confidence and self-esteem at home.
7. How responsible is the child in his/her current foster placement. By this we mean, does the child have opportunities and encouragement to play active and responsible roles in their community and where necessary, having appropriate guidance and supervision and being involved in decisions that affect them.

1 2 3 4 5

Not at all completely

8. How respected is the child in his/her current foster placement. By this we mean, does the child have the opportunity, along with carers, to be heard and involved in decisions which affect them.

1 2 3 4 5

Not at all completely

Thank you.
Appendix 15. Ethical Approval- The University of Edinburgh

University of Edinburgh
School of Health in Social Science
RESEARCH AND RESEARCH ETHICS COMMITTEE

Ethical review form for level 2 and level 3 auditing

This form should be used for any research projects carried out under the auspices of SHSS that have been identified by self-audit as requiring detailed assessment - i.e. level 2 and level 3 projects under the three-tier system of ethical approval that has been developed by the Research Ethics Committee of the School. The levels within the system are explained in the SHSS Research Ethics Policy and Procedures document. Please indicate which level applies to your research.

This form provides general School-wide provisions. Proposers should feel free to supplement these with detailed provisions that may be stipulated by research collaborators (e.g. NHS) or professional bodies (e.g. BSA, SRA). The signed and completed form should be submitted, along with a copy of the research proposal, research instruments and information and consent sheets to the relevant person (Subject Area Research Ethics Co-ordinator for staff, postdoctoral fellows and postgraduate students, Dissertation supervisor for undergraduate student projects). Level 3 requests should also be lodged, (if possible electronically) with the School Research Ethics Administrator for forwarding to the Research Ethics Committee.

Research Ethics Committee will monitor level 2 proposals yearly to satisfy themselves that the School Ethics Policy and Procedures are being complied with. They will revert to proposers in cases where there may be particular concerns of queries. For level 2 and 3 audits, work should not proceed until issues raised have been considered, by the appropriate people. Level 3 applications should be submitted well in advance of a required date of approval (see submission dates on shared area address).

The form developed by the College of Humanities and Social Science will be used for level 2 and 3 reviews. If the answer to any of the questions below is ‘yes’, please give details of how this issue is being/will be addressed to ensure that ethical standards are maintained.

<table>
<thead>
<tr>
<th>1</th>
<th>THE RESEARCHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Your name and position</strong></td>
<td>Laura Kerr, Trainee Clinical Psychologist</td>
</tr>
<tr>
<td><strong>Proposed title of research</strong></td>
<td>The role of foster carers’ self-efficacy, attributions and coping in placement success for looked after children.</td>
</tr>
<tr>
<td><strong>Funding body</strong></td>
<td>NHS EDUCATION SCOTLAND (NES)</td>
</tr>
<tr>
<td><strong>Time scale for research</strong></td>
<td>March 2012- May 2013</td>
</tr>
<tr>
<td><strong>List those who will be involved in conducting the research, including names and positions (e.g. ‘PhD student’)</strong></td>
<td>Laura Kerr (Trainee Clinical Psychologist) Dr Jill Cossar (Lecturer in Clinical Psychology &amp; Academic Supervisor). Dr Nina Koruth &amp; Dr Kirsty Dalrymple (Clinical Psychologists &amp; Clinical Supervisors)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2</th>
<th>RISKS TO, AND SAFETY OF, RESEARCHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those named above need appropriate training to enable them to conduct the proposed research safely and in accordance with the ethical principles set out by the College</td>
<td>No</td>
</tr>
</tbody>
</table>
Researchers are likely to be sent or go to any areas where their safety may be compromised, or they may need support to deal with difficult issues. | No
---|---
Could researchers have any conflicts of interest? | No

### 3 RISKS TO, AND SAFETY OF, PARTICIPANTS

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could the research induce any psychological stress or discomfort?</td>
<td>Yes- it may cause some distress for some participants to complete questionnaires regarding their wellbeing, and the stress related to being a foster carer.</td>
</tr>
<tr>
<td>Does the research involve any physically invasive or potentially physically harmful procedures?</td>
<td>No</td>
</tr>
<tr>
<td>Could this research adversely affect participants in any other way?</td>
<td>No- supports will be provided via social work and helpline information. Participants will often be discussing similar issues in their role as paid foster carers.</td>
</tr>
</tbody>
</table>

### 4 DATA PROTECTION

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will any part of the research involve audio, film or video recording of individuals?</td>
<td>No</td>
</tr>
<tr>
<td>Will the research require collection of personal information from any persons without their direct consent?</td>
<td>No</td>
</tr>
<tr>
<td>How will the confidentiality of data, including the identity of participants (whether specifically recruited for the research or not) be ensured?</td>
<td>Names will only be written on consent forms which will be kept separately from the data collected for the purposes of the study. All other information will be non-identifiable.</td>
</tr>
<tr>
<td>Who will be entitled to have access to the raw data?</td>
<td>The main researcher and academic supervisor, Dr Jill Cossar (Clinical Psychologist)</td>
</tr>
<tr>
<td>How and where will the data be stored, in what format, and for how long?</td>
<td>The completed questionnaires will be kept in a secure file. They will be destroyed once the information has been put on to a secure laptop that only the main researcher has access to. It will be non-identifiable information at this stage.</td>
</tr>
<tr>
<td>What steps have been taken to ensure that only entitled persons will have access to the data?</td>
<td>Only the main researcher (Laura Kerr) will have access to the laptop on which the data is stored.</td>
</tr>
<tr>
<td>How will the data be disposed of?</td>
<td>The paper questionnaires will be shredded.</td>
</tr>
<tr>
<td>How will the results of the research be used?</td>
<td>They will be fed back to participants, social work and NHS interested parties. They will be written up in a journal article and submitted for publication.</td>
</tr>
<tr>
<td>What feedback of findings will be given to participants?</td>
<td>All</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Is any information likely to be passed on to external companies or organisations in the course of the research?</td>
<td>No</td>
</tr>
<tr>
<td>Will the project involve the transfer of personal data to countries outside the European Economic Area?</td>
<td>No</td>
</tr>
</tbody>
</table>

