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MENTALISING IN THE PARENTS AND CARERS OF LOOKED AFTER CHILDREN.

Section A: A systematic search with narrative review of interventions to improve mentalisation in foster carers and adoptive parents

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Summary page

Section A: This section reviews the literature on interventions to improve mentalisation in foster carers and adoptive parents. The review sought to explore 5 key research areas in the literature relating to: 1) the interventions and their theoretical groundings, 2) the commonalities and differences between the interventions, 3) their strengths and limitations, 4) the efficacy of the interventions, and 5) whether improvements were maintained over time. Overall, the review found the body of literature to be at an early stage of development. The studies largely lacked rigorous designs, which limited the conclusions that could be made. However, some tentative hypotheses were drawn from the studies. Research implications include developing the measurements of mentalisation and the widespread implementation of controlled interventions.

Section B: This section explores the journey of a group of Foster Carers (FCs) as they complete the Circle of Security Parenting (COS-P) attachment-based intervention and the effect that this has on their Reflective Functioning (RF) and stress. It used a mixed methods non-experimental single case design. The quantitative section involved measuring the RF and stress of seven FCs. Six of these participants went on to also complete qualitative interviews, which was analysed using thematic analysis. The study found qualitative evidence that FCs completing COS-P developed their awareness of their own mind as well as the mind of their child. The quantitative results showed some limited changes and greater variability. It tentatively points to the COS-P programme as a potential programme for developing RF in FCs.

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Abstract

Research is increasingly highlighting the importance of affecting parental mentalising in the transmission of secure attachment. This paper offers a review of the literature on interventions to improve mentalisation in foster carers and adoptive parents. A search of PsycINFO, Medline, Social Care Online and Scopus revealed nine relevant papers that were included in the final review. The review sought to explore 5 key research areas in the literature relating to: 1) the interventions and their theoretical groundings, 2) the commonalities and differences between the interventions, 3) their strengths and limitations, 4) the efficacy of the interventions, and 5) whether improvements were maintained over time. Overall, the review found the body of literature to be at an early stage of development. The studies largely lacked rigorous designs, which limited the conclusions that could be made. However, some tentative hypotheses were drawn from the studies. Research implications include developing the measurements of mentalisation and the widespread implementation of controlled interventions.

Introduction

This review seeks to explore interventions for foster carers and adoptive parents that aim to improve their mentalisation abilities. This introduction provides an overview of the theoretical foundations of mentalisation and also background literature about carers of Looked After Children (LAC) and the particular challenges in this field.

Attachment and mentalisation

Bowlby's (1973, 1980) influential work proposed 'attachment' as a deep and enduring emotional bond, connecting individuals across time and space. Within this theory, sensitive caregivers are understood to accurately interpret their infant's communication signals and provide an appropriate response. These 'containing' responses foster strong attachment relationships between caregivers and their babies, and it was proposed that this close communication facilitates an intimate bonding and therefore a 'secure base' from which children can safely go and out and explore the world (Ainsworth, 1985). However, when caregivers offer an unstable, unavailable or inconsistent response to the infant's signals, an insecure attachment style may be formed. Despite extensive exploration of attachment, the research has often overlooked wider social and cultural factors such as stress, poverty and employment. It is known that type of attachment differs depending on the relationship, but generally the infant provides more emotionally charged behaviours to maximise the response for a caregiver, or may give up attempting a response altogether if these new responses are not met. In the decades since Bowlby's original work, researchers have sought to further understand the mechanism(s) that account for the inter-generational transmission, termed the 'transmission gap' (Van Ijzendoorn, 1995).

The idea of ‘mentalisation’, which builds on ideas of parental sensitivity, has grown as a theory to explain this ‘transmission gap’ (Fonagy & Target, 2005). Mentalisation has been defined as the ability to understand and interpret one’s own and others’ behaviour in the context of underlying mental processes (e.g. feelings, thoughts, beliefs and desires) (Fonagy, Gergely, Jurist, & Target, 2018). To operate successfully in the social world requires an understanding of what is going on in other people’s minds, and mentalisation has been offered as an explanation of this process. Mentalising is proposed as one of the mechanisms that exerts its influence on attachment security and a child’s socio-cognitive development (Sharp and Fonagy, 2008). It has been associated with various aspects of development including theory of mind, emotional self-regulation, secure attachment and adult psychological adjustment (Steele & Steele, 2008; Fonagy, Luyten & Allison, 2002).

The field of mentalisation covers multiple areas of investigation and an assortment of terminology. When used in the context of parenting or caring it has traditionally been referred to as ‘maternal mentalisation’ or ‘parental mentalisation’. Mentalization can be viewed as an umbrella term, encompassing multiple theoretical constructs and methods of assessment (Yatziv, Kessler, and Atzaba-Poria, 2018, p. 3). Two of the key theoretical constructs held within parental mentalisation are reflective functioning (RF) and mind-mindedness (MM).

Reflective functioning

The operationalisation of the ability to mentalise, or accurately understand and reflect on the mental states and beliefs of others and oneself has been referred to as ‘reflective functioning’ (RF; Fonagy & Target, 1997). Similarly, RF in the context of a parent’s ability to reflect on their

own and their child's internal experience and their impact on external behaviours has been referred to as 'parental RF' (PRF; Cooper & Redfern, 2016). Slade, Grienenberger, Bernbach, Levy, & Locker (2005) showed an association between different patterns of attachment and RF: high maternal RF has been shown to be associated with secure attachment, whereas low RF is associated with ambivalent and disorganised attachment.

Levy and Truman (2002) suggest that when caregivers are not able to reflect on their own mental states, their ability to be sensitive and emotionally responsive to their children is restricted. Fonagy and Target (1997) propose that this inhibits the children developing their own sense of self and an understanding of their own emotions, which in turn affects their ability to emotionally regulate and form secure attachments. In this way, the RF capabilities allow a mother to create the psychological and physical environment that is most supportive to the development of the child (Fonagy and Target, 2005). When implementing this theory with biological parents, Suchman et al. (2012) found that improvements in RF were associated with improvements in caregiving behaviour.

Mind-mindedness

Another distinct but overlapping facet of mentalisation is Mind-Mindedness (MM). The concept was developed from the literature on parental sensitivity (Meins, Fernyhough, Fradley and Tuckey, 2001). MM has been defined as the capacity of the parent to "conceive of the infant as having a mind," and in doing so attribute underlying mental states to a child's behaviour (Meins, 1997). MM has been measured through the MM task where a parent is asked 'Can you describe [child's name] for me?' (Meins et al., 1998). The responses are then coded, and high levels of

‘mental’ descriptions are interpreted as high MM. A study by Meins, Fernyhough, Fradley and Tuckey (2001) found that high MM in biological mothers was predictive of attachment security of the child at the age of 6-months.

There is limited research on the overlap between MM and RF, however it is likely that both concepts reflect the underlying capacity for mentalization (Rosenblum, McDonough, Sameroff, & Muzik, 2008). Both concepts aim to understand the carer’s capacity to consider their child as independent with their own autonomous thoughts and feelings. It is argued that both processes are likely to have the same underlying neurobiological mechanisms (Sharp and Fonagy, 2008). Previous reviews in the field of mentalisation have included both MM and RF as key search terms, highlighting the importance of both concepts (e.g. Ghossain, 2014).

Looked after children

The act of mentalising within biological families is likely to be different to mentalisation in non-biological relationships – particularly when the carer and child relationship started later in the child’s life. LAC, many of whom may have been insecurely attached to their biological parents, require ‘more intense’ attempts from carers to identify the child’s thoughts and feelings (Sharp and Fonagy, 2008). Many looked after children have been through traumatic experiences in the form of physical and sexual abuse, as well as inadequate early emotional support (Simmer, 2007). When maltreatment occurs in the context of a parental or familial relationship there is a relational element to the traumatic experiences, as the child’s source of support is also the source of fear or anxiety. This maltreatment and subsequent separation from their primary caregivers mean that these children are more vulnerable to emotional and behavioural difficulties (Dozier, Dozier, &

Manni, 2002). The trauma they experience impacts on their neurobiological, psychological and social development and is likely to continue to affect individuals into adulthood (Van der Kolk, 2017).

The ability to effectively mentalise is impaired during periods of high emotional arousal (Fonagy & Allison, 2013). Research suggests that carers of LAC can particularly struggle when the children they are looking after resist the care they offer and carers may feel as if the children are deliberately trying to sabotage their relationship (Selywn, Wijedasa and Meakings, 2014). Caring for looked after children can be an emotionally demanding role and adequate training and support is not always offered (Bunday, Dallos, Morgan, & McKenzie, 2015). These demands and lack of support make carers particularly ‘vulnerable to breakdowns in mentalising’ (Redfern et al., 2018, p 236). The difficulty for carers to understand the link between how children are behaving and how that relates to underlying attachment may result in increased likelihood of placement breakdown, which can significantly increase children’s vulnerability to further emotional distress (James, Landsverk, Slymen, & Leslie, 2004). It has also been shown that children exposed to frequent placement moves are at greater risk of poor outcomes (Newton, Litrownik and Landsverk, 2000). Looking after a child with disrupted attachment will likely interact with a carer’s own attachment experiences. Bunday et al. (2015) found that many foster carers were ‘struggling to cope with [their own] aversive early relationships and experiences’ (p. 155). Bunday et al. also showed that when a child activates unresolved issues within their carer, the carer’s ability to mentalise is likely to be adversely affected. Therefore, the importance of a carer’s ability to reflect on their own experiences and continually mentalise under stress is vital if the placement is to be successful for both the child and the carer.

Interventions for carers of LAC

The number of LAC in England and Wales is increasing. From 2018 to 2019 there was a 4% increase in number of children categorised as ‘looked after’ by local authorities in England; 75% of these were either in foster care or put up for adoption (Department of Education, 2020). Consequently, it is more important than ever for foster and adoptive parents to be equipped with the relevant skills to look after the children in their care. If supported effectively, foster and adoptive parents are in an excellent position to offer LAC reparative care by offering an experience of a safe and supportive attachment relationship.

The National Institute of Excellence (NICE) guidelines highlight the importance of warm stable relationships with caregivers as being a central ‘intervention’ for LAC (NICE, 2013). The focus of the provision to support carers has, however, often focused on practical behaviour management skills, which although helpful, may not be enough for children at risk of having attachment difficulties (Suchman, Decoste, Rosenberger, & McMahon, 2012). A review into cognitive-behavioural or ‘skills-based’ interventions that were effective with biological parents were shown to have limited efficacy for LAC (Turner, Macdonald, & Dennis, 2007). In addition, as outlined above, looking after a child that has limited capacity to mentalise due to early relational trauma will adversely affect the carer’s ability to mentalise and respond sensitively to the child (Ensink, Normandin, & Target, 2015). In order to increase the chance of a positive attachment and emotional security, specific training in an attachment-based approach to support carers is likely to be beneficial (Chamberlain et al., 2006).

The value of interventions aiming to improve mentalisation has been highlighted in a wide range of fields including Borderline Personality Disorders (BPD) (Bateman & Fonagy, 2008), eating disorders (Skarderud & Fonagy, 2012) and depression (Luyten, Fonagy, & Lemma, 2012). A comprehensive review of mentalising within a biological parent population was carried out by Camoirano (2017), who found some evidence that mentalisation-based interventions for parents could be effective in improving reflective functioning and overall caregiving. This review, however, did not include studies on adoptive or foster carers. A randomised control trial of biological parents of children with neurodevelopmental disorders found significant improvements in RF an intervention group (Sealy & Glovinsky, 2016). Similarly, a study of the Circle of Security (COS) parenting programme by Huber, McMahon, & Sweller (2015) showed significant improvements in participants RF. This study was limited, however, to biological parents and there are currently no studies that explore the RF of non-biological carers (e.g. foster carers) completing the COS programme.

Previous Reviews

Despite an increasing awareness of the significance of mentalisation, the existing reviews of foster and adoptive interventions have largely overlooked the role of mentalisation. Recent systematic reviews into interventions in foster family care (Bergstrom et al., 2019; Kemmis-Riggs, Dickes & McAloon, 2018) made no reference to mentalisation, MM or RF. Similarly, recent systematic reviews of psychological interventions for adoptive parents (Drozd, Bergsund, Hammerstom, Hansen and Jacobsen, 2017; Ni Chobhthaigh and Duffy, 2019) made only passing reference to MM and did not investigate RF or mentalisation more broadly. An evaluation of the methodological challenges of investigating foster and kinship carers and children (Kemmis-Riggs,

Dickes, & McAloon, 2018) did not consider the challenges of investigating mentalisation or the associated constructs of RF or MM. Given the possible importance of increased mentalisation in foster and adoptive parents, a review of interventions for foster and adoptive carers is central to increasingly the knowledge base in this important area.

Review aims

This emphasis on foster carer mentalisation is important because mentalisation in the carer forms the building blocks from which children's own mentalisation and attachment is developed. This review aims to reflect on the complexities and challenges of studying mentalisation; a concept that stretches across multiple theoretical foundations and can be studied using an array of different measures and within a range of interventions. The effectiveness of the interventions will be assessed in the context of the quality of the available literature, holding in mind the difficulties and limitations of investigating a population that has received inadequate exploration in the past. An essential part of this review, therefore, will be to identify the gaps in the literature and provide recommendations for future research and clinical practice.

In summary, the review questions for the literature looking at interventions aimed at improving mentalisation in carers and/or parents of LAC are therefore:

1. What interventions are used to improve mentalisation in foster and adoptive carers and what are the theoretical bases of these interventions?
2. What are the commonalities and differences of the core elements of the interventions?
3. What are the strengths and limitations of the studies?

4. What, if any, is the evidence that such interventions are effective in improving carer mentalisation?
5. If there are improvements, are these maintained over time?

Method

Literature search

Four electronic databases (PsycINFO, Medline, Social Care Online and Scopus) were searched to find relevant papers. The search looked at papers produced between 1989 and 2019. 1989 was the year the concept of mentalisation was first used by Peter Fonagy (Fonagy, 1989). A PRISMA diagram of the search process can be found in Figure 1 below. The inclusion and exclusion criteria are presented below in Table 1. The review used the following relevant search terms:

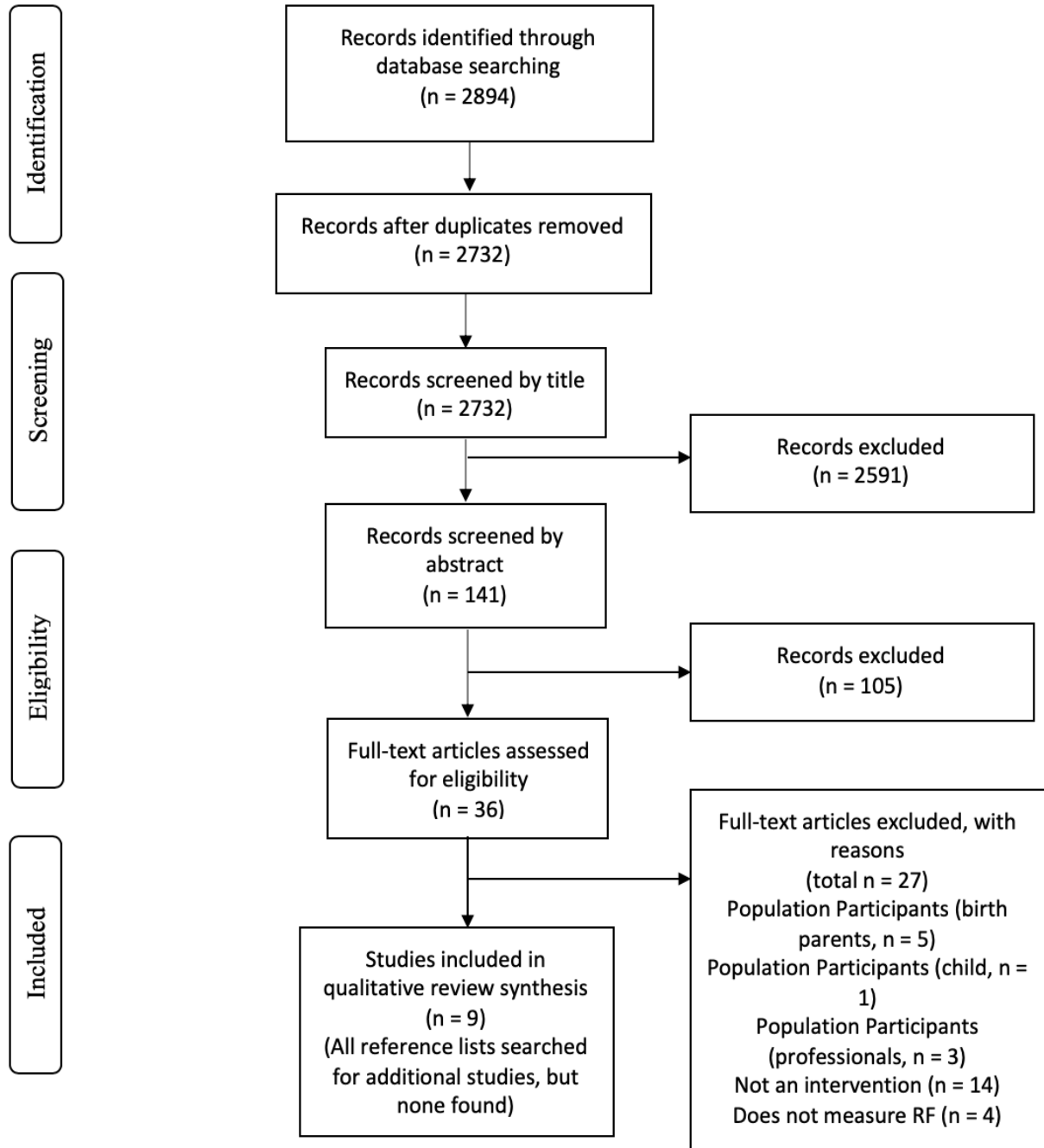
(Reflective functioning OR mentali?ation OR mind-mindedness OR mind-minded) AND (intervention OR treatment OR training OR course OR class OR support OR service) AND (foster care OR kinship care OR foster child* OR foster parent* OR foster carer* OR foster mother OR foster father OR foster family OR adoption OR adopted OR LAC or ‘Looked After’)

The term ‘mind-mindedness’ (MM) and ‘mind-minded’ was included in the literature search after preliminary exploration of the literature revealed its widespread use.

