PARENTS OF CHILDREN WITH SOCIAL, EMOTIONAL AND BEHAVIOURAL DIFFICULTIES: DEVELOPMENT THROUGH CIRCLE OF SECURITY-PARENTING

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Abstract

Circle of Security Parenting (COS-P) is an attachment-based psychoeducational intervention designed to enhance parents' ability to understand and respond to their children's emotional needs and to foster secure parent-child relationships. This study explored the development of parents of children with social, emotional and behavioural difficulties through participation in COS-P. Using a mixed-methods design, the study focused on changes in parents' internal representations of their children, emotion regulation, parental self-efficacy, and responses to their children's negative emotions at pre-intervention, post-intervention and 3-months follow-up. The results indicated that following participation in COS-P, on average, parents developed more coherent internal representations of their children and the parent-child relationship. Additionally, meaningful increases in parental-self-efficacy, and reductions in self-reported unsupportive responses to children's negative emotions were observed. Small improvements in emotion regulation were reported by some participants. However, there was also considerable variability in individual trajectories over time, highlighting the importance of employing both variable-centered and person-centered analyses. This dual approach provided a more nuanced understanding of the diverse ways in which parents responded to the intervention, highlighting how aggregated results may obscure important individual differences. The findings underscored the potential of COS-P as an effective attachment-based intervention capable of facilitating meaningful changes in parenting perceptions of themselves and their children even within a brief intervention period. Furthermore, the study demonstrated the feasibility and utility of the Five-Minute Speech Sample – Coherence (FMSS-C) as a low-burden, cost-effective tool for measuring changes in parents' internal representations in clinical settings. These results

contributed to the growing evidence supporting the use of attachment-focused interventions to enhance parent-child relationships.

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Parents of Children with Social, Emotional and Behavioural Difficulties: Development Through Circle of Security-Parenting

Attachment is the emotional bond formed between children and their caregivers. It is essential for children's survival and development. According to attachment theory, infants are genetically programmed to connect with caregivers (Bowlby, 1982; Cassidy & Shaver, 1999). This "attachment bond" is considered to be an innate, biologically and psychologically adaptive system that provides a relationship in which infants and children will: 1) seek proximity to the primary caregiver(s); 2) be provided with a "secure base" from which to explore and a "safe haven" to return to for comfort, protection and validation; and 3) develop an "internal working model" of relationships that forms the basis of what to expect in other relationships moving forward (Bowlby, 1982). The quality of a child's attachment is strongly influenced by parental sensitivity—defined as the ability to accurately perceive, interpret, and respond appropriately to a child's behavioural signals (e.g., Atkinson et al., 2005; Gerlach et al., 2022). When caregivers adequately understand the internal states and needs of infants and children and respond sensitively, children develop a *secure attachment.* The caregiver-child relationship becomes one that helps children manage stressful situations and physiological states, contributing to the development of self-regulatory abilities and positive internal representations of relationships with caregivers and others. In contrast, insensitive or inconsistent caregiving often leads to insecure attachment, characterized by a lack of confidence in the caregiver's availability for comfort and protection (Verhage et al., 2016).

Ainsworth developed a procedure for systematically observing parent-infant interactions and classifying their attachment relationships into three categories: secure, avoidant or anxious ambivalent, with the latter two considered insecure attachment styles (Ainsworth et al., 1978).

Parents of securely attached children are typically available, responsive and sensitive to their children's feelings. Securely attached children feel protected and that they have someone to rely on, and they are comfortable exploring their environment with their caregiver present. Parents of children who develop an avoidant attachment style are often "rejecting" or "cold". They shut down their children's bids for affections and tend to withdraw support in times of distress. Children of these parents learn to suppress their innate desire for affection and closeness and disconnect from their emotional needs. Parents of anxiously attached children are typically self-preoccupied and more sensitive to their own needs and anxiety than to their children's needs. They are also often intrusive and inconsistent in their responses to children. As such, children with this attachment style become conflicted about how their parent may respond to them. They become distrustful of their caregiver, but also want affection and closeness and for them to meet their emotional needs. They cling to and struggle to separate from their caregivers but are also difficult to soothe.

A fourth style of attachment, known as disorganized attachment, was later identified by Main and Solomon (1986). Disorganized attachment arises in situations where caregivers are a source of fear or distress for the child, often due to inconsistent, frightening, or abusive behaviour. These caregivers may display erratic or contradictory behaviours, leaving the child unable to develop a coherent strategy for seeking comfort and safety. Children with disorganized attachment experience a paradoxical conflict: their primary caregiver, who should serve as a secure base, also represents a source of fear. Disorganized attachment is associated with an increased risk of developmental challenges, including difficulty with emotion regulation, disrupted internal working models of relationships, and vulnerability to mental health issues later in life (Lyons-Ruth & Jacobvitz, 2008).

Attachment security is thought to be foundational for healthy development and psychological functioning throughout the lifespan (Bowlby, 1973). During childhood, children with secure perceptions of their parents show competent adaptation in school contexts, exhibit more emotional and peer social competence, have higher self-esteem, and exhibit fewer behavioural problems than children with insecure perceptions (Brumariu et al., 2018). Insecure attachment styles - in particular, disorganized attachment - are related to the development of internalizing and externalizing problems across childhood and adolescence (e.g., Fearon et al., 2010; Groh et al., 2012; Madigan et al., 2013; Madigan et al., 2016). Notably, children referred for mental health treatment often have higher rates of insecure attachment compared to their non-referred peers. For example, approximately 70% of non-referred children exhibit secure attachment, whereas only about 20% of children with early-onset conduct problems referred for clinical services display secure attachment (Speltz et al., 1990; Greenberg et al., 1991). This study explored the development of parents of children with social, emotional and behavioural difficulties through participation in Circle of Security-Parenting (COS-P), an attachment-focused parenting intervention. For the purposes of this study, "parent" refers to all adults who are primary caregivers to children, and the terms "parent" and "caregiver" will be used interchangeably throughout.

Incorporating Attachment-Based Intervention in Children's Mental Health Treatment

Research indicates that parental involvement in children's mental health treatment is essential for achieving gains in children's social, emotional, and behavioural functioning. A meta-analysis of 49 youth treatment studies found that alongside therapeutic alliance and youth engagement, parental participation in treatment was one of the strongest predictors of positive youth outcomes (Karver et al., 2006). In another example, a trial comparing the effects of parent

and child, child-only, and parent-only cognitive behavioural therapy for children with depression and anxiety found that children in the parent and child condition demonstrated better coping skills post-treatment and had significantly greater improvements in parent-reported emotional well-being than children in the other two treatment conditions (Mendlowitz et al., 1999). Lakin and colleagues (2004) found that greater parental involvement in treatment was associated with a lower likelihood of readmission for children and youth receiving residential treatment for social, emotional and behavioural difficulties. Not only is parental involvement important for treatment success, but positive changes in parenting behaviours may mediate changes in children's social, emotional, and behavioural functioning. Research on Stop Now and Plan (SNAP), a cognitive-behavioural treatment for children with disruptive behaviour problems, which includes both parent and child components, has shown that children with the best treatment outcomes were those whose parents experienced changes in their own behaviour (Pepler et al., 2010). Bridgett et al. (2015) wrote that "parenting behaviour is a likely, and key social mechanism in the intergenerational transmission of self-regulation," influencing behavioural outcomes and neural pathways related to self-control (p. 611). Negative parenting practices are a primary risk factor for social, emotional, and behavioural difficulties (Bridgett et al., 2015). Sustained positive developmental change for children with social, emotional and behavioural challenges requires both parental involvement in treatment and positive changes in parenting. As such, incorporating parent-focused components into treatment is key.

Evidence-based parenting programs can be generally divided into two types according to the theoretical paradigm on which they are based: behaviourally focused interventions and attachment-focused interventions. Behaviourally focused interventions are typically based on behaviour modification and social learning theory. The goal of intervention is to teach parents to

manage their children's disruptive behaviours through use of reinforcements, analysis of the antecedents and consequences, and shaping positive behaviour (e.g., Sanders et al., 1999; Webster-Stratton, 2000; Forgatch & Patterson, 2010). Attachment-based parenting interventions aim to promote parental sensitivity and change parental mental representations of their child, by helping parents better understand the attachment needs underlying their children's behaviours, develop their observational skills, attunement, empathic responding, dyadic emotion regulation, self-reflection and reflective functioning (e.g., Moretti & Braber, 2013; Woodhouse et al., 2018).

Two lines of research support the rationale for incorporating attachment-focused interventions specifically into children's mental health treatment. The first draws upon findings on the efficacy of three behaviourally focused parenting interventions (Comet, Incredible Years and Cope) compared to an attachment-focused parenting intervention (Connect) for children exhibiting severe behaviour problems (Hogstrom et al., 2016). Although both types of intervention resulted in reductions in children's externalizing behaviour over the course of intervention, only the attachment-focused intervention, which targeted the attachment relationship between parents and children, resulted in continued improvements in children's behaviour after completion of the treatment program at two-year follow-up. Children in families who received the behaviour-focused interventions displayed the opposite pattern, with externalizing behaviour trending upwards at two-year follow-up (Hogstrom et al., 2016). A similar pattern was observed in a longitudinal study on a behaviour-focused day treatment program for children in kindergarten with disruptive behaviour problems (Barkley et al., 2000). Children exhibited improvements in their social, emotional, and behavioural regulation capacities over the course of the one-year treatment program. However, at the two-year follow-up, many children had regressed, suggesting the intervention did not give rise to lasting changes.

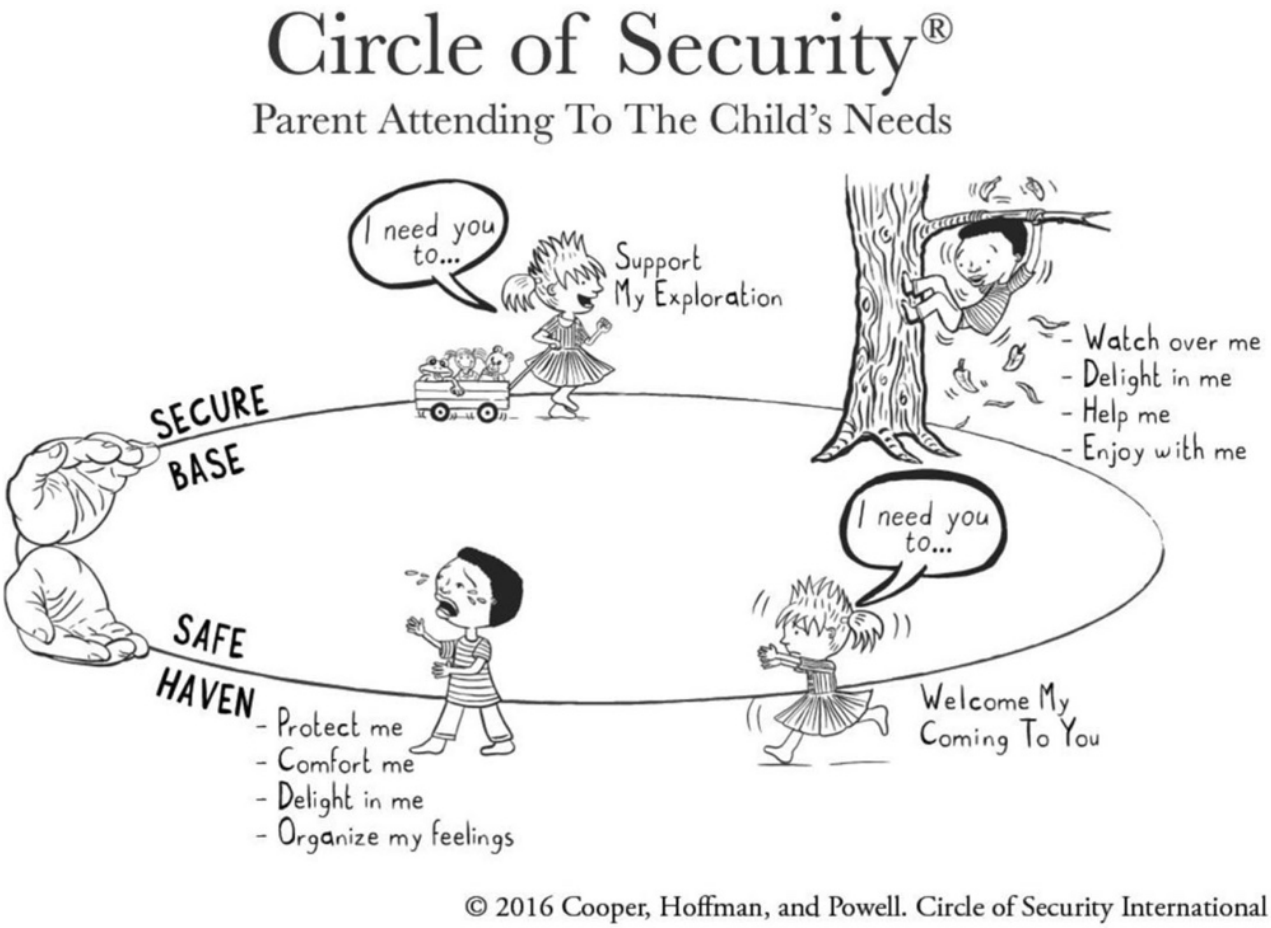
Together with the findings of Hogstrom and colleagues (2016), this suggests that behavioural strategies may not be enough to support lasting change and that an attachment-focused intervention may be helpful for long-term improvements in children's social, emotional, and behavioural regulation.

Circle of Security Parenting

One such attachment-based parenting intervention is Circle of Security Parenting (COS-P; Woodhouse et al., 2018). COS-P is an 8-week group-based psychoeducational parenting intervention. The program is informed by attachment theory and is an adaptation of a more intensive 20-week parenting intervention which aims to promote secure attachment relationships by providing individualized video feedback in a small group context (Circle of Security Intensive; Powell et al., 2014). Rather than using individualized video material, COS-P incorporates stock footage of parent-child interactions to demonstrate children's signaling of attachment needs and parent-child relationship dynamics. This footage, accompanied by handouts and guided reflection, teaches key principles of attachment theory and encourages parents to apply these principles to strengthen relationships with their children and better understand their children's needs (Cassidy et al., 2017). The centerpiece of COS-P is a graphic illustrating central tenets of attachment theory, namely that children need from parents a "secure base" from which to venture out and explore and a "safe haven" to return to for comfort, protection, and validation (Figure 1; Bowlby, 1982, 1988). Table 1 provides a summary of the remaining content covered each week in COS-P. Though originally designed for in-person delivery, the intervention can also be delivered remotely via secure videoconferencing.

Figure 1

Circle of Security Graphic



To date, seven randomized controlled trials (RCTs) have evaluated COS-P, with mixed findings. Cassidy et al. (2017) found reductions in unsupportive parental responses and improvements in parent-rated child inhibitory control, but no effects on child attachment classification or behaviour problems. In exploratory post-hoc analyses, the researchers found that the impact of COS-P on child-caregiver attachment quality was moderated by maternal avoidant attachment. Specifically, children of mothers who exhibited higher levels of avoidant attachment were more likely to be classified as securely attached and less likely to be disorganized following

Table 1

Summary of COS-P Content

COS-P week	Key COS concept(s)	Core content
Week 1 Week 2	**COS graphic/Circle map**	• Basic concepts of attachment • Children's attachment and exploration needs • COS graphic as a map for understanding parent-child interactions
Week 3 Week 4	**Being with**	• Importance of being with children in their emotional states • Parent coregulating the child while the child develops their own capacity for emotion regulation
Week 5	**Shark music**	• How defensive processes (often based in the parent's childhood experiences) can influence parents' experience of and response to their child's needs • Importance of parents reflecting on parenting struggles to enable more supportive responding
Week 6	**Mean, weak, gone**	• Hostile, helpless, and neglectful parenting • Disorganized attachment • Importance of reflection to help keep caregiving in balance
Week 7	**Rupture & repair** **Time in**	• Importance of relationship repair following inevitable ruptures in caregiving • How repair supports the long-term development of child emotion regulation and positive relationship capacities • "Time in" as a strategy for parent–child relationship repair
Week 8		• Summary of core content • Participant reflection on key learnings • Celebration of program completion

Note. Table reproduced from Maxwell et al. (2021).

the intervention**.** In a multi-site non-randomized study with a waitlist control, Maxwell et al. (2021) reported improvements in parental mentalizing and self-efficacy, and reductions in caregiving helplessness and hostility. Another RCT by Dexter et al. (2024) found that COS-P led to improvements in parental reflective functioning and parental behavioural and emotional responsiveness to children in a semi-structured play interaction. Moreover, increases in reflective functioning appeared to partially mediate the intervention's effects on parenting behaviour—caregivers who became more reflective also became more emotionally and behaviourally responsive, even after accounting for their initial levels of reflective functioning and parenting behaviour.

However, other RCTs have found limited or no effects of COS-P on key parenting and child outcomes. For example, Risholm Mothander et al. (2017), Rohder et al. (2022) and Stuart et al. (2025) found no significant difference between COS-P and care-as-usual on outcomes such as parent mentalization and reflective functioning, maternal sensitivity, parenting behaviours, parenting stress and depression symptoms, child social-emotional functioning, and child attachment classification. Similarly, relative to waitlist control, Zimmer-Gimbeck et al. (2022) found that the only significant improvement observed in the COS-P group was a reduction in self-reported parental attachment anxiety; no group differences emerged for child behaviour, parenting practices, parenting stress and depression, or reflective functioning.

Past authors have proposed several explanations for the null findings observed in COS-P trials. In some studies, the authors felt that care-as-usual was already a robust intervention, potentially limiting the added benefit of COS-P. Others have suggested that group-based delivery of COS-P may be insufficient and that direct, individualized feedback may be necessary to produce meaningful change, especially in higher-risk families. Additionally, concerns have been

raised about the sensitivity of outcome measures—particularly those assessing reflective functioning—which may not fully capture subtle changes resulting from the intervention.

Despite these inconsistencies, COS-P remains a widely used, theoretically grounded intervention, and has been identified in a recent systematic review as one of a few attachment-based, manualized programs (without direct, individualized video feedback) with strong evidence for improving caregiver-child relationships (Wittkowski et al., 2025). However, given the mixed findings across COS-P trials, further research is needed to clarify its effects on parenting processes that are known to support secure attachment.

The present study was designed to further elucidate the impact of COS-P in a community-based children's mental health setting. I focused on parenting constructs that are thought to be key mechanisms through which parenting interventions like COS-P may promote positive developmental change. Specifically, I explored changes in parents' internal representations of the parent-child relationship (measured through narrative coherence), parental emotion regulation, parental self-efficacy, and parents' responses to children's distressing emotions.

Narrative Coherence and Secure Attachment

Ultimately, COS-P aims to promote secure attachment relationships between parents and children. Attachment theory suggests that parents' internal representations (i.e., thoughts, attributions, and expectations) of their children guide both their interpretations of the children's behaviour and their own behaviours towards their children, and consequently shape the quality of the attachment relationship (Bowlby, 1982; Main et al., 1985). Some parents have flexible, multi-faceted and integrated (i.e., coherent) internal representations of children, that include both positive and negative aspects of children's characteristics and the parent-child relationship

(Oppenheim, 2006). Such representations are thought to facilitate an accurate interpretation of the children's signals and prompt sensitive and attuned responses to children (Ainsworth et al., 1974). This, in turn, contributes to children's sense of safety and security in the attachment relationship and facilitates the development of better self-regulation (Dykas & Cassidy, 2011; Sroufe, 2005).