### 5 RESEARCH DESIGN

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>The research involves living human subjects specifically recruited for this research project</td>
<td>Yes</td>
</tr>
<tr>
<td>If ‘no’, go to section 6</td>
<td></td>
</tr>
<tr>
<td><strong>How many participants will be involved in the study?</strong></td>
<td>Minimum of 97</td>
</tr>
<tr>
<td>What criteria will be used in deciding on inclusion/exclusion of participants?</td>
<td>As detailed in above proposal</td>
</tr>
<tr>
<td>How will the sample be recruited?</td>
<td>As detailed in the above proposal</td>
</tr>
<tr>
<td>Will the study involve groups or individuals who are in custody or care, such as students at school, self help groups, residents of nursing home?</td>
<td>No</td>
</tr>
<tr>
<td>Will there be a control group?</td>
<td>No</td>
</tr>
<tr>
<td>What information will be provided to participants prior to their consent? (e.g. information leaflet, briefing session)</td>
<td>As detailed in above proposal and attached information sheets</td>
</tr>
<tr>
<td>Participants have a right to withdraw from the study at any time. Please tick to confirm that participants will be advised of their rights, including the right to continue receiving services if they withdraw from the study..</td>
<td>Yes</td>
</tr>
<tr>
<td>Will it be necessary for participants to take part in the study without their knowledge and consent? (e.g. covert observation of people in non-public places)</td>
<td>No</td>
</tr>
<tr>
<td>Where consent is obtained, what steps will be taken to ensure that a written record is maintained?</td>
<td>The consent forms will be kept in a secure place by the researcher.</td>
</tr>
<tr>
<td>In the case of participants whose first language is not English, what arrangements are being made to ensure</td>
<td>Translators will be employed where necessary</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Will participants receive any financial or other benefit from their participation?</td>
<td>No</td>
</tr>
<tr>
<td>Are any of the participants likely to be particularly vulnerable, such as elderly or disabled people, adults with incapacity, your own students, members of ethnic minorities, or in a professional or client relationship with the researcher?</td>
<td>No</td>
</tr>
<tr>
<td>Will any of the participants be under 16 years of age?</td>
<td>No</td>
</tr>
<tr>
<td>Do the researchers named above need to be cleared through the Disclosure/Enhanced Disclosure procedures?</td>
<td>No</td>
</tr>
<tr>
<td>Will any of the participants be interviewed in situations which will compromise their ability to give informed consent, such as in prison, residential care, or the care of the local authority?</td>
<td>No</td>
</tr>
</tbody>
</table>

### 6 EXTERNAL PROFESSIONAL BODIES

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the research proposal subject to scrutiny by any external body concerned with ethical approval?</td>
<td>Yes-</td>
</tr>
<tr>
<td>If so, which body?</td>
<td>Individual social work Department review process</td>
</tr>
<tr>
<td>Date approval sought</td>
<td>University ethics required prior to submission</td>
</tr>
<tr>
<td><strong>Outcome, if known or</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date outcome expected</strong></td>
<td>Following University ethics processes</td>
</tr>
</tbody>
</table>

### 7 ISSUES ARISING FROM THE PROPOSAL

In my view, ethical issues have been satisfactorily addressed subject to confirmation that IRAS approval is not required.

**Signature**  
Dr. S O’Rourke

**Date**  
06/02/12
Non-IRAS confirmation email

From: Hamill, Raymond (NHS Lanarkshire) - Corporate R&D Manager  
Sent: Tue 20/12/2011 16:22  
To: Kerr, Laura - Trainee Clinical Psychologist  
Cc: 'Godden, Judith'  
Subject: RE: internal audit

Hi Laura - I've just spoke with Judith Godden at the Glasgow REC about your project - thanks Judith - and I confirm that.

- If this is Sponsored by the University, then it is their indemnity that would apply - they should confirm this for you.
- If there is no NHS involvement (other than your own time, which is down to agreements you should have in place with your local line manager), then your University is correct, and all other considerations are the responsibility of the University and the Social Work department - I see you will be going to their ethics committees directly in any case.

I should also confirm that we do not need to see your thesis.

Hope this helps.
Kind regards - Raymond  
Happy Christmas!
Raymond Hamill  
Corporate Research & Development Manager  
NHS Lanarkshire  
c/o Monklands Hospital  
Monkscourt Avenue  
Airdrie ML6 0JS  
Tel: Monklands Hospital: 01236 712460  
Mob: 07777 9161388  
mailto:raymond.hamill@lanarkshire.scot.nhs.uk
Appendix 16. Social Work Ethical Approval

a. Edinburgh City Council

From: Laura Kerr [L.Kerr.6@anl.ac.uk]
Sent: 09 August 2012 10:45
To: Li Wang
Subject: Re: Research Access request

Dear Li,

I have now met with Tricia and we have agreed that I will begin to
recruit from Edinburgh city social work. I wondered if I could have a
letter/or short form which says that I have been through your ethics
process for the appendix of my thesis?