Table 1. Inclusion and exclusion criteria for the review

	Inclusion criteria	Exclusion criteria
Participants	Foster carers and adoptive parents.	Studies on foster and adoptive children, biological parents or residential placements.
Intervention	Any intervention targeted at foster carers and adoptive parents. Published between 1989-2019.	
Control	Papers with and without control groups	
Outcomes	The study must include one or more quantitative measure of parental mentalisation.	Studies including only qualitative or anecdotal outcomes.
Study design	Any design evaluating an intervention	
Language	Written or translated into English	
Category	Journal article or thesis (including unpublished)	

Figure 1. Flowchart of literature search



Critique

Studies were critiqued using an amalgamated checklist comprising of items from the quality assessment tools developed by the ‘Effective Public Health Practise Project’ (EPHPP,

2009) and Downs and Black's (1998) tool for evaluating literature. These combined assessment tools provided the questions necessary to comprehensively critique the literature. Booth, Papaioannou & Sutton (2012) indicate that although checklists may offer novices a means to assess the quality of studies, if they are applied too strictly, checklists can result in misleading conclusions. This review, therefore, used the EPHPP (2009) and Downs and Black's (1998) tool as a foundation for exploration of the literature. A full list of the information extracted and key questions asked of the studies can be found in Appendix B. Table 2 shows key elements from the papers.

Overall, the studies in this review were found to have significant limitations. No studies were removed from the review as a result of methodological or design issues. However, due to the limited use of control groups and other research limitations, described more fully in the results section (review question 3), the results were largely taken as descriptive.

Review structure

The review is organised into the key research questions outlined in the introduction. Key themes and results from the literature are summarised pertinent to the question.

Results

The search strategy outlined above revealed nine relevant studies that met the inclusion criteria. There were four uncontrolled pre-post intervention designs (Gurney-Smith, Granger, Randle, & Fletcher, 2010; Midgley et al., 2019; Selwyn, Golding, Alper, Smith, & Hewitt, 2016; Zeegers et al., 2019), two repeated measures designs (Bick, Dozier, & Moore, 2012; Gabriel, 2017)

and three controlled pre-post designs (Adkins, Luyten, & Fonagy, 2018; Bammens, Adkins, & Badger, 2015; Wassall (2011). Table 2 below summarises the key information from these studies.

Table 2. Summary of studies included in the review

<i>Study</i>	1	2	3	4	5	6	7	8	9
<i>Author (Year)</i>	Gurney-Smith, Granger, Randle, & Fletcher (2010)	Wassall (2011)	Bick, Dozier, & Moore (2012)	Bammens, Adkins, & Badger (2015)	Selwyn et al. (2016)	Gabriel (2017)	Adkins, Luyten, & Fonagy (2018)	Midgley et al. (2019)	Zeegers et al. (2019)
<i>Country</i>	United Kingdom	United Kingdom	United States	United States	United Kingdom	New Zealand	United States	United Kingdom	The Netherlands
<i>Quantitative Design</i>	Uncontrolled pre-post	Controlled pre-post	Repeated measures	Controlled pre-post	Uncontrolled pre-post	Repeated Measures	Controlled pre-post	Uncontrolled pre-post	Uncontrolled pre-post
<i>No. of participants</i>	N = 13	N = 25	N = 56	N = 31	N = 34	N = 22	N = 102	N = 28	N = 105
<i>Control</i>	No	Yes (Waiting-list control group)	No	Yes (Treatment as usual: 1 x 4h training on trauma and attachment)	No	No	Yes (4-hour class consisting of educational information)	No	No
<i>Follow-Up</i>	3-month	8-month	No	No	7-8 months (N = 18)	3 months (only descriptive information provided)	6 weeks	6 weeks	6-month
<i>Mentalisation outcome measures used</i>	Mind-Mindedness Interview - Adapted	Maternal Mind-Mindedness Interview	Reflective Functioning Scale	Five-minute speech sample coded using the RF coding manual (Fonagy et al., 1998)	Parental Reflective Functioning Questionnaire	Mind-Mindedness Interview	Parental Reflective Functioning Questionnaire Five-minute speech sample coded using the	Parental Reflective Functioning Questionnaire	Mind-Mindedness Interview

						Reflective Functioning Scale			
Intervention	Fostering Attachments Group (precursor to Nurturing Attachments group) 18 x 2.5h group sessions)	Fostering Attachments group (see left)	Attachment and Bio-behavioral Catch-up 10 x 30-60min individual sessions	Family Minds programme 3 x 3h group sessions	Nurturing Attachments Program 18 x 3h group sessions	Fostering Security training programme 10 x 2h group sessions	Family Minds 3 x 3h group sessions	Reflective Fostering programme 10 x 3h group sessions	Basic Trust Intervention 6 to 9 individual or couple session
Theoretical foundation of intervention	Social learning theory and attachment theory.	Social learning theory and attachment theory.	Attachment and bio-behavioural theories	Mentalisation-based therapy and attachment	Attachment theory and mentalisation	Attachment theory, mind-mindedness, social learning theory, neurobiological theories and attribution theory	Mentalisation, information on trauma and attachment	Reflective parenting model and attachment	Attachment and mind-mindedness
Children's age (years)	Mean: 9 yrs Range: 4-14 yrs	Mean: 8.31 yrs Range: 0-15.5 yrs	Mean: 12 months Range: 2 weeks-31 months	Mean: 5 yrs 10 months Range: Not reported	Mean: 8 years Range: 1.5-17 yrs	Mean: 7 Range: 2-13 yrs	Mean: 6.5 yrs Range: 2 months-18 yrs	Mean: 8.85 Range: 3-19 yrs	Mean: 8.12 yrs Range: 3-11 yrs
Population	Foster carers and adoptive parents	Foster carers and adoptive parents	Foster carers	Foster carers and adoptive parents	Adoptive parents	Foster carers	Foster carers	Foster Carers	Adoptive parents

Literature Review

Research question 1: What interventions are used to improve mentalisation and what are their theoretical groundings?

In attempting to answer this research question it is clear that there are a significant number of different types of interventions with largely the same aims, and yet, there are limited studies which evaluate each of these interventions. The nine studies included in this review used a total of seven different interventions. The wide range of interventions used suggests that interventions aimed at developing mentalising are at the early and exploratory stages of development. No randomised controlled studies have been produced, there are no best practice guidelines highlighting effectiveness and the National Institute for Health and Clinical Excellence (NICE) do not offer guidance on mentalisation or Reflective Functioning in their document on attachment for LAC (NICE, 2015).

Fostering Attachments programme (studies 1 and 2)

The Fostering Attachments programme aims to develop the parenting skills of the caregiver using an understanding of social learning and attachment theories. Golding (2007) developed the programme after seeing the importance of developing attuned and responsive parenting (key components of parental mentalisation) in successful foster and adoptive relationships. The group is built upon Attachment Theory and developing an understanding of the impact of trauma on children's development. It is also informed by Dyadic Development Practice (DDP) (see Casswell, Golding, Grant, Hudson, & Tower, 2014), a model designed to support children who have experienced trauma and disturbances in their attachments.

Nurturing Attachments group (study 5)

Golding (2014) published a revision of the 'Fostering Attachments group' (described above) and was largely grounded in the same psychological theory. More attention, however, was given in this intervention to developing the mentalisation of participants including a focus on self-care, stress and maintaining emotional connections to children when managing behaviour. This was done through the implementation of reflective diaries, actively creating spaces to consider the mind of the child and reflecting on the impact of the child's behaviour on themselves. Space was also created to consider difficulties children may be experiencing in different aspects of their lives, for example at school and with friends (Golding, 2014).

Attachment and Bio-behavioral Catch-up (ABC) (study 3)

This intervention was developed to improve the quality of care for looked after infants and to promote the healthy development of infant-carer relationships (Dozier & the Infant-Caregiver Lab, 2002). The intervention is grounded in three aspects of psychological theory critical to fostering: 1) Helping caregivers to re-interpret infants' signals eliciting nurturance even when the behaviours often fail to elicit nurturance (Stovall-McClough & Dozier, 2004), 2) developing autonomous caregivers, which relates closely to attachment (e.g. offer nurturance) (Dozier, Stovall, Albus, & Bates, 2001), and 3) developing caregiving styles that promote bio-behavioural regulation in infants (e.g. Field, Hernandez-Reif, Diego, Schanberg, & Kuhn, 2005; Barnard & Morisset, 1995). Each of these components are related to central aspects of parental mentalisation.

Family Minds (studies 4 and 7)

The Family Minds (FM) programme is a psycho-educational intervention designed specifically for use with foster carers and adoptive parents. It explicitly uses principles from

mentalising and specifically Mentalisation-Based Therapy (MBT). The main purpose of the intervention is overtly to improve carer mentalisation. The intervention progressively introduced self-reflection and mentalisation. Using principles from Mentalization-Based Therapy for Families (MBT-F; Allen et al., 2008), it encourages curiosity and consideration of others' internal worlds.

Fostering Security programme (Study 6)

The Fostering Security programme aims to incorporate the development of carer mentalisation alongside a more traditional skills-based model (Gabriel, 2017). The programme comprises psycho-educational and skills-based modules as well as a more explicitly mentalising focused 'caregiver self-care and self-reflection' module, which focuses on participants' own attachment and parenting histories in order to develop an understanding of the functions underlying their children's behaviours.

Reflective Fostering Programme (RFP) (study 8)

The Reflective Fostering Programme (RFP) (Redfern et al., 2018) was specially designed for easy implementation by non-mental health specialists. The group is informed by Cooper & Redfern's (2016) Reflective Parenting Model (RFM), which encourages self- and child-focused RF with the aim of managing emotional states and stress. The group is designed as a psychoeducational, not therapeutic, intervention. The RPM is grounded in psychological theory related to sensitive caregiving, building strong parent-child relationships and secure attachment (Fonagy, Steele, Steele, Moran, & Higgitt, 1991; Huth-Bocks, Muzik, Beeghly, Earls, & Stacks, 2014; Stacks et al., 2014).

Basic Trust Intervention (study 9)

The basic trust intervention aims to improve carer's sensitivity and mind-mindedness through video feedback. The focus of the sessions is to create an awareness of the child's behaviour and mind, and how parents are responding to the child. The programme also includes psycho-educational components where participants learn about the implications of insecure and disorganised attachment and how mind-mindedness and sensitivity can create a safe environment for the child. The intervention is focused on strengthening the parent-child relationship by developing responses to the child's attachment signals and needs (Colonnesi et al., 2012). The study is also based in theory relating to mind-mindedness, which encourages sensitive and appropriate responses by highlighting the feelings, wishes, intentions, and thoughts of the child (Meins, 1997).

Research question 2: What are the commonalities and differences of the core elements of the interventions?

As the previous research question shows, there remains a large number of interventions offered to carers and adoptive parents which focus on achieving similar goals. The current literature search revealed seven separate programmes from the nine studies. The majority (7 studies, 5 programmes) of the studies and programmes offered the interventions to adoptive parents and foster carers in a group format. Two of the programmes (studies 3 and 9) were delivered as either individual or couple's sessions. Both non-group programmes made use of video analysis of carer-child interactions allowing for an in-depth and personalised breakdown of caring behaviours. These two were also the shortest of all the interventions; between 5-10 hours (study 3) and 6-9 hours (study 9). Although the average length of all the programmes was 24.7 hours, the range between them was considerable. The shortest was the Attachment

and Bio-Behavioural Catch-up programme, which involved between 5-10 hours, with the longest being the 54-hour Nurturing Attachments Group.

All seven of the interventions found in this review were grounded, at least in part, in attachment theory. This foundation was used by the programmes to facilitate a greater understanding of the child within a relational framework. Despite the fact that many traditional parenting groups often rely heavily on Social Learning theory, only three programmes (4 studies; 1, 2, 5 and 6) explicitly employed this theory. Just one of the nine studies (study 3) explicitly used Bio-Behavioral Regulation theory to help develop regulation in foster children. An exploration of the interventions showed that three of the programmes (4 studies; 4, 5, 6 and 7) reported being 'trauma-informed'. However, the content of the four other programmes also showed theoretical foundations looking at how adverse experiences and relationships affect future experiences for LAC.

In general, the programmes' participants cared for children with a wide range of ages, which is explored further in research question 3. The average age of targeted children in eight of the nine studies was between 5-10 years old. Only one study (3) was specifically targeted at an infant population and had an average age of 1 year. Four of the studies (3, 6, 7, 8) included just foster carers in their study population, two just looked at adoptive parents (5 and 9), and three included both adoptive parents and foster carers (Studies 1, 2, and 4). In these three studies the results for each population were not separated.

Research question 3: What are the strengths and limitations of the studies?

Sampling

The sizes of the studies ranged from 13 participants for the smallest to 105 for the largest. The average was 45 participants per study. These numbers are relatively small which limits the power of statistical analyses. The mean age of the children being looked after by participants in all the studies was below 10 years old. This means that any results should largely be understood in the context of younger children. However, the range was from 0 to 19 years across all studies and some studies had particularly large age ranges with four studies (2, 5, 7 and 8) having an age range greater than 15.5 years. This may limit the conclusions that can be made about interventions for particular age-groups. Similarly, three studies (1, 2 and 4) sampled both foster carers and adoptive parents together, limiting the conclusions that can be drawn specifically about either population.

Design considerations

There were four uncontrolled pre-post (1, 5, 8, 9) and two repeated measures designed (multiple measures of the same variable taken over multiple time periods) (3 and 6) studies. Only three (studies 2, 4, 7) were pre-post studies which included a control group. Conclusions from these will be given more weight when considering later the efficacy of interventions. The conclusions that can be drawn from the uncontrolled studies are limited as causality is not addressed, leaving the potential for placebo effects. The designs used by the studies are representative of a new and emerging field. The lack of a control group may be a result of studying a small and hard to reach population. Clinical demands mean that control groups cannot always be organised in time for when the intervention runs as was the case in study 5.

The control group in study 2 was a waiting-list sample that would later go on to complete the group. Participants were from the same population and were allocated to comparison or intervention groups alternatively and equally as referrals were received, which reduced the risk of confounding variables. In study 4 the intervention and comparison groups were both advertised, and participants were self-selecting, which may have resulted in self-selecting bias. Another difference between the conditions was the length of the intervention. The intervention group was nine hours long versus the comparison group, which represented ‘treatment as usual’ (TAU), being only four hours, meaning that the control group received less treatment ‘dosage’ than the intervention group. Finally, study 7 investigated the same intervention as study 4 and had similar strengths and limitations; the participants were self-selecting to treatment group and the TAU group received a shorter four-hour intervention.

Follow-up

A strength of the current literature in this field is the widespread use of follow-up measures. Seven studies (1, 2, 5, 6, 7, 8, 9) included follow up measures beyond the end of the intervention. The data at follow up for study 6, however, was not reported and therefore will not be included in this review. Follow-up data importantly provides insight into whether any intervention effects can be sustained over time.

Measures

Some studies in this field have measured carer mentalisation by scoring interviews or prompted speech in the Mind-Mindedness Interview (MMI; studies 1, 2, 6, 9), the Reflective Functioning scale (RFS; study 3) and Five-Minute Speech Sample coded for Reflective Functioning (FMSS-RF; studies 4 and 7). Alternatively, the PRFQ (used in studies 5, 7, 8) asks respondents to self-report their mentalising. The measures used in the literature have largely not had their validity or reliability assessed apart from the PRFQ, which was found to have

satisfactory validity and reliability (Luyten, Mayes, Nijssens, & Fonagy, 2017). The limited availability of rigorous evaluation of measures limits how results can be understood and interpreted. A description of the measures used by the studies can be found in Table 3.

As shown in Table 3 there are three subscales on the PRFQ. A decrease in the ‘Pre-mentalising’ subscale indicates an improvement in mentalising. Changes on the other two subscales are, however, open to a degree of interpretation. Whether increases in ‘Interest and Curiosity’ and ‘Certainty in mental states’ subscales indicate an improvement depends on the initial levels. If prior levels of these subscales are high, then an increase might indicate hypermentalising or intrusive mentalising. Study 5 created a ‘total score’ for the PRFQ. Correspondence with creator of the measure (Luyten – email correspondence) suggested that this new score was not in line with the original aims of the questionnaire. This ‘total score’ will therefore not be included in this review.

All 9 studies in this review relied exclusively on self-report and self-expression of mentalisation and the majority of the studies (1, 2, 3, 4, 6, 7, 9) analysed carers’ verbal descriptions of their child. This method has been criticised by Shai and Belsky (2011) as being adversely affected by variables such as level of verbosity and socio-economic status.

The MMI was also either slightly amended or amended scoring was used in all four studies that employed the measure (see Table 3). This limits the comparisons that can be made between studies that purportedly used the same measures. Similarly, the measures used in all the studies have not been validated for use with foster carers or adoptive parents. Study 7 was alone in using two measures of carer mentalisation; the PRFQ and FMSS-RF. This strengthens the results produced, as changes in both questionnaires would suggest that the change was more

likely to be reliable, and the different measures give a deeper understanding of what has changed.