Other parents, however, tend to process information regarding their children in a more distorted manner. They have poorly integrated internal representations that may overemphasize children's negative characteristics, be predominated with worry or concern regarding children, demonstrate overly rigid or diffuse boundaries within the parent-child relationship, or reflect excessive idealization of children. These types of representations can hinder the accurate interpretation of children's signals and lead to insensitive caregiving characterized by emotional detachment, hostility, rigidity, harshness, overprotectiveness, or intrusiveness (Bowlby, 1982; Bretherton, 1990; Oppenheim, 2006). Children may consequently develop incoherent representations of their parents, construct negative models of close relationships, or learn to inhibit or exaggerate emotional expressions in relationships, leading to poorer social-emotional adjustment (Oppenheim et al., 2004; Rosenblum et al., 2002).

In the context of the Circle of Security Parenting (COS-P) program, changes in parents' internal representations are proposed as the first step in improving the parent-child relationship. In a qualitative analysis of parents' experiences of participating in COS-P, Maxwell et al. (2021) suggested that these initial shifts in parents' mental representations facilitate the development of increased empathy, self-compassion, and parenting confidence. Several studies have examined this aspect of the COS-P change process by focusing on the development of parental reflective functioning over the course of intervention. Reflective functioning, or mentalization, refers to

parents' capacity to identify and reflect on the role of mental states (e.g., feelings, thoughts, intentions, desires) in their own and their children's behaviours (Fonagy et al., 1991). Some studies have found improvements in reflective functioning following COS-P participation **(**Kohlhoff et al., 2016; Maxwell et al., 2021), while others have not (Gray, 2015; Maupin et al., 2017; Zimmer-Gembeck et al., 2022). Previous studies examining reflective functioning in the context of COS-P have relied on self-report measures, such as the Parental Reflective Functioning Questionnaire (PRFQ; Luyten et al., 2017). While useful, the PFRQ has been shown to have low sensitivity to reflective functioning scores on the lower end of the spectrum, making it less ideal for research with higher risk populations. To address this limitation, Dexter and Wong (2023) used the Parent Development Interview-Revised (PDI-R2; Slade et al., 2003), a semi-structured interview that provides a more detailed assessment of reflective functioning compared to self-report measures. They found that caregivers participating in COS-P demonstrated significant improvements in reflective functioning compared to the control group. They also observed improvements in parents' behavioural and emotional responsiveness to children and found that post-intervention reflective functioning scores accounted for a substantial amount of variance in behavioural and emotional responsiveness.

While reflective functioning has been the focus of several studies on the impact of COS-P, narrative coherence offers another important and complementary lens through which to understand parents' internal representations of their child and the parent-child relationship. Unlike reflective functioning, which emphasizes the parent's capacity to understand behavior in terms of mental states, narrative coherence focuses on the structure of parents' internal representations of their children and emotional quality of how parents talk about their children. It is a measure of the extent to which parents provide clear, consistent, and multifaceted portrayals

of their children, when asked to describe their children and their relationship with them (Sher-Censor & Yates, 2012; Koren-Karie & Oppenheim, 2004). The assumption underlying this approach is that more coherent narratives reflect more integrated, flexible, and emotionally attuned internal representations, which in turn support sensitive caregiving. Because COS-P aims to promote positive changes in how parents perceive and understand their children, narrative coherence provides a theoretically grounded and developmentally meaningful way to assess this potential change.

While no studies have directly examined the development of parental narrative coherence over the course of COS-P, the existing literature on narrative coherence in attachment relationships suggests its critical role in fostering healthy parent-child dynamics, making it a compelling focus for further investigation in attachment-based interventions. Research has shown that mothers who provide coherent narratives about their children demonstrate higher emotional availability during interactions. For instance, a study of mothers and young children with autism found that those who conveyed coherent narratives were more sensitive, offered more appropriate structuring, and were less intrusive when playing with their children compared to mothers with incoherent narratives (Sher-Censor et al., 2017). Additionally, coherent maternal narratives have been linked to fewer reports of internalizing and externalizing behaviour problems in children, as reported by the mothers themselves (Sher-Censor et al., 2018). Research also indicates that children with existing self-regulation difficulties showed better adjustment outcomes when their mothers provided coherent narratives (Sher-Censor et al., 2016). These findings highlight the significance of narrative coherence in promoting positive parenting behaviours and better social-emotional outcomes for children.

Parental Emotion Regulation

Children's ability to regulate themselves physically and emotionally is positively associated with markers of healthy development such as school readiness (Raver et al., 2011) and is thought to promote improved social-emotional functioning across the life span (Diamond & Aspinwall, 2003). Parent-child coregulation supports the development of child self-regulation through coordinated behavioural and affective patterns that provide external regulation for children who cannot independently regulate themselves (Feldman, 2007). Parents need to be able to regulate their own emotions and behavioural states and at the same time engage in attuned co-regulation processes that support the development of children's self-regulation. Some studies have found post-COS-P reductions in caregiver depression, anxiety, and stress (Coleman, 2014; Kim et al., 2018; Maxwell et al., 2021), which could be at least partially driven by improvements in caregiver emotion regulation. Coyne et al. (2019) discuss how COS-P is embedded within a relationship-based intervention framework, with therapists aiming to provide a secure base and safe haven for parents to reflect on and work through difficult emotions and aspects of their unique histories that have interfered with their ability to respond sensitively to their children. In effect, the group can become a "holding environment" (Winnicott, 1965) or co-regulating relationship for parents. This process may support the development of parental emotion regulation, enabling parents to better engage in co-regulation with their children. From a cognitive behavioural perspective, improved parental mentalization and awareness of emotional triggers may reduce negative attributions regarding children's challenging behaviours, resulting in reduced parental distress in response to such behaviours. COS-P uses the metaphor of "shark music" to support the development of parents' awareness of their emotional triggers. The idea is that much like the ominous music in a movie signaling an impending shark attack, these

emotional triggers are rooted in past experiences, anxieties, or unresolved feelings that colour a parent's perception of their child's actions. By becoming aware of their "shark music," parents can then better understand and regulate these emotional responses.

Parental Self-Efficacy

Parental self-efficacy refers to parents' self-perception of their competence and ability to effectively perform the tasks of parenting. It has been consistently associated with positive parenting practices and child outcomes (e.g., Bloomfield & Kendall, 2012; Jones & Prinz, 2005). The converse of parental self-efficacy, caregiver helplessness, has been associated with disorganized attachment (George & Solomon, 1996), an attachment style predictive of significant developmental risk for children (Lyons-Ruth et al., 2016). Caregiver helplessness is characterized by a relationship dynamic in which the parent feels ineffective to respond to children's needs and facilitate regulation of children's emotions and behaviours. COS-P has been theorized to promote greater parental self-efficacy and reduce caregiver helplessness by providing a framework to help parents understand children's behaviour as an expression of legitimate needs as well as to simplify and provide guidance around essential parental tasks. Compared to parents in a waitlist control condition, Maxwell et al. (2021) found that parents who participated in COS-P showed evidence of improved self-efficacy regarding empathy and affection toward the child and reductions in caregiving helplessness and hostility toward the child. In fact, increased feelings of parental agency and efficacy seem to be one of the most consistently reported positive outcomes of COS-P across multiple studies (e.g., Gray, 2015, Kohlhoff et al., 2016; Maxwell et al., 2021; Rose et al., 2018). The exception was a study by Maupin et al. (2017), who assessed parental self-efficacy as a component of parenting competency and found null results. In this case, the authors indicated that measurement occurred

immediately following completion of the program and they proposed that later follow-up evaluations might capture more change.

Parental Responses to Children's Distressing Emotions

The way parents respond to children's distressing emotions impacts children's social and emotional development (Fabes et al., 2002) as children learn to regulate emotions through interactions with parents (Laible & Panfile, 2009). For example, if parents become emotionally distressed in response to their children's negative affect, children are likely to learn that their negative emotions are something to be stopped or punished. Research has shown that harsh parental reactions to children's negative emotions are associated with poor adjustment and social functioning in children (Eisenberg et al., 1996). Increased parental mentalization is associated with more supportive responses to children's distressing emotions, because parents who can reflect on their own and their children's mental states, are more likely to understand their children's distressing emotions and corresponding behaviours in terms of needs and respond sensitively (Slade et al., 2005). Parents with poorer capacity for reflection on mental states are more likely to be overwhelmed by their children's negative emotions and may respond in less sensitive and appropriate ways. COS-P focuses on helping parents identify and respond in a supportive manner to children's negative affective states, by supporting the development of parental mentalization and through teaching the "being with," "shark music" and "time-in" skills. Parents are also supported to reflect on how their own emotions and internal experiences were supported in their families of origin, and how this might affect their approach to parenting with their own children. Cassidy et al. (2017) found that compared to a wait-list control, caregivers who participated in COS-P reported a lower likelihood of engaging in unsupportive responses to children's distress. Parental mentalization is also conceptually similar to empathy, the

development of which has been described as a possible mechanism through which COS-P may promote positive developmental changes for children and the parent-child relationship (Maxwell et al., 2021). As such, more supportive responses to children's distress may be a pathway through which increased parental empathy (or mentalization) manifests a positive effect for children's development.

A Note on Age and COS-P

It is important to note that COS-P was originally developed for parents of children aged 0 – 6 years old, as early childhood is considered a critical period for attachment formation and intervention. However, in real-world clinical or community mental health settings, the intervention is often delivered to parents of children outside the intended age range, as was the case at the agency I partnered with for this study. The effectiveness of COS-P for parents of children older than 6 years old is an under-researched area. However, attachment needs do not disappear after early childhood but continue to shape relationships throughout life (Mikulincer & Shaver, 2018). The ability to provide both a secure base and a safe haven remains critical for emotional development, even as children grow older and their attachment behaviours become more complex (Sroufe, 2005). Theoretically, there are reasons to believe that COS-P may be applicable beyond its intended age range, and empirical evidence from attachment-focused interventions across the lifespan offers further support for this notion.

To begin, the psychoeducation provided in COS-P—including the importance of the attachment relationship as a secure base and safe haven, the emphasis on understanding the needs underlying children's behaviour, and the focus on emotional attunement and presence—reflects principles that apply to attachment relationships across the lifespan (Waters & Cummings, 2000). For example, COS-P explores how some parents vary in their ability to

support children's attachment needs, with some struggling more with providing a secure base for exploration, and others finding it hard to provide a safe haven for comfort and sharing in their children's successes and joys. These two caregiving patterns align with the concepts of attachment anxiety and avoidance that are discussed in the adult attachment literature (Brennan et al., 1998; Fraley & Shaver, 2000).

There is also significant conceptual overlap between COS-P and other attachment-focused interventions such as *Connect* (an attachment-focused intervention for parents of adolescents; Moretti & Braber, 2013) and emotion-focused couples therapy (Greenberg & Johnson, 1988). These interventions have shown to be effective across various stages of development. For example, Moretti et al. (2015) demonstrated that *Connect* promotes positive outcomes by enhancing parental sensitivity, reflective functioning and dyadic emotion regulation – mechanisms that closely parallel those targeted in COS-P. Similarly, research on emotion-focused therapy for couples underscores how interventions targeting attachment processes such as emotional attunement and responsiveness can improve relationship functioning in adulthood (Beasley & Ager, 2019; Spengler et al., 2024). Together, these studies suggest that COS-P, which shares the same core principles as these other attachment-focused interventions, may be valuable even when applied to parents of older children.

Research Questions

In summary, research underscores the critical role of the parent-child relationship in shaping children's emotional and behavioural development. Furthermore, many studies have demonstrated that parental involvement in children's mental health treatment enhances outcomes. There is good theoretical and empirical support for attachment-based interventions, such as Circle of Security Parenting (COS-P), but gaps remain in understanding the specific

mechanisms that drive long-term improvements in parent and child outcomes. The present study aimed to address these gaps by exploring the development of parents of children with social, emotional, and behavioural difficulties through participation in COS-P in a community-based children's mental health agency. Using a mixed-methods, pre-post longitudinal design, the study focused on the following questions:

1. Do parents' internal representations of their children and the parent-child relationship parent-child relationship as measured by the FMSS-C shift towards greater coherence over the course of COS-P?
2. Does parental emotion regulation improve over the course of COS-P?
3. Does parental self-efficacy increase over the course of COS-P?
4. Do parents report more supportive responses to children's distressing emotions and fewer unsupportive responses over the course of COS-P?

Method

Participants

The study comprised a total of 10 participants who completed the Circle of Security – Parenting (COS-P) program between October 2022 and June 2023. There were two parenting dyads in the study (i.e., both participants were parents of the same child) and six participants who were the sole parent receiving COS-P for a given child. As such, there were parents of eight children in total in the study. All children were receiving mental health services through the Child Development Institute (CDI) for a range of internalizing and externalizing difficulties. COS-P was offered to parents as an adjunct treatment to the main intervention their child was receiving. These interventions included:

1. **Family and Community Counselling (FCC)**: An integrative counselling program for families with children under six experiencing social, emotional, developmental, and behavioural difficulties.
2. **SNAP® (Stop Now And Plan)**: A program for children with significant disruptive behaviours and emotional dysregulation. It teaches children and their caregivers to manage emotions and actions by pausing to stop, think, and plan to avoid reacting impulsively.
3. **School Day Treatment**: A specialized, classroom-base intervention for children from Junior Kindergarten to Grade 6 with significant emotional, social and behavioural challenges who have difficulty managing in their mainstream schools. This program utilizes a multi-disciplinary team including special education teachers, child and youth workers, an educational assistant, a family counselor, and a psychologist.

4. **Child Care Consultation** – Consultants collaborate with parents and childcare providers to develop goals and strategies based on the child's strengths and needs, supporting the child's development and inclusion in community childcare programs.

Participants were recruited from three separate COS-P groups that were offered during the study period. The first group ran from October 2022 – December 2022. Four out of six parents in the group consented to participate in the research. The other two parents were excluded from the study due to language barriers and having completed COS-P previously. The second group was offered from February 2023 – April 2023. Four out of eight parents in this group participated in the study. Two of the remaining four declined to participate for personal reasons; the other two parents were excluded due to language barriers. The third group ran from April 2023 – June 2023. All three participants agreed to participate in the study: however, one participant dropped out of COS-P and the research study. As such, there were two participants in total from the third cohort. The demographics and characteristics of the study participants are summarized in Table 2.

Table 2

Sociodemographic Characteristics of Parent Participants

Characteristic	***n***	**%**
Gender		
Female	8	80
Male****	2	20
Marital status		
Single	2	20
Married/partnered****	6	60
Separated/divorced	2	20
Age of child receiving services from CDI		
3 years old	1	10
5 – 6 years old	3	30

7 – 8 years old**	3	30
11 years old**	3	30
Gender of child receiving services from CDI		
Female	8	80
Male	2	20
Caregiver's relationship to child receiving services from CDI		
Biological parent	9	90
Grandparent (primary caregiver)	1	10
# of children living with caregiver		
2****	8	80
3	1	10
4	1	10
Ethnicity		
White***	6	60
Multi-racial*	2	20
Asian	1	10
Latin American	1	10
Highest educational level		
High school	1	10
University or postgraduate degree****	8	80
Unknown	1	10
Family income per year		
$10,000 - $25,000	1	10
$25,000 - $50,000	1	10
$50,000 - $100,000	1	10
>$100,000****	6	60
Unknown	1	10
Number of months family had been receiving services at CDI at follow-up		
7 – 9 months	3	30
10 – 13 months****	6	60
> 24 months	1	10
Number of hours of caregiver treatment received outside of COS-P		

< 5	1	10
20 – 30**	4	40
30 – 40**	2	20
40 – 50	2	20
> 70	1	10
Main treatment program for child at CDI		
Family Community Counselling	3	30
School Day Treatment**	3	30
SNAP**	3	30
Childcare Consultation	1	10
Previous parenting interventions outside of CDI		
Yes – Triple P	1	10
No	9	90

Note. Each individual asterisk (*) in the table represents a participant who is part of a dyadic parental unit (e.g., a mother and a father). While data were collected independently for each participant, asterisks indicate individuals who are parenting a child together with another participant in the study.

Design

The study used a longitudinal mixed-methods design integrating quantitative and qualitative data to explore change in parents over the course of COS-P. Measures were collected from participants at pre-intervention, post-intervention and 3-months follow-up.

Measures

Parental Emotion Regulation. Parental emotion regulation was assessed using the Difficulties in Emotion Regulation Scale – 18 (DERS-18; Victor & Klonsky, 2016). The DERS-18 is a short-form of a self-report measure of emotion regulation (Gratz & Roemer, 2004). It consists of six subscales measuring different types of difficulties in emotion regulation. These include: 1) non-acceptance (i.e., tendency to have a negative secondary or non-accepting reaction

to one's own distress); 2) goals (i.e., difficulty in concentrating and/or accomplishing tasks when experiencing negative emotions); 3) impulse control (i.e., difficulty remaining in control of one's behaviour when experiencing negative emotions); 4) awareness (i.e., a lack of awareness of inattention to one's emotional responses); 5) strategies (i.e., belief that there is little one can do to regulate oneself once upset); and 6) clarity (i.e., extent to which one knows and is clear about own emotions). Items are rated from 1 ("almost never") to 5 ("almost always"), with three items reverse-coded. Total scores range from 18 to 90, with higher scores indicative of greater overall difficulties in emotion regulation. The DERS-18 has exhibited good reliability and internal consistency (Cronbach's alpha = 0.91), as well as good convergent and concurrent validity (see Victor & Klonsky, 2016).

Parental Self-Efficacy. An adapted version of the Tool to Measure Parenting Self-Efficacy (TOPSE; Kendall & Bloomfeld, 2005) was used to examine parents' reports of parenting self-efficacy. The TOPSE was initially adapted by researchers at CDI for evaluation of a parenting program for mothers and children exposed to intimate partner violence (Jenney et al., 2021). The adapted version contains fourteen of the original 48 TOPSE items. Items were chosen based on theoretical considerations and program evaluation needs. Two subscales (routines and parental pressures) were eliminated for the adapted version (see Jenney et al., 2022). The remaining 14-item TOPSE contains items from seven of the original nine domains: 1) parenting affection and emotion; 2) play; 3) empathy and understanding; 4) control; 5) discipline and boundaries; 6) self-acceptance and 7) parental learning and knowledge. A total score is generated from these 14 items and used as a measure of parental self-efficacy. Due to concerns raised by CDI staff regarding relevance to the aims of COS-P, the discipline and boundaries subscale were further modified for this study. The original CDI adapted version contained "I am able to reason

with my child" and "I can find ways to avoid conflict" as the items for this subscale. These items were modified to "Setting limits and boundaries is easy for me" and "I am consistent in the way I use discipline" (both are items from the full-length TOPSE). The adapted TOPSE was shown to have excellent internal reliability (Cronbach's alpha = 0.92; Jenney et al., 2022).

Parental Response to Children's Distressing Emotions. Parental responses to children's distressing emotions were assessed using the Coping with Children's Negative Emotions Scale (CCNES; Fabes et al., 1990). Parents were presented with 12 short vignettes describing common situations in which school-aged children experience and express sadness, anger, fear, embarrassment, disappointment, and anxiety (e.g., being teased by peers, being nervous about embarrassing themselves in public, falling off a bike). For each situation, parents were asked to indicate how likely (on a 7-point scale from "very unlikely" to "very likely") they would be to react in each of six different ways. Three types of responses are considered supportive. These include: (1) expressive encouragement and validation (e.g., encourage my child to express her feelings of frustration); (2) emotion-focused reactions aimed at helping the child feel better (e.g., soothe my child and do something fun to make him feel better); (3) problem-focused reactions aimed at helping the child solve the problem related to the causes of the emotion (e.g., help my child think of ways she can still be with friends). The other three types of responses are considered unsupportive. These include: (4) matching the distress of the child (e.g., get angry with my child); (5) punitive reactions (e.g., send my child to his room to cool off); and (6) minimizing reactions that deemphasize the seriousness of the event, the child's problem, or reaction (e.g., tell my child to not make a big deal out of it). The CCNES is internally reliable with alpha coefficients ranging from .71 to .87 for the subscales in past research. It has also shown good test–retest reliability, concurrent and construct validity

(Eisenberg & Fabes, 1994; Fabes et al., 2002). For example, children's emotional decoding performance was positively correlated with supportive parental responses to emotions and inversely correlated with unsupportive responses (Fabes et al., 2002). Consistent with prior studies (Blandon, 2015; Cassano et al., 2014; Nelson et al., 2009) expressive encouragement, emotion-focused and problem focused reactions were averaged for each parent to create a *supportive responses* score. Distress, punitive and minimization reactions were averaged for each parent to create an *unsupportive responses* score.