Many thanks
Laura.

Lei Wang <Li.Wang@edinburgh.gov.uk> on Fri, 22 Jun 2012 09:42:04 +0100:

> Laura
> > Access within the Children and Families department for your research has
> > been granted and you are now free to make the contacts you require.
> > Please be aware that it will be the decision of individual staff members
> > how, or indeed if, they are able to support your research. Contact
> > person for your research is Tricia Rosa (tricia.rosa@edinburgh.gov.uk).
> > As part of granting this access, I would ask that you indicate how much
> > staff time was made available to you and would also ask you to provide
> > us with a summary of your research findings (no more than 100 words)
> > when it is completed.
> > Please don't hesitate to contact me if you have any question.
> > Best wishes
> > Li
> > Li Wang
> > Children and Families Department
> > The City of Edinburgh Council
> > 14 Waverley Court, 4 East Market Street
> > Edinburgh, EH8 8RG
> > Tel: 0131 450 6127
> > E-mail: li.wang@edinburgh.gov.uk
b. North Ayrshire Council

From: E McLaren [EMclaren@north-ayrshire.gsw.gov.uk]
Sent: 30 November 2012 14:60
To: Kerr Laura (KLS LAMARKSHIRE)
Cc: mcmahon@north-ayrshire.gsw.gov.uk
Subject: RE: Foster carer research project - North Ayrshire Council [CONFIDENTIAL]

Excellent Laura. All points covered.

All the best with the study.

Eleanor  
c/o Mae for info

Eleanor McLaren, Solicitor, Corporate Services, North Ayrshire Council, Cunningham House, Irvine. KA12 6EE  
Tel: 01294 324374  
email: EMclaren@north-ayrshire.gsw.gov.uk

Dear Eleanor,

Many thanks for your email.

1. The study uses a one off cross sectional design, taking a snapshot of the current situation in placements. The outcome variable, ‘placement stability’ is measured by the length of placement at the time of data collection. Children have to be placed for a minimum of 6 months because the majority of placements that disrupt, do so in the first six months. Therefore recruiting cases who have placements longer than this time I will have a sample of placements that, based on this dimension, are more successful. This other outcome variable ‘placement stability’ is also measured by a one off questionnaire completed by carer and social worker. The study therefore has no follow up period and involves only a single set of questionnaires completed by carer and one questionnaire completed by social worker.

2. The questionnaires were piloted and the average time taken to complete was 45 minutes for carer questionnaires and 5 minutes for social worker questionnaires. The questionnaires are completed only once.

3. The right to withdraw from the study at any time and for any reason is outlined on both the foster care information sheet and the foster care consent form.

4. Children’s names are not requested at any point. Demographic factors: age, gender, ethnicity, length of placement, number of previous placements are collected.

I hope this helps to clarify the points you raised and look forward to hearing back from you regarding this.

Many thanks
Laura

From: E McLaren [EMclaren@north-ayrshire.gsw.gov.uk]
Sent: 30 November 2012 12:12
To: Kerr Laura (KLS LAMARKSHIRE)
Cc: mcmahon@north-ayrshire.gsw.gov.uk
Subject: Foster carer research project - North Ayrshire Council [CONFIDENTIAL]
Laura,

I have been passed your details from Mae Henderson, Senior Manager within Children and Families relative to the research project you are conducting with foster carers.

I can confirm that North Ayrshire Council are prepared to participate in the study subject of the following points being clarified:

- I am unclear as to the length of the study. The paperwork suggests 6 months, but given that you are assessing (broadly) the parenting capacity of foster carers and its impact on placement breakdown and outcomes for young people, will you be in touch with us at some later stage to assess whether each of the placements has broken down or what the outcome was for the young person?
- Also, can we clarify exactly that it will take only 40 mins for the foster carer to complete all 7 questionnaires. Will the questionnaires be completed again by them at some point in the future?
- Each foster carer to be advised clearly that they may withdraw from the study at any time.
- Children within each foster care placement to be identified only by age and sex - strictly no names of children.

I presume there will be no difficulty in meeting the above points and look forward to reading the results of the research in due course once available.

Kind regards,
Eleanor
Eleanor McLaren,
Solicitor,
Corporate Services, North Ayrshire Council, Cunninghame House, Irvine. KA12 8EE
Tel: 01294 324374
email: emclaren@north-ayrshire.gov.uk
c. East Ayrshire Council

EAST AYRSHIRE COUNCIL
DEPARTMENT OF EDUCATIONAL AND SOCIAL SERVICES
(SOCIAL WORK)

THIS AGREEMENT IS MADE ON THE (date) 01/08/2012.

BETWEEN:

EAST AYRSHIRE COUNCIL, a local authority constituted under the Local Government etc (Scotland) Act 1994 and having its main office at Council Headquarters, London Road, Kilmarnock KA3 7BU; and:

[ LAURA KERR ] ("The Researcher")

Definitions

Where the terms below have been defined within the Data Protection Act 1998, the meaning is the same as in the Act. Any additional description below is to put the definitions into the context of this Agreement.

"Personal Data" means any personal information relating to an identified or identifiable person which is provided by the Council to the Researcher, or which is collected by the Researcher, for the purpose of the Research Project.