Table 3. Overview of mentalising measures used by studies included this review

MEASURE	AUTHORS	STUDIES	CONTENT OF MEASURE	VALIDITY AND RELIABILITY ASSESSED
MIND-MINDEDNESS INTERVIEW (MMI)	Meins, Fernyhough, Russell, & Clark-Carter (1998)	Studies 1, 2, 6 and 9	<p>This measure asks participants one question: “Can you describe (child’s name) for me?” Participants responses are recorded and transcribed verbatim. The responses are then coded into four exhaustive and exclusive categories; mental, behavioural, physical and general attributes. A higher the proportion in the mental category is interpreted as greater mind-mindedness (Meins et al., 2003). Study 2 uses version 2.0 of the scoring manual. Study 9 uses version 2.2.</p> <p>Study 1 uses an additional ‘rupture question’ - ‘describe a recent rupture with your child or young person’, which is coded in the same way.</p>	No
FIVE-MINUTE SPEECH SAMPLE CODED FOR REFLECTIVE FUNCTIONING (FMSS-RF)	Bammens, Adkins, & Badger (2015) using Fonagy et al’s (1998) scoring manual	Studies 4 and 7	<p>The Five-Minute Speech Sample (FMSS), a method that asks individuals to speak uninterrupted for five-minutes and the responses are coded. In this population their foster child, for five-minutes. The speech sample is recorded and then coded for RF using Fonagy et al’s (1998) scoring manual.</p> <p>This 11-point scale places individuals on a continuum from -1 (anti-reflective) to +9 (very high RF abilities). Individuals are scored on three components of RF; 1) self-directed RF, 2) child directed RF, and 3) their global RF level</p>	No
PARENTAL REFLECTIVE FUNCTIONING QUESTIONNAIRE (PRFQ)	Luyten, Mayes, Nijssens, & Fonagy, 2017	Studies 5, 7 and 8	<p>The Parental Reflective Functioning Questionnaire (PRFQ) is an 18-item self-report measure developed as a quick and easy way to evaluate RF. The questionnaire has 18 items which ask respondents to rate how strongly they disagree or agree with a statement (e.g. ‘I always know what my child wants’) on a 7-point scale.</p> <p>A validation study was Luyten, Mayes, Nijssens, & Fonagy (2017) found a three-factor structure in samples of biological mothers and fathers. The three subscales (and internal consistency) were ‘Pre-mentalising’ (alpha = .617), ‘Certainty about mental states’ (alpha = .860) and ‘Interest and curiosity in mental states’ (alpha = .676).</p>	<p>Yes</p> <p>Preliminary evidence shows good internal consistency and construct validity (Luyten, Mayes, Nijssens, & Fonagy, 2017)</p>

Research Question 4: What, if any, is the evidence that interventions are effective in improving mentalisation?

As discussed, the literature in this field is still in early development and studies have often relied on small-scale pre-post designs. The deficits in study design and the variability of measures and programmes prevent any firm conclusions to be drawn regarding the efficacy of interventions in this field. However, the literature when taken as a whole does allow readers to form initial hypotheses around the efficacy of various interventions on mentalisation, which this review will now seek to summarise. Overall, improvements in aspects of carer mentalisation was found in 7 of the studies (studies 1, 3, 4, 5, 6, 7, 9), see Table 4 for a summary of results.

Table 4. Overview of results from studies included in this review

Study	Intervention	Measure	Significant changes?	Effect size (if reported)
Study 1	Fostering Attachments	MMI	No	N/A
		Additional question on MMI	Yes	$F = 5.9, p < .01$
Study 2	Fostering Attachments	MMI	No	N/A
Study 3	Attachment and Bio-behavioral Catch-up (ABC)	RFS	No	$t = 2.063, p = .044$
Study 4	Family Minds	FMSS-RF	Yes	$U = 33.5, p = .001$
Study 5	Nurturing Attachments group	PRFQ	Yes	Interest & curiosity subscale: $p < .002, d = .466$ Other subscales: NS
Study 6	Fostering Security programme	MMI	Yes	$F = 3.57, p = .035$

Study 7	Family Minds	FMSS-RF	Yes	Global score: $F = 13.07, p = .001$ Parent subscale: $p = .01, d = .94$ Child subscale: $p = .011, d = .77$
		PRFQ	Yes	Certainty subscale: $p < .03, d = .55$ Interest & Curiosity subscale: $p < .05, d = .50$ Other subscales: NS
Study 8	Reflective Fostering Programme	PRFQ	No	N/A
Study 9	Basic Trust Intervention	MMI	Yes	$p < .01, d = .58$

Fostering Attachments and Nurturing Attachments groups (3 studies)

Study 1 analysed the mentalisation of foster carers and adoptive parents completing the Fostering Attachments Group using an adapted MM interview (see Table 3 for more information). The measure revealed no statistically significant changes on the description or total rupture subsections. However, the total number of caregiver mental attributes on the additional rupture question showed a statistically significant increase in attributes. The added question was developed for this study and includes no data on reliability or validity. Despite this, the change is suggestive of improvements in foster carers' understanding of the mind of their child and a better understanding of their own minds in relation to their child after a rupture had occurred. These results may be revealing a process involved in carer mentalisation where a greater understanding of one's own mind precedes greater insight and understanding of their child's mind. Despite these encouraging results, the original part of the MMI indicated no changes in the mentalising abilities of participants. This disparity will be considered in the discussion.

Study 2 sought to replicate study 1 as it measured the Fostering Attachments Group using the MMI. It lacked, however, the additional 'rupture question' so this could not be further explored. The investigation was strengthened by a more rigorous design that included a control

group. Similar to study 1, no significant changes during or following the intervention were found in MM. Despite this, the authors report that the facilitators of the group qualitatively described an increase in participants' understanding and ability to empathise with their child's thoughts.

The apparent consistent lack of improvements in MMI resulted in changes being made to the intervention, which was adapted and renamed 'Nurturing Attachments' and evaluated in study 5 (the changes to the intervention are reported in research question 1). The study found no difference pre- and post-training on the 'pre-mentalising' or 'certainty' subscales of the PRFQ. However, the 'interest and curiosity' subscale was found to significantly increase from pre- to post-training ($p < .002$) with a small effect size (Cohen's $d = .466$). The overall RF score was also found to significantly increase ($p < .002$). However, as shown in research question 3, the calculation of the overall RF score appeared to be idiosyncratic as the original measure does not provide this score and so should not be interpreted as a valid assessment of RF. Despite efforts by the authors of study 5, no control group was available, meaning definitively linking the improvements in aspects of mentalisation is not possible. Using the PRFQ rather than the MMI also meant that it is difficult to know whether the differences between studies 1 and 2 and study 5 can be attributed to the adaptations in the group or the measure being used. Despite this, a strength of the Fostering/Nurturing Attachment groups is the repeated measurement and adaption of the intervention and there is some early promise for this adapted intervention.

Family Minds

The Family Minds intervention was evaluated by two studies (4 and 7). Study 4 used a control group and found that prior to training there no difference between the Family Minds

training group and the control group on the FMSS-RF measure. Analysis of the subscales of the FMSS-RF (Child-focused, self-focused and global) revealed close to identical scores between subscales: if a participant had high RF in one domain the other two domains were also high. The individual subscales were therefore not reported by the study. Following the training, a significant difference was found between the mean RF scores of the intervention (Mean = 5.12) and comparison groups (Mean = 3.46) ($U = 33.5, p = .001$): indicating positive treatment effects from the programme on participants' mentalisation.

Possibly the study with the strongest design in this review was study 7, which included a control group and a relatively large number of participants ($n = 102$). Accordingly, the results from the study will be given more weight. It was particularly useful research as it sought to replicate and build upon study 4. It developed study 4 by using two mentalisation measures (PRFQ and FMSS-RF), which helped to compare different forms of measurement. As in study 4, study 7 showed that the participants in the Family Minds group had significantly improved the scores in both questionnaires when compared with groups that completed an alternative psychoeducational group. The improvements were found in both mentalising measures and indicated a degree of consistency between the measures.

A particularly interesting result was a significant decrease in the certainty subscale of the intervention group in study 7, which was interpreted by the authors of the study as the Family Minds intervention improving the mentalising of carers. As cited by the study, Asen and Fonagy (2012) highlight how parents that are less certain about their child's mind (e.g. what they are feeling or believing) are more likely to be inaccurate and inflexible when mentalising their child. It's of note that the studies investigated different but related populations; study 4 - adoptive parents, study 7 - foster carers. This indicates that the Family

Minds group could be effective for both populations. The authors also highlighted the decrease in the mentalising scores in the TAU control group, which they suggested was a potential negative outcome of non-mentalising or relational focused interventions. They speculated that these groups may result in an ‘overconfidence’ in ‘knowing’ their children. This is an important hypothesis that should be followed up in further intervention.

Attachment and Bio-behavioral Catch-up (ABC)

Study 3 represents the only evaluation of the ABC intervention. Participants’ mentalisation was measured in sessions 3, 6 and 9 of the intervention using the Adult Attachment Interview scored for RF (AAI-RF). The RF scores were found to significantly increase at time two and three ($t = 2.063, p = .044$). However, as acknowledged by the authors, the lack of rigor in the design (i.e. no control group and no clear baseline) prevents further interpretation of the results beyond highlighting potentially interesting findings and a possible new way of measuring change, justifying further exploration.

Fostering Security programme

The Fostering Security programme was only represented in this review by study 6. Results indicated that participants’ scores on the MMI had increased from baseline over four measurement time points. There was an overall significant effect found in the interaction between time and mind-mindedness score across both intervention groups ($F = 3.57, p = .035$). Post-hoc tests that measured between the time points were not carried out and so it is not possible to know when improvements occurred. These limited results may indicate a positive effect from the Fostering Security programme, but further evaluation is required.

Reflective Fostering Programme (RFP)

Study 8 evaluated the RFP using the PRFQ, which showed no significant improvements across all PRFQ subscales in the pre-post measure. Despite this, participants in the study fed back that they experienced an increase in reflective capacity. The qualitative improvements could have been a result of participants wanting to please researchers and provide positive feedback for the group. The reason for the disparity between quantitative and qualitative data may, however, have been due to the small sample size or the limitations in the sensitivity of the measure to capture any changes. A large sample size and the use of more measures would help differentiate between these various hypotheses explaining no change in the scores.

Basic Trust Intervention

The most recent publication, study 9, evaluated the Basic Trust intervention. Using the MMI, it found a significant increase in the mind-related descriptions (8% more than at baseline) from pre- to post-intervention with a medium effect size ($p < .01$, $d = .58$). Although this cannot be causally interpreted due to the lack of control group, there may be initial indications that the Basic Trust intervention can be used to improve carer mentalising.

Research Question 5: If there are improvements, are these maintained over time?

A strength of seven of the studies in this review was the use of follow-up measures. The follow up data was collected between 6-weeks (studies 7 and 8) and 8 months (studies 2 and 5) after the interventions were completed (although the statistical data for study 6 was not reported). Follow-up measures are very valuable in indicating whether there are any long-term treatment effects.

Of the studies that found improvements, four involved a follow-up measure. Post-hoc tests in study 1 found improvements from baseline to follow-up on the additional MMI rupture question. However, as discussed, there is very little evidence around the validity of this question and so this result should be viewed with significant caution.

Study 9 included a follow-up measure that showed that the initial improvements made in mentalisation after the intervention were no longer significantly different to pre-intervention levels. Study 6 also indicated a loss of the improvements after a 3-month follow-up. The study did not report the statistical significance of this reduction which limits what can be interpreted. Losses in improvements are a concern for interventions that seek to make lasting changes for participants. Study 9 discussed the possible need for ‘booster sessions’ to help maintain improvements in carers particularly following periods of high stress in the family.

In contrast to the above, two studies demonstrated sustained improvements in mentalisation 7-8 months (study 5) and 6 weeks (study 7) following the end of the intervention. A smaller number ($n = 18$) returned the 7 to 8-month follow-up questionnaires. These responses should be treated with caution as an exploration by the authors suggested that participants facing more difficulties pre-intervention were more likely to have returned the questionnaires. However, the results indicated that the improvements in mentalisation had been retained. Similarly, Study 7 found that both parent and child RF measures on the FMSS-RF and subscales of the PRFQ had maintained improvements made during the intervention. With a relatively robust study design, the results from study 7 help to build the case that the Family Minds intervention may be effective in effecting lasting change in participants’ mentalising.

Discussion

The research questions in this review have highlighted that the interventions supporting foster and adoptive parents with mentalisation are in the early stages of development. Small-scale exploratory research remains a valuable tool for furthering an understanding of the feasibility of interventions. It does, however, limit the conclusions that can be made regarding the efficacy and longer-term implications of the interventions.

Research is increasingly showing the importance of mentalisation between biological parents and children at risk of attachment insecurity (Stacks et al., 2014). It is important for future research to parallel this exploration with non-biological carers as well. This review has highlighted the limited literature on interventions within this field. The importance of effective support for carers is central to facilitating secure attachments in LAC and there is growing evidence that effective carer mentalising is a bridge to achieving this.

The Family Minds programme possibly holds the greatest level of evidence supporting it as an effective intervention for improving mentalising, with two studies evaluating the group and one (study 7) offering a stronger design than other studies in this field. By using two measures of mentalisation, a control group and a larger number of participants, the results suggest that the Family Minds intervention holds promise for increasing mentalisation in this participant group. In addition, the positive results were maintained at 6-week follow up, further supporting the evidence that this intervention may be helpful for carers of LAC. Interestingly, this group was one of the shorter interventions (9 hours). The intervention may have been more effective as it was specifically designed for a foster carer population and specifically to improve mentalising (by for example, reducing parental stress or reducing externalising behaviours in

children). Similarly, the nurturing attachments group showed initial signs that it could be effective for carers.

Unfortunately, some past studies evaluating mentalisation interventions have not included a measure of mentalisation. For example, an evaluation by Colonnesi et al. (2012) of the 'Basic Trust' intervention (an intervention designed around the concepts of MM) included no measures of MM. The addition of these measures would allow for an exploration of the role of mentalisation and it would be recommended that future evaluations include a mentalisation measure.

There has been widespread inconsistency in how mentalising is measured. In particular, the multiple variations of the MMI make comparison between studies difficult. For example, study 1 used an adapted MMI measure and only found significant improvements in the adapted part. This disparity highlights the need for more investigation to be done into the measures evaluating mentalising. Greater uniformity in mentalising measures would allow for greater confidence to be had in studies in this area and in the comparisons made between them.

This review has also highlighted possible weaknesses in the mentalising measures. Study 2 found a disparity between the subjective perceptions of facilitators, which suggested increased mentalising, and the outcome measure (the MMI) that found no significant changes. Study 8 found a similar disparity, with participants feeding back that they had subjectively experienced improvements in their mentalising, yet no significant changes were found in the mentalising outcome measure (the PRFQ). The absence of any changes in the mentalising measures may offer a more objective and valid assessment of the mentalising. Participants and facilitators may both have vested interest in the interventions being useful and have a desire to

shine a positive light on them. However, this disparity could also indicate a lack of sensitivity in the measures. This hypothesis is in line with other literature that has shown the difficulties in measuring quantitative changes in the PRFQ after psychosocial interventions (Fonagy et al., 2016).

Given the measures used in this field are also in a developmental stage, the research would benefit from exploring innovative measures of mentalising. For example, Shai and Belsky (2011) have proposed an alternative method of measuring mentalisation by tracking the unconscious kinaesthetic patterns of parental attunement by videoing and scoring free-play sessions between parents and children. This employs a similar methodology used by infant observation studies, which has proved very valuable in furthering the child development literature. The video data needed for this measurement of mentalising may be readily available in interventions already using video feedback (e.g. studies 3 and 9) and should be considered for future studies. This approach may offer a helpful direction for future research by measuring ‘live’ mentalisation.

Clinical implications

The initial evidence from the Fostering Attachments group highlighted a lack of changes in the mentalising of participants, yet the study investigating the revised Nurturing Attachments group suggested that the increased focus on mentalising may have a positive influence. This, however, needs to be verified in a controlled and randomised trial. The implications may be that other interventions can also be adapted to actively encouraging mentalising. This may be achieved through reflective diaries and active consideration by carers of their own and their children’s minds. There are also initial signs that the Family Minds group is effective in improving carer mentalising. This group, like Nurturing Attachments,

specifically targets mentalising. These interventions should be considered by services for future interventions.

Further research

It is evident that the improvement and validation of measures into mentalising would be valuable for the development of this field. The disparity between positive qualitative feedback and an absence of quantitative changes found in studies 2 and 8 highlights the need for further exploration of measures. It would be valuable for future studies to provide a precise and in-depth qualitative evaluation of an intervention alongside a quantitative measure/s of mentalising within the LAC field.

This review found that the ages of the children in the studies often included a wide range. It would be beneficial to services for studies to investigate carers of specific age ranges in order to clarify the efficacy of interventions for different age groups. An example of this is study 3, which exclusively studied carers of infants. Alternatively, it would be helpful for outcomes to be assessed according to the different age groups of the children.

The results of study 7 showed a decrease in certainty of the intervention group as measured by the PRFQ, which was interpreted as an increase in mentalising. This review has shown the difficulties of using the PRFQ in isolation. Study 7 had the benefit of also using the FMSS-RF measure, which corroborated the increase in mentalising. However, studies that do not use additional measures or qualitative participant data could erroneously interpret an improvement in mentalising when it might be possible that participants are hypermentalising. Future research should therefore aim to use additional research methods when using the PRFQ.

It has been shown that a strength of much of the literature was the use of follow-up measures. However, this was limited by not fully reporting statistical results. Sustaining change is a very important part of interventions and follow-up data should be obtained in order to assess this, as findings may suggest that carers require additional support to maintain the changes that they have made (Selwyn et al., 2016).

The studies included in this review included populations of adoptive parents, foster carers and a combination both. It would be valuable for studies to report separately the different populations of foster carers and adoptive parents when they are included in the same study. The three studies that involved both groups, grouped them together in the results preventing an understanding of any differences between the two populations. This is important given the evidence that there are tangible differences between adoptive parents and foster carers (Neil, Beek, & Schofield, 2003).

Conclusion

Overall, this review shows a mixed picture of the usefulness of interventions which seek to increase mentalising in carers of LAC. The studies indicate mixed results in interventions' success in improving the mentalising ability of participants although weak study designs limit the conclusions that can be made. As stated above, there may be some emerging evidence relating to the efficacy of the Family Minds group and the Nurturing Attachments group. However, in the absence of good quality research into other interventions, a lack of improvement in mentalisation following these groups should not be interpreted as evidence for their lack of efficacy but rather an indication that future research is required. In particular there is a need for studies with larger numbers of participants, controls, and multiple measures.

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Section B: “Why she is the way she is”: A mixed methods exploration of changes in Foster Carers Reflective Functioning in the context of an attachment-based group intervention

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Abstract

Background: The importance of Reflective Functioning (RF) in parenting is receiving increasing attention in recent literature on child development. This study explores the journey of a group of Foster Carers (FCs) as they complete the Circle of Security Parenting (COS-P) attachment-based intervention and the effect that this has on their RF and stress.

Method: This study used a mixed methods non-experimental single case design. The quantitative section involved measuring the RF and stress of seven FCs. Six of these participants went on to also complete qualitative interviews, which was analysed using thematic analysis.

Results: The study found qualitative evidence that FCs completing COS-P developed their awareness of their own mind as well as the mind of their child. The quantitative results showed some limited changes and greater variability.