Narrative Coherence. The Five-Minute Speech Sample-Coherence (FMSS-C; Sher-Censor, 2019) was used to assess the coherence of parents' narratives about their child who was receiving services at CDI. The FMSS-C is a qualitative research method in which parents are asked to speak for five minutes, uninterrupted, about their child and their relationship with the child. It provides a snapshot into parents' internal representations of their child. The measure assesses the clarity, consistency, and multidimensionality of parents' narratives about their child, as well as the degree to which content within the narrative is well-supported. The FMSS-C is grounded in attachment research which shows that the coherence of a parent's narrative is reflected of the quality of the parent-child relationship and the child's developmental outcomes. The FMSS-C was selected as a measure because it was more feasible and less labour- and time-intensive than traditional attachment narrative measures. As per the FMSS-C protocol, parents were provided with the following prompt: "For the next 5 minutes, please tell me about your thoughts and feelings regarding your child. Please tell me what kind of a person your child is and how the two of you get along together." Following the prompt, parents were allowed to narrate for 5 minutes, uninterrupted by the interviewer. When the parent fell silent for 30 seconds or longer, the following prompt was offered once: "Please tell me anything about your child for a

few more minutes." Throughout the procedure, the interviewer maintained a warm but neutral stance towards the parent.

The narratives provided were recorded, transcribed, and coded for coherence according to the procedure developed by Sher-Censor et al. (2019). A total coherence score was derived based on the coding of six subscales:

1. Focus (the degree to which the narrative focuses on the child).
2. Elaboration (the degree to which the parent provides detailed and rich descriptions of the child and their relationship).
3. Separateness (the degree to which the parent describes the child as having a distinct personality with needs and desires that are different from their own).
4. Concern/worry (the degree to which the parent articulates worries and concerns regarding the child (reverse-coded)).
5. Acceptance/rejection (the degree to which the parent speaks lovingly of the child and their accomplishments and expresses empathy for the child's negative behaviours and characteristics vs. the degree to which the parent displays rejection, disappointment, devaluation of a judgmental stance towards the child).
6. Complexity (the degree to which the parent provides a multi-faceted portrayal of the child and their relationship, including both positive and negative aspects with supporting examples).

Coders are instructed to read the narrative at least two times. During the initial reading, the coder marks sentences or segments that demonstrate a lack of focus on the child, examples of elaboration of statements or lack thereof, concerns, acceptance, rejection, complexity and contradictions. During the second reading, the coder integrates his or her impression of the

narrative as a whole. This procedure allows for the narrative to be assessed based on the pattern of each of the subscales, as well as the organization and internal consistency of the narrative as a whole.

Each subscale receives a rating from 1 – 7, with higher scores (5 or above) indicating few or no issues in the domain, and lower scores (4 and below) suggesting some difficulties in the domain. The exception is the concern/worry subscale, which is reverse-coded, with higher scores indicating narratives more inundated with concerns or worries about the child and the parents' relationship with the child.

The total coherence score is an integration of the six subscales and reflects the degree to which the narrative focuses on the child, and conveys a consistent, elaborated, complex, and believable portrayal of the child, without being dominated by excessive concern about the child or issues in recognizing the child as a separate individual. A coherent transcript offers the reader a clear and comprehensible account of the parent's intentions and the events described. Parents who provide a coherent account create a consistent and intricate portrayal of the child. These parents consistently describe the child, their relationship, and behaviours in a clear, fluent, and believable way. At the incoherent end of the spectrum, parents produce narratives that are contradictory, confused, disjointed, and unclear. Coders might have to review specific sections of such transcripts repeatedly to grasp the parent's intentions. The authors of the FMSS-C suggest a cutoff score of 4 for overall coherence, with narratives with a total coherence score above 4 considered to be "coherent," and narratives with a total coherence score below 4 considered to be "incoherent" (Sher-Censor, 2023, personal communication). Scores in the "coherent" range (5 – 7) can only be assigned if the parent received a score of at least 5 on the focus, elaboration,

separateness, acceptance and complexity subscales, and a score not higher than 4 on the concern/worry scale.

The FMSS-C procedure was adapted from a similar method used to evaluate the quality of the relationships between individuals experiencing mental illness and their caregivers (Gottschalk et al., 1958; Gottschalk & Gleser, 1969). The FMSS-C has been used with parents in the United States, United Kingdom and Israel. Regarding the validity of the FMSS-C, a study of mothers of young children with autism found mothers with more coherent speech samples were observed to have greater emotional availability during play than mothers who provided incoherent narratives (Sher-Censor et al., 2017). More coherent maternal narratives were also associated with fewer behavioural problems in toddlers (Sher-Censor et al., 2018) and preschoolers (Sher-Censor & Yates, 2014). Lastly, in children with self-regulation challenges, parental narrative coherence predicted reductions in behaviour problems, increases in ego resiliency, and greater peer acceptance from preschool to first grade (Sher-Censor et al., 2016).

Procedure

The first step in developing this study was to meet with clinicians at CDI to discuss the project and obtain feedback on the goals for the research and proposed procedures. The research questions and methods were mutually decided upon with CDI clinicians and internal research staff. Research ethics approval was then obtained from York University and CDI.

Eligible parents enrolled in COS-P groups were informed about the study by a member of their clinical team and asked if they would like to participate. Parents who expressed interest in the study were then invited to attend an initial virtual meeting (conducted via Zoom) with a member of the research team within 1 week of the COS-P start date (either one week before or in the week following). Some flexibility was allowed in terms of the timing of this first meeting to

maximize the likelihood of finding a time that parents would be able to attend. During this initial meeting, parents were provided with more information about the purpose of the research project and the potential risks and benefits of participating. They were also assured that their decision to participate or not participate would have no bearing on the quality of service they receive at CDI.

After providing informed consent to participate in the research, parents were invited to complete the pre-intervention measures via Zoom with the researcher. The FMSS-C was administered first, as per instruction by the developers of the measure. Administering the FMSS-C first is considered vital, as any measure administered before it may colour caregivers' narratives (Sher-Censor, 2019). The DERS, TOPSE, and CCNES were administered next. For the questionnaires, participants were provided with a link to complete the measures through Microsoft Forms. The research team member remained on the Zoom call with the parents as they completed the measures to answer any questions or assist with technical difficulties. On average, after completing the consent process, the entire procedure took 20 – 30 minutes to complete. The same procedure for collecting the FMSS-C, DERS, TOPSE and CCNES data was repeated at post-intervention (within 2 weeks of completion of COS-P) and at 3-months follow-up.

Analysis

FMSS-C. The FMSS-C narratives were transcribed and coded by myself and a master's student in developmental psychology. We were both trained by the FMSS-C developer to achieve 80% reliability for the total coherence score. Inter-rater reliability for the overall coherence score between the two coders in this study was established at 92.3%, based on dual coding of 13 out of 29 narratives. The disagreement in this case was resolved by contacting the FMSS-C developer for a third opinion on the narrative, and eventually consensus was reached. The remaining narratives were coded solely by me.

For each participant, quotes from the FMSS-C narratives that exemplified the main patterns of their FMSS-C were extracted. When possible, these quotes were included in the results below. However, given that coding for the FMSS-C is based on identification of specific statements related to subscales, as well as on the coder's overall impression of the narrative, there were some instances in which the section of transcript that would be necessary to include to capture the themes and patterns observed was too lengthy, and/or to include it would jeopardize the confidentiality and anonymity of participants. As such, there are specific quotes included in the results for some but not all participants.

Missing and excluded data. Due to an audio recording error, the Time 1(pre-intervention) FMSS-C was missing for one participant (Participant 6). Additionally, CCNES data for Participant 4 at Time 2 (post-intervention) were excluded due to an abnormal response pattern, likely due to a technical error in the Microsoft Forms mobile interface. The decision to exclude these data was based on visual inspection of this data as an outlier, as well as an examination of the average response variability for this measure in the overall sample. Variability in Participant 4's response pattern at Time 2 was unique (they alternated between only two out of seven possible responses for all 72 items on the measure) and fell several standard deviations outside of the mean.

Descriptive analyses. All analyses were conducted using R. Descriptive statistics, including means and standard deviations were calculated for the DERS, TOPSE, CCNES, and FMSS-C scales and subscales. Confidence intervals (95%) for each measure were calculated based on the standard error of the mean to provide a representation of uncertainty in the data. Effect sizes (Cohen's d) were computed using baseline standard deviations. Using baseline standard deviations to calculate effect sizes in longitudinal intervention studies with a small

sample size is advantageous because it enhances sensitivity to changes by maintaining focus on participants' initial state. In other words, it provides a metric for assessing how participants deviate from their starting point over the course of the intervention (Feingold, 2009). It is particularly useful in small sample sizes, as pooled standard deviations can be overly influenced by potential biases introduced by changes in data distribution in response to the intervention.

Minimal Clinically Important Difference. It was not feasible to conduct hypothesis testing using inferential statistics with such a small sample due to insufficient power to mitigate the risk of Type II error. As such, it was important to use other methods to capture meaningful change (or lack thereof) over the course of the intervention. The minimal clinically important difference (MCID) is the smallest change in a treatment outcome that an individual perceives as beneficial (Jaeschke et al., 1989), providing a practical threshold for assessment clinical significance when traditional statistical tests lack power. There is no consensus regarding one method for establishing the MCID, rather, multiple methods are used, each with its strengths and applications depending on the context of the study and the nature of the data available (Mouelhi et al., 2020). Many intervention studies calculate a reliable change index (RCI; Jacobson & Truax, 1991). However, given the small sample size and lack of normative data available to establish test-retest reliability, this method was poorly suited to this study. Instead, the effect sizes calculated using baseline standard deviations were used as the metric for MCID, setting 0.5 standard deviations (SD) as the threshold for a clinically meaningful change. This decision was informed by a systematic review from the field of health research, which revealed that changes close to 0.5 SD are often perceived as beneficial by individuals across a range of measures and conditions (Norman et al., 2003). The authors presented additional rationale to support this threshold based on research on the psychology of discrimination (Miller, 1956). They explained

that the limit of an individual's ability to discriminate across a range of stimuli is approximately 1 part in 7, which they argue is very close to 0.5 SD (Norman et al., 2003).

Ethical Considerations. To protect the confidentiality of participants, identifiable details in the narratives were altered while maintaining the overall meaning of what the participants expressed. The pronoun "they" is used when referring to parents throughout the results section to conceal their gender. Children are referred to using "he" or "she" pronouns; however, these were also altered for confidentiality such that the pronoun used to refer to a child does not necessarily reflect the reported gender identity of that specific child.

Two-Tiered Analysis: Combining Variable-Centered and Person-Centered Approaches

The study followed a two-tiered approach to analysis, using both variable-centered and person-centered analyses. Variable-centered analysis focuses on examining relationships between or within different variables across the entire sample. The purpose of this approach is to identify trends or patterns that are common across all participants. Traditionally, most developmental psychology research has used a variable-centered approach as the main conceptual and analytical tool for formulating theories and testing hypotheses (e.g., Thomae, 1988; Wohlwill, 1973). However, several authors have expressed concerns about the limitations of variable-centered analyses, particularly in terms of understanding the structures and processes involved in development and growth at the individual level (Bergman & Magnusson, 1997). Person-centered analysis has been proposed as an alternative approach to address some of the limitations of variable-centered analysis. Person-centered analysis focuses on the patterns and trajectories of individual participants or identified groups within the sample. This approach allows for individual to be clustered based on similarities in their responses or behaviours,

allowing for the exploration of how different subgroups or individuals may uniquely experience or respond to certain conditions (Magnusson, 2003).

The decision was made to incorporate both variable-centered and person-centered analyses to capture the breadth and depth of the data and allow for both aggregate and individual-level insights. The duality of this approach allows for an exploration of how parents changed on average over time, while also acknowledging the clinical reality that not all parents follow the same trajectory of development and growth over the course of intervention. Examining individual patterns of development throughout the study period offered an opportunity to deepen understanding of these unique responses of individuals to COS-P.

Results

Results for the variable-centered analysis are presented first, followed by the person-centered analysis. For the variable-centered analysis, numerical results for each of the measures aggregated across all participants are provided first, followed by a graph for each measure. Data for individual participants are presented alongside the aggregate data to illustrate the varied trajectories of participants throughout the study period relative to the average trajectory. For the person-centered analysis, the numerical results for each participant are reported along with graphs showing the trajectory of each outcome variable over time for individual participants. Participants were grouped into three categories based on their overall FMSS-C coherence score: 1) Increasing Coherence; 2) High Baseline, Stable Coherence; and 3) Low Baseline, Stable Coherence.

Variable-Centered Analysis

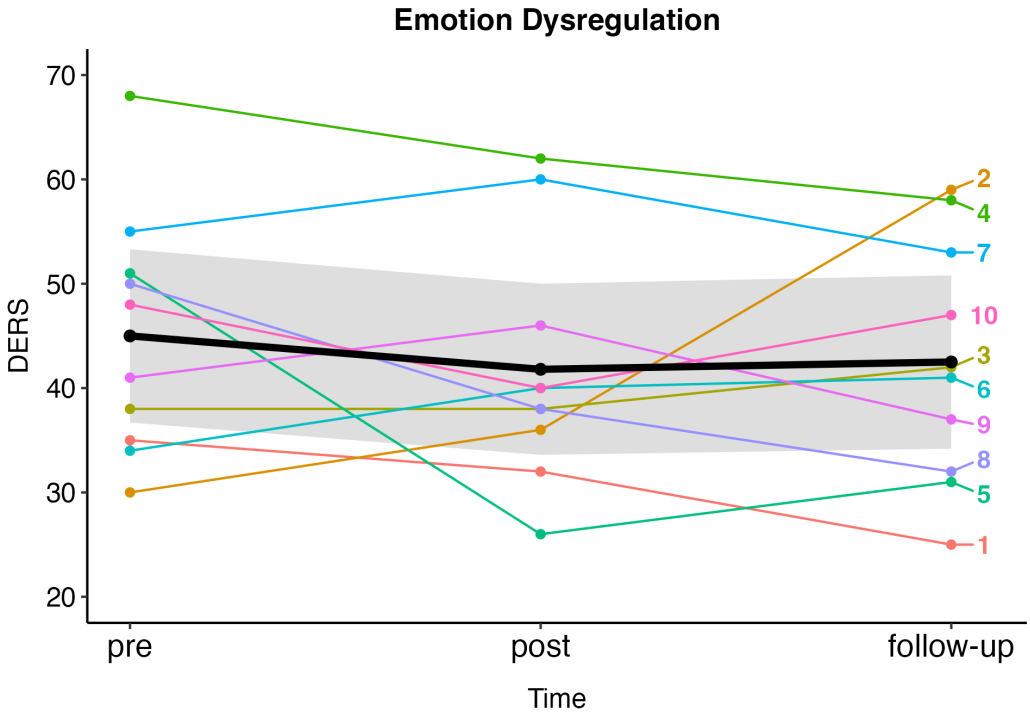
The mean and standard deviation for each outcome variable across time (pre, post, and follow-up) aggregated to include all participants are summarized in Appendix A. Overall, the analyses indicated that, on average, from pre- to post-intervention, parental self-efficacy ($d = 0.53$) and narrative coherence ($d = 0.76$) increased, whereas unsupportive responses to children's negative emotions ($d = 0.74$) decreased. Emotion dysregulation and supportive responses to children's negative emotions remained relatively stable. At follow-up, improvements in parental self-efficacy and narrative coherence were maintained, and the decrease in unsupportive responses to children's negative emotions was sustained, suggesting lasting benefits of the COS-P intervention over time. Effect sizes (Cohen's d) for the changes in outcome variables from pre- to post-intervention, pre- to follow-up, and post- to follow-up can be found in Appendix B.

Emotion Dysregulation

On average, emotion dysregulation, as measured by the DERS, showed a slight decrease from pre-intervention ($M = 45.0$, $SD = 11.60$) to post-intervention ($M = 41.8$, $SD = 11.41$) and remained stable at follow-up ($M = 42.5$, $SD = 11.66$). The effect sizes were small for all comparisons ($d = 0.28$ from pre- to post-intervention, $d = 0.22$ from pre- to follow-up, and $d = 0.06$ from post- to follow-up; see Figure 2).

Figure 2

DERS Scores Graphed Across Time



Note: The black line represents the average DERS score across all participants. The grey ribbon is the 95% confidence interval around the average scores. The coloured lines represent individual participants' scores.

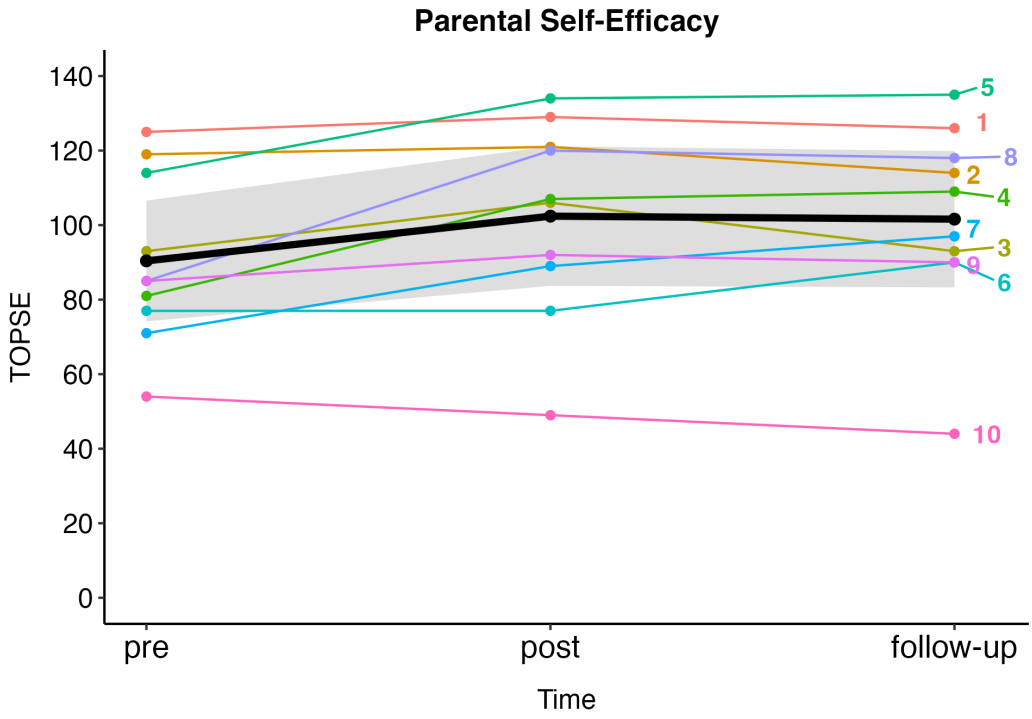
Parental Self-Efficacy

On average, parental self-efficacy, as measured by the TOPSE, showed an increase from pre-intervention ($M = 90.4$, $SD = 22.62$) to post-intervention ($M = 102.4$, $SD = 26.21$), and this

increase was maintained at the 3-month follow-up (M = 101.6, SD = 25.54). The effect size for the change from pre- to post-intervention was medium (d = 0.53), indicating a meaningful improvement in parental self-efficacy (see Figure 3).