"Data Subject" means the person who is the subject of the Personal Data.

"Research Project" means the Researcher’s non-commercial research project as described in more detail in the Research Access Questionnaire.

1 The Researcher hereby undertakes and agrees to comply with all applicable requirements under the Data Protection Act 1998 including, but not limited to, processing Personal Data in accordance with the Act.

2 Without limiting the generality of Clause 1, the Researcher further undertakes that in relation to the processing of any Personal Data it shall:

   a. use the Personal Data solely for the purpose of the Research Project.

   b. not supply the Personal Data to any third party for any purpose or use whatsoever.

   c. comply with any reasonable instructions from the Council concerning the processing of the Personal Data.

   d. ensure that it effects and maintains appropriate and reasonable technical and organisational security measures against unauthorised or unlawful processing of the Personal Data.
e. collect only Personal Data which is relevant and necessary for the purpose of the Research Project

f. where appropriate obtain the consent in writing of the Data Subjects to the processing of their Personal Data

g. ensure that the results of the Research Project are anonymised when published and that no information is published which would enable the Data Subject to be identified.

2. At the conclusion of the Research Project, the Researcher undertakes to destroy all Personal Data that it holds including deleting from all IT systems and at the Council's request, the Researcher shall certify to the in writing that this destruction has been carried out. Where the Researcher wishes to retain the Personal Data and can show that there are good reasons for doing so, the Research shall not be required to destroy the Personal Data provided that it is anonymised by the deletion of any personal identifier such as (without limitation) name and date of birth.

4. The Researcher agrees to indemnify the Council and keep it its officers and employees fully and effectively indemnified against all costs claims demands expenses and liabilities arising directly as a result of any breach by the Researcher of any of the provisions of this Agreement or of any applicable provision of the Data Protection Act 1998.

5. This Agreement shall be governed by and construed in accordance with the laws of Scotland and both parties submit to the exclusive jurisdiction of the Scottish Courts

SIGNED by or on behalf of the parties at the date which first appears in this Agreement.

For and on behalf of East Ayrshire Council  

}  

Planning and Development Manager

For and on behalf of Researcher  

Laura Kerr  

Trainee Clinical Psychologist
South Lanarkshire Council Social Work Resources
Research Ethics Application

Name of Applicant            Laura Kerr
University (when applicable) University of Edinburgh
Course of Study (when applicable) Doctorate of Clinical Psychology
Date of Application          February 2012

Will this application be subject to University Ethics Approval? Yes- approval received

Project Title                         ‘The role of foster carer self-efficacy, attributions and coping in placement stability and success for looked after children’

Background to research
Placement breakdown in foster care is related to poorer psychosocial outcomes for children (Barber & Delfabbro, 2003) and therefore research that seeks to investigate risk and protective factors for placements is considered to be important. Much previous research has however focused on identifying risk factors, for example Oosterman and colleagues (2007) found child age, behavioural problems and previous residential care to be predictive of placement breakdown. Results of this study are less clear on foster carer factors which affect placement outcome. Difficulties in measuring the constructs hypothesized to be important, such as ‘parenting’ and ‘child-carer relationships’, mean that results are less valid and reliable than those which make use of quantitative markers such as child age or number of previous placements. However, Sinclair and Wilson (2003) found that poorer parenting scores in carers predicted placement breakdown and Farmer and colleagues (2005) provided evidence that carer strain was significantly related to placement breakdown.

These studies suggest that underlying factors such as coping, stress and aspects of parenting in foster carers, impact placement outcome. The degree to which their results can be generalized is limited however due to methodological issues. In both papers the main constructs, ‘parenting scores’ and ‘foster carer strain’, are rated using non-standardized measures and are based on report of supervising social workers or through direct participant interview. The outcome measures also lack consistency across studies and tend to be insensitive, with placements generally being rated as ‘successful’ versus ‘unsuccessful’ by social workers or being determined as such based on duration alone. These approaches increase the risk of biased and socially desirable responding and the use of idiographic measures contributes to difficulties in interpretation and amalgamation of results. Therefore further investigation of foster carer factors using standardized parenting measures and a more sensitive measure of placement success is required. The current study would provide this and would also demonstrate a shift in the literature towards identifying protective rather than risk factors. This shift is more helpful in allowing policy makers and clinicians develop interventions that can increase the success and stability of placements for children and young people.

Study design
An exploratory study using a cross-sectional quantitative design will be used. Participants will complete a set of seven self-report questionnaires measuring a number of variables. These variables will then be explored through correlation and multiple regression analysis in order to answer the research questions.
Participants (who – inclusion and exclusion criteria? How many? How will participants be recruited? Are there specific issues with vulnerable groups?)

Participants:
Participants will be foster carers who have a child between the ages of 3 and 16, placed with them by their local authority for a minimum of six months. Social workers, linked to these foster carers will also be participants. Recruitment will primarily take place in North and South Lanarkshire; however other local authorities across the west of Scotland will also be approached for inclusion. These include City of Glasgow, North Ayrshire, South Ayrshire and East Ayrshire. The study requires a minimum of 97 participants in total.

Procedure:
The researcher will attend child and family social work meetings within the local authority areas taking part in the study. Social workers will be provided with information leaflets regarding the study and asked to pass these on to foster carers who meet the inclusion criteria. The information leaflet will outline the study as ‘an investigation of coping and beliefs in foster carers’ and will describe in detail what would be required of participants.