Conclusions: The study contributed to the small but growing body of literature on RF in FCs. It demonstrates how developing RF can potentially result in more sensitive and attuned caring within a foster care setting. It tentatively points to the COS-P programme as a potential programme for developing RF. Suggestions for clinical practice and further research are outlined.

Key words: Mentalising, Reflective Functioning, Foster Carers, Looked After Children (LAC).

Introduction

Looked after children

Maltreatment can be defined as physical, emotional and sexual violence, or neglect committed by adults, usually parents or others close to the child (Reading et al., 2009). In 2019 78,150 children were looked after by local authorities in England; an increase of 4% from the previous year (Department of Education, 2020). The majority (49,570 children) were looked after as the direct result of maltreatment. Looked after children (LAC) will often have experienced significant adverse experiences including suffering and witnessing violence, parental substance abuse, and living in chaotic and impoverished environments (Oswald, Heil, & Goldbeck, 2010). The majority of LAC have experienced maltreatment, which is likely to negatively impact on their ability to self-regulate and effectively manage stressful situations (Kim & Cicchetti, 2010). As a result of these adverse early experiences (ACEs), LAC are at greater risk of poor mental and physical health, and have worse behaviour outcomes when compared with their peers (Vinnerljung & Hjern, 2018).

Foster carer stress

Caring for children with a history of trauma can be very challenging even for experienced and sensitive Foster Carers (FCs). Foster caring can be a very rewarding experience, yet many in the role also cite high levels of stress relating to their responsibilities (Murray, Tarren-Sweeney, & France, 2011). A significant number of foster care placements will also ultimately break down and further compounds the traumatic experiences of the foster children (Sinclair et al., 2005). Understanding and attending to a child's developmental trauma is crucial to sustaining a positive foster care placement. The complex traumatic histories of LAC who have been maltreated means that caring for them requires a high level of adaption to

their specific developmental needs (Dozier & Rutter, 2016). There are also other factors that contribute to foster carer stress. A review conducted by Adams, Hassett and Lumsden (2018) particularly cited dealing with authorities and family tensions relating to the carers birth family as additional contributions to carer stress.

Attachment theory

Many LAC will have prior experiences of maltreatment, including from their primary caregivers who despite loving them, were too preoccupied, distant, unpredictable, punitive or distressed to be responsive to their child's needs (Cook et al., 2005). Attachment theory proposes that infants need emotionally sensitive caregivers to provide safe, consistent and attuned care (Bowlby, 1988). When this occurs, children have a 'secure base' from which they can safely explore the world, which is essential for healthy childhood development (Ainsworth, 1985). LAC have often not experienced security within caregiving relationships (secure base) and may have experienced maltreatment from their families of origin. There is evidence that as many as 80% of maltreated children will go on to develop insecure patterns of attachment (Friedrich, 2002). Disrupted early attachment experiences can result in children developing internalised working models of being unworthy and unloved, subsequently resulting in a lack of trust in caregivers (Hek & Aiers, 2010).

Reflective Functioning

Secure attachment has been proposed to be intergenerationally transmitted through parental 'reflective functioning' (RF; Slade, Grienenberger, Bernbach, Levy, & Locker, 2005). RF has been defined as an individual's ability to hold their own and others mind in mind (Bateman & Fonagy, 2012). When operationalised within the context of caring roles, the

construct is currently referred to as ‘parental Reflective Functioning’, ‘mind-mindedness’ or ‘parental mentalisation’. Common across all these definitions, is the ability of the carer to hold the child in their mind as an independent psychological agent and to reflect on the child’s mental states (Yatziv, Kessler, and Atzaba-Poria, 2018). RF particularly highlights the importance of carer self-focused mentalising. Given the number of terms used to cover overlapping constructs, this paper will largely use the term RF, although it is understood that there is likely to be an overlap with other constructs, and further research is needed to differentiate the subtleties of carer mentalisation (Camoirano, 2017).

There is growing attention being paid to the importance of RF within the parenting literature. High parental RF has been positively associated with various outcomes including: better communication and limit setting with children (Rostad & Whitaker, 2016), adaptive affect regulation and stress tolerance in children and parents (Fonagy, Gergely, Jurist, & Target, 2018) and overall more positive parenting practices (Luyten, Mayes, Nijssens, & Fonagy, 2017). Higher levels of RF have also been associated with a greater capability to manage parental stress (Rutherford, Booth, Luyten, Bridgett, & Mayes, 2015). However, when carers do not accurately mentalise their children, it can have a negative impact on their own emotions (Sharp and Fonagy, 2008).

Evidence is emerging that the relationship between child attachment, challenging behaviour and placement stability, is underpinned by the RF capacities of foster carers (Cooper & Redfern, 2016). However, the ability to effectively mentalise can become more difficult for people during times of high arousal and stress. It is therefore particularly important that FCs have, and are supported to retain, a capacity for both self- and child-focused RF (Taylor, 2012). Even FCs with relatively high RF can experience a reduction in their capacity to reflect when

working with a child or children with a history of trauma and/or distressing close relationships (Redfern et al., 2018).

Interventions

Given the compelling evidence pointing towards negative outcomes for LAC and the difficulties FCs face, there is a clear need to develop and evaluate interventions that would support FCs in their role. Although the existing literature on mentalising and FCs is limited, there are some studies that have specifically measured FCs' mentalising when completing an intervention. Perhaps most significantly Adkins, Luyten, & Fonagy (2018) found an increase in RF of FCs after completing a 9-hour intervention. In an uncontrolled study by Bick, Dozier & Moore (2012), an attachment-based group increased the RF of FCs. Reflecting on the results, the authors considered that ceiling effects may have meant that some FCs with high initial scores may have seen fewer improvements. Finding more mixed results qualitative feedback in Gabriel (2017) indicated increased RF, which was supported by some initial signs of improvement on the quantitative scales. In contrast, Midgley et al (2019) investigation using an attachment-based intervention to improve FCs' RF showed mixed results. In focus groups, participants reported improvements in their RF skills, however this was not reflected in the quantitative measuring of RF using the Parental Reflective Functioning Questionnaire (PRFQ), which showed no significant changes. Similarly, Wassall (2011) discovered that facilitators of an intervention for foster and adoptive parents reported observable changes in parental RF, yet the quantitative measure (the Mind-Mindedness Interview) did not capture any significant changes. Wassall (2011) also found that outcomes showed variation between the different individuals suggesting that the intervention may be more helpful for some.

Intervention – Circle of Security Parenting

The intervention used in this study is the Circle of Security-Parenting (COS-P) programme. COS-P is an 8-week programme designed for parents/carers of children aged 0-12 years who would like support to help their children to build secure relationships. It is an intervention that is currently being used in the UK with foster carers. COS-P uses the key concepts from the original 20-session Circle of Security (COS) intervention condensed into an 8-session intervention (Cooper, Hoffman, & Powell, 2009). Appendix B shows the 8-week COS-P curriculum. This shortened intervention was designed to be more flexible and less intense than the original COS intervention, while maintaining its core principles. The COS and COS-P programmes are based on attachment research, seeking to support parents in three ways: (1) to develop their ability to accurately observe their interactions with their child and their child's signals of attachment and needs, (2) to support their understanding of their own mental representations of caregivers and attachment, and (3) to develop caregivers' ability to mentalise in the context of their parenting role (reflective functioning) (Berlin, Zeanah, & Lieberman, 2008). These core components are hypothesised to be related to RF. Indeed, an investigation by Huber, McMahon, & Sweller (2015) with biological parents found significant improvements in RF following the COS programme. Interestingly the greatest benefits were for participants who began with less reflective abilities. The COS-P programme gets a rating of 2+ on the early intervention index (Early Intervention Foundation EIF, 2019). The EIF evidence ratings distinguish five levels of strength of evidence about the degree to which a programme has been shown to have positive, causal impact on specific child outcomes. To date, no Randomised Controlled Trials have investigated the COS-P programme and there are no known published studies exploring the use of COS-P with a FCs population. It would be very valuable to understand if RF changes for FCs, and whether there are any active mechanisms at work in RF when participating in this intervention.

Present study

The potential importance of RF in foster caring and the scarcity of research in this area led to the aims of the present study. This study explored whether FCs participating in a COS-P intervention displayed a change in their RF and parental stress. The study attempted to better understand the mechanisms by which RF might improve in the context of undertaking a COS-P intervention.

The present study sought to explore the following questions:

1. Does attending the COS-P group result in measurable change in RF over time for FCs?
2. Does attending the COS-P group result in changes in stress levels for FCs?
3. What changes, if any, do FCs notice with their parenting following the COS-P programme?
4. How do FCs understand the connections, if any, between their RF and how they parent their foster child?

Methodology

Procedure

Ethical approval was received by the Salomons Ethics Panel (see Appendix C). The intervention took place in a specialised NSPCC Parent Infant Relationship Team working with children who had been placed in foster care due to maltreatment. NSPCC ethics approval was sought and granted as well as a cross service agreement (Appendix D) made with the two local authorities that employed the FCs involved in the groups.

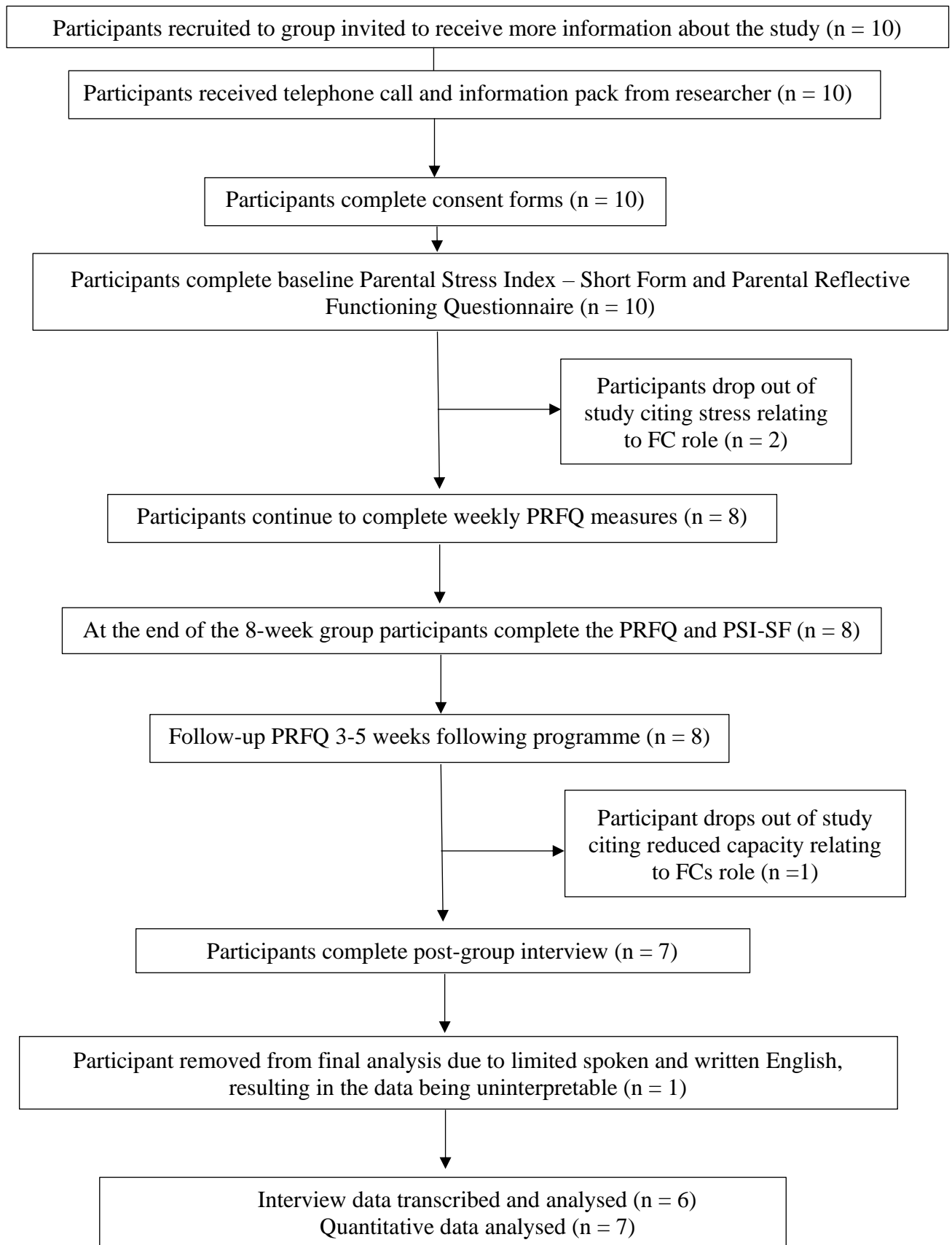
Participants

Participants for this study were recruited from two Circle of Security Parenting (COS-P) groups being run for FCs in the two local authorities. Every FCs that agreed to participate in the group consented to be part of the study, Figure 1 lays out the procedure and participant involvement. Table 1 summarises the demographic and key information of the FCs involved in the study. All participants involved in final analysis were female, which is broadly representative of the FCs population. One male was initially involved in the study but was not included in final analysis. Pseudonyms were given to protect anonymity of the participants and minimal information is also given, to decrease likelihood of identification. The average age of the foster child involved in this study (through their FC) was 8.5 years (range = 4 to 13 years).

Table 1. Participant demographic and key information

Participant number	Pseudonym	Gender	Ethnicity	Years as a FC	Age of foster child used for questionnaires	Number of current foster children	Number of sessions missed	Referrer to the group
1	Lizzy	Female	Black British	10	13	3	3	Supervising social worker
2	Abi	Female	Black British	9	4	3	1	Prior involvement with service
3	Nikki	Female	White British	11	8	1	0	Supervising social worker
4	Mary	Female	White British	13	8	2	1	Supervising social worker
5	Fatima	Female	Asian British	9	8	2	2	Self-referral
6	Ayesha	Female	Asian British	15	10	3	2	Self-referral
7	Jasmine	Female	Asian British	Unknown	Unknown	Unknown	1	Supervising social worker

Figure 1. Flowchart showing participants progression through the study



Design

This study was initially intended to be run using a mixed-methods Single Case Experimental Design (SCED). The use of mixed methods allows for research questions to be more comprehensively addressed than when using either quantitative or qualitative methods (Creswell & Clark, 2017). A mixed methods design employs the use of both quantitative and qualitative data collection and analysis, which can help to provide a rich body of information. For the quantitative data it was hoped that participants would act as their own controls by comparing their non-intervention period with their intervention period. In addition, further depth would be added through qualitative interviews with all participants exploring their perceptions of any changes. SCEDs are, however, not always feasible in clinical situations due to ethical, methodological or practical obstacles (Kazdin & Wilson, 1978), and a sudden start to the groups meant that no baseline period could be collected.

Stress was measured pre- and post-program and RF was measured at every session and at follow up. The absence of a baseline unfortunately reduced the conclusions that can be drawn. Following the completion of the group, participant FCs were interviewed to offer qualitative information on their experiences of the group and their understandings of any changes in RF and parental stress. The interview data were also used to provide context and interpretation of the single case quantitative data.

Quantitative data

Standardised measures

Two standardised measures were used to assess any changes in the FCs; the Parental Reflective Functioning Questionnaire (PRFQ; Luyten, Mayes, Nijssens, & Fonagy, 2017) and the Parenting Stress Index - Short Form (PSI-SF; Abidin, 1995). Both questionnaires were

slightly adapted for this study to be relevant to FCs (eg. ‘your child’ was changed to ‘your foster child’). As shown in the introduction, there is evidence of a relationship between stress and RF. The measures used in this study were selected in order to explore the relationship between stress and RF. A foster carer (FC) who was not a participant in the study was consulted prior to the study and made comments and amendments on the word changes.

PRFQ

To measure any changes in the mentalising abilities of participants, the 18-item self-report PRFQ (Appendix G), was completed each week at the beginning of the group. The questionnaire asks respondents to rate their answers to questions relating to their parenting role on a Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The PRFQ measures three aspects of parental reflective functioning ‘Pre-mentalising’ (PreM), ‘Certainty about mental states’ (Cert) and ‘Interest and curiosity in mental states’ (Int&Cur). ‘Pre-mentalising’ refers to a non-mentalising stance where carers find it difficult to understand their children and are more likely to attribute malevolent intentions of their child. A *decrease* in pre-mentalising score on the PRFQ therefore, indicates an improvement in mentalisation. A *decrease* ‘Certainty’ scores usually indicates improvement in carers’ ability to be more flexible in their mentalising, however, if it is already low, a further decrease may indicate a decrease in understanding their child. The final subscale of the PRFQ, ‘Interest and curiosity in mental states’, refers to a carer’s curiosity around the inner world of their child. An *increase* in the scores of this subscale generally indicates an improvement in RF. However, it is also possible that if respondents with high levels of Int&Cur increase further they are hypermentalising (i.e. overinterpreting situations). Each subscale of the PRFQ was analysed individually for each participant. Preliminary evidence shows good internal consistency and construct validity (Luyten, Mayes, Nijssens, & Fonagy, 2017). The PRFQ could be a more appropriate measure of RF over other methods that rely on the spoken language of respondents (e.g. the Parental

Development interview coded for RF), which can be affected by verbosity and socio-economic status (Shai and Belsky, 2011).

PSI-SF

In order to measure changes in stress levels of participants, each completed the PSI-SF (Appendix H) (Abidin, 1995) prior to the first session and again in the last session. The PSI-SF is a 36-item self-report measure based on the full PSI (Abidin, 1995). Respondents rate on a Likert scale between 1 (Strongly Agree) and 5 (Strongly Disagree) the extent to which they agree with a statement. It produces a total stress score which is comprised of three subscales; Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI) and Difficult Child (DC). PD measures the distress experienced by a carer in the context of their caring role. P-CDI measures the subjective carer perceptions that the child does not meet their expectations and that interactions with the child are not reinforcing. The final subscale, DC, measures a carer's view of behavioural characteristics such as demandingness, defiance and noncompliance. The total stress score comprises of the three subscales combined and a decrease in parental stress is expected to correspond to a decrease in all three subscales and subsequently the overall score. The questionnaire also produces a 'defensive score', which indicates that a parent or carer may be responding from a defensive position (this provides contextual information for the other results).