Figure 3

TOPSE Scores Graphed Across Time



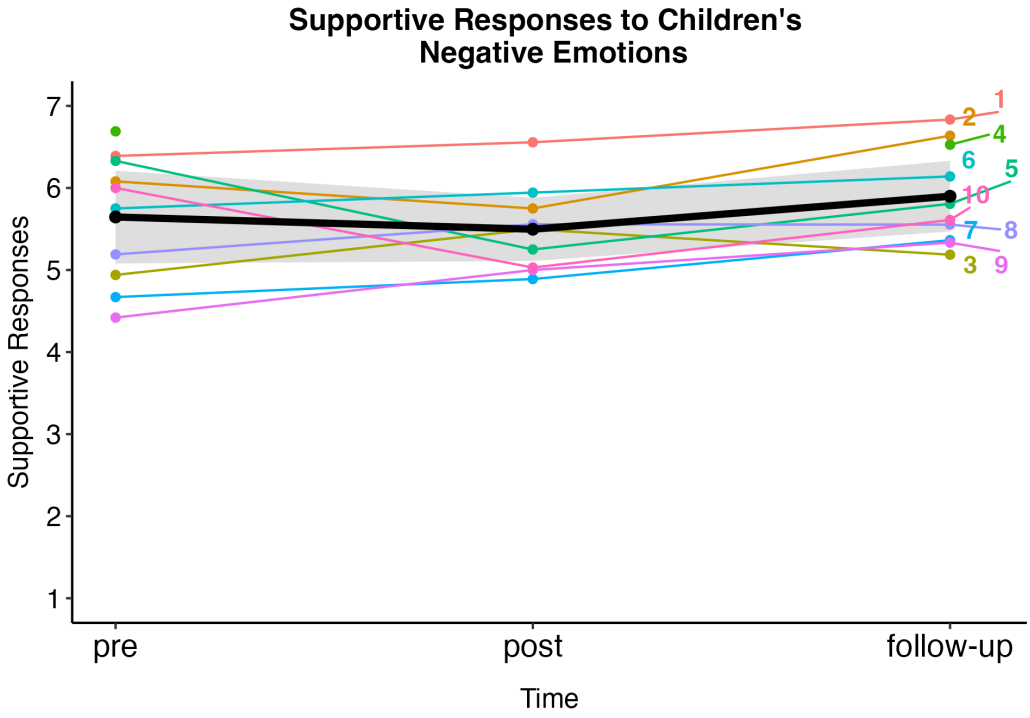
Note: The black line represents the average TOPSE score across all participants. The grey ribbon is the 95% confidence interval around the average scores. The coloured lines represent individual participants' scores.

Responses to Children's Negative Emotions

On average, supportive responses to children's negative emotions, as measured by the CCNES Supportive scale, remained relatively stable across time with a slight increase at follow-up (pre-intervention: M = 5.65, SD = 0.79; post-intervention: M = 5.50, SD = 0.53; follow-up: M = 5.90, SD = 0.60). The effect sizes indicated small to moderate changes, with the largest change observed from post-intervention to follow-up (d = 0.51; see Figure 4).

Figure 4

CCNES Supportive Scores Graphed Across Time



Note: The black line represents the average CCNES Supportive score across all participants. The grey ribbon is the 95% confidence interval around the average scores. The coloured lines represent individual participants' scores.

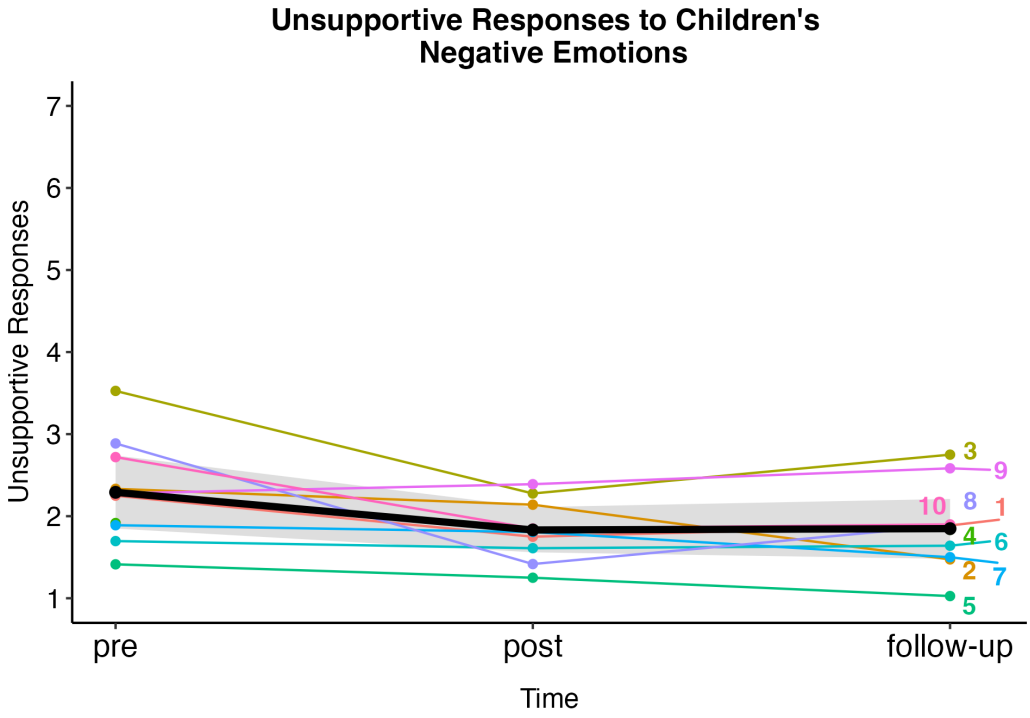
Unsupportive responses, as measured by the CCNES Unsupportive scale, on average, decreased from pre-intervention ($M = 2.29$, $SD = 0.62$) to post-intervention ($M = 1.83$, $SD = 0.38$) and remained lower at follow-up ($M = 1.85$, $SD = 0.51$). The effect sizes indicated large changes from pre- to post-intervention ($d = 0.74$) and from pre- to follow-up ($d = 0.71$), suggesting a meaningful change in unsupportive responses (see Figure 5).

Narrative Coherence

On average, narrative coherence, as measured by the FMSS-C Coherence scale, increased from pre-intervention ($M = 3.44$, $SD = 1.13$) to post-intervention ($M = 4.30$, $SD = 1.49$) and

Figure 5

CCNES Unsupportive Scores Graphed Across Time



Note: The black line represents the average CCNES Unsupportive score across all participants. The grey ribbon is the 95% confidence interval around the average scores. The coloured lines represent individual participants' scores.

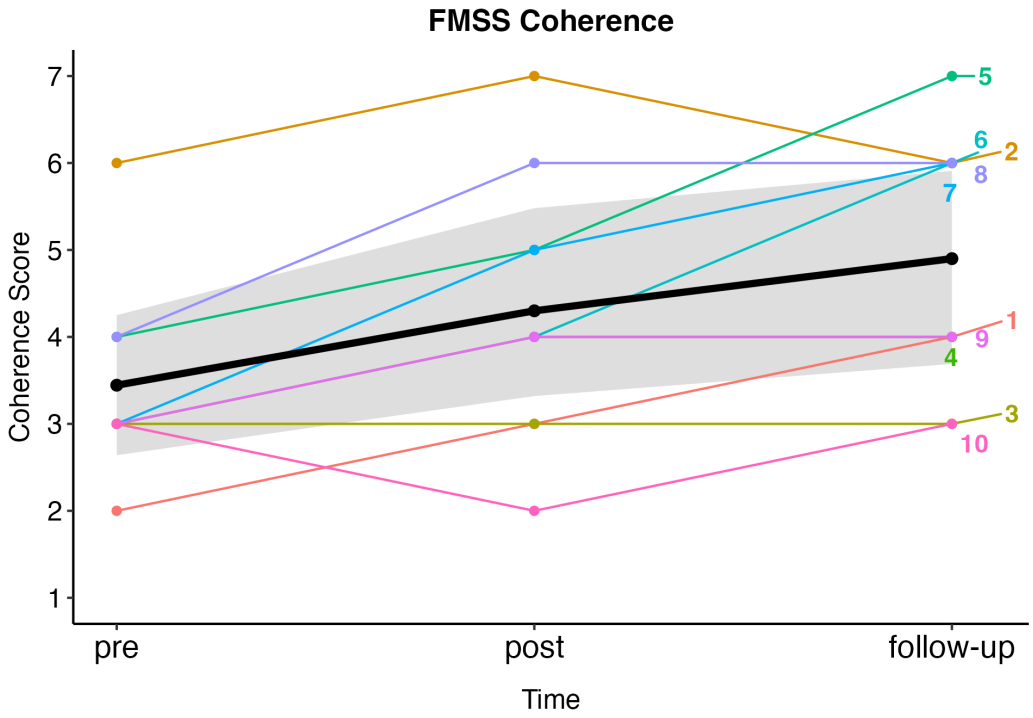
continued to improve at follow-up (M = 4.90, SD = 1.45). The effect sizes were medium to large, indicating a meaningful improvement across time (d = 0.76 from pre- to post-intervention, d = 1.29 from pre- to follow-up). These changes indicate improvements in the emotional climate and quality of the parent-child relationship (see Figure 6).

FMSS-C Subscales. The subscales of the FMSS-C measure showed varied patterns of change across the intervention period and follow-up. The subscales for acceptance, concern/worry, and complexity demonstrated improvements that were either maintained or continued to increase at follow-up. On average, acceptance scores increased markedly from pre-

intervention (M = 4.56, SD = 1.13) to post-intervention (M = 5.70, SD = 0.95, d = 1.01), and this improvement was

Figure 6

FMSS-C Coherence Scores Graphed Across Time



Note: The black line represents the average FMSS-C Coherence score across all participants. The grey ribbon is the 95% confidence interval around the average scores. The coloured lines represent individual participants' scores.

sustained from post-intervention to follow-up (M = 5.70, SD = 1.25). Average concern/worry scores decreased from pre-intervention (M = 4.78, SD = 1.09) to post-intervention (M = 3.80, SD = 1.40) and continued to decrease at follow-up (M = 3.30, SD = 1.77), with effect sizes of d = 0.93 from pre- to post-intervention and d = 1.40 from pre- to follow-up. On average, complexity scores showed an increase from pre-intervention (M = 3.78, SD = 1.30) to post-intervention (M = 4.50, SD = 1.72) and further improvement at follow-up (M = 5.00, SD = 1.56), with effect sizes of d = 0.55 from pre- to post-intervention and d = 0.94 from pre- to follow-up.

The focus, elaboration, and separateness subscales, on average, showed minimal changes over time, indicating stability in these areas. Overall, these results indicate that the changes observed in the FMSS-C Coherence scale were driven by improvements in the acceptance, concern/worry, and complexity subscales.

Person-Centered Analysis

The following section presents a detailed examination of the trajectories of individual participants from pre- to post-intervention, and through to follow-up. Each participant's scores on the FMSS-C, DERS, TOPSE and CCNES is considered. To enrich understanding of individual trajectories, de-identified excerpts from the FMSS-C interviews are provided to illustrate specific examples of how participants' perspectives on their child and their relationship with the child evolved through the intervention. Using the FMSS-C coherence score, participants were divided into three categories: 1) Increasing Coherence; 2) High Baseline, Stable Coherence; and 3) Low Baseline, Stable Coherence. Results for individual participants are organized in this manner because the FMSS-C, as a qualitative measure, provides a deeper, more nuanced view of parents' internal representations of their child and the parent-child relationship. These underlying mental models may drive behavioural changes and are critical precursors to sustained behavioural change. Compared to the other measures in the study, the FMSS-C may more sensitively reflect the impact of COS-P on the parent-child relationship.

Increasing Coherence

Within the increasing coherence group, two subgroups were identified: 1) participants whose narratives shifted from incoherent (score 4 or below) to coherent (score above 4) from pre-intervention to post-intervention and follow-up, and 2) participants whose coherence scores increased over the course of the intervention by at least 2 points but remained incoherent (i.e.,

score 4 or below) at follow-up. Changes of 2 points of more was selected as the threshold for increasing coherence because it reflects a reliable difference in the quality of the underlying narrative and is less likely to represent sporadic variation over time or coding error.

Participants Whose Narratives Shifted from Incoherent to Coherent

There were 4 participants whose FMSS-C Coherence scores shifted from incoherent to coherent over the course of intervention and follow-up period: Participants 5, 6, 7 and 8.

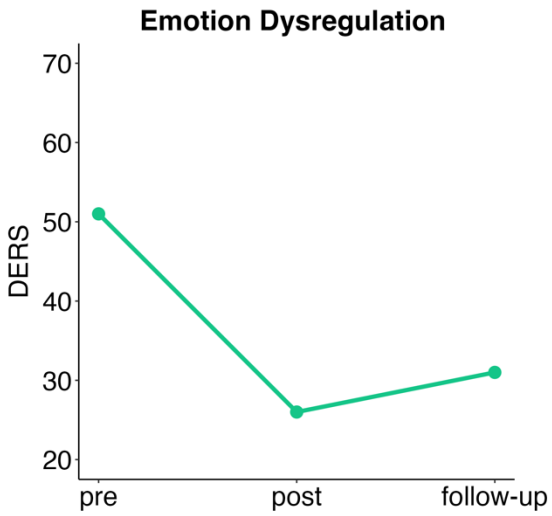
Participant 5. A visualization of the results for Participant 5 is presented in Figure 7. The overall FMSS-C Coherence shifted from 4 to 6 from pre-intervention to post-intervention and continued to increase to 7 at follow-up. An examination of the FMSS subscales shows adequate levels of focus, elaboration, separateness and acceptance and complexity at baseline. The score of 4 on overall coherence was driven by moderate levels of concern/worry expressed by the participant about their child at pre-intervention. This participant expressed worry and concern about their child's emotional development on more than one occasion throughout the interview. This concern was accompanied by a lack of confidence in their child's ability to overcome the challenges, as illustrated in the following quote:

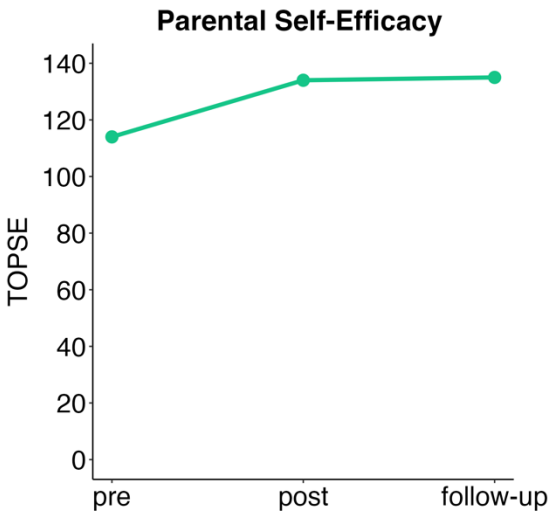
> So even though he tries to fit in in a group of boys, you know, because he's always active, he's not quite accepted. And I think he's sad sometimes because of that. I can see that he has a very hard time in building positive relationships with other children in his class… And then I see a lot of, I can feel a lot of sadness and frustration from him. Yeah, I think I'm very worried about his emotional development because that's the part he's struggling a lot with [Participant 5, pre-intervention].

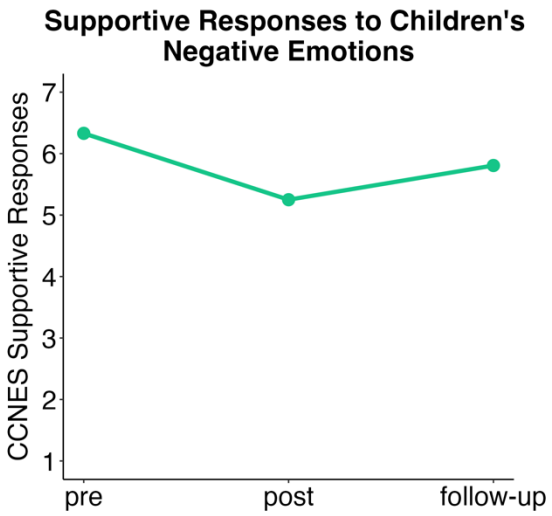
At the post-intervention assessment, the participant's worry and concern about their child had largely resolved, mentioning it only once throughout the interview. In addition, when the participant articulated their concern about the child, it was coupled with confidence in the parent and child's ability to cope with the situation, as exemplified in the following quote:

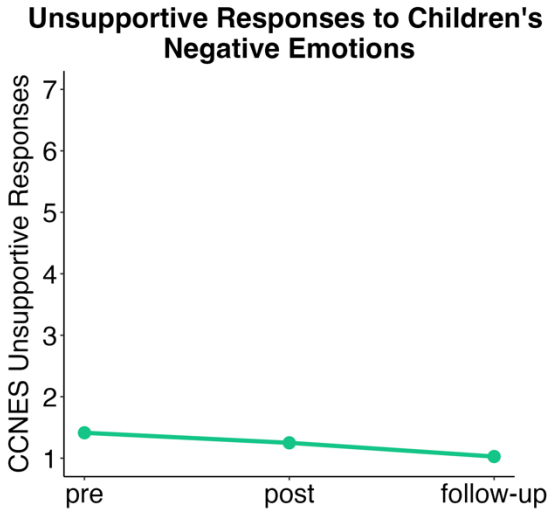
Figure 7

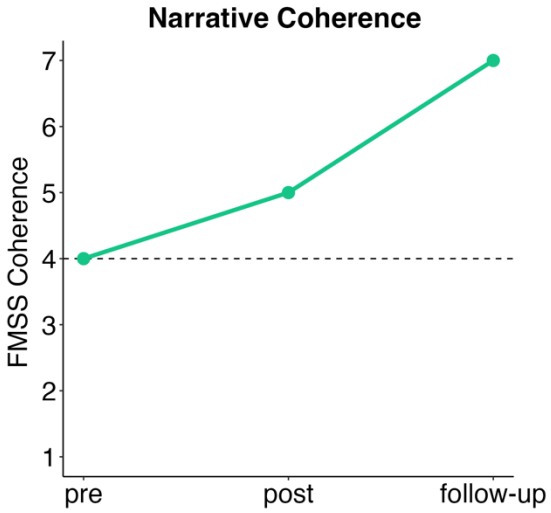
Summary of Data for Participant 5











FMSS Scores

	Pre	Post	FU
Focus	7	5	7
Elaboration	7	7	7
Separateness	7	5	7
Concern*	5	3	1
Acceptance	5	7	7
Complexity	6	5	7
Coherence	4	5	7

Note: *reverse coded

> He still has tantrums. He still has a hard time, you know, But I think yeah, I think I'm really glad I took the workshop. I think that's just what I needed because…a lot of things make sense for me now. He feels safer now, we're creating our new routines, you know, like it's good, I think are at a better place now [Participant 5, post-intervention].