Interested foster carers will be asked to contact the researcher or notify their social worker if they would like further information. Those foster carers who request further information will be sent out a written consent form and the battery of questionnaires. They will be asked to complete the questionnaires anonymously and return them in a pre-paid envelop to the agreed address. Following this, the social worker linked to each foster carer will be asked to complete one short questionnaire, related to the well-being of the child who is placed with the foster carer.

Foster carers who take part in the study will be offered a CPD session led by the researcher during which the results of the study will be fed back and the literature around psychological factors in foster parenting will be discussed.

Methods of data collection – how will data be gathered? (interviews, questionnaires etc)

All data will be gathered through questionnaires (see attached). Five of these measures are standardized, valid and reliable measures, one is a short demographic questionnaire and one is a rating scale developed form the purposes of the study based on the child wellbeing indicators produced by the Scottish Government in the ‘Getting it Right for Every Child’ document.

Methods of data analysis

The principle research question will be addressed using two separate hierarchical regression analyses. The first will use the measure of placement success based on child wellbeing indicators as the outcome variable and the second will use the length of placement as the outcome variable. Both analyses will use foster carer age, gender, length of time as foster carer, foster carer training, foster carer wellbeing and child behaviour in the initial step and parental self-efficacy, attributions of adult controllability, emotion focused coping, problem focused coping and dysfunctional coping as predictor variables in the second step.

Data screening will be carried out to check that the assumptions of the regression are met. These include normality of distribution of residuals, linearity, heterogeneous variance, curvilinearity, leverage and influence of outliers.

The secondary research questions will be explored through correlation.
Ethical Issues

What does the applicant consider to be the main ethical issues and how will they be addressed?

There are two main ethical issues relevant in the study; these issues have been considered as below:

1. Ensuring informed consent. Detailed participant information leaflets have been developed in order to ensure informed consent. Potential participants will also have the opportunity to discuss the research with their social worker and the researcher prior to participation. Participants will be informed of their right to withdraw at any time and will be guaranteed that any information provided will be non-identifiable.

2. There is the possibility that completing questionnaires regarding caring for children may cause some distress for some participants. As such, information leaflets will provide helpline/internet sites which provide information and support for parenting difficulties. Participants will also have continued support from their linked social worker with whom they are encouraged to discuss any foster parenting stress they are experiencing.

Is there the possibility that any aspects of the study will cause discomfort, anxiety, stress or embarrassment to participants? Yes

If yes, please explain how this will be minimised.

Some clients may find some of the questions in the measures distressing. For example, reporting their current levels of stress, or how they manage difficult behaviour displayed by a foster child. The likelihood of this is relatively low, as paid professionals, foster carers will routinely be asked to consider factors such as this. All questionnaires have been selected as sensitive and unobtrusive in nature and participants will be provided with a number of websites/helpline numbers should they feel distressed following completion of any of the measures.

Benefit to research participants or third parties. Who will benefit from the studies?

The study will benefit those who support foster carers to increase the likelihood of secure and stable placement arrangements. The study hopes to highlight protective factors for placements that may be able to be targeted in interventions in order to increase placement stability. The individual participants will be invited to an information session where the results will be fed back and the literature around psychological factors important in parenting and caring will be presented.

Consent

How will consent be obtained? Please attach copy of consent form if appropriate.

Potential participants will have the opportunity to discuss the study face to face with their linked social worker and over the phone with the researcher. They will be provided with information leaflets describing the study and the nature of information being collected. Following this, consent to participate forms will be sent out and participants will be requested to complete these prior to completion of any measures. The consent to participate form (which will have participant’s name) will be sent back in the post to the researcher and will immediately be removed from the questionnaire packs and be kept securely in a separate location from the completed measures (see attached info leaflet and consent form)
Data Protection

How will the data of participants be protected?

The procedures around the handling of confidential information have been outlined in both the information leaflet and the consent form. Participants will be made aware that no identifying information will be stored alongside their completed measures.

Will confidentiality be guaranteed? Yes

The procedures around the handling of confidential information have been outlined in both the information leaflet and the consent form. Participants will be made aware that no identifying information will be stored alongside their completed measures.

Will anonymity be guaranteed? Yes

This is a quantitative study which is interested in collating a wide range of numerical data; participants will not be identifiable in any way during the data analysis and write up of this study. Procedures around potential identifiable information are outlined in information and consent leaflets (i.e. consent form with name will be stored separately from the completed measures)

How will you explain to participants that they may refuse to take part or to withdraw from the research?

This is made explicit on both the information leaflets and the consent form. Potential participants who contact the researcher will also be informed of this verbally.

Copies of the following must be attached if applicable:-

Explanation form
Data collection instrument

I confirm that the information provided is accurate.

Signature Date 06/02/2012

Name in block letters LAURA KERR

On behalf of South Lanarkshire Council I give approval to this research application.

Signature Date 6.2.12

Name in block letters
e. North Lanarkshire Council

Dear Laura,

I write to inform you that your Research Access Application has been successful, providing the terms and conditions of the Research Contract you agreed are met, and that a copy of the final report is sent to us for information.

The contact person assigned to you for your research will be Sheila Gordon, Service Manager – Children and Families. Could you please contact Sheila before beginning the questionnaire process, as she is interested in how these sessions will be structured and how findings will be fed back to carers. You can contact Sheila on 01689 332723.

If you have any queries or require further feedback regarding the above please do not hesitate to contact me at the above telephone number.