Analysis

Page's L-Trend Test (PRFQ)

Page's L-Trend Test (Page, 1963) is a repeated measures non-parametric trend test which was used to analyse whether there was a significant weekly trend in each of the subscales of the PRFQ in either direction. Each participant's data was measured and reported

individually. The Page’s L-Trend test was considered appropriate as the data was within-subject and ordinal. Significant trends are indicated when the p-value of the test is below the .05 level, indicating a 95% confidence that there is a significant trend. The data were analysed using a formula produced in Microsoft Excel.

Reliable Change Index (PSI-SF)

In order to measure whether statistically significant changes had occurred pre- and post-group in the stress levels of the participating FCs, the Reliable Change Index (RCI; Jacobson and Truax, 1991) was applied to each participant’s PSI-SF results. The results indicate whether change is statistically likely to be due to treatment, or if the change is within the normal range of a measure’s test-retest reliability. The RCI test is calculated using the standard deviation of a normative sample and the test-retest alpha score. If the change of scores is greater than the RCI score (reported in Table 2) there is evidence that a significant change has occurred. As a relatively new questionnaire, the PRFQ has not yet been measured for test-retest reliability so only the PSI-SF results were measured. The RCI was constructed using existing test-retest alpha scores from the PSI-SF manual (Abidin, 1995) and the standard deviation from a sample of 141 parents of a parenting study (Zaidman-Zait et al., 2010).

Table 2. RCI calculation for the PSI-SF

	Test re-test alpha	Standard Deviation	RCI score
PD	0.85	9.6	≥ 10.31
P-CDI	0.68	7.32	≥ 11.48
DC	0.78	8.6	≥ 11.18
Total stress	0.84	17.2	≥ 19.07

Qualitative data

Interview Schedule

An interview schedule (Appendix I) was designed to explore the research questions outlined in the introduction. The same questions were asked of each participant with follow-up questions being used to explore their accounts in more detail. The questions were designed to explore the experiences of the group and perceptions of any changes in FC parenting behaviours and attitudes toward their foster children. Interviews were completed 3-5 weeks following the end of the COS-P intervention. Each interview took between 45-60 minutes.

Thematic analysis

All interviews were recorded and transcribed verbatim (see Appendix J for excerpts of transcripts and coding). The analysis itself was inductive with existing theory driving the initial research questions, rather than the analysis. The qualitative data were analysed using thematic analysis based on Braun and Clarke's (2006) model, which allowed for the dominant themes and subthemes to be explored. Thematic analysis is a method that allows patterns to be found in the data. Braun and Clark's (2006) six-step model was followed: (1) All transcripts were read to become familiar with the data set. (2) The transcripts were then re-read with initial codes applied. Data extracts and their coding were analysed by two other researchers and adjustments made. (3) These codes were then searched to find overarching themes and subthemes. (4) These themes were then reviewed by the author and the two other researchers and comments and changes were made by agreement. (5) These themes were refined, and relevant names given to them. The final set of themes, subthemes and corresponding codes can be found in Appendix J. (6) Finally, the themes and subthemes were brought together in the results section below.

Results

Analysable data were available for 7 of the 10 participants involved in the study. Two participants in the second group agreed to participate in the study but dropped out early in the study. One other participant engaged well with the group, but the data were not able to be analysed due to limited levels of spoken and written English. One of the seven participants that completed the questionnaires was unable to complete an interview due to reduced capacity relating to their foster caring role. The results section first presents individual participant results, followed by qualitative themes arising from the thematic analysis of the interviews.

Individual quantitative results

Participant 1 - Lizzy

Lizzy was invited to the COS-P group by her supervising social worker. She had three foster children at the time and reported that she did not have any concerns about them. As Table 3 shows, there were no significant changes in Lizzy's PSI-SF scores over the course of the group. At both baseline and post-group, the PSI-SF indicated significant 'defensive responses', which may have impacted the validity of her responses.

There were also no significant trends in her PreM, Cert or Int&Cur subscales (see Table 4). Her Int&Cur scores were the second lowest at baseline and remained consistently lower than most participants throughout the intervention. In her interview she described the group as not being helpful and not giving her anything new. Lizzy missed more group sessions than any other participant ($n = 3$), which may have had an impact on her scores. She also reported frustration about not being able to complete the group due to a lack of childcare and not being allowed to bring an infant she was fostering into the group.

Table 3. PSI-SF scores for Lizzy

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive?	Yes (10)	Yes (9)			
Parental Distress	10	6	10.31	-4	NC
Parent–Child Dysfunctional Interaction	32	24	11.48	-8	NC
Difficult Child	26	30	11.18	4	NC
Total Stress	16	12	19.07	-4	NC

Note. NC = No Change, SC* = Significant Change.

Figure 2. Graph showing Lizzy’s PSI-SF scores

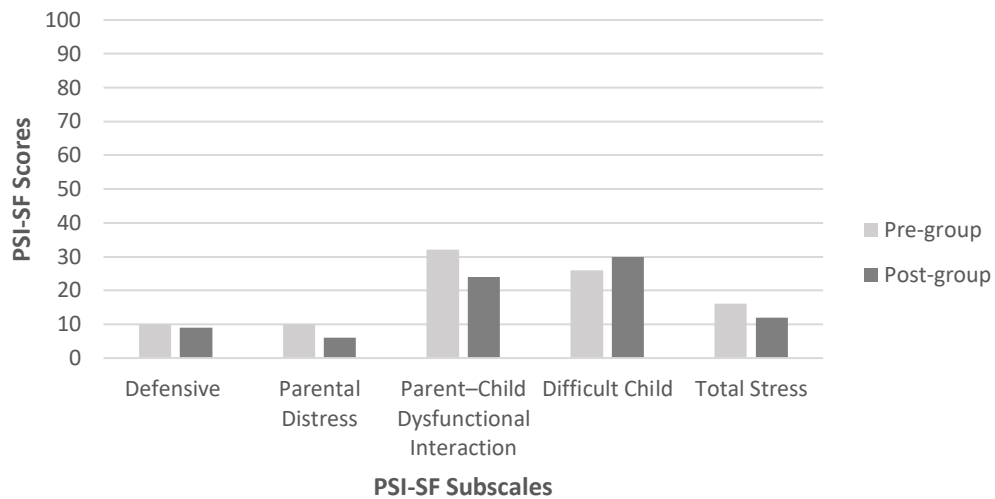
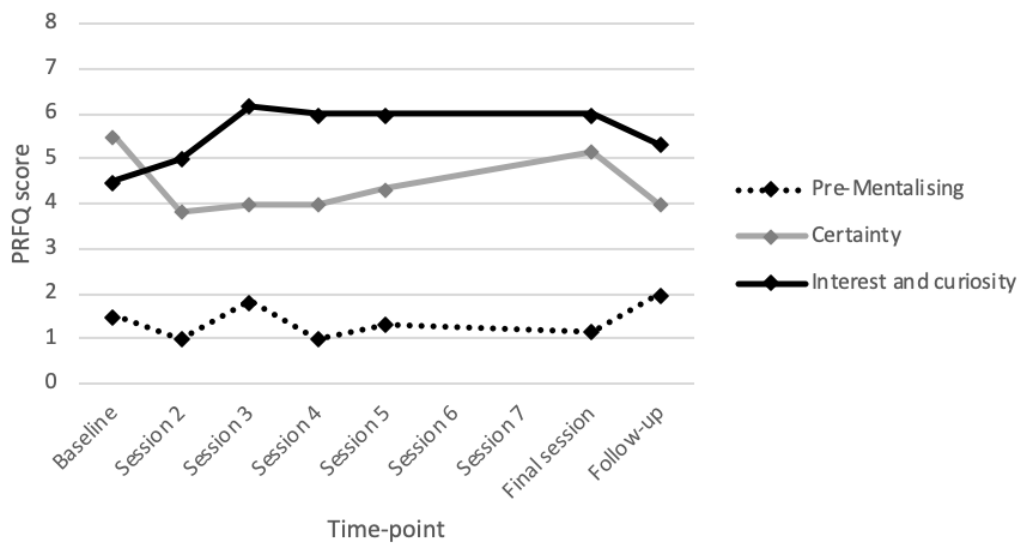


Table 4. PRFQ scores for Lizzy

	Page’s L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 116, p > .05	No	N/A
Certainty	L = 112, p > .05	No	N/A
Interest and curiosity	L = 122, p > .05	No	N/A

Figure 3. Graph showing Lizzy’s PRFQ scores



Participant 2 –Abi

Abi was invited to join the group after previous involvement with the service. She was looking after two foster children at the time of the group. Abi’s results showed some of the most change of any participant. Her PSI-SF results showed a reliable change (Table 5) in all subscales indicating that her stress had significantly improved. The results did also, however, indicate that post-group her responses were significantly ‘defensive’. Over the course of the group Abi showed no change in PreM or Cert but there was significant increasing trend in her Int&Cur score (see Table 6). She reported that the group had helped her to ‘take a step back’ and reflect. She described the group as having a significant impact on not only her fostering relationships but other relationships as well. It was therefore thought that the increase in Int&Cur indicated an improvement in RF.

Table 5. PSI-SF scores for Abi

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	No (16)	Yes (9)			
Parental Distress	54	6	10.31	-48	SC*
Parent–Child Dysfunctional Interaction	86	66	11.48	-20	SC*
Difficult Child	92	58	11.18	-34	SC*
Total Stress	78	40	19.07	-38	SC*

Note. NC = No Change, SC* = Significant Change.

Figure 4. Graph showing Abi’s PSI-SF scores

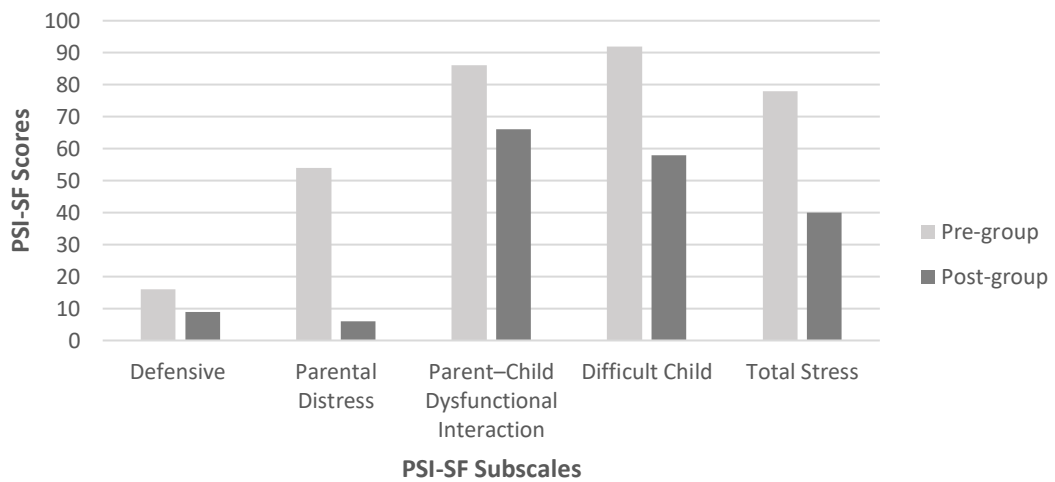
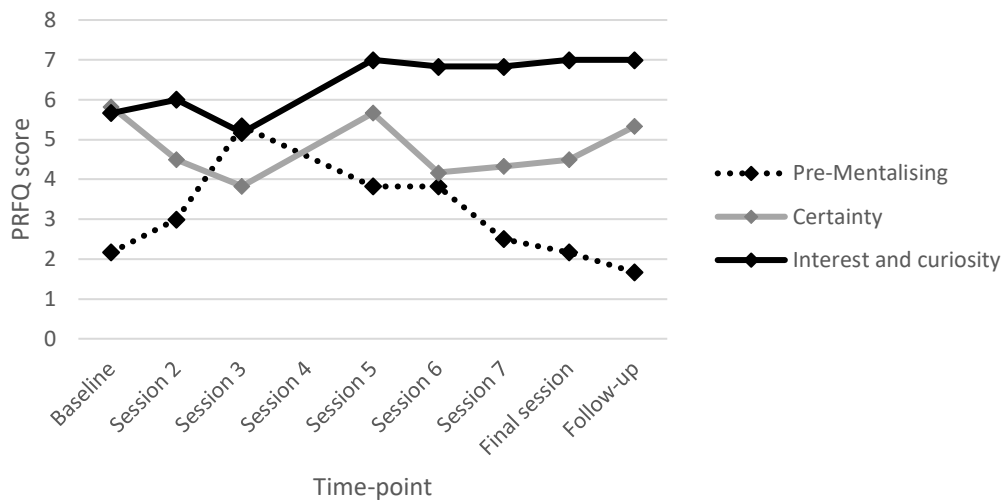


Table 6. PRFQ scores for Abi

	Page’s L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 144.5, p > .05	No	N/A
Certainty	L = 155.5, p > .05	No	N/A
Interest and curiosity	L = 193.5, p = .046	Yes	Increase

Figure 5. Graph showing Abi's PRFQ scores



Participant 3 – Nikki

Nikki was looking after one 7-year old girl. She was having significant difficulties with her at home with challenging behaviours and substantial anxiety. Her supervising social worker had referred her to the group to help support her at a challenging time. RCI calculations showed significant improvements in PD and P-CDI subscales of the PSI-SF although there was no change in overall stress (Table 7). Nikki described the group as a very helpful space where she realised that it was acceptable to take time to look after herself. She said, “it’s being aware that you need to stop, you need to stop and think, you need that little bit of time as well. You know, we need to go out, refill our glass, and come back.”

Results from the Page’s L test showed no significant effect for any of the subscales on the PRFQ (table 8). A visual inspection of the graph shows a gradual increase for IC, which had continued by follow-up. In Nikki’s qualitative feedback she indicated that she felt more aware of her own and her child’s underlying emotions and mental states. In particular, she said the group helped her to become more aware of her own responses to parental distress saying due to the group “I know the triggers. I can feel the triggers.”

Table 7. PSI-SF scores for Nikki

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	No (20)	No (17)			
Parental Distress	78	50	10.31	-28	SC*
Parent-Child Dysfunctional Interaction	92	72	11.48	-20	SC*
Difficult Child	92	98	11.18	6	NC
Total Stress	88	74	19.07	-14	NC

Note. NC = No Change, SC* = Significant Change.

Figure 6. Graph showing Nikki's PSI-SF scores

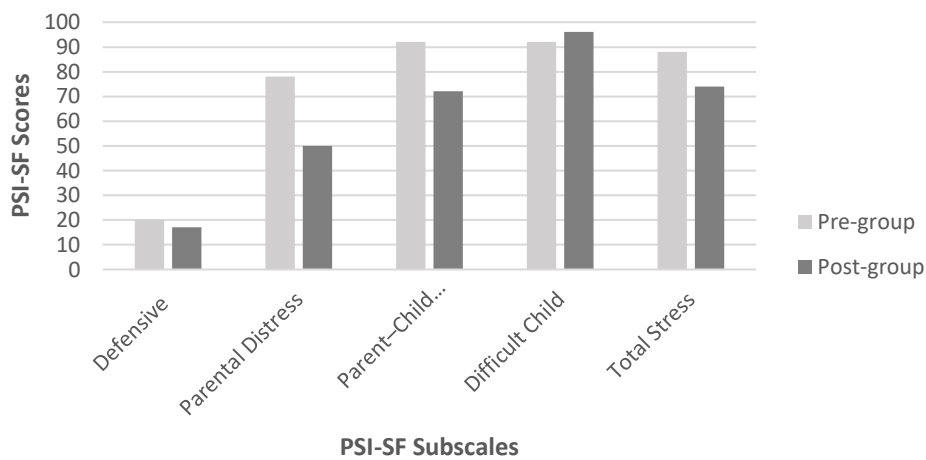
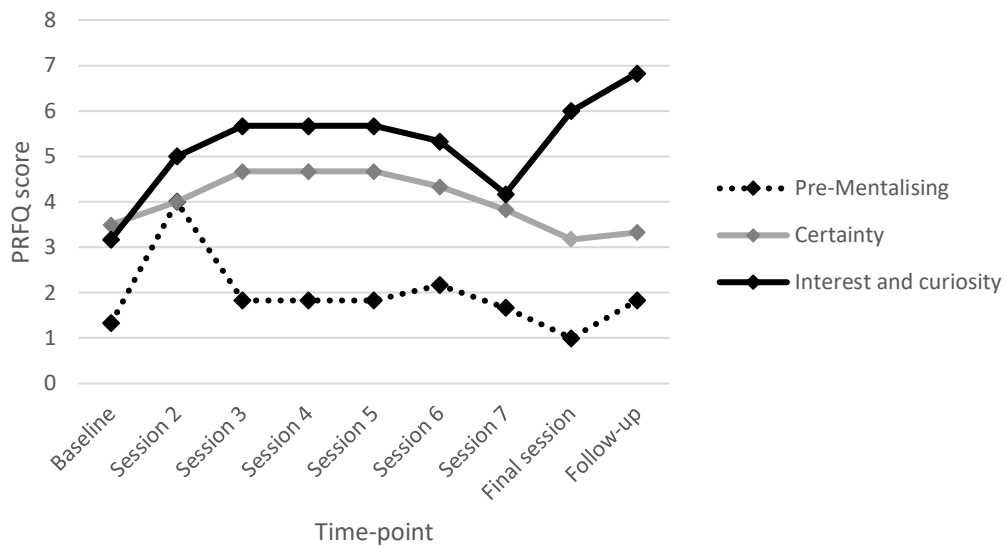


Table 8. PRFQ scores for Nikki

	Page's L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 212.5, p > .05	No	N/A
Certainty	L = 199, p > .05	No	N/A
Interest and curiosity	L = 262, p > .05	No	N/A

Figure 7. Graph showing Nikki’s PRFQ scores



Participant 4 - Mary

Mary was recruited to the group by her supervising social worker although she reported that she was not having any significant problems and that the invitation came ‘out of the blue’. From baseline to post-group on the PSI-SF (Table 9) only the ‘Difficult child’ subscale changed significantly, showing an improvement. This may have been due to understanding better ways to support the behaviour of her foster children. The PRFQ showed no changes in PreM or Cert but did find an increase in Int&Cur (Table 10). Mary described in her interview an increased interest in understanding why her foster child was behaving the way she was and felt that she was better able to understand the reason for some of her actions; “I think you analyse it a little bit more, if that makes sense”. This information alongside the PRFQ was taken as an indication that Mary’s RF had increased.