At the follow-up, this participant's interview was characterized by high levels of warmth and acceptance of the child, accompanied by a balanced, multidimensional view of the child capturing both positive and negative characteristics. The well-elaborated narrative was focused on the child, and the child was described as separate from the parent. Furthermore, the concern and worry the participant had expressed about their child at baseline was completely resolved. The following quote reflects this shift:

> I think he has shown to be very resilient because I can feel that he's happier now, you know? He's more comfortable with his feelings, and he's continuing to develop all his skills… Sometimes he used to tell me "I'm bad," or "I can't do this." But now he's like, "Oh, it's okay to make mistakes. Like, I made a mistake, but I erased it." [Participant 5, follow-up].

Participant 5 reported substantial reductions in emotion dysregulation (DERS), with their score decreasing from 51 at pre-intervention to 26 at post-intervention (Δ = -2.16 SD), and slightly increasing to 31 at follow-up (Δ = -1.72 SD from pre-intervention). Regarding their sense of parental self-efficacy as measured by the TOPSE, this participant demonstrated a strong upward trajectory, with their initial score of 114 increasing to 134 at post-intervention (Δ = +0.88 SD) and maintained at 135 at follow-up. On the CCNES Supportive scale, Participant 5 began with a score of 6.33, which decreased to 5.25 at post-intervention (Δ = -1.37 SD) and increased again to 5.81 at follow-up (Δ = -0.66 SD from pre-intervention), indicating some variability and an overall reduction in the endorsement of supportive responses to hypothetical scenarios of children's negative emotions. In contrast, the CCNES Unsupportive responses revealed a consistent decline, starting from 1.41 at pre-intervention and reducing to 1.25 at post-

intervention (Δ = -0.71 SD), and further to 1.03 at follow-up (Δ = -0.62 SD from pre-intervention). These changes highlight a significant improvement in managing unsupportive responses to the child's negative emotions.

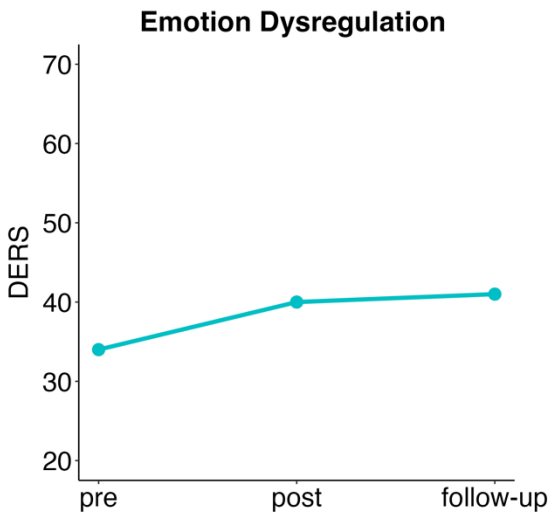
In summary, Participant 5 exhibited meaningful improvements in narrative coherence, with notable improvements observed on the concern/worry subscale. They reported improvements in emotion regulation and parental self-efficacy, alongside a reduction in unsupportive responses to their child's negative emotions. There was variability in their reports of supportive responses to their child's negative emotions, with an overall trend downward.

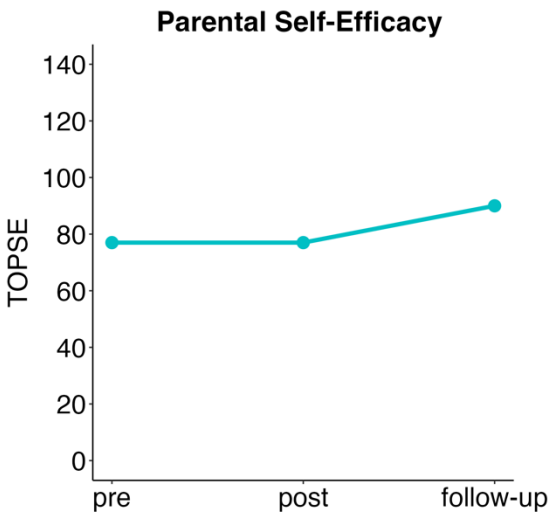
Participant 6. A visualization of the results for Participant 6 is shown in Figure 8. Due to a malfunction with the audio recording device, the FMSS-C was not completed for Participant 6 at pre-intervention. However, from post-intervention to follow-up the participant exhibited increasing levels of narrative coherence. The shift from incoherence to coherence was driven by an increasing complexity score. At post-intervention, the narrative illustrated an awareness of the child's multifaceted personality by discussing both positive traits (e.g., energy and empathy) and challenges (e.g., issues with jealousy and emotional outbursts). However, their portrayal of the child was somewhat imbalanced, emphasizing the child's challenges more than their positive attributes. Furthermore, the positive traits were not as well-elaborated as the negative aspects. At follow-up, the narrative reflected a more balanced portrayal of the child, again capturing both positive and negative traits, but with more emphasis on the child's growth and positive characteristics, rather than the challenges. The balance in this parent's perspective following intervention is illustrated in the following quote:

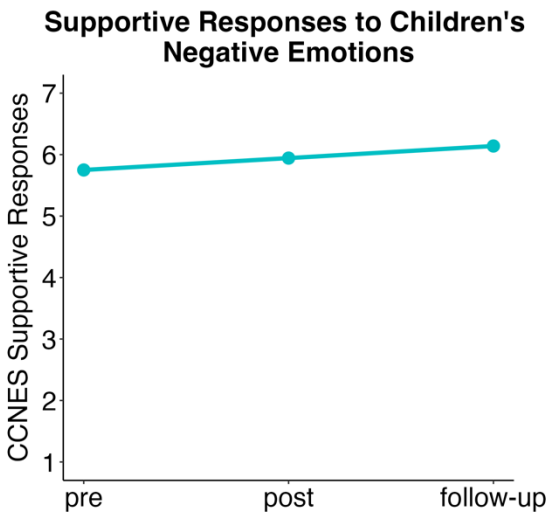
> There were times, you know, where she was quite aggressive towards her brother. But now we see that, we see that a little bit less. There are times where she gets still a bit jealous…But I find that over the last few months, you know, she's kind of matured and

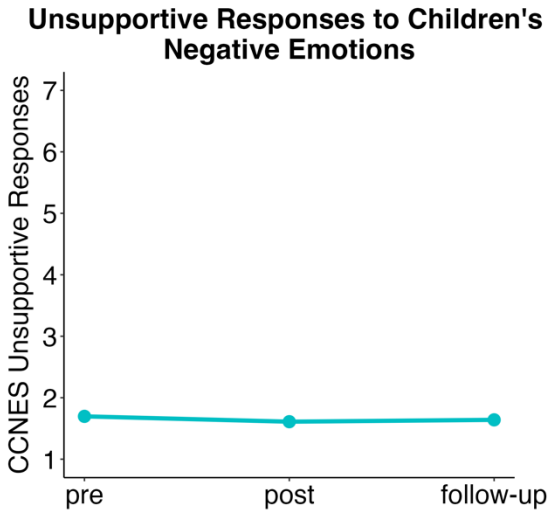
Figure 8

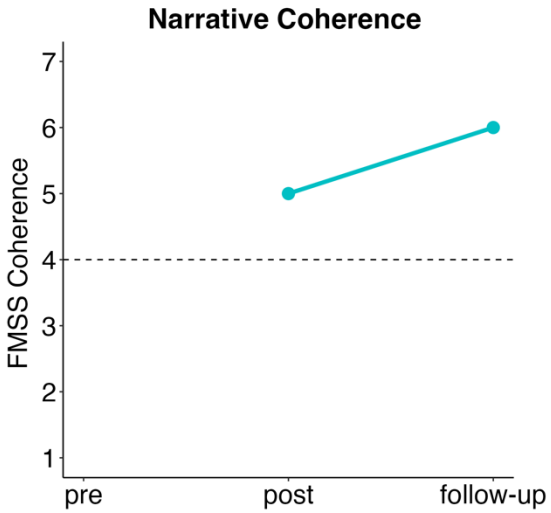
Summary of Data for Participant 6











FMSS Scores

	Pre	Post	FU
Focus		7	7
Elaboration		7	7
Separateness		7	5
Concern*		3	3
Acceptance		6	6
Complexity		4	7
Coherence		4	6

Note: *reverse code; Time 1 ("pre") data missing for Participant 6

> she is kind of is able to voice and explain and express what she needs now [Participant 6, follow-up].

Scores in focus, elaboration, separateness, concern/worry and acceptance remained relatively consistent across time. This participant expressed some concern regarding the child's relationship with their sibling; however, these concerns were limited to a specific circumstance and the parent expressed confidence in the child's ability to overcome the challenges over time. At follow-up, one remark suggested some minor issues with separateness (i.e., referring to the child as "we" instead of "she"); however, this did not affect the overall coherence of the narrative.

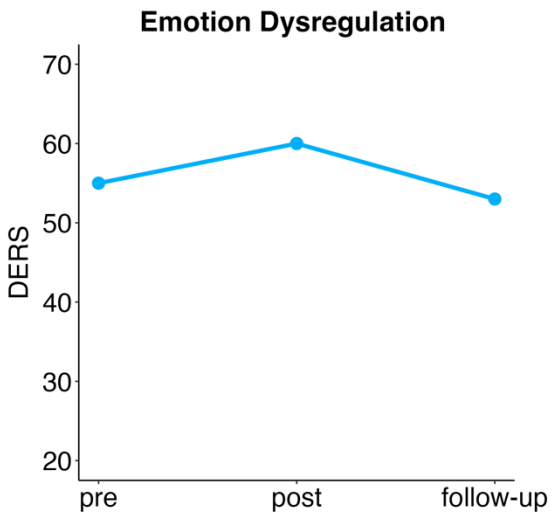
Regarding emotion dysregulation, participant 6 demonstrated relatively stable scores on the DERS, with a minor increase from 34 at pre-intervention to 40 at post-intervention and 41 at follow-up, indicating minimal change over time (+0.09 SD from pre-intervention). This participant reported a modest increase in parental self-efficacy over time, with scores increasing from 77 at pre-intervention to 90 at follow-up (Δ = +0.57 SD; post-intervention = 77). On the CCNES, supportive responses showed a slight increase from 5.75 at pre-intervention, 5.94 at post-intervention, and 6.14 at follow-up (Δ = +0.49 SD from pre-intervention to follow-up). Unsupportive responses showed minimal change over time (pre-intervention = 1.70; post-intervention = 1.61; follow-up = 1.64).

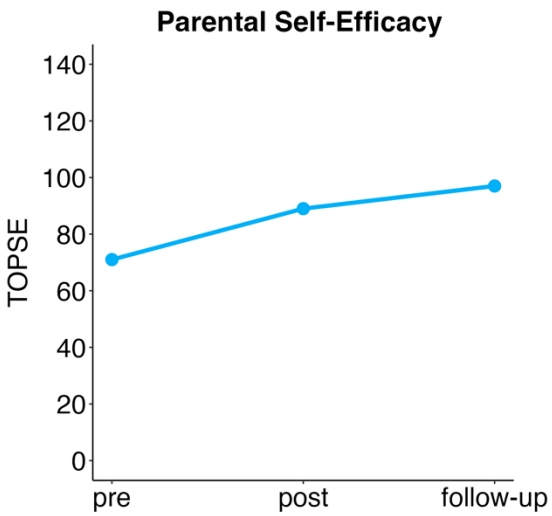
In summary, Participant 6 showed increasing narrative coherence over time, driven by an increasingly complex view of the child, with more focus on positive traits while still maintaining a balanced portrayal. Reports of emotion dysregulation remained stable, whereas parental self-efficacy showed a modest increase. Supportive responses to negative emotion showed a slight increase, while unsupportive responses remained unchanged over time.

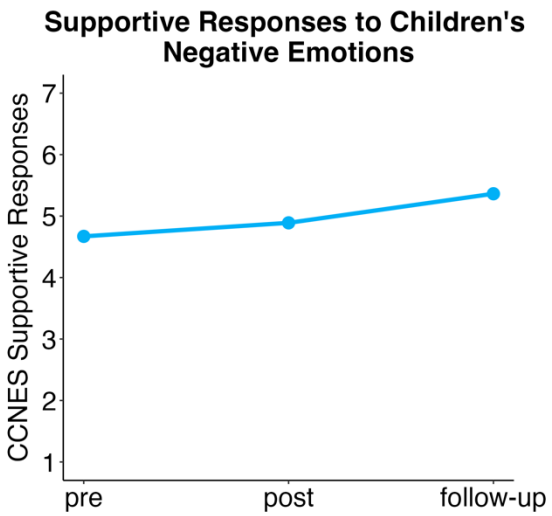
Participant 7. A visualization of the results for Participant 7 is presented in Figure 9. Notably, the overall FMSS-C Coherence for Participant 7 increased from a baseline score of 3 to 5 post-intervention, and further to 6 at follow-up. This participant's scores for focus, elaboration and separateness were high and stable across time. During the pre-intervention interview, the participant shifted from speaking about the child to reflecting on their own experiences with their parents growing up; however, this drift in focus was brief, and the participant's speech refocused on the child and their relationship shortly after. During the post-intervention and follow-up interviews, the child and their relationship with the child was the sole focus of the narrative. Increases in acceptance and complexity and decreases in concern/worry were observed across time. At pre-intervention, most of the narrative was focused on the child's difficulties related to his diagnosis of ADHD. Very little was learned about the child aside from the social and emotional challenges he experienced. The predominant focus on the child's difficulties, combined with occasional judgmental comments about the child (e.g., "I think he's a bit clueless with the whole social thing") resulted in low scores in acceptance and complexity, which contributed to an overall coherence score in the incoherent range. Though several concerns were mentioned throughout the interview, the participant generally expressed confidence in the child's ability to cope (e.g., "But now he's on medication his teachers have actually seen a difference in his behaviour. He's more calm, he can hold himself together, he can focus on things"), with the exception of one occasion, resulting in a score of 4. At post-intervention and follow-up, the participant provided a more balanced picture of the child, speaking about his interests and elaborating more on his positive attributes, in addition to some of his challenges, resulting in higher scores on complexity subscale. Though the participant expressed finding some of the child's challenging behaviours frustrating on occasion, the tone of the interview at these times

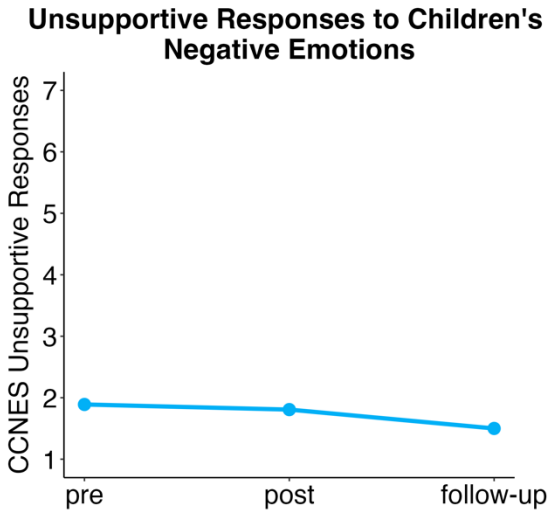
Figure 9

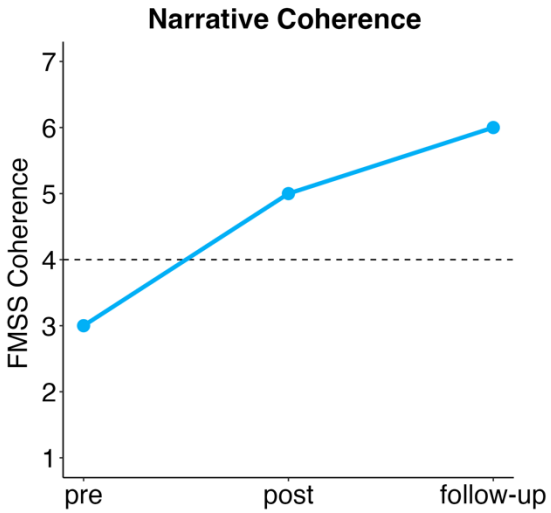
Summary of Data for Participant 7











FMSS Scores

	Pre	Post	FU
Focus	5	7	7
Elaboration	7	7	7
Separateness	7	7	7
Concern*	4	4	1
Acceptance	4	5	5
Complexity	3	6	6
Coherence	3	5	6

Note: *reverse coded

was warm and not overly critical, thus resulting in a higher score in acceptance. Finally, at the follow-up interview, though the participant spoke of difficulties that may pose a challenge for the child, they expressed confidence in the child's ability to cope and did not express worry or concern about these difficulties, thus resulting in a lower score on the concern/worry subscale. During the FMSS-C interview participant 7 stated the following regarding the overall impact of COS-P on the parent-child relationship:

> From the Circle of Security stuff, I learned more about how to deal with him saying no. So I think our relationship is better than it used to be [Participant 7, post-intervention].

Participant 7 exhibited relatively stable levels of emotion dysregulation (DERS) over time (pre-intervention = 55; post-intervention = 60; follow-up = 53). In terms of parental self-efficacy as measured by the TOPSE, Participant 7 demonstrated significant improvement, starting with a score of 71, increasing to 89 at post-intervention (Δ = +0.80 SD), and culminating at 97 at follow-up (Δ = +1.15 SD from pre-intervention). For the CCNES Supportive scale, the scores moved from 4.67 at pre-intervention to 4.89 at post-intervention, and then to 5.36 at follow-up (Δ = +1.04 SD from pre-intervention) indicating a meaningful increase in supportive responses to the child's negative emotions. Conversely, the CCNES Unsupportive responses showed a consistent decline, moving from 1.89 at pre-intervention to 1.81 at post-intervention, and further to 1.50 at follow-up (Δ = -0.60 SD from pre-intervention).

In summary, participant 7 displayed improvements in narrative coherence, driven by increasing scores in complexity and acceptance. They reported improvements in parental self-efficacy. Emotion dysregulation remained stable. There was also a reduction in unsupportive responses to children's negative emotions, coupled by an increase in supportive responses over time.

Participant 8. A visualization of the results for Participant 8 is displayed in Figure 10. The FMSS-C Coherence for Participant 8 increased from an initial score of 4 to 6 post-intervention, and it remained at 6 at follow-up, indicating improvements in narrative coherence. The narratives demonstrated consistently high scores in focus and elaboration. Some minor issues in separateness were noted in the pre- and post-intervention interviews. Regarding the acceptance subscale, the interviews were characterized by warmth and understanding of the child's difficulties. This feature can be observed in the following quotes:

> I feel like I empathize with him a lot around some of the changes and transitions and will listen to him quite a lot [Participant 8, pre-intervention].

> It comes into conflict when it's like, oh, we just aren't going to do something this year. We were thinking of not going to [yearly tradition], and he's very upset at me for that. And he is trying to figure out ways that he can get to go anyway, which I said is totally fine. Just our whole family can't go [Participant 8, follow-up].