Yours sincerely,

David Wardrope
Research Assistant
PARTICIPANT INFORMATION SHEET (FOSTER CARER)
‘A study of foster carer beliefs and coping’

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Please feel free to contact us if anything is not clear or if you would like to discuss the study further.

What is the purpose of the study?

The study is interested in looking for factors that are associated with stable and successful placements for foster children. This is an interesting area of research because stable placements lead to better outcomes for children and also because placement breakdown can be distressing for everybody involved. Therefore it is helpful if researchers can work out what factors help placements remain stable.

Why have I been invited to take part?

The study is looking to recruit foster carers who have a child between the age of three and sixteen placed with them for a minimum of six months. You have been identified by social work as fitting these criteria.

Do I have to take part?

It is up to you to decide to join the study. We will describe the study through this information sheet. If you agree to take part, we will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. This would not affect the standard of care you receive from social work or any other services regarding your foster child.
What will be involved in the study?

If you are interested in taking part in this study you will be sent out a consent form and some questionnaires. You should read the consent form carefully and contact the researcher or your social worker if you have any further questions.

Following this, you would complete the consent form and the questionnaires and give these back to your link worker who will return them to the researcher. There are seven questionnaires in total which ask about a range of factors, some will be in relation to caring for children and some will be about your own life. These will take about 45 minutes in total. The social worker who supervises the placement will also be asked to fill in one of the questionnaires, which will take them about 5 minutes. This questionnaire is about how the child who is placed in your care is currently getting on.

What are the advantages and disadvantages of taking part in the study?

Advantages-
The study will help researchers better understand the important role that foster carers play in placement success and stability. Those who participate will be invited to an information session where the results will be presented and information about psychological factors in foster caring will be discussed.

Disadvantages-
Some people may find some of the questions in the questionnaires difficult to answer or may feel some distress following completion of the questionnaires. Due to this, helpful contact numbers and website information will be provided. You do not need to answer any questions that you do not want to.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. The information you provide will be held in a secure file that only the main researcher will have access to. You will only be asked to put your name on a written consent form which will be stored separately from all of the other forms you fill in. No information that could identify you or the child placed in your care, will be included in the study.

What will happen to the results of the study?

The results of the study will be written up and submitted as a thesis for a Doctorate in Clinical Psychology. The results will also be submitted for publication to a scientific journal. No identifiable information will be included in these documents.
Who is organising and funding the research?

The research is being completed as part of a Doctorate in Clinical Psychology training course that is funded by NHS Education Scotland.

Who has reviewed the study?

The study has been reviewed and approved by the following bodies:
- The University of Edinburgh, School of Health in Social Science Ethics Committee.
- North Lanarkshire Social Work Ethics Department
- South Lanarkshire Social Work Ethics Department

Complaints

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you are entitled to do this and the researcher will provide you with the necessary contacts.

Further Information

If you wish to receive further information about this study, or if you think that you would like to participate, please let the main researcher (Laura Kerr) know by contacting her at 01698 426753.

Contact Details

The study is being undertaken by-

Ms Laura Kerr  
Trainee Clinical Psychologist  
NHS Lanarkshire  
tel. 01698 426753

The study is being supervised by-

Dr Mary Smeddle  
Consultant Clinical Psychologist  
NHS Lanarkshire  
tel. 01236 707774
HELPFUL CONTACTS

Title: A Study of Foster Carer Beliefs and Coping.

The following resources offer support and advice to foster carers and parents. If you feel any distress following completion of the questionnaires please discuss this with your link worker or make use of the resources listed below:

Fosterline (advice helpline for foster parents) 0800 040 7675

A website for the Fostering Network in Scotland. www.fostering.netscotland

A Scottish Gov. resource for parenting www.parentnetworkscotland.org.uk

Parentline Scotland (Scottish Gov. funded helpline) 0808 800 2222
PARTICIPANT INFORMATION SHEET (SOCIAL WORKER)

‘A study of foster carer beliefs and coping’

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Please feel free to contact us if anything is not clear or if you would like to discuss the study further.

What is the purpose of the study?

The study is interested in looking for factors that are associated with stable and successful placements for foster children. This is an interesting area of research because stable placements lead to better outcomes for children and also because placement breakdown can be distressing for everybody involved. Therefore it is helpful if researchers can work out what factors help placements remain stable.

Why have I been invited to take part?

The study is looking to recruit foster carers who have a child between the age of three and sixteen placed with them for a minimum of six months. As a social worker within Children & Families Services you will work with foster carers who meet these criteria.

Do I have to take part?

It is up to you to decide to join the study. We will describe the study and go through this information sheet. If you agree to take part, we will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. This would not have any effect on any aspect of your work or employment.

What will be involved in the study if I consent?
The main researcher will attend a staff meeting to discuss the study and what will be involved for social workers. Before taking part, you should read the consent form carefully and contact the researcher if you have any further questions.

You will be asked to identify individual foster carers on your current caseload who meet the criteria stated above. You will then contact them to inform them about the study and provide them with an information sheet similar to this.

If foster carers are interested in taking part you will provide them with a consent form, the questionnaires and a stamped addressed envelope to be returned to the social work department. The researcher will then pick up the returned forms and ask you, as the supervising social worker, to complete one questionnaire that will take approximately 5 minutes. This questionnaire is about how the foster child is currently getting on.

**What are the advantages and disadvantages of taking part in the study?**

**Advantages-**
The study will help researchers better understand the important role that foster carers play in placement success and stability. Those who participate will be invited to an information session where the results will be presented and information about psychological factors in foster caring will be discussed.