Table 9. PSI-SF scores for Mary

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	No (13)	No (14)			
Parental Distress	38	46	10.31	8	NC
Parent–Child Dysfunctional Interaction	70	62	11.48	-8	NC
Difficult Child	62	26	11.18	-36	SC*
Total Stress	58	44	19.07	-14	NC

Note. NC = No Change, SC* = Significant Change.

Figure 8. Graph showing Mary’s PSI-SF scores

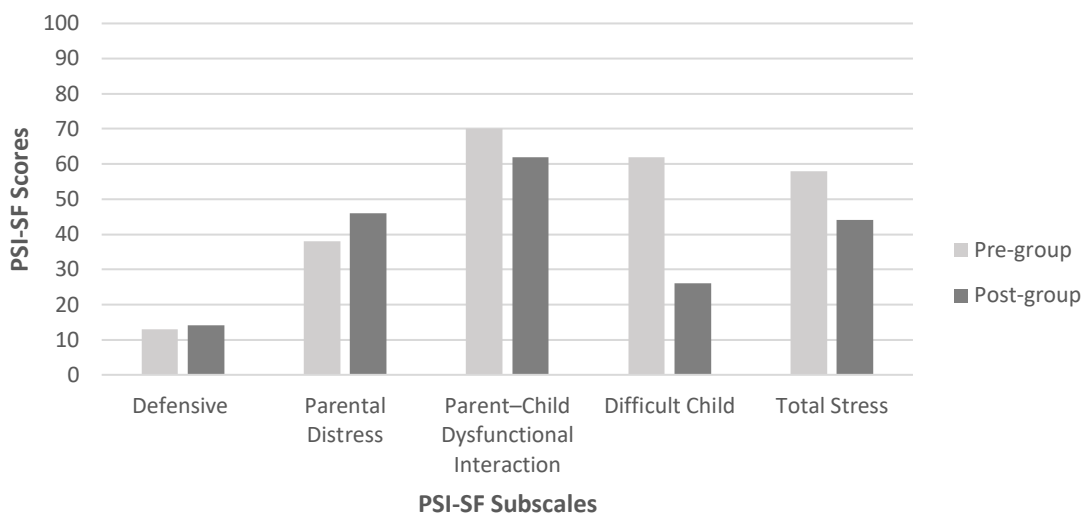
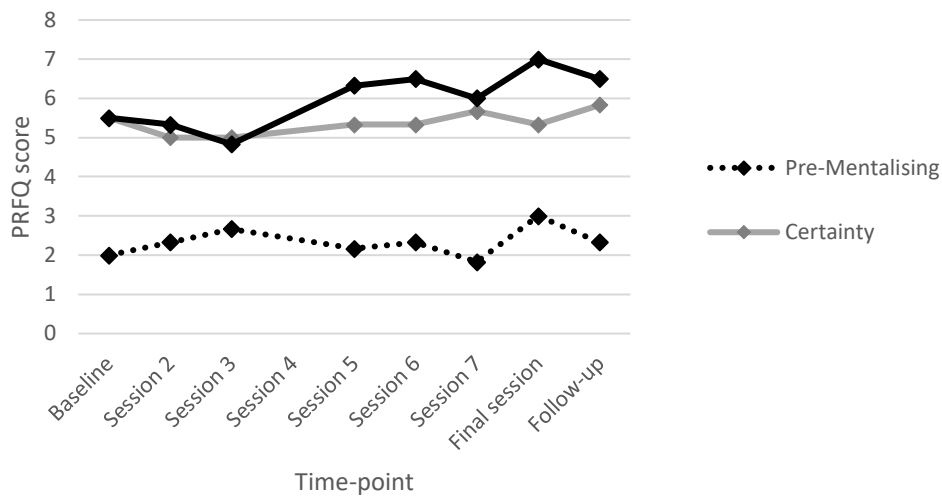


Table 10. PRFQ scores for Mary

	Page’s L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 172, p > .05	No	N/A
Certainty	L = 183.5, p > .05	No	N/A
Interest and curiosity	L = 194.5, p = .047	Yes	Increase

Figure 9. Graph showing Mary’s PRFQ scores



Participant 5 - Fatima

Fatima self-referred to the COS-P group after hearing a presentation about it at a FCs support group. She had two foster children. Her scores on the PSI-SF (Table 11) showed a ‘defensive response’ pattern but this was not present at post-group. She showed significant increase in stress in the PD and DC subscales on the PSI-SF but no significant changes in P-CDI or total stress. Fatima explained during her interview how she was finding the behaviour of her foster children difficult and that this was a significant source of stress. Fatima’s PRFQ scores at baseline indicated strong reflective abilities; scoring the second highest baseline score for Int&Cur. Over the course of the group, however, there were no changes indicated in any of the subscales (Table 12). Fatima was very positive about the group and reported that it had been very valuable to her role as a FC.

Table 11. PSI-SF scores for Fatima

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	Yes (9)	No (15)			
Parental Distress	10	38	10.31	28	SC*
Parent–Child Dysfunctional Interaction	62	54	11.48	-8	NC
Difficult Child	40	56	11.18	16	SC*
Total Stress	34	50	19.07	16	NC

Note. NC = No Change, SC* = Significant Change.

Figure 10. Graph showing Fatima’s PSI-SF scores

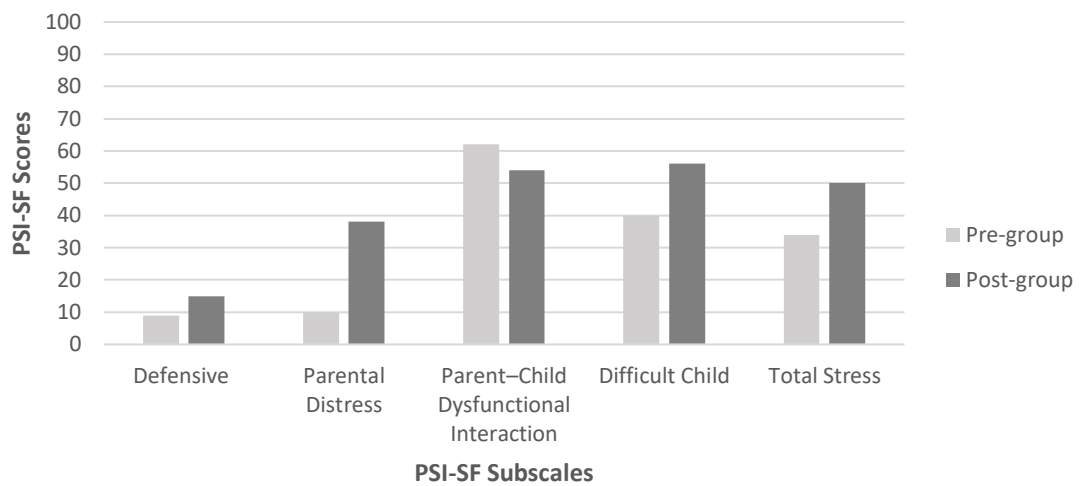
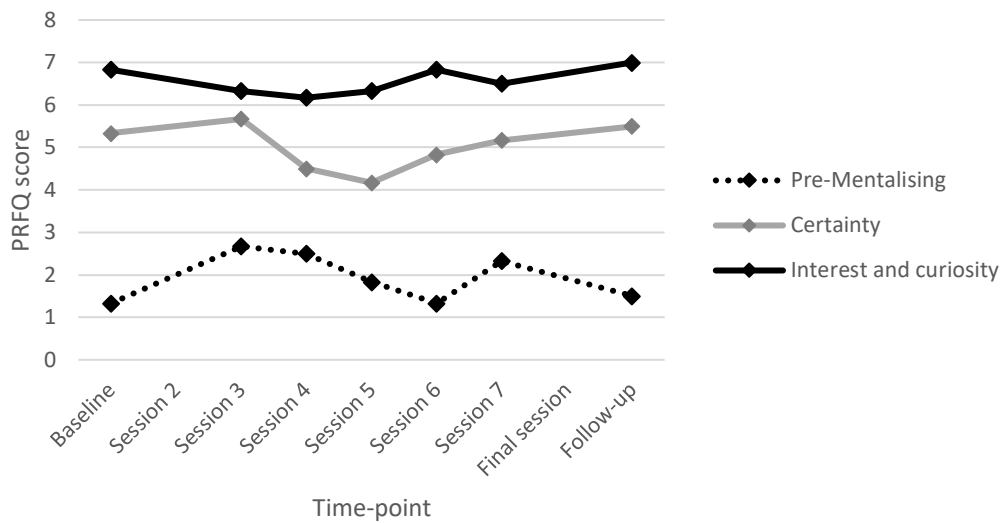


Table 12. PRFQ scores for Mary

	Page’s L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 108, p < .05	No	N/A
Certainty	L = 110, p > .05	No	N/A
Interest and curiosity	L = 124, p > .05	No	N/A

Figure 11. Graph showing Mary’s PRFQ scores



Participant 6 - Ayesha

Ayesha self-referred to the group after seeing the same presentation as Fatima (participant 5). She was fostering a sibling group of three. Her scores on the PSI-SF (Table 13) showed the greatest deterioration of all participants; PD, P-CDI and total stress all became worse over the course of the group. Only the DC subscale showed no increase. In her interview Ayesha provided context for this decline by explaining that one of her children had experienced a deterioration in their mental health and had problems at school, which was having an impact on the whole family. Ayesha began the group with the highest scores for any foster carer on the PRFQ in Int&Cur. The only change on the PRFQ at follow-up, however, was a decrease in Cert with PreM and Int&Cur remaining unchanged (Table 14). Ayesha’s interview showed an openness in what was happening in her child’s mind and so the decrease in certainty is likely representative of increasing RF. Ayesha found the group to be a very positive experience which she reported became more interesting as she attended more groups.

Table 13. PSI-SF scores for Ayesha

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	Yes (9)	No (15)			
Parental Distress	6	38	10.31	32	SC*
Parent–Child Dysfunctional Interaction	24	58	11.48	34	SC*
Difficult Child	62	58	11.18	-4	NC
Total Stress	24	54	19.07	30	SC*

Note. NC = No Change, SC* = Significant Change.

Figure 12. Graph showing Ayesha’s PSI-SF scores

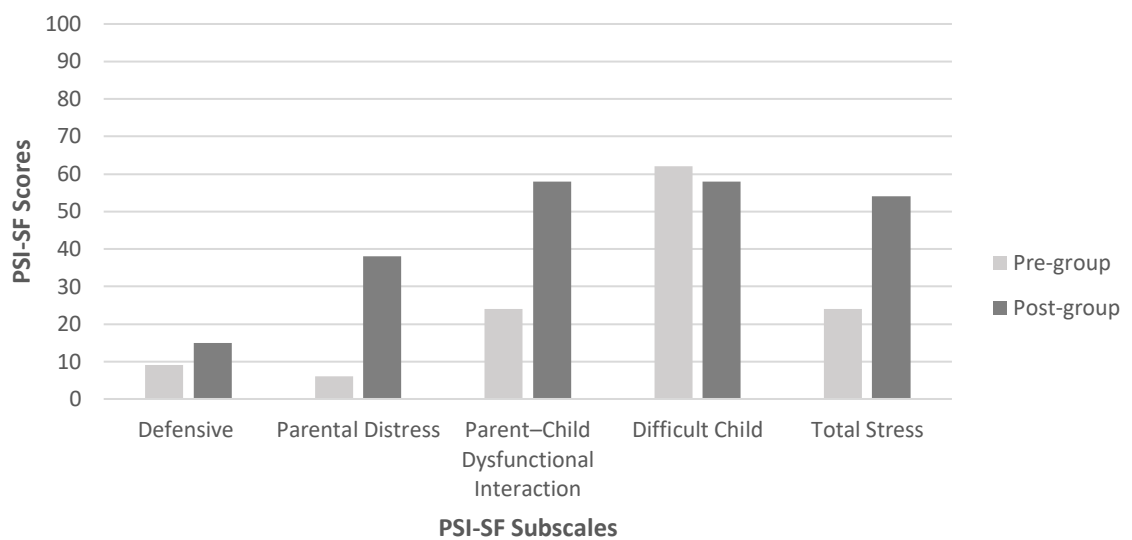
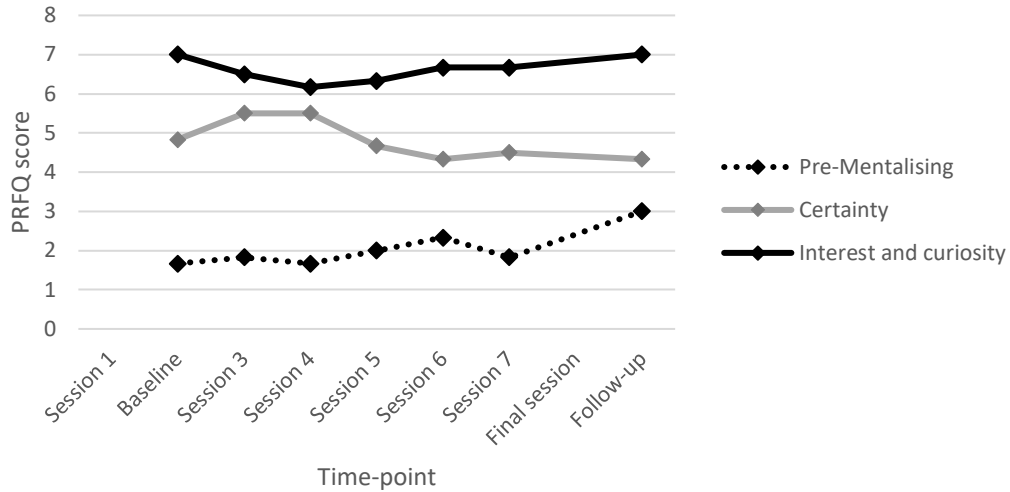


Table 14. PRFQ scores for Ayesha

	Page’s L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 133, p > .05	No	N/A
Certainty	L = 89.5, p = .049	Yes	Decrease
Interest and curiosity	L = 118.5, p > .05	No	N/A

Figure 13. Graph showing Ayesha’s PRFQ scores



Participant 7 - Jasmine

The final participant, Jasmine, was unable to attend an interview following the end of the group due to increased pressure relating to their FC role and therefore some contextual information was not obtained. She showed mixed results on her PSI-SF (Table 15); scores of PD and DC became worse over time whereas the P-CDI improved. In contrast, there were no significant changes on the PRFQ (Table 16). The changes in distress may be due to changes in circumstances that also prevented her from continuing with the research study.

Table 15. PSI-SF scores for Jasmine

	Pre-group	Post-group	PSI-SF subscale RCI	Change in scores	Reliable change?
Defensive	No (12)	No (13)			
Parental Distress	10	32	10.31	22	SC*
Parent-Child Dysfunctional Interaction	82	66	11.48	-16	SC*
Difficult Child	14	40	11.18	26	SC*
Total Stress	38	46	19.07	8	NC

Note. NC = No Change, SC* = Significant Change.

Figure 14. Graph showing Ayesha's PSI-SF scores

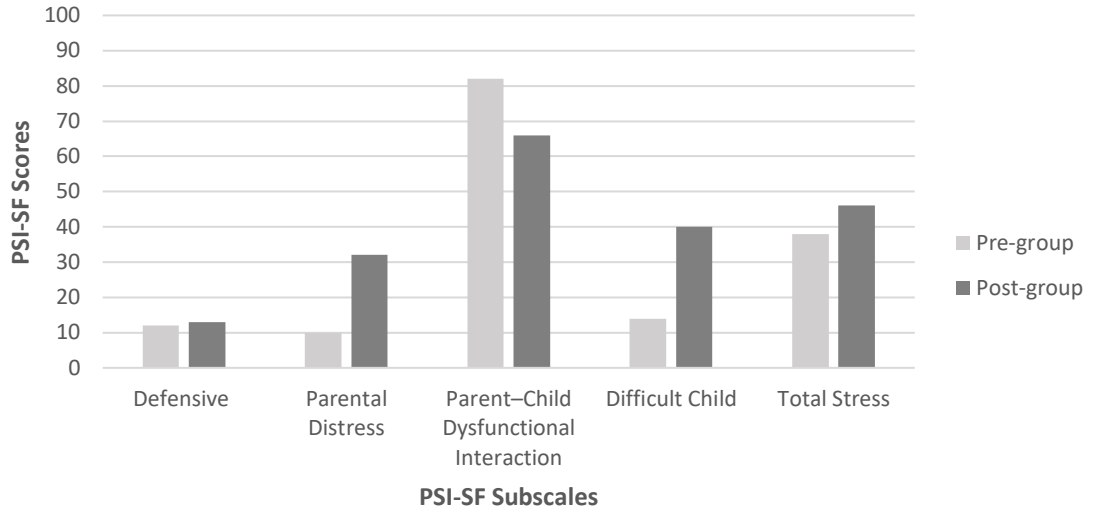
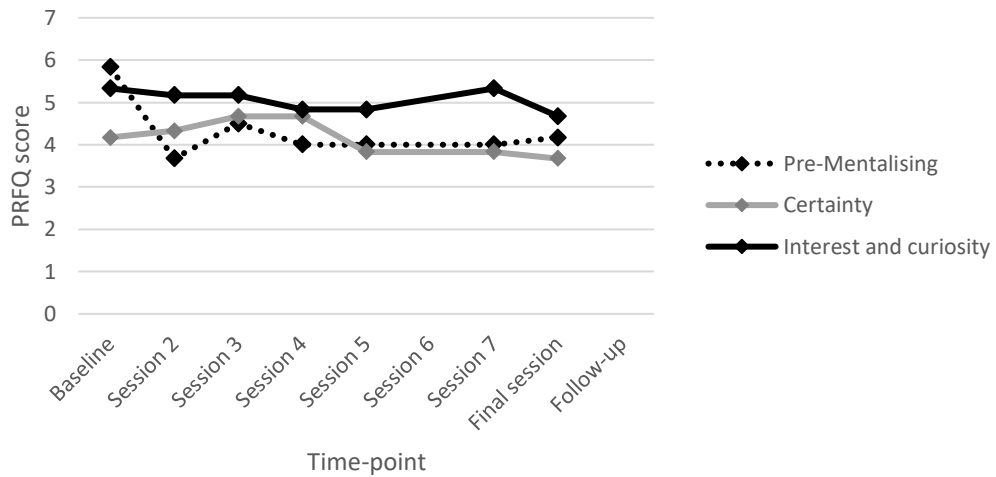


Table 16. PRFQ scores for Jasmine

	Page's L score	Significant trend?	Increase or decrease in RF?
Pre-Mentalising	L = 107, p > .05	No	N/A
Certainty	L = 94, p > .05	No	N/A
Interest and curiosity	L = 97.5, p > .05	No	N/A

Figure 15. Graph showing Jasmine's PRFQ scores



Qualitative Interview themes

Thematic analysis of the interview data produced three main themes with corresponding subthemes, shown in Table 17. The themes are described below and quotes from participants are used to illustrate the concepts.