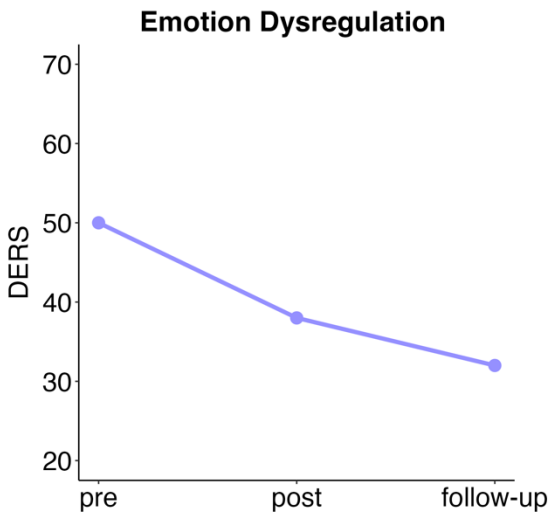
The improvement in overall coherence was primarily driven by increasing scores in complexity. At pre-intervention, though the parent elaborated on several positive aspects of the child and their relationship, more than half the narrative was focused on child's difficulties and challenging behaviours. The parent spoke a lot about the child's difficulties with transitions, high levels of anxiety, and tendency to focus on negative aspects of his experiences. For example:

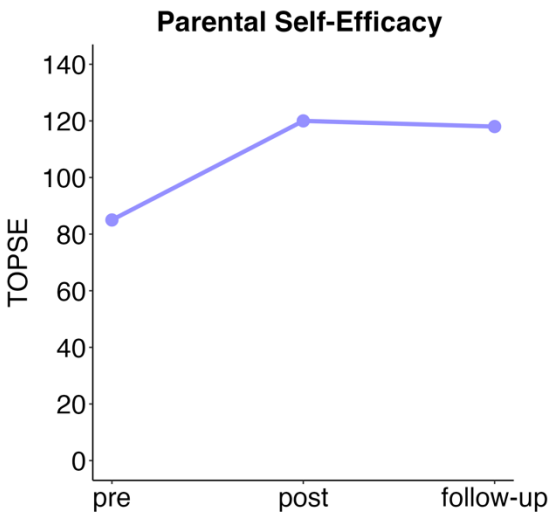
> He has some trouble with any transitions, into any sort of routine or out of any sort of routine. They cause him great deals of anxiety… And the other thing is that even if he has a great experience, it can be very negative, like he can respond very negatively about whatever it was. Even if he had a great time, he can always find the things he didn't like [Participant 8, pre-intervention].

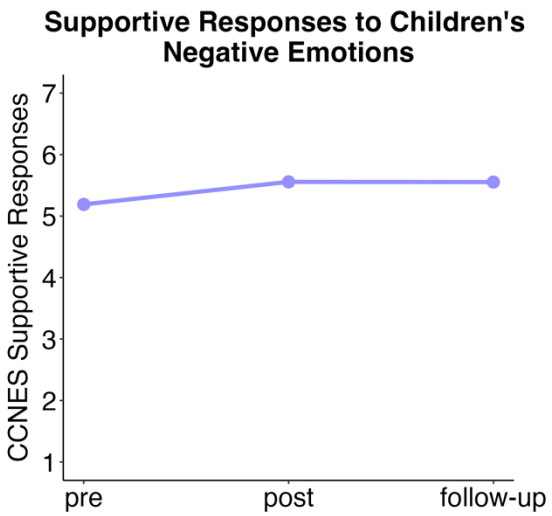
At post-intervention and follow-up, the participant provided more balanced, multi-faceted descriptions of the child, with more focus on positive aspects. The participant spent more time describing the child's strengths, interests, and goals for the future, in addition to speaking about some of the ongoing challenges the child faces, illustrated as follows:

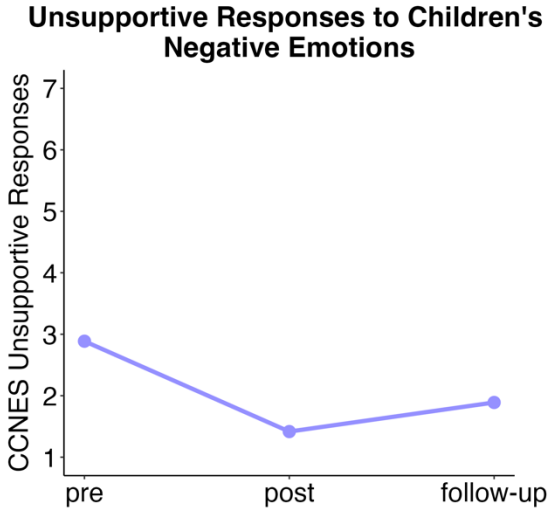
Figure 10

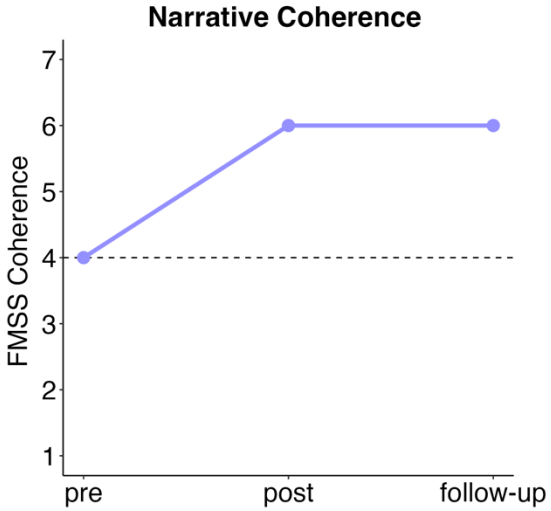
Summary of Data for Participant 8











FMSS Scores

	Pre	Post	FU
Focus	7	7	7
Elaboration	7	7	7
Separateness	5	5	7
Concern*	4	4	4
Acceptance	5	6	6
Complexity	4	7	6
Coherence	4	6	6

Note: *reverse coded

> He's making some new friends at school this year, which is nice, branching out a little bit. He's actively involved in a number of things, in track and field and trying to improve his times on laps and really trying to set some goals. Although that kind of relies on his executive functioning which is not necessarily all that high. But we're working on that. And as I said, he's really caring. He has a dog that he loves very, very much [Participant 8, follow-up].

Participant 8 reported improvements in emotion regulation as evidenced by the decrease in DERS scores from 50 at pre-intervention to 38 at post-intervention (Δ = -1.06 SD) and further to 32 at follow-up (Δ = -1.59 SD from pre-intervention). Participant 8 also reported positive changes in parental self-efficacy, with TOPSE scores rising from 85 at pre-intervention to 120 at post-intervention (Δ= +1.41 SD), which was maintained at 118 at follow-up (Δ= +1.33 SD from pre-intervention). On the CCNES Supportive scale, this participant had relatively stable responses across time, exhibiting a slight increase (pre-intervention = 5.19; post-intervention = 5.56; follow-up = 5.55, Δ = 0.46) over time. The CCNES Unsupportive responses decreased from 2.89 at baseline to 1.42 at post-intervention (Δ = -1.47 SD). They increased to 1.89 at follow-up (Δ = -1.00 from pre-intervention).

In summary, Participant 8 showed meaningful improvements in narrative coherence, particularly evidenced by increasingly complex descriptions of the child. There were notable improvements in both emotion regulation and parental self-efficacy, alongside a decline in unsupportive responses to the child's negative emotions.

Participants Whose Coherence Increased Over Time but Remained Incoherent at Follow-up

There were three participants whose FMSS-C Coherence scores increased over time but remained in the incoherent range at follow-up: Participants 1, 4 and 9.

Participant 1. A visualization of the results for Participant 1 is shown in Figure 11. At pre-intervention, Participant 1's narrative was dominated by concerns about the child's development and external stressors, with minimal focus on positive attributes of the child or the

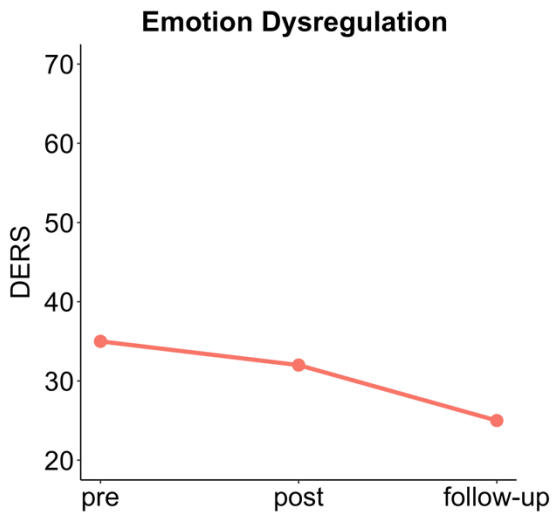
parent-child relationship. This pattern resulted in a very high score in concern/worry, and low score in complexity. Also notable was the low score in focus, as the participant spent a significant portion of the interview speaking about the family's struggles and hardships rather than the child. Together, these ratings resulted in an overall coherence score of 2. At post-intervention, the participant's speech was more focused on the child, with only a minor digression to another topic. However, the participant's concerns about the child and the struggles of the child and the family continued to dominate, though somewhat less so. The overall coherence score at post-intervention was 3. At follow-up, the narrative contained more discussion of some of the child's positive attributes, though these remained significantly less detailed compared to the child's challenges and struggles, resulting in a complexity score of 4, and a concern/worry score of 5. The overall coherence score at follow-up was 4, which was an improvement from pre-intervention. There were minor issues in separateness observed at pre-intervention and follow-up. A strength of this participant's narratives across all time points was the high degree of acceptance and warmth expressed towards the child, despite the significant challenges described. These markers for acceptance featured even more prominently at post-intervention and follow-up, as evidenced by the following quote.

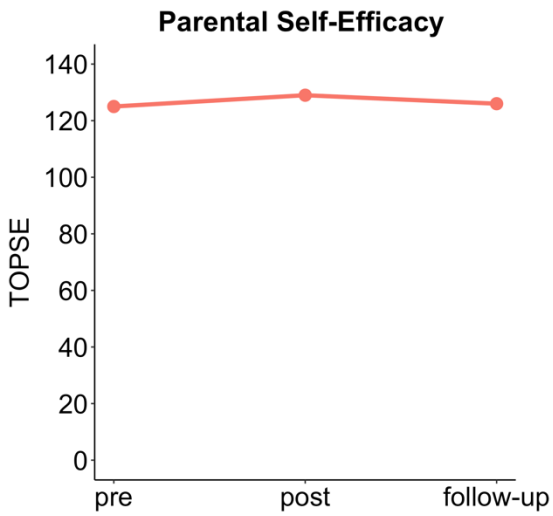
> For the most part, [child's name] and I get along. Um, you know, she has her moments where, you know, she is not in a good place. So we butt heads or we just don't agree. And, she has her tantrums, you know, moments. Um…she's a great kid. Like, I mean, she works really hard at school, she, She's very friendly. She can be really kind. She's basically a good kid. It's just that she's just has all these emotions that she tries to work out [Participant 1, follow-up].

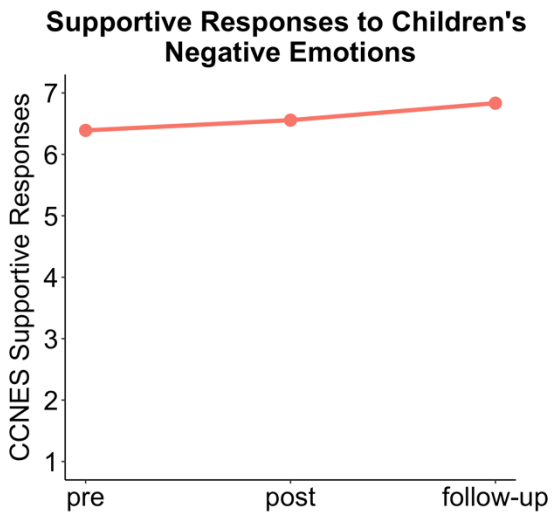
Over the course of the study, Participant 1 reported improvements in emotion regulation, with DERS scores decreasing from 35 at pre-intervention to 25 at follow-up (Δ = -0.43 SD; post-intervention DERS = 32). Participant 1's TOPSE scores remained stable from pre- to post-intervention to follow-up (range = 125 – 129), indicating consistent levels of parental self-

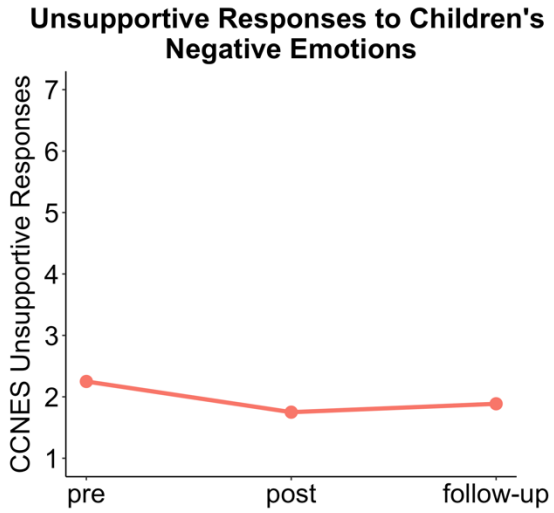
Figure 11

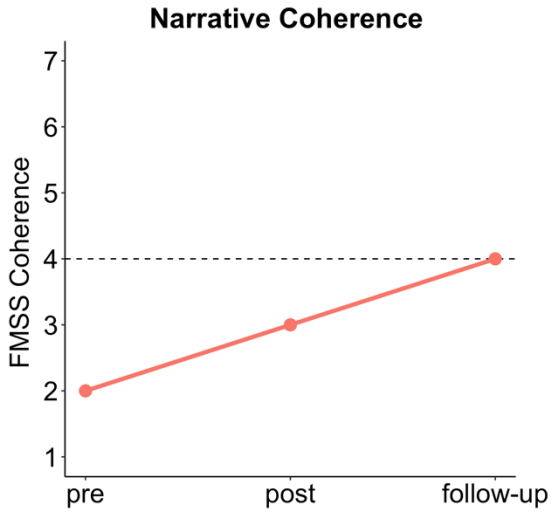
Summary of Data for Participant 1











FMSS Scores

	Pre	Post	FU
Focus	2	5	6
Elaboration	7	7	7
Separateness	5	7	5
Concern*	7	5	5
Acceptance	5	6	7
Complexity	3	3	4
Coherence	2	3	4

Note: *reverse coded

efficacy over time. On the CCNES, they endorsed a greater likelihood of supportive responses, with scores increasing from 6.39 at pre-intervention to 6.83 at follow-up (Δ = +0.46 SD; post-intervention CCNES Supportive = 6.56)). They also reported a decreased likelihood of unsupportive responses from pre-intervention to post-intervention (scores decreased from 2.25 to 1.75; Δ = -0.80 SD), which was maintained at follow-up (score = 1.89; Δ = -0.58 from pre-intervention).

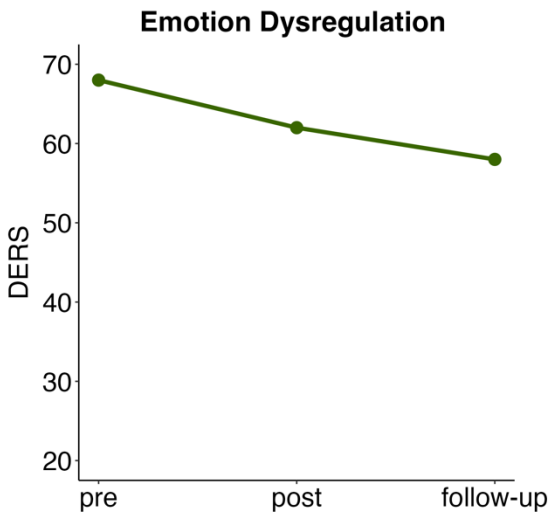
In summary, Participant 1 demonstrated increasing narrative coherence over time, characterized by greater focus on the child, and more acknowledgement of the child's positive qualities in addition to their challenges. They also showed some improvements in emotion regulation, a greater likelihood of supportive responses, and decreased likelihood of unsupportive responses to children's negative emotion. Their reports of parental-self efficacy remained consistent and elevated across time.

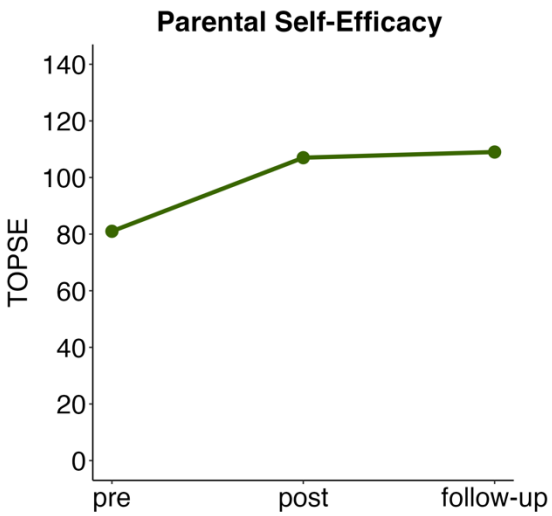
Participant 4. A visualization of the results for Participant 4 is shown in Figure 12. Participant 4's narratives showed improvements on multiple subscales of the FMSS from pre-intervention to post-intervention. Improvements on the acceptance, separateness, and complexity scales were maintained at follow-up; improvements in concern/worry were not maintained. Though improvements were observed, the overall coherence score remained in the incoherent range at post-intervention and follow-up.

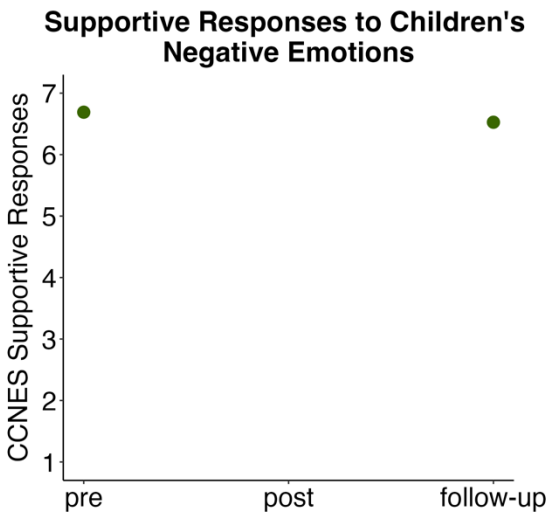
Scores in elaboration and focus were consistently high across time. There were some minor drifts in focus at pre-intervention and follow-up, but these did not impact the overall coherence score. As indicated, the most notable changes on the FMSS for this participant were on the acceptance, separateness, and complexity subscales. At pre-intervention, the participant expressed mild rejection of the child and a judgmental stance towards the child. Behaviour that

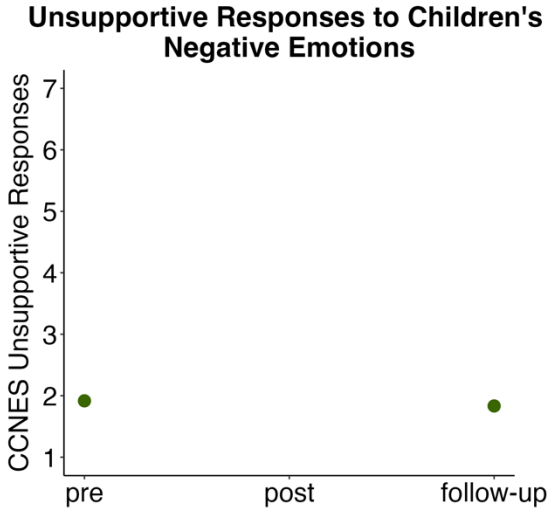
Figure 12

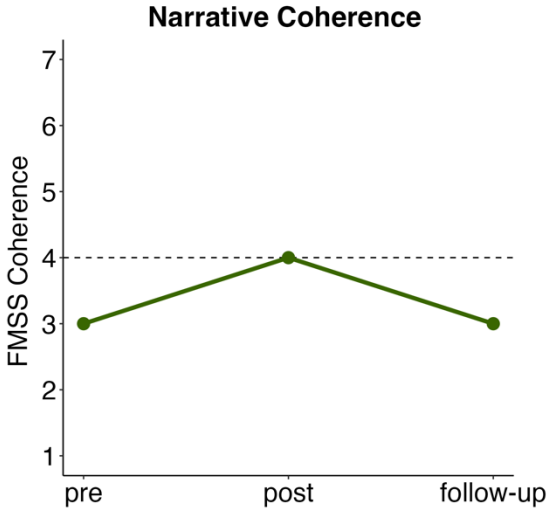
Summary of Data for Participant 4











FMSS Scores

	Pre	Post	FU
Focus	6	7	5
Elaboration	7	7	7
Separateness	4	7	7
Concern*	5	3	5
Acceptance	3	6	6
Complexity	3	4	4
Coherence	3	4	4

Note: *reverse coded

was not in accordance with the participant's expectations was judged negatively. The following excerpt illustrates:

> [Child's name] is very strong willed. He is very defiant. I feel like maybe he's trying to find his own space in the dynamic of what our family looks like…He has a great personality when he's not upset…He is a perpetual liar. I struggle with lies daily. So he and I have some serious trust issues…I'm pretty tired when it comes to dealing with [child's name]'s behaviour [Participant 4, pre-intervention]

The participant also demonstrated some minor difficulties in the area of separateness, exhibited by a minor boundary dissolution in which the child appeared to have more control than the parent, as reported in the following statement:

> When he is asked to do something that he's not interested in doing it becomes a big, very ugly battle, and I generally either give up and just end up doing it myself or it just doesn't get done because he just doesn't want to [Participant 4, pre-intervention].