**Disadvantages-**
Participation will require a small increase in work load, for example reviewing case load to identify potential participants and filling in a short questionnaire.

**Will my taking part in the study be kept confidential?**

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. The information you provide will be held in a secure file that only the main researcher will have access to. You will only be asked to put your name on a written consent form which will be stored separately from all of the other forms you fill in. No information that could identify you, the foster carers or any children in their care will be included in the study.

**What will happen to the results of the study?**

The results of the study will be written up and submitted as a thesis for a Doctorate in Clinical Psychology. The results will also be submitted for publication to a scientific journal. No identifiable information will be included in these documents.
Who is organising and funding the research?

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Complaints

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Further Information

If you wish to receive further information about this study, or if you think that you would like to participate, please let the main researcher (Laura Kerr) know by contacting her at 01698 426753.

Contact Details

The study is being undertaken by-

Ms Laura Kerr  
Trainee Clinical Psychologist  
NHS Lanarkshire  
tel. 01698 426753

The study is being supervised by-

Dr Mary Smeddle  
Consultant Clinical Psychologist  
NHS Lanarkshire  
tel. 01236 707774
Appendix 18. Consent Forms

CONSENT FORM - Foster Carer

Title: A Study of Foster Carer Beliefs and Coping.

Name of Researcher: Laura Kerr

Please initial each box to show consent.

1. I confirm that I have read and understand the information sheet dated ‘March 2012’ for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [ ]

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my care or legal rights being affected. [ ]

3. I understand that my responses will be treated with complete confidentiality and that I will not be personally identified. [ ]

4. I understand that I may omit any questions which I do not want to answer. [ ]

5. I agree to take part in the above study. [ ]

Name: [ ] Date: [ ] Signature [ ]

(Researcher)

If you wish to be contacted following completion of the study in order to receive feedback directly, or to be informed of the time & location of the feedback sessions that will be run in a group format, please provide contact details below:

Email Address:

Phone Number:
CONSENT FORM- Social Worker

Title: A Study of Foster Carer Beliefs and Coping.

Name of Researcher: Laura Kerr

Please initial each box to show consent.

1. I confirm that I have read and understand the information sheet dated ‘March 2012’ for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my care or legal rights being affected.

3. I understand that my responses will be treated with complete confidentiality and that I will not be personally identified.

4. I understand that I may omit any questions which I do not want to answer.

5. I agree to take part in the above study.

Name: ___________________________ Date: ____________ Signature ___________________________
( Participant)

Name: ___________________________ Date: ____________ Signature ___________________________
( Researcher)

If you wish to be contacted following completion of the study in order to receive feedback directly, or to be informed of the time & location of the feedback sessions that will be run in a group format, please provide contact details below-

Email Address: _______________________

Phone Number: ______________________
Appendix 19. Data Exploration- Distribution of Data

The distribution of continuous variables was assessed for normality prior to the correlation analyses necessary for testing hypothesis 1 and 2 and the bivariate correlations carried out prior to the regression models. Visual examination of histograms, values of skew and kurtosis and their z scores and a series of one-sample Kolmogorov-Smirnov tests were used to evaluate the data (see table 1)

Table 1 Assessments of Normality

<table>
<thead>
<tr>
<th>Variable</th>
<th>Skew</th>
<th>(z score)</th>
<th>Kurtosis</th>
<th>(z score)</th>
<th>Kolmogorov-Smirnov Test p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foster carer age</td>
<td>-0.123</td>
<td>(-0.48)</td>
<td>0.140</td>
<td>(.28)</td>
<td>.232</td>
</tr>
<tr>
<td>Time as foster carer</td>
<td>1.816</td>
<td>(7.06)</td>
<td>3.182</td>
<td>(6.26)</td>
<td>.000</td>
</tr>
<tr>
<td>Child age</td>
<td>-0.091</td>
<td>(-0.35)</td>
<td>-0.909</td>
<td>(-1.82)</td>
<td>.153</td>
</tr>
<tr>
<td>Child age at onset of placement</td>
<td>-0.035</td>
<td>(-0.14)</td>
<td>-0.994</td>
<td>(-1.98)</td>
<td>.088</td>
</tr>
<tr>
<td>No. of previous placement</td>
<td>1.414</td>
<td>(5.57)</td>
<td>1.972</td>
<td>(3.92)</td>
<td>.000</td>
</tr>
<tr>
<td>Length of placement</td>
<td>0.986</td>
<td>(3.88)</td>
<td>0.738</td>
<td>(1.47)</td>
<td>.000</td>
</tr>
<tr>
<td>No. of fostered children</td>
<td>0.843</td>
<td>(2.48)</td>
<td>0.286</td>
<td>(0.43)</td>
<td>.000</td>
</tr>
<tr>
<td>DBSE</td>
<td>-0.193</td>
<td>(-0.76)</td>
<td>-0.555</td>
<td>(-1.11)</td>
<td>.039</td>
</tr>
<tr>
<td>FCOPES</td>
<td>0.145</td>
<td>(0.57)</td>
<td>-0.577</td>
<td>(-1.15)</td>
<td>.818</td>
</tr>
<tr>
<td>PCF</td>
<td>0.621</td>
<td>(2.45)</td>
<td>2.534</td>
<td>(5.07)</td>
<td>.002</td>
</tr>
<tr>
<td>SDQ</td>
<td>0.185</td>
<td>(0.73)</td>
<td>-0.573</td>
<td>(-1.15)</td>
<td>.293</td>
</tr>
<tr>
<td>DASS-21</td>
<td>2.357</td>
<td>(9.32)</td>
<td>7.64</td>
<td>(14.53)</td>
<td>.000</td>
</tr>
<tr>
<td>Foster carer placement quality</td>
<td>-1.262</td>
<td>(-4.98)</td>
<td>0.938</td>
<td>(1.88)</td>
<td>.000</td>
</tr>
<tr>
<td>Social worker placement quality</td>
<td>-1.320</td>
<td>(-5.12)</td>
<td>1.966</td>
<td>(3.85)</td>
<td>.000</td>
</tr>
</tbody>
</table>