Table 17. Study themes and subthemes

Theme	Sub-themes
Greater self-reflective abilities	<p>Increased awareness of and managing instinctive responses</p> <p>Increased awareness of own needs and feelings</p>
Greater understanding of child's needs	<p>Greater attunement to child's attachment needs</p> <p>Attunement to events in child's life and their history</p> <p>'Wait until they are ready'</p>
A positive group	<p>A focus on reflection</p> <p>A safe space</p>

Theme 1: Greater self-reflective abilities

All the participants interviewed made reference to this first theme. They all, to varying degrees, reported an increase in their self-reflective abilities. This theme is divided into two subthemes.

Increased awareness of and managing instinctive responses

Participants highlighted how attending the COS-P group had helped them to become more aware of how they instinctively responded to their foster children, particularly at times of stress. Participants reflected on their own histories and how this impacted on their caring behaviours. Some FCs also reflected on how their own history and experiences of parenting had impacted, positively or negatively, on their instinctive responses and ultimately how they

foster children. The COS-P program uses the term ‘shark music’ to help individuals explore how uncomfortable feelings ‘left over’ from experiences from their own past can influence their current relationship with their child and the way they think and feel about parenting. Two-thirds of the interviewees made reference to how they had become more aware of their own ‘shark music’. They described being able to notice their instinctive responses to their foster children and how there may be certain situations that trigger strong responses.

“(The group) makes you stop and think... because they say the spoken word can’t come back.” (Abi)

“But I think it’s okay, it’s recognising (your shark music), I thought it’s a brilliant way of putting it... what pushes your buttons? Yeah, I thought it was excellent.” (Mary)

“it really made me think about me as a person and how I react to certain things.” (Fatima)

Increased awareness of own needs and feelings

The second subtheme related to FCs better understanding their own underlying needs and feelings. Many participants described becoming more aware of their own experiences when fostering. They described how this awareness had an impact on their caring behaviours and highlighted their need to look after themselves in order to best support their foster children.

Interestingly, some foster carers reported that their stress levels had not changed but how they related to their stress had. This growing awareness of their own feelings could account for some increases in the PSI-SF scores and it may be that understanding their own needs and feelings may be the first step towards reducing stress over the longer term.

[My stress levels have] kind of stayed similar, it's given me something else to think about So when I came into this group, it's given me additional tools to help, to manage myself. (Abi)

“But it's being aware that you need to stop, you need to stop and think, you need that little bit of time as well. You know, we need to go out, refill our glass, and come back.” (Nikki)

(Describing an interaction with her foster child) “I'll discuss it another time, because at the moment I'm not in a good place and nor are you. So we'll do it later. And I'll do it tonight.” (Mary)

Theme 2: Greater understanding of child's needs

The second theme relates to FCs' perceptions that the COS-P group has helped them to better understand the needs of the child they are caring for.

Greater attunement to child's attachment needs

FCs reported using the psychological frameworks from the COS-P group to become more attuned to the attachment needs of their foster children. They demonstrated using attachment frameworks in order to interpret current behaviours and described an increased awareness of the role that they play in meeting these attachment needs. Some FCs described doing some parenting activities before the COS-P group, but viewing interactions using an attachment framework further encouraged these behaviours:

“I think it was very relevant to what we do, how we react, I mean for example, with, say for example the coming back and the cuddling. The cuddling is even more closer now, because you realise that, they really need you, and you've got to be that strong base.” (Abi)

An increased awareness of child development was found to reinforce some of the existing practices and in some cases confirm to individuals that intuitive responses had a solid psychological grounding. Some reported how it was reassuring to become aware of the underlying attachment processes even if it just confirmed their existing caring practices:

“Yeah, the going back and coming back in, that naturally happens but it's nice to go, “oh yeah”, and it's what she's asking for is exactly what you're thinking, but it's nice to go, “oh yeah”, that's exactly what's natural” (Mary)

“And she needs that cuddle. And I’m not saying I wouldn’t have given it before, but I understand it more” (Nikki)

Attunement to events in child’s life and their history

The second subtheme highlighted a perceived improvement in attunement to the history and traumatic events a child had experienced. There was an increased awareness that child behaviours should be viewed in the context of the child’s past and they were likely to relate to their prior relationships. The consideration of a child’s past involved thinking about any prior traumatic experiences and relationships, even including their experiences before they were born:

“I understand now it’s obviously come from the womb as well, why she is the way she is.” (Nikki)

FCs noticed that their children’s attempts to elicit care may be different to children without a history of trauma. In these instances, they may actually result in the opposite of the desired result if the FC is unaware of the underlying need. There was clear attempt by foster carers to empathise and understand the difficult behaviours and emotions through the lens of past trauma. These were often viewed within the attachment framework set out by COS-P:

“Even although they’ve been like years, things are popping up because of attachment, because of their family” (Ayesha)

“There’s no, you know, their safe place is totally gone. That’s why you find them out here so angry, so broken” (Abi)

‘Wait until they are ready’

A consistent topic through many of the FCs’ interviews was the importance of giving their foster children time and space, and approaching them when they were ready. There was evidence that this was an important practice prior to the group but that some had become more sensitive to the children’s state of mind. These FCs’ accounts suggested increased attunement to the mental state of the child and an awareness of themselves being ready for when the child was ready:

“I do bring her in now, I do sort of, when I think it’s safe, when she’s not going to kick and punch me and everything, I’ll wait ‘till she’s ready, and I’m there. And I’m waiting.” (Nikki)

The process of providing a secure base means that children will explore the world if they feel that they are able to come back to an attachment figure that will consistently welcome them back. FCs said that it was important to be able to let their children have their own space even if this provoked anxiety or concerns in themselves:

“It’s about, you know, you understanding that, you know, letting your children go and to be there when they come back” (Ayesha)

Theme 3: A positive group

The majority of the participants reported finding the group a very positive and helpful space. Only one participant reported that they did not find the group helpful and said that it did not offer any new information to them.

A focus on reflection

Most FCs found the ability to reflect with other FCs in the group, to be a valuable experience. They fed back that the training involved a greater level of personal reflection and engagement than other training experiences. FCs described thinking together about how the other members and themselves responded to situations:

“Trainings are usually, they’re giving us information, and I think this is something that we, yeah, the information is there but we thought about it and a lot of it was our experiences” (Ayesha)

“You get to think about things and analyse yourself, you know”
(Abi)

A safe space

The degree of personal reflection in the group was enabled by the safety that FCs felt amongst both the other FCs and the facilitators. It allowed them to think and speak honestly about themselves and about their relationships, this was helped by relatively small sized groups:

“Because you’re in a small group, you know it’s not going anywhere else, so you can sit and discuss” (Nikki)

“(There was) not many of us. It was really nice” (Ayesha)

Summary of results

Overall, participants described an increase in both self- and child-focused RF following the COS-P group. The results also highlighted the strengths of an attachment-based training for this population. These results contrasted with the lack of discernible general trends on the PRFQ. However, some improvements were found for individual participants with three showing an improvement in one subscale; Int&Cur (n = 2) and Cert (n = 1). No significant change was captured on the other four participants.

Both quantitative and qualitative results showed a wide range of levels of parental stress. All but one participant showed some change in their scores on the PSI-SF from pre- to post-group; some showed improvements (n = 3), deteriorations (n = 2) and mixed subscale changes (n = 1) with no overall discernible results. The qualitative and thematic findings helped to provide a wider context to the quantitative responses. From the interviews, five out of the six participants described finding the group helpful and in particular highlighted the helpfulness of a safe and reflective space.

Discussion

This study shows mixed results regarding the mentalising abilities of FCs following participation in a COS-P group. Participants largely reported experiencing a meaningful change in RF, yet only limited changes were reported on the PRFQ measure. These mixed results reflect previous findings in this field; Wassall (2011) and Midgley et al. (2019) both found qualitative feedback indicating a subjective change in mentalising, which was not reflected in quantitative measures.

The results of this study help to shed light on the active mechanisms involved in the development of RF in FCs. An important theme coming from the interviews with the FC was the development of their awareness of their own mind and experiences. They indicated that they were more aware of their own 'instinctive responses' and how they were operating as a carer. In this way, the development of awareness of a carers own mind may be a significant step towards the awareness of their child's mind.

FCs in this study reported that in order to respond sensitively to a child's needs, they needed to understand and manage their own stress levels. This links in with previous work with biological parents that found levels of RF to be related very closely with the parental tolerance of their child's distress and internal stress levels (Rutherford, Booth, Luyten, Bridgett, & Mayes, 2015). The ability of FCs to have effective RF skills is therefore related to their ability to notice and tolerate their own distress. FCs described an increased awareness of their child's state of mind and were more able to take a step back from situations without being emotionally overwhelmed themselves.

This study raises interesting questions around the direction of the relationship between carer stress and RF; effective RF is most likely when the carer themselves are in emotionally stable states, but also stress likely to be lower if a carer is mentalising well and able to compassionately understand their foster child. The picture in this study may suggest an interactive bi-directional relationship between RF and stress; lower stress enabling RF and RF enabling lower stress. It may be valuable for the relationship between these two variables to be explored further.

The positive feedback about the group related largely to the focus on reflection and the safety provided by the group. Fraiberg et al.'s (1975) seminal work described 'ghosts in the nursery', suggesting that biological mothers were unaware of their own trauma or 'ghosts' that impacted their ability to parent. Working with traumatised children may elicit powerful 'ghosts' from FC's own experiences. The pain associated experiencing care being rejected by a child may be experienced more powerfully by some. Pearlman and Maclan's (1995) investigation into therapists found that the newest therapists, and those with a personal trauma history, experienced the most difficulties and were most likely to experience burnout.

FCs reported that increased mentalising abilities translated into tangible differences in how they parent their foster children (e.g. more aware of when they should take a step back). This adds weight to the idea that changes in RF will have an impact on parenting practices and so reinforces the need for interventions to target its improvement. The COS-P indicates hope through better understanding of their own mind and the mind of their child, that FCs were better able to manage and understand complex interpersonal dynamics with their child/ren. In the interviews, participants were found to use an attachment framework to understand their foster children. The COS-P includes psychoeducation of attachment and conclusions can be

drawn that developing these processes was important in facilitating both motivation and a framework to effectively mentalise their foster child.

It is possible that the mixed results may be a result of the PRFQ not being sensitive enough to capture changes during a short-term group. The measure is relatively new and requires further testing of its validity and reliability. This study also used the measure weekly, which no other known study has done. The PRFQ scores are not normed and so it was not possible to extrapolate what constitutes a 'high' or 'low' score. Similarly, increases or decreases in subscales can mean either an increase or decrease on RF. It was evidently very valuable for this study to use qualitative methods to explore individual results more fully. The higher scoring participants' (e.g. participants 5 and 6) scores remained largely consistent yet lower scoring participants improved (2 and 4), which provokes questions around the 'ceiling effect' for this measure. It also highlights the variation between the results of the different participants and whether, as Wassall (2011) previously indicated, certain individuals (i.e. participants with lower initial RF) would respond more to the COS-P intervention.

It is also possible that the PRFQ mentalising measures accurately show limited changes in RF. The absence of any substantial changes may not be surprising, given the relatively short 8-session programme. Trowell, Davids, Miles, Shmueli, and Paton's (2006) investigation into a programme for mental health professionals found a significant increase in the RF abilities. Importantly, the programme was two years in length and there are currently no known interventions of such depth offered to FCs. This research may highlight how, as Gabriel (2017) has previously stated, the development of FCs' RF is a dynamic and active process that may take years to develop.

Compounding the short programme may be the limited attendance of participants; only one FC (participant 3) attended all eight sessions. Non-attendance was often due to demands relating to the FC's role, but it may have had a negative effect on the 'dosage' received by the participants. It may be possible that the full 20-week COS programme would have had a greater effect on RF and stress, although it is acknowledged that limited resources often make offering longer programmes impractical. In addition, busy schedules can mean regular attendance to a longer group could be difficult. An advantage of the COS-P programme is that it can be facilitated by a range of professionals (not just psychologists), which may mean that it can reach a wider range of participants (Kohlhoff et al 2016). It should also be highlighted that five of the seven FCs included in this study were of BAME origin. It has been shown that BAME communities are exposed to more life stressors, which can lead to worse health outcomes (Sternthal, Slopen & Williams, 2011). This inequality may have accounted for the levels of stress observed in this study.

Another possible explanation for limited changes on the PRFQ, is that the COS-P programme is not designed to specifically change RF (despite core principles relating to the concept). Limited changes in participants' RF during the Fostering Attachments group (see Gurney-Smith, Gronger, Randle & Fletcher, 2010; Wassall, 2011) led to adaptations in the Fostering Attachments intervention to explicitly develop mentalisation. A subsequent exploration by Selwyn et al. (2016) indicated that this may have had a positive effect on RF outcomes.

The small sample and lack of an extended baseline period means that the quantitative measures should be viewed with a degree of caution. However, there were some small significant changes found in this study in the Int&Cur subscale of the PRFQ, that may offer an

insight into mentalising. Participant's 2 and 4 scores indicated a significant trend towards an improvement in RF on the Int&Cur subscale. Interestingly, these results reflected previous studies that have used the PRFQ to investigate interventions for carers of LAC and found statistically significant improvements in the same subscale (Selwyn et al., 2016; Adkins, Luyten, & Fonagy, 2018). In these studies, changes in the other subscales were also minimal or not present at all. This raises questions about whether the Interest and Curiosity aspect of RF is more susceptible to improvement in attachment based interventions.

The quantitative methods in this study present a mixed picture of changes in parental stress. Overlaying the qualitative data, however, shows that the deterioration in parental stress from pre- to post-group was often attributable to changes in the presentation of their foster child/ren and quite possibly unrelated to the COS-P group. Given the levels of trauma in the LAC population it is likely that there will be periods of crisis that will have an impact on their wider networks. The lack of a baseline period prevents more confident conclusions to be made, however.

Study strengths

A key strength of this study was the use of mixed methods, which provided a rich set of data that offered a triangulation of changes in RF and stress. Despite the lack of baseline data, non-experimental studies, such as this one, can play a role as “interesting, unusual, novel, or important” aspects of interventions (Tate, Taylor, & Aird, 2013, p.79). The weekly collection of data provided responsive understanding of changes in RF and the use of a single case design provided a detailed insight into individual experiences that is often overlooked in larger scale research.

Limitations

Although the separation between the COS-P facilitators and the researcher was made explicit in the information sheet and at the beginning of the interviews, the distinction may not have been understood or felt by participants. This may have had an influence on their responses to both questionnaires and interview questions. Similarly, ‘defensive’ responses to the PSI-SF were scored by four participants at either one or both time points. Responses may have also been influenced by social desirability factors, such as wanting to be seen as a competent carer.

Both the PRFQ and the PSI-SF were developed for use with biological parents and the suitability of their use with FCs remains unclear. Limitations in the measures, particularly the PRFQ, may have limited the conclusions that can be made. Another limitation was three participants dropping out or not being included in the quantitative analysis and four in the qualitative analysis. It may have been helpful to collect participant information earlier, in order to better understand any differences between participants that completed the study and those that did not.

A key limitation was the lack of baseline data for the COS-P groups. There were significant difficulties in navigating the requirements of the local authorities in order to receive final approval for the study. These delays meant that the start dates for both groups were very sudden and sufficient time to gather baseline data was not possible. An associated limitation, due to ethical requirements of the NSPCC (host organisation), was the absence of child-focused measures. It was not possible to measure any specific child outcomes, such as change in child behaviour. It is expected that changes in the RF of FCs would have impacted on their behaviour toward their foster children which in turn would impact on the child’s behaviour. It would be valuable to measure this in future studies.

Research Implications

It is evident that the literature on interventions for FCs' RF remains in its infancy. Studies with control groups building up to Randomised control trials would be very valuable in furthering our understanding of RF and interventions to improve it in FCs. The results in this study relating to Int&Cur subscale of the PRFQ, supported by previous explorations, may indicate the need for future studies to consider the aspects of RF that are most susceptible to change. This would allow for interventions to specifically target features of RF that can be influenced.

This study benefited from the collection of contextual information for parental stress. Given the highly demanding nature of the role, it would be very helpful for future studies to collect similar data in order to contextualise any changes in stress. Similarly, future studies using the PRFQ may benefit, from the use of qualitative exploration that can be used to interpret the scores. This is important for the PRFQ measure as increases in the scores on the Interest and Curiosity, and Certainty subscales can indicate either an improvement or deterioration of RF. Without contextual information, it may be difficult to understand if the responses are an improvement or deterioration.

Other methods of measuring mentalising are still being explored (e.g. the Five-Minute Speech Sample with RF coding; Bammens, Adkins, & Badger, 2015) and would benefit from use alongside the PRFQ. In addition, mentalising may not always be accurately reported in speech. It may be useful for future research to also measure mentalising 'live' through analysing free play sessions with their foster children (see Meins, Fernyhough, Fradley, & Tuckey, 2001).

Clinical implications

This study showed that the COS-P group might facilitate the improvement of FC RF just as Huber, McMahon, & Sweller (2015) found with biological parents. Also similar to Huber, McMahon, & Sweller (2015) was the tentative finding that the greatest changes in RF may have been for participants that started with lower RF scores. Further research is required to explore this hypothesis further but this may mean FCs with lower RF could be specifically targeted for future COS-P groups.

This study showed that when FCs were given a space to reflect on their own experiences and their child's, they made good use of and highly valued it. Traditional behavioural interventions are important, but they may not be sufficient for FCs given the prevalence of trauma. The complexity and importance of the work that FCs undertake, highlights the need for interventions that help to develop a reflective understanding of themselves and their child. Associated with this is the need for longer term interventions to significantly affect mentalising.