The participant expressed several concerns about the child's academic performance, health, and social-emotional development with no indication of confidence in the child's ability to cope in a resourceful way with the challenges, leading to an elevated concern/worry score. The narrative was also almost exclusively focused on the child's negative characteristics, challenging behaviours, and difficulties in the parent-child relationship, leading to a low score in complexity.

At post-intervention, the participant demonstrated increased acceptance of the child. The participant acknowledged the child's social difficulties and was able to provide an accepting and understanding explanation for them, as follows:

> Recently [child's name] has sort of improved in terms of not having so many outbursts…We do have more interaction now in terms of being able to talk. He's still has his moods, you know, where he's got better days than others. But for the most part, I'm able to have a better relationship with him in terms of communication. He's still not a huge talker, but at least I know when I sit and talk with him that he listens. Even if he's not looking at me, I know he's listening, it's just that he's not one to look many people in the eye [Participant 4, post-intervention].

The improvement in acceptance was maintained at follow-up as evidenced by the following excerpt in which the participant acknowledges both the child's difficulties along with his underlying potential and strengths:

> He just needs to sort of build the confidence…build up his self-worth. Like I just don't feel he's got that and that's where I think he struggles. And I think once that gets sorted, I think everything else will just fall into place for him. He just needs to really start believing in himself. He's otherwise really, really good…He's a super funny kid and I hope one day he sees his potential because he's a good boy [Participant 4, follow-up].

No issues in separateness were observed at post-intervention or follow-up. On the concern/worry scale, at post-intervention participant 4 continued to express concerns about the child; however, they were coupled with more confidence in the child's ability to overcome the challenges. For example, in the following excerpt, the participant expressed concern about the child's tendency to procrastinate, but it was coupled with a description of a strategy for dealing with this concern in the context of the parent-child relationship. For example:

> At school, he's doing really, really well. He's still a bit of a procrastinator when it comes to studying. He waits for the last minute, which can be challenging…So I am working on reminding him to give himself opportunities to study in advance so that he's not trying to sort of cram all the information at the very last minute [Participant 4, post-intervention].

At follow-up, the concern/worry score was elevated again. The participant expressed multiple concerns about the child throughout the interview along with a lack of confidence in being able to cope with more than one of the concerns.

Finally, the score in complexity was improved at post-intervention compared to pre-intervention, and this improvement was maintained at follow-up. Though the narrative was still focused more on the child's negative attributes rather than positive ones, the participant provided more detail on some of the child's interests and strengths as well as positive aspects of the parent-child relationship at post-intervention and follow-up compared to pre-intervention.

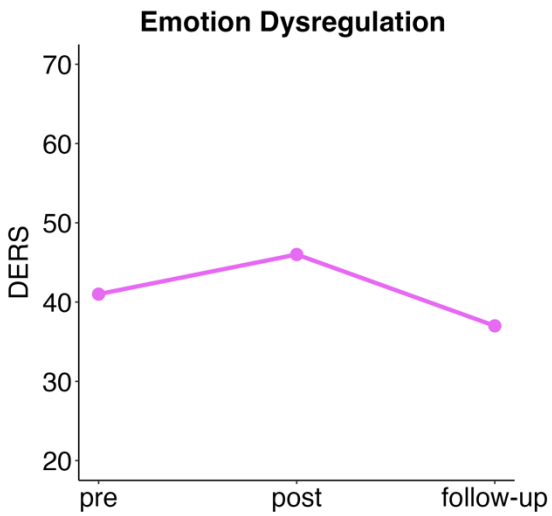
Participant 4 showed a meaningful reduction in emotion dysregulation over the course of the study, with DERS scores decreasing from 68 at pre-intervention to 62 at post-intervention. Scores decreased further to 58 at follow-up, marking a total decrease of -0.86 SD from pre-intervention to follow-up. Regarding parental self-efficacy, participant 4 reported substantial improvements over time, with scores on the TOPSE increasing from 81 at pre-intervention to 107 at post-intervention (Δ = +1.15 SD), and further to 109 at follow-up (Δ = +1.24 SD from pre-intervention). On the CCNES supportive scale, Participant 4's scores remained relatively stable from pre-intervention to follow-up (6.69 to 6.53). Similarly, this participant's scores on the unsupportive scale also remained relatively stable from pre-intervention to follow-up (1.92 to 1.83). Post-intervention scores on the CCNES were excluded due to a measurement collection error.

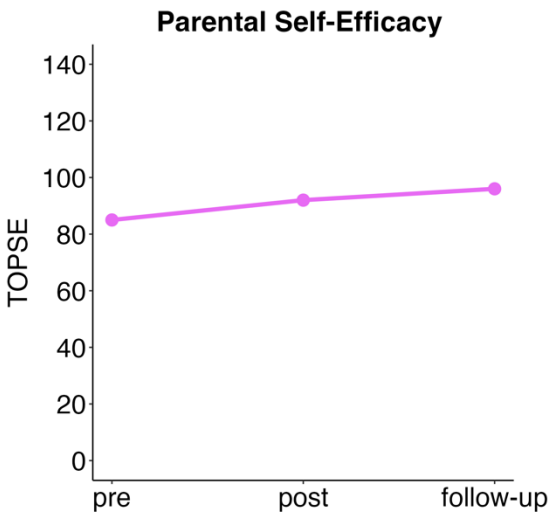
In summary, though the FMSS coherence scores for Participant 4 remained in the incoherent range at all time points, they demonstrated improvements in acceptance, separateness, and complexity across time. In addition, Participant 4 reported reductions in emotion dysregulation and increases in parental self-efficacy across time. Scores on the CCNES remained stable from pre-intervention to follow-up and were unable to be assessed at post-intervention.

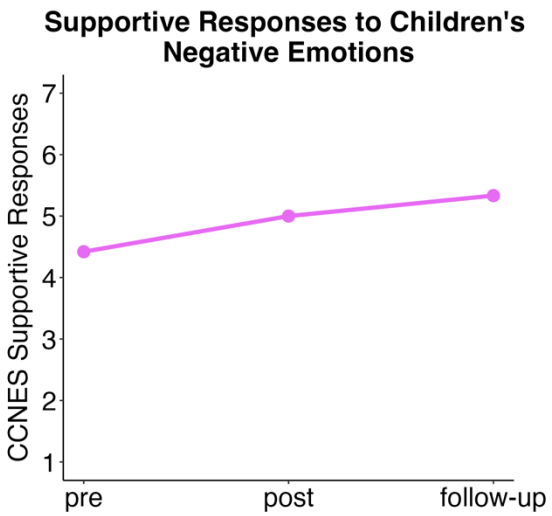
Participant 9. A visualization of the results for Participant 9 is shown in Figure 13. At pre-intervention, Participant 9's narrative was predominantly focused on the child's challenges with anxiety, emotion regulation, and executive functioning. The participant spoke very little about the child's other attributes other than briefly mentioning his ability to be empathic and his than one remark that was interpreted as mildly judgmental of the child, and the participant expressed concern about how past decisions may have impacted the child's development. This pattern resulted in lower scores for acceptance and complexity, and a higher score for

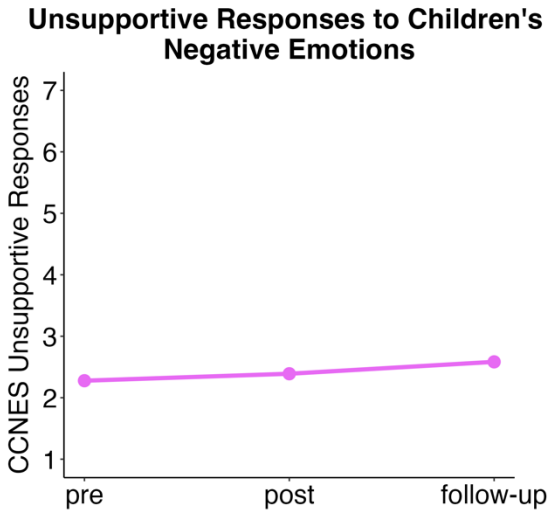
Figure 13

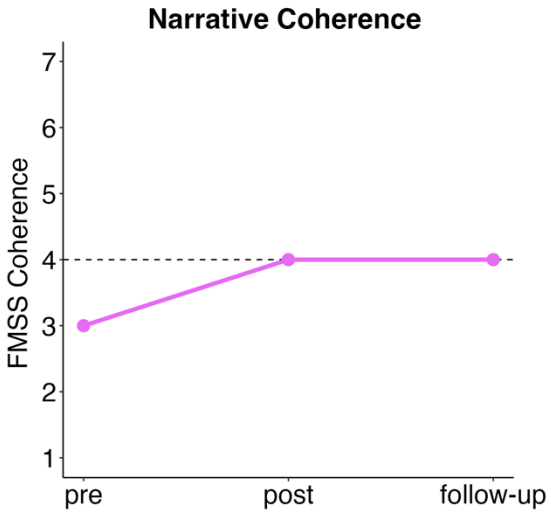
Summary of Data for Participant 9











FMSS Scores

	Pre	Post	FU
Focus	7	7	7
Elaboration	7	7	7
Separateness	7	7	7
Concern*	5	4	5
Acceptance	4	4	5
Complexity	3	4	4
Coherence	3	4	4

Note: *reverse coded

concern/worry, which together resulted in an overall coherence score of 3. At post-intervention and follow-up, this participant's narratives were still focused predominantly on the child's difficulties and concerns about his development; however, the participant spoke somewhat more about positive attributes of the child, including some of his other interests, his improving academic performance, progress in coping with social and emotional challenges, and the participant's interest in board games. However, these sections were poorly elaborated and were quickly followed by further reflection on the child's difficulties. In addition, the narrative contained more increasing empathy for the child. Though more present, these sections of the narrative remained relatively unelaborated. This pattern resulted in slightly improved scores on complexity. The concern/worry score reduced at post-intervention as the participant spoke of most (but not all) of the child's difficulties as improving and indicated confidence in the child's ability to continue to progress. At follow-up, the acceptance score reached 5 as the narrative did not contain any remarks indicating lack of acceptance of the child. In addition, the participant's comments about increasing empathy for the child suggested somewhat more acceptance of the challenges in their relationship, as exemplified in the following description:

> You know, we'll always have arguments…parents and kids fight all the time, I think. [Child's name] is doing a better job seeing what his actions do and realizing what I'm trying to do. And I have a better understanding of how he functions. Can't say I completely understand it, I can't experience it. But I have a bit of more empathy in how our relationship functions.

Participant 9 reported relatively stable levels of emotion dysregulation, with scores on the DERS fluctuating from 41 at pre-intervention, to 46 at post-intervention, and 37 at follow-up. Participant 9 reported a slight increase ($\Delta = +0.49$ from pre-intervention to follow-up) in parental self-efficacy over time (TOPSE pre-intervention = 85; post-intervention = 92; follow-up = 96). On the CCNES, they endorsed an increased likelihood of supportive responses, with scores

rising from 4.42 at pre-intervention to 5.00 at post-intervention, and 5.33 at follow-up, marking a total change of +1.16 SD over time. Finally, they reported a slight increase (Δ = +0.49 from pre-intervention to follow-up) in unsupportive responses over time (pre-intervention = 2.28; post-intervention = 2.38; follow-up = 2.58).

In summary, Participant 9 demonstrated increasing narrative coherence over time, maintaining a primary focus on the child's difficulties but gradually including more positive attributes and improvements in their descriptions of the child. Their emotion dysregulation remained stable over time, they showed mild improvements in parental self-efficacy, and they reported an increase in supportive responses to children's negative emotions over time. Unsupportive responses showed a slight increase as well.

High Baseline, Stable Coherence

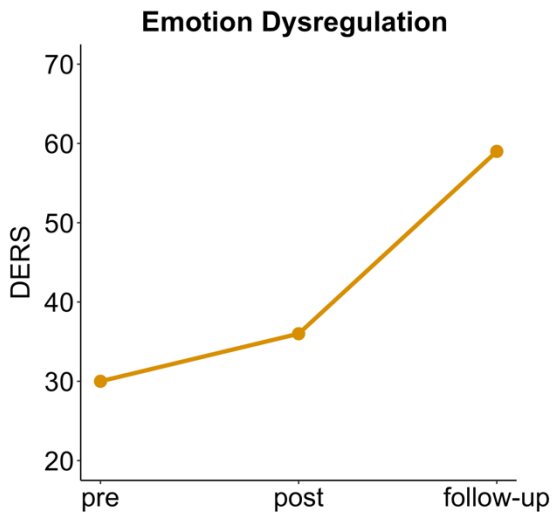
There was 1 participant whose FMSS-C Coherence scores began and were maintained in the coherent range over the course of the intervention and follow-up period: Participant 2.

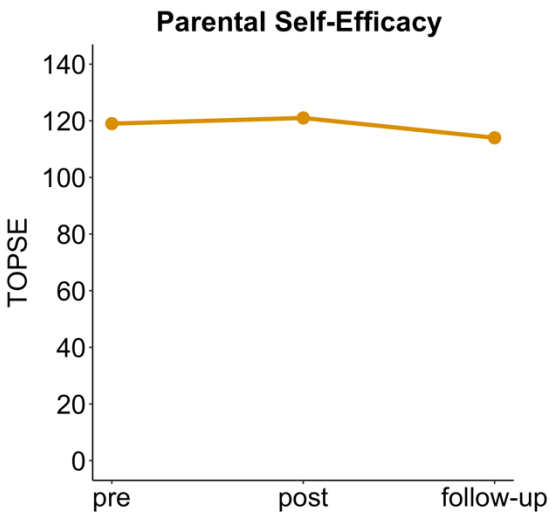
Participant 2. A visualization of the results for Participant 2 is shown in Figure 14. Participant 2's narratives were characterized by high levels of coherence across time. At pre-intervention, the narrative was well-elaborated, showed adequate levels of separateness and was focused on the child and their relationship. The participant provided a rich and detailed description of the child, elaborating on several of the child's strengths and positive characteristics, in addition to acknowledging the child's difficulties and challenges. As seen in the excerpt below, their descriptions were characterized by high levels of acceptance, including acceptance of significant difficulties encountered with the child's development.

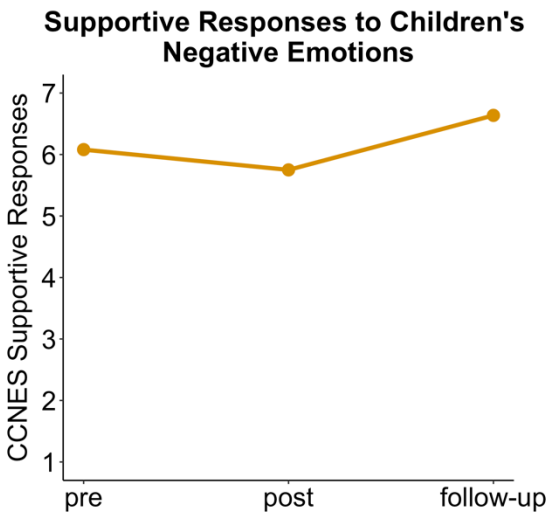
> [Child's name] is a very vivacious, strong willed, smart, funny, cute, amazing little person…It's never quiet when you go on a walk with her. She's constantly talking. It's like her mind is going a mile a minute and her mouth can't keep up. Um, but she, she's very insightful, is very inquisitive, loves to research things…There have been difficult

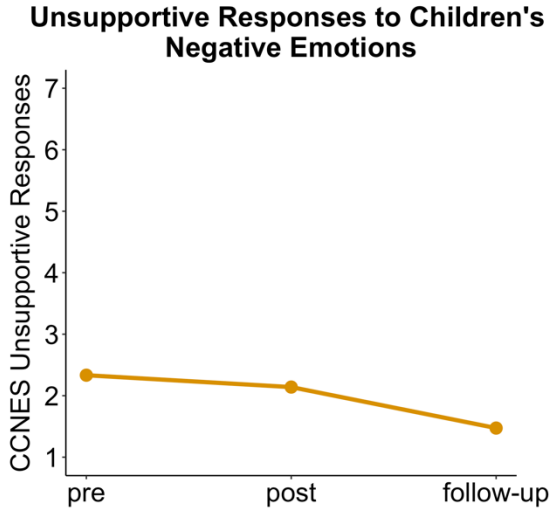
Figure 14

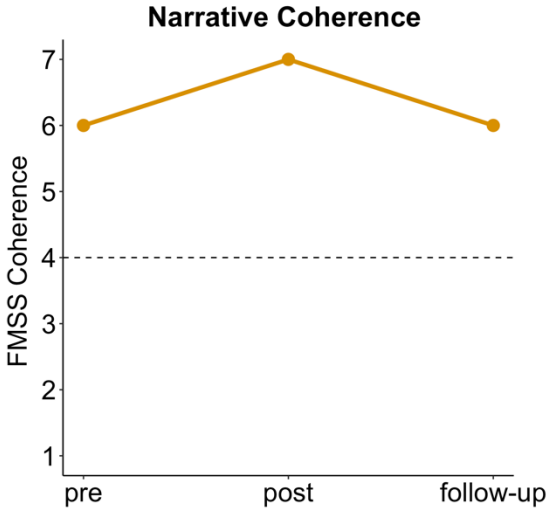
Summary of Data for Participant 2











FMSS Scores

	Pre	Post	FU
Focus	7	6	6
Elaboration	7	7	7
Separateness	6	7	7
Concern*	3	1	1
Acceptance	7	7	7
Complexity	6	7	6
Coherence	6	7	6

Note: *reverse coded

> times, as we know. That's why we're in the program now. But I think that's only a small part of who she is [Participant 2, pre-intervention].

The participant articulated some concern regarding the child's ability to function independently in society in the future; however, they expressed hope in the child's ability to benefit from treatment at CDI and did not appear to be preoccupied with worry about the child. For example:

> And, I really hope that she benefits from [intervention] and that we benefit in terms of helping her out so that she can live independently and do well in the future and have the social skills that she'll need to be involved in society [Participant 2, pre-intervention].

Combined, this pattern of results resulted in high scores in focus, elaboration, separateness, acceptance and complexity, and a relatively low score in concern/worry. At post-intervention and follow-up, the participant continued to portray the child and their relationship in a similar manner. The only notable difference was that the narratives at post-intervention and follow-up no longer contained references to concerns about the child's future and development.