Skew z score calculated by value skew/value st. error skew
Kurtosis z score calculated by value kurtosis/value st. error kurtosis (Field, 2009)

The demographic variables: length of time as carer, number of previous foster placements, placement length and number of other foster children in the home were found to deviate from a normal distribution. The predictor variables: ‘psychological distress’, ‘perceived control
over failure’ and the outcome variables foster carer placement quality and social worker placement quality.

Log transformations were applied to all of these variables and z scores < +/- 2.58 were used to indicate successful transformations using the guidance from Field (2009) for a medium sized sample. Table 2 shows the skew, kurtosis, and associated z scores for the transformed variables. Transformations resulted in the variables: length of time as foster carer, number of previous placements, placement length, number of other fostered children, ‘psychological distress’, ‘perceived control over failure’ and foster carer placement quality fulfilling criteria for a normal distribution. Table 3 provides descriptive statistics for the transformed variables.

<table>
<thead>
<tr>
<th>Log Transformed Variables</th>
<th>Skew (z score)</th>
<th>Kurtosis (z score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time as foster carer</td>
<td>0.095 (0.37)</td>
<td>-0.68 (-0.724)</td>
</tr>
<tr>
<td>No. of previous placement</td>
<td>0.442 (1.74)</td>
<td>-1.08 (-2.15)</td>
</tr>
<tr>
<td>Length of placement</td>
<td>-0.304 (-1.19)</td>
<td>0.738 (1.47)</td>
</tr>
<tr>
<td>No. of fostered children</td>
<td>0.084 (0.24)</td>
<td>-1.243 (-1.86)</td>
</tr>
<tr>
<td>PCF</td>
<td>0.076 (0.30)</td>
<td>0.724 (1.36)</td>
</tr>
<tr>
<td>DASS-21</td>
<td>0.029 (0.11)</td>
<td>-0.660 (-1.32)</td>
</tr>
<tr>
<td>Foster carer placement quality</td>
<td>0.369 (1.46)</td>
<td>-1.21 (-2.40)</td>
</tr>
<tr>
<td>Social worker placement quality</td>
<td>-1.76 (-6.80)</td>
<td>4.15 (8.13)</td>
</tr>
</tbody>
</table>

Skew z score calculated by value skew/value st. error skew
Kurtosis z score calculated by value kurtosis/value st. error kurtosis (Field, 2009)

A second transformation was undertaken on the remaining variable, ‘Social worker placement quality’. Results of a square root transformation on this variable produced a skew value of -1.524, (z score= -5.906) and a kurtosis value of 2.930 (z score =5.733). Neither transformation was therefore successful for this variable. The untransformed data for social worker placement quality was therefore used for multiple regression analyses on the basis
that regression does not require variables to be normally distributed but does require residuals to be normally distributed (Field, 2009). For the correlation analyses prior to regression analyses, where this variable was included, non-parametric correlations were employed.

Table 3 Descriptive Statistics Transformed Variables

<table>
<thead>
<tr>
<th>Log Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time as foster carer</td>
<td>1.81</td>
<td>0.36</td>
<td>.95</td>
<td>2.59</td>
</tr>
<tr>
<td>No. previous placements</td>
<td>0.27</td>
<td>0.27</td>
<td>.00</td>
<td>.90</td>
</tr>
<tr>
<td>Length of placement</td>
<td>1.56</td>
<td>0.33</td>
<td>.78</td>
<td>2.16</td>
</tr>
<tr>
<td>No. of fostered children</td>
<td>0.25</td>
<td>0.22</td>
<td>.00</td>
<td>.70</td>
</tr>
<tr>
<td>PCF</td>
<td>1.02</td>
<td>0.04</td>
<td>.88</td>
<td>1.15</td>
</tr>
<tr>
<td>DASS-21</td>
<td>0.58</td>
<td>0.38</td>
<td>.00</td>
<td>1.49</td>
</tr>
<tr>
<td>Foster carer placement quality</td>
<td>0.32</td>
<td>0.31</td>
<td>.00</td>
<td>.95</td>
</tr>
</tbody>
</table>
Appendix 20. Data Exploration- Missing Data

Data was screened for missing values, which were found to be minimal with the highest percentage of missing values for an item being 3.3%. Little’s Missing Completely at Random Test (MCAR, Little and Rubin, 1987) was not significant ($x^2 = 1601.478; \text{df} = 2020; p=1$) suggesting that the missing values were completely random and data imputation could be used. The regression imputation method was therefore used to impute missing data. Descriptive statistics for variables were compared between imputed and non-imputed data and the differences between means and standard deviations were minimal, confirmed by a series of t-tests which found no significant differences between means for imputed and non-imputed variables.