Practical difficulties of attending the weekly COS-P group highlights the need for interventions for FCs to support as best as possible the practical needs of FCs, for example, offering childcare and individual catch-up sessions when non-attendance is unavoidable.

This is the first known study of COS-P with a FCs population. The initial results in this study have shown that COS-P may help to facilitate RF. A future direction may be for the COS and COS-P interventions to specifically adapt content to encourage mentalising skills. Changes were made in the Nurturing Attachment group with successful outcomes in RF (see Selwyn et

al., 2016). This can be done through utilising reflective diaries, creating spaces to consider the impact of the child's behaviour on them and reflecting on what the child is experiencing.

Conclusions

This study provided an in-depth exploration of FCs' RF and stress when completing COS-P - an attachment-based intervention. The interview data suggested changes had occurred in participants' RF with 3 main themes being identified: 'Greater self-reflective abilities', 'Greater understanding of child's needs' and 'A positive group'. An exploration of these themes revealed how changes in their RF affected how they managed both themselves and how they interacted with their child. The quantitative data presented more limited changes, which have been discussed. Some increases in the interest and curiosity into the mind of their child were highlighted. There are some methodological limitations in this study and the conclusions should remain tentative. This study should be understood as explorative and offering an insight into the active mechanisms involved in improving RF in FCs. This study has shed light on some of the active processes involved in an important but under-researched population and has suggested possible directions for future research and clinical applications.

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Part C

Appendix of Supporting Material

Appendix A - Evaluation and data extraction checklist

Participants

- What was the role of the participants? (were they representative of target population?)
- What were the presenting difficulties of the participants?
- How were participants recruited?
- How many participants took part and what was their average age?

Method

- What was the design of the study?

Control

- Was there a control group?
- Were assessors blind to treatment group?
- Were participants aware of the research question?
- Were participants randomised?

Data collection

- What was the drop-out rate of participants?
- How often was data collected and at what time points?
- What mentalisation measure was used in the study?

Intervention

- Where did the intervention take place?
- What intervention was used?
- What did this intervention comprise of?
- How many sessions were there and what was their length of time?

Results

- Was there a treatment effect?
- Were they significant when compared to the control group?

Appendix B – Overview of COS-P intervention

Circle of Security Parenting Programme

At times all parents feel lost or without a clue about what our child might need from us. Imagine what it might feel like if you were able to make sense of what your child was really asking from you. The Circle of Security® Parenting™ program is based on decades of research about how secure parent-child relationships can be supported and strengthened.

Using the COSP™ model developed by the Circle of Security originators, our trained Facilitators work with parents and care-givers to help them to:

- **Understand** their child’s emotional world by learning to read emotional needs
- **Support** their child’s ability to successfully manage emotions
- **Enhance** the development of their child’s self esteem
- **Honor** the innate wisdom and desire for their child to be secure

The overall goals of *Circle of Security Parenting (COS-P)* are:

- Increase security of attachment of the child to the parent
- Increase parent’s ability to read child’s cues
- Increase empathy in the parent for the child
- Decrease negative attributions of the parent regarding the child’s motivations
- Increase parent’s capacity to self-reflect
- Increase parent’s capacity to pause, reflect, and chose security-promoting caregiving behaviors
- Increase parent’s capacity to regulate stressful emotional states
- Increase parent’s ability to recognize ruptures in the relationship and facilitate repairs
- Increase parent’s capacity to provide comfort when their child is in distress

The weekly sessions that are covered in *Circle of Security Parenting*:

- Week 1 Introducing the concept of the Circle
- Week 2 Exploring our children’s needs all the way around the Circle
- Week 3 “Being with” on the Circle. Helping our children to manage their emotions.
- Week 4 “Being with” infants on the Circle
- Week 5 The path to security
- Week 6 Exploring our struggles
- Week 7 Rupture and repair
- Week 8 Summary

Appendix C - Salomons Ethics Panel Approval

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Appendix D – Research and development letter

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Appendix E - Research information form



Salomons Centre for Applied Psychology

1 Meadow Road

Tunbridge Wells

TN1 2YG

PHOTO OF RESEARCHER

Dear Carers,

My name is xxxxxxxxxxxxxx and I am carrying out some research as part of my doctoral degree at Canterbury Christ Church University alongside colleagues at the xxxxxxxx. We are particularly looking at whether the Circle of Security programme that you are about to attend influences aspects of how you foster.

We very much hope you will agree to take part in this research. There is a lack of research looking at the important work that foster carers do and it is hoped that this project will be helpful to this and other similar services working with foster carers. Not taking part in this research, however, will have no affect on your participation with the group, which you can attend as planned.

If you agree to take part in the research I will be asking you to complete a brief online questionnaire (around 10 minutes) at home once a week for the three weeks before the group and the three weeks after the group. In addition, there will be time allotted at the end of each Circle of Security group to complete the same questionnaires.

I will also invite you to take part in an interview with me at the end of the group programme. In this interview I will be asking participants some questions about anything you have noticed in yourself or your foster child/ren over the time you have been coming to this group. This interview will last between 45-60 minutes.

As a token of our gratitude, those taking part would receive a £20 thank you voucher, as I am aware that I am asking you to give up some of your busy time for this research.

If you think you might wish to take part in the research, please also read the accompanying 'Further information' sheet. It is important that you have read all the information about the study before deciding whether to take part.

As you have indicated that you may be interested in the research I will contact you via phone to discuss the project further, this will also be an opportunity to ask me any questions you may have. You are free at any point during or after to withdraw from the research and remain in the group programme.

Yours sincerely,

xxxxxxxxxx

Trainee Clinical Psychologist at Canterbury Christ Church University.

XXXXXXXXXXXXXXXXXXXX

Further information

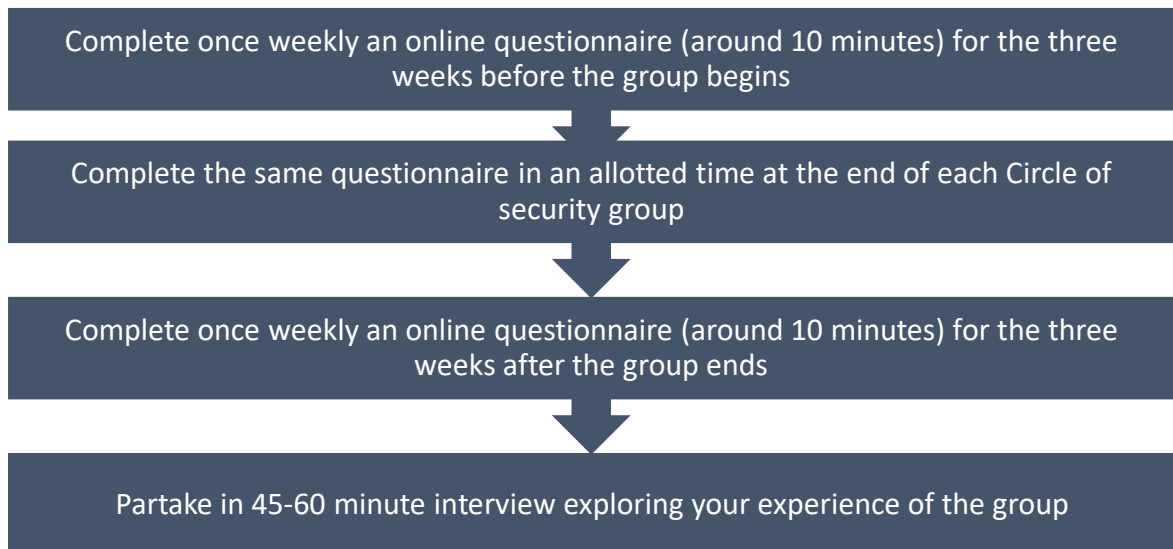
Please read this document, which will give you some more information about what the project will involve:

Why have I been invited to participate?

You have been invited to be part of this project because you are a foster carer completing the Circle of Security group. Many foster carers have found the group helpful in the past and this project would like to explore in more detail any changes that take place.

What will be expected of me?

The research will involve four steps:



What expenses and/or payments will there be?

As a token of our gratitude each participants will receive a £20 gift voucher for taking part in the project. Travel expenses up to £10 will also be paid for participants to attend the interview in the xxxxxx building in xxxxxx.

What are the possible disadvantages and risks of taking part?

Neither the questionnaire nor the interview are designed to be upsetting, however, it is possible that some issues may arise for you in terms of your foster care role which you feel you need further support about. If this does happen we can discuss by telephone or at the end of the interview where to get this support. Support may either be through general support services or through a The LIFT worker running the group will always encourage you to seek support from your supervising social worker, or depending on the issue LIFT will signpost you to general supportive services.

What will happen if I don't want to carry on with the study?

If you wish to withdraw from the study you may do so at any point by letting me know. You will be free to continue with the Circle of Security without being part of the study if this is what you wish to do. If you would also like for your data to be deleted then you can request this.

Who can I contact if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to me in the first instance and I will do my best to address your concerns. You can

contact me (xxxxxxx) by leaving a message on the 24-hour voicemail phone number xxxxxxxxxxxx (please leave a contact number and say that the message is for me) or by emailing me on xxxxxxxxxxxx and I will get back to you as soon as possible. You may also get in touch with Dr xxxxxxxx the Consultant Clinical Psychologist at the xxxxx service.

If you remain unhappy and wish to complain formally, you can do this by contacting Professor xxxxxxxx, Research Director, Salomons Centre for Applied Psychology xxxxxxxx tel: xxxxxxxxxxxx

Will information from or about me from taking part in the study be kept confidential?

All information that is collected from or about you during the course of the research will be kept strictly confidential and will only be looked at by my supervisors and me. I will anonymise the questionnaires and interviews by *removing information about you so that you cannot be recognised*. I will keep this data on an encrypted memory stick or in a securely locked cabinet. This anonymised data will be retained for 10 years and then it will be disposed of securely.

The only time when I would be obliged to pass on information from you to a third party would be if, as a result of something you told me, I were to become concerned about your safety or the safety of someone else.

As part of this research, I may use some direct quotes of things that you say to me to illustrate points I make in my dissertation or any papers I publish. However, your name will not be mentioned and I will not directly quote anything that could identify you or the child you look after to anyone else. I will also not mention the name xxxxx in the report as this might allow people to identify those in the group.

Who is organising and funding the research?

This research is being conducted together by the xxxxx, the xxxx team and Canterbury Christ Church University. It is being funded by Canterbury Christ Church University.

Can I find out about the findings of the research?

I will be writing a short report of this research to feed back to those who took part. If you would like a copy of this report we can discuss at the interview what is the best way to get this to you. You can also request at this point to be notified of any future publication of the project findings.

Who has reviewed the study?

To protect your interests an independent ethics committee at the Salomons Centre has evaluated this research project and has given it a favourable opinion.

Appendix F - Study consent form



Centre Number:

Study Number:

Participant Identification Number for this study:

CONSENT FORM

Please return this consent form in the enclosed envelope

Title of project: Exploring reflective functioning in foster carers undertaking Circle of Security intervention.

Name of Researcher: xxxxxxxxxx

Please initial box

1. I confirm that I have read and understand the information sheet dated..... (version.....) 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 this affecting my involvement in the COS group.

3. I understand that data collected during the study will be looked at by supervisors xxxxxxxxxx and xxxxxxxxxx. I give permission for these individuals to have access to my data.

5. I agree that anonymous quotes from my interview may be used in xxxxxxxxxx doctoral thesis and in any subsequent published reports of the study findings.

6. I agree to take part in the above study

7. I agree for my anonymous data to be used in further research studies
(optional)

Name of Participant _____ Date _____

Signature _____

Appendix G - PRFQ

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Appendix H – PSI-SF

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Appendix I – Interview schedule

Interview questions

Semi-structure interviews

I will begin the interview by explaining reflective functioning in accessible terms – “I am doing research exploring how people understand the needs of their foster children and how they think and feel about the foster children they look after”. Then I will ask them - “I would like to explore with you your experiences of being part of the COS group and to think about anything that might be different for you or the child/children you foster as a result of you attending the group”.

The interview will begin with warm up questions: How did you find the group? Were there any highlights for you? Any things you found particularly difficult?

Research Question – ‘What perceived impact if any has the CoS group had on your FC role?’

Have you noticed any changes in how you carry out your role as a foster carer following the COS programme?

Possible follow-ups:

- What have you noticed?
- How do you understand this?
- Has anyone else noticed these changes?
- What have they said to you?
- What do you put the change down to?
- Anything else you have noticed about yourself?

Research Question – How do foster carers understand the connections (if any) between the process of change in RF and their parenting of their foster child/ren?

Have you noticed any changes in how you understand your foster child and their needs during or following the Circle of Security programme? Sometimes stress can reduce it so it can go up and down.

Possible follow-ups:

- What are these changes, what have you noticed, what have other people noticed or said?
- Could you give any examples of the changes?
- Has this had an impact on your relationship with your child? Or could it be something else?
- How have these changes in your relationship with your child come about, do you think? Could this relate to changes in RF? What else could explain the change?

Research Question – How do foster carers understand any processes of change or connections in their own stress levels as a parent and their reflective functioning?

Have you noticed any changes in your stress levels as a foster carer?

Possible additional questions:

- Could this relate in any way to changes in reflective functioning or could it be something else?
- Have there been any other life events that have happened over the past few months that may have affected your stress levels?

Other

- Have there been any barriers to making changes?
- What were these, are they something that could have been overcome?
- Have you completed any parenting/caring groups before? If so, how was this group similar different?

Appendix J - Excerpts of interview with initial coding

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Appendix K – Table documenting the development of themes and subthemes

Theme	Sub-theme	Codes
Greater self-reflection	Awareness of and managing instinctive responses	Increased awareness of triggers
		Understanding instinctive responses
	Increased awareness of effect of own history	Increased awareness of history
	Understanding one’s own feelings and needs	Understanding own stress Own needs Understanding own anxiety
Understanding the child’s needs	Attunement to child attachment needs	Awareness of developmental needs Increased attunement to attachment Increased attunement to FC being a secure base Understanding attachment
	Responsive to child’s ways of dealing with feelings	Knowing when to step back Giving child space (when needed) When they are ready
	Attunement to events in child’s life and their history	Understanding child history Attuned to events in child’s life impacting on current Contact with parents (complex attachment) Trauma from womb
A positive group	Reflecting together on fostering	Bringing own experiences
		Reinforcing current actions
	A safe space to reflect	Small group positive
		A place to think about self A place to think about relationships

	Giving words to and understanding existing processes	Giving words to existing processes
Themes and codes not included in final results	Relating to child but not within above theme	<p>Easier to mentalise foster children than biological children</p> <p>Foster children can try to sabotage placement</p> <p>Child has learnt mentalising more</p> <p>Child expressing themselves more</p>
	Mentalising outside of FC role	<p>Mentalising others has improved</p> <p>Teaching mentalising to others</p> <p>Understanding others better</p>
	Negative group (all from one participant)	<p>already have experience</p> <p>already knew</p> <p>don't have any problems</p>

Final report on the research

Jack Wilson

Exploring reflective functioning in foster carers undertaking Circle of Security intervention

Introduction: Foster Caring can be a very rewarding and challenging role. There is limited research how best to support them in their role. Reflective Functioning (RF) in parenting is receiving increasing attention in recent literature on child development. This study sought to explore the journey of a group of Foster Carers as they completed the Circle of Security Parenting (COS-P) attachment-based intervention and the effect that this has on their RF and stress.

The study: This study originally aimed to use a mixed methods Single Case Experimental Design but due limited periods available before the group was run baseline data could not be collected for the participants. The quantitative section, therefore, involved a non-experimental design measuring the RF and stress of seven FCs. Six of these participants went on to also complete qualitative interviews, which was analysed using thematic analysis.

Results: The study found that FCs completing COS-P reported developing their awareness of their own mind as well as the mind of their child. The quantitative results showed some limited changes and greater variability. The study contributed to the small but growing body of literature on Reflective Functioning in Foster Carers. It demonstrates how developing

Reflective Functioning can potentially result in more sensitive and attuned caring within a foster care setting. It tentatively points to the COS-P programme as a potential programme for developing Reflective Functioning.

Arrangements for publication: This study will be submitted for publication in the *Adoption and Fostering* journal.

Feedback to participants: Verbal feedback will be offered to involved participants by the clinical director of the service where the study took place. If participants would like additional written feedback this will also be provided to them.

Appendix M – Journal article submission information

Adoption & Fostering is the only quarterly UK peer reviewed journal dedicated to adoption and fostering issues. Edited by Roger Bullock (Fellow, Centre for Social Policy, The Social Research Unit at Dartington), it also focuses on wider developments in childcare practice and research, providing an international, inter-disciplinary forum for academics and practitioners in social work, psychology, law, medicine, education, training and caring.

5. Submitting your manuscript

Manuscripts should be submitted to the editor by e-mail attachment to:

Miranda Davies
CoramBAAF Adoption & Fostering Academy
41 Brunswick Square
London
WC1N 1AZ
Telephone: +44 (0)20 7520 0300
Email: miranda.davies@corambaaf.org.uk

5.1 Information required for completing your submission

You will be asked to provide contact details and academic affiliations for all co-authors via the submission system and identify who is to be the corresponding author. These details must match what appears on your manuscript. At this stage please ensure you have included all the required statements and declarations and uploaded any additional supplementary files (including reporting guidelines where relevant).

5.2 Permissions

Please also ensure that you have obtained any necessary permission from copyright holders for reproducing any illustrations, tables, figures or lengthy quotations previously published elsewhere. For further information including guidance on fair dealing for criticism and review, please see the Copyright and Permissions page on the SAGE Author Gateway.

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6. On acceptance and publication

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Your SAGE Production Editor will keep you informed as to your article's progress throughout the production process. Proofs will be sent by PDF to the corresponding author and should be returned promptly. Authors are reminded to check their proofs carefully to confirm that all author information, including names, affiliations, sequence and contact details are correct, and that Funding and Conflict of Interest statements, if any, are accurate. Please note that if there are any changes to the author list at this stage all authors will be required to complete and sign a form authorising the change.

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7. Further information

Any correspondence, queries or additional requests for information on the manuscript submission process should be sent to the Adoption & Fostering editorial office as follows:

Editor, Miranda Davies, at miranda.davies@corambaaf.org.uk.