Participant 2 reported increased emotion dysregulation over time. The DERS scores increased from 30 at pre-intervention to 36 at post-intervention, followed by an increase to 59 at follow-up (Δ = +2.50 SD from pre-intervention to follow-up). In terms of parental self-efficacy, Participant 2's scores on the TOPSE remained relatively stable across time (pre-intervention = 119; post-intervention = 121; follow-up = 114). On the CCNES supportive responses scale, Participant 2 had fluctuating scores over time, decreasing from 6.08 at pre-intervention to 5.75 at post-intervention, and increasing to 6.64 at follow-up. The change from pre-intervention to post-intervention was -0.42 SD; from pre-intervention to follow-up the change was +0.71SD. Unsupportive responses decreased from 2.33 at baseline to 2.14 at post-intervention and further to 1.47 at follow-up, reflecting a decrease of -1.38 SD from baseline to follow-up.

In summary, despite reporting increasing emotion dysregulation over time, Participant 2 showed consistently high levels of narrative coherence and parental self-efficacy. They also reported a consistent decrease in unsupportive responses to children's negative emotions. Though there was fluctuation in the participant's endorsement of supportive responses, they ultimately reported a greater likelihood of supportive responses at follow-up compared to pre-intervention.

Low Baseline, Stable Coherence

There were 2 participants whose FMSS-C Coherence scores began and remained in the incoherent range over the course of the intervention and follow-up period: Participants 3 and 10.

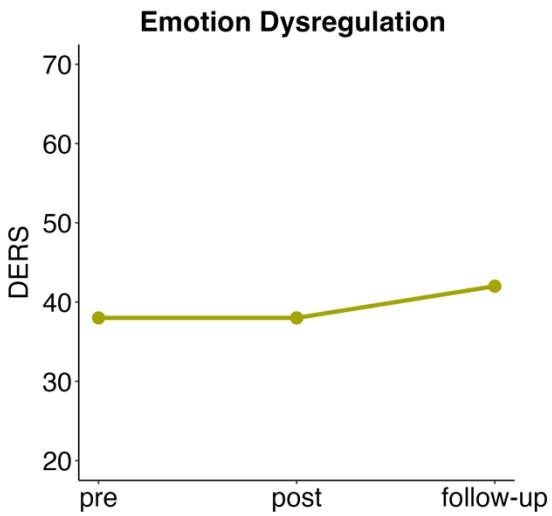
Participant 3. A visualization of the results for Participant 3 is shown in Figure 15. Participant 3's narratives were characterized by a preoccupation with the child's difficulties and concerns about these difficulties. Very little was learned about the child aside from his challenges and the strain the participant described those challenges as creating for their relationship. The participant's concerns are apparent in the following description:

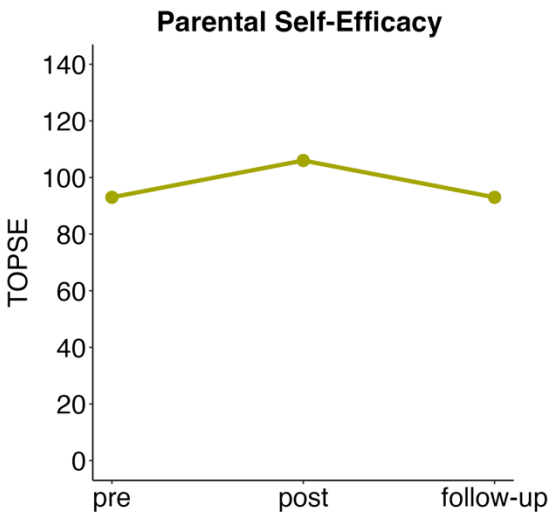
> Generally, I think we've always had a good relationship. He started off being just a sweet kid, playful, and there's no real issue. He's always been a little bit stubborn, but never really an issue until earlier this year. Our relationship has changed a little bit as a result…I think maybe I can describe it in terms of some of the concerns that I have…I have concerns over his social abilities and social skills. Um, I want him to have friends, and I'm not seeing that happening. In fact, it's the opposite. He loses friends. Um, independence as well. He's losing some of that independence [Participant 3, pre-intervention].

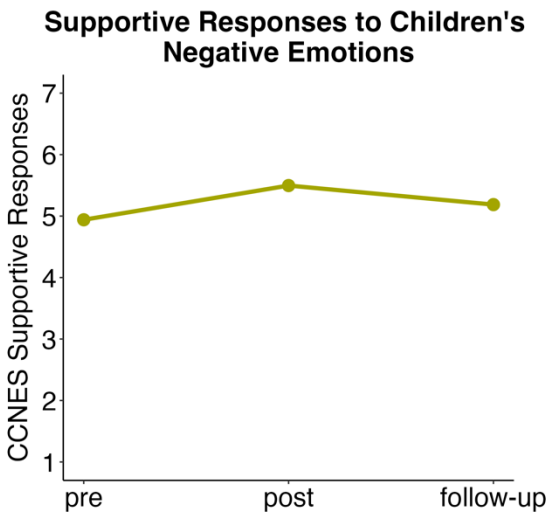
The concern expressed by the participant lessened somewhat over time. In comparison to the pre-intervention narrative, the follow-up narrative was less flooded with concern and the participant was able to describe more of the child's positive qualities (e.g., creativity, interest in sports). However, the concern was still a prominent feature of the interview. In addition, the

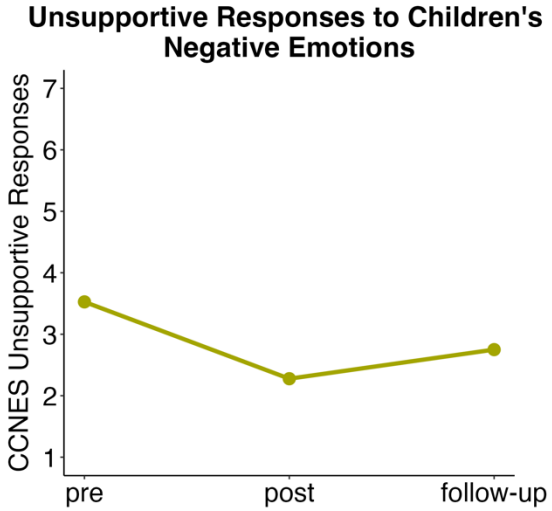
Figure 15

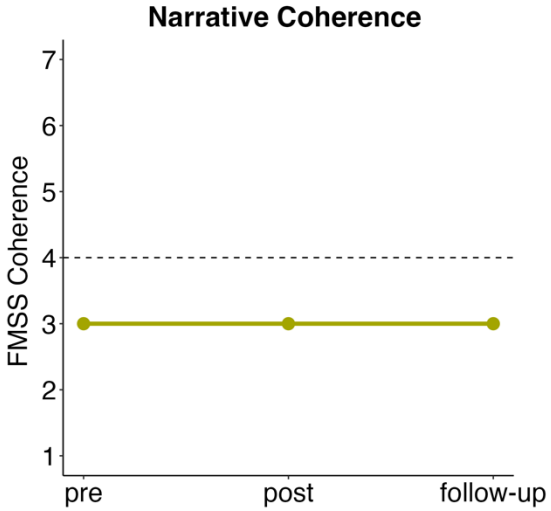
Summary of Data for Participant 3











FMSS Scores

	Pre	Post	FU
Focus	7	7	6
Elaboration	7	7	5
Separateness	7	7	7
Concern*	7	6	5
Acceptance	4	5	3
Complexity	3	3	3
Coherence	3	3	3

Note: *reverse coded

overall portrayal of the child remained skewed towards the child's difficulties and negative characteristics. For example:

> He's a very anxious, nervous person. Which does put a strain a little bit on our relationship because it's frustrating, to say the least. Um, he's also very rigid. So socially rigid, refuses to accept people's opinions, change his perspective. He doesn't take criticism well. So all of these things are very hard and do put a strain. And it makes me concerned of his future [Participant 3, follow-up].

These features of the narratives resulted in an overall coherence score in the incoherent range at all three time points.

Participant 3 reported minimal change in emotion dysregulation as evidenced by the DERS scores which remained relatively consistent across time (pre- and post-intervention = 38; follow-up = 42). There was some fluctuation in parental self-efficacy with a shift in scores on the TOPSE from 93 at pre-intervention to 106 at post-intervention (Δ = +0.57 SD); however, this change was not maintained over time, as the score returned to 93 at follow-up. On the CCNES, Participant 3 reported an increase in supportive responses from pre- to post-intervention (4.94 to 5.50; Δ = +0.71 SD); however, this change was also not maintained over time (follow-up = 5.19; Δ = +0.31 from pre-intervention to follow-up). In terms of unsupportive responses, Participant 3 reported a decrease from 3.53 at pre-intervention to 2.28 at post-intervention (Δ = +2.01 SD). At follow-up, the score rose to 2.75, still reflecting a meaningful improvement of -0.76 SD from baseline.

In summary, though the FMSS narratives showed some lessening of concern/worry and more focus on positive attributes over time, the portrayal of the child remained largely negative, leading to an overall coherence score in the incoherent range at all time points. Participant 3 showed minimal change in emotion dysregulation. There was a temporary improvement in parental self-efficacy and supportive responses to children's negative emotions, but these

changes were not maintained over time. Finally, there was a reported decrease in unsupportive responses.

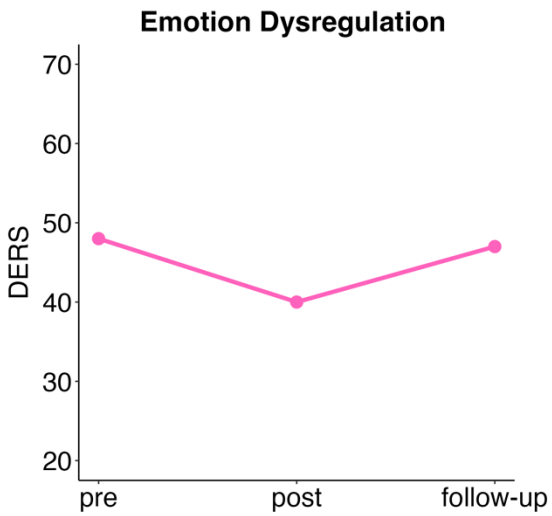
Participant 10. A visualization of the results for Participant 10 is shown in Figure 16. Participant 10 exhibited consistently low scores in overall coherence across time, with issues noted in several domains. At all three time points, the focus of the participant's speech frequently shifted to stressors in the participant's life, thoughts about parenting more generally, or content related to the participant's other children. At post-intervention, the drifts in focus were so prominent that very little was learned about the child; the majority of the participant's speech was focused on other matters. When the narrative was focused on the child and the parent-child relationship, Participant 10 described a child with significant social, emotional, and behavioural difficulties. The participant spoke about feeling inadequately equipped to meet the child's needs and expressed how these challenges have negatively impacted the parent-child relationship. The following quote illustrates this participant's perception of the challenges:

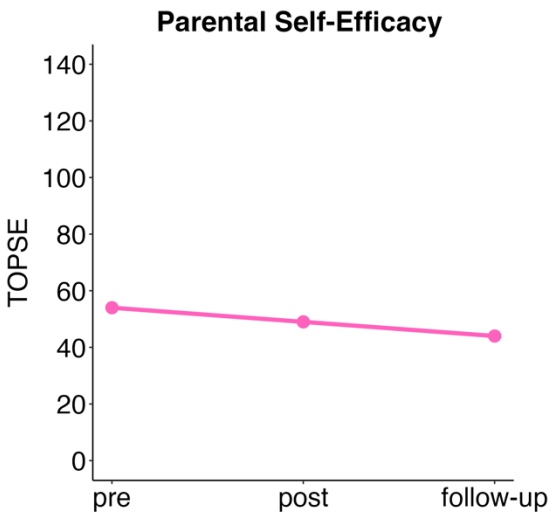
> I don't know how to help him and I don't know how to necessarily address some of his deeper feelings or his needs… Some of those feelings come out as aggression, as crying, as tears, like just screaming, yelling, lots of stuff like that. So I think I feel a little bit conflicted, right? Because there's just so much love there. Um, but then there's tension and uncertainty and sometimes resentment [Participant 10, pre-intervention]

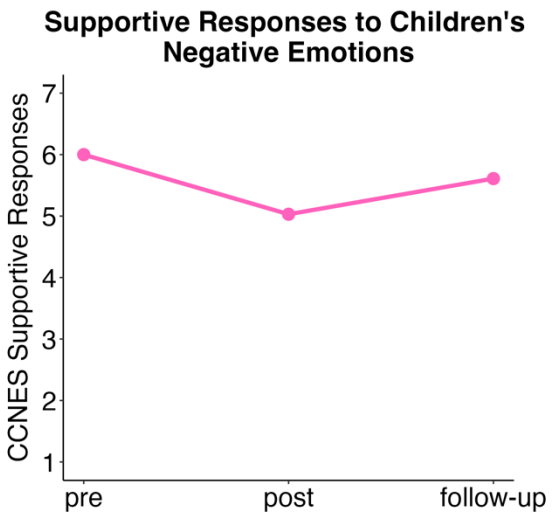
Scores for concern/worry were elevated at all three time points, due the concerns expressed about the child's development and the participant's lack of confidence in being able to meet the child's needs. The higher scores in concern/worry also reflect the participant's focus on how their ability to parent has been negatively impacted by external stressors. Scores in acceptance increased over time. At pre-intervention, participant 10's narrative included some minor rejecting and judgmental remarks. At post-intervention and follow-up, the narrative was characterized by warmth, and though the participant was not outwardly accepting of the child's

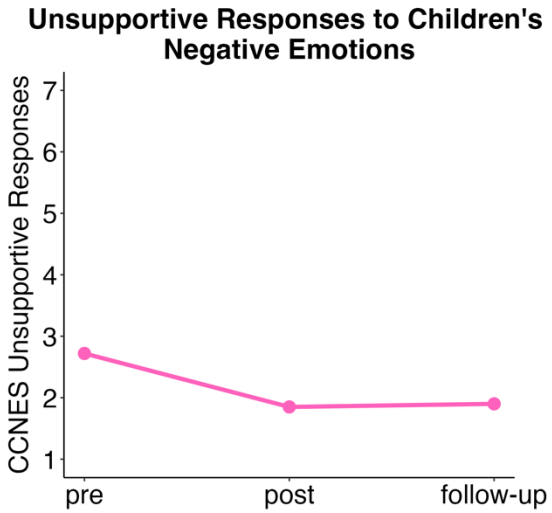
Figure 16

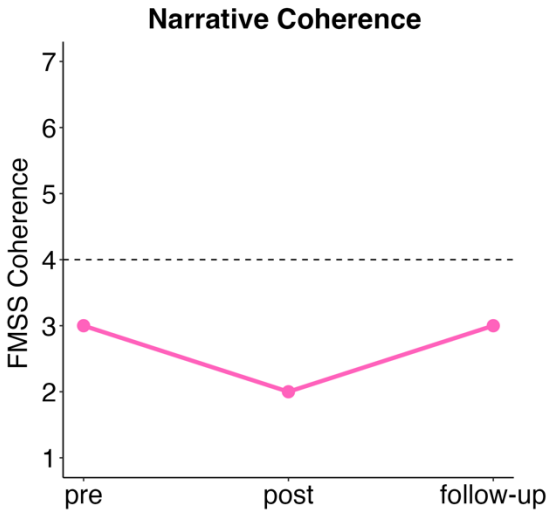
Summary of Data for Participant 10











FMSS Scores

	Pre	Post	FU
Focus	4	2	3
Elaboration	5	7	7
Separateness	7	5	7
Concern*	5	5	5
Acceptance	4	5	5
Complexity	3	2	3
Coherence	3	2	3

Note: *reverse coded

challenges, they were not judgmental or rejecting to the child either. In addition, the participant was able to reflect warmly on the child's positive developmental progress, as illustrated by the following excerpt:

> I've seen huge progress over the last several months since he's been enrolled in the program [at CDI]. And that's been amazing. Like huge strides in facing some of his fears, huge strides in his social emotional learning and his interaction with peers and others [Participant 10, follow-up]

Scores in complexity remained consistently low across time. The low scores in complexity resulted from the participant's unidimensional focus on the child's negative attributes and challenges, as well as the participant's struggles in their relationship with the child.

Taken together, the above pattern of scores resulted in an overall coherence score in the incoherent range at all three time points. In closing, regarding their challenges in parenting the child, Participant 10 provided the following insights during the FMSS interview:

> [Child's name] and I, like I said, we can be really close at times, but then we can also be very disparate and very distant because of like I'm unable to fill that gap. And I think he's probably unable to fill that gap because his needs aren't being met. My needs aren't being met. I can't meet his needs because, to use the Circle of Security phrasing, like my cup is never full. My cup is never even close to half full…And because I can't fill my cup, I rarely can fill his cup [Participant 10, post-intervention].

For this participant, despite learning and reflecting on COS-P concepts, and having integrated them into their understanding of their parenting, they continued to struggle in their relationship with their child due to insufficient support for their own needs.

Participant 10 reported some fluctuation in emotion dysregulation with scores on the DERS shifting from 48 to 40 from pre- to post-intervention (Δ = -0.69 SD) and increasing again to 47 at follow-up. In terms of parental self-efficacy, scores on the TOPSE decreased slightly over time from 54 at pre-intervention, to 49 at post-intervention, and 44 at follow-up, reflecting a total change of -0.44 SD. This participant reported the lowest levels of parental self-efficacy

overall. On the CCNES scale for supportive responses, Participant 10 reported a decrease from 6.00 at pre-intervention to 5.03 at post-intervention (Δ = -1.23 SD), with scores increasing to 5.61 at follow-up (Δ = -0.49 from pre-intervention to follow-up). Finally, unsupportive responses decreased from 2.72 at pre-intervention to 1.85 at post-intervention (Δ = -1.40). This change was maintained over time, with a score of 1.90 at follow-up.

In summary, Participant 10 demonstrated consistently low narrative coherence over time, characterized by consistent difficulties in the areas of focus, concern/worry, and complexity. Scores in acceptance improved from pre-intervention to post-intervention and follow-up. Participant 10 reported fluctuating levels of emotion dysregulation, and low level of parental self-efficacy compared to the overall sample. Finally, participant 10 reported a decreased likelihood of supportive and unsupportive responses to children's negative emotions over time.

Discussion

The purpose of this study was to explore changes in parents' internal representations of their child and their relationship with their child, their ability to regulate emotions, their confidence in parenting, and their responses to their child's distressing emotions through participation in the Circle of Security – Parenting (COS-P) intervention. The findings are summarized below and integrated with previous theory and research on attachment-based parenting interventions.

While this study does not assess long-term outcomes, it contributes to understanding the proximal parenting capacities that COS-P aims to strengthen. The domains examined in this study—narrative coherence, parental emotion regulation, self-efficacy, and responses to children's distress—are all central to the development of secure attachment and may lay the groundwork for sustained improvements in the parent-child relationship. Narrative coherence reflects the extent to which parents hold an integrated and balanced understanding of their child, which supports attuned and sensitive caregiving (Bowlby, 1982; Sher-Censor et al., 2016, 2017). Emotion regulation enables parents to engage in co-regulation, providing the external support children need to manage their own emotional states (Feldman, 2007). By maintaining their own emotional stability and responding sensitively, parents help children develop self-regulation skills that are foundational for emotional and social development. Parental self-efficacy contributes to a caregiver's sense of confidence in their ability to meet their child's needs, which in turn shapes parenting behaviours (Bloomfield & Kendall, 2012; Jones & Prinz, 2005). Finally, the way parents respond to children's distressing emotions plays a key role in shaping emotional development, as children rely on caregivers to help them regulate and make sense of their feelings (Fabes et al., 2002; Laible & Panfile, 2009). Together, these factors represent key

mechanisms through which attachment-based interventions like COS-P may foster positive developmental change.

Several notable changes were observed over the course of the program. Many parents demonstrated greater narrative coherence in the way they described their child and their relationship, suggesting a shift toward a more integrated and balanced understanding of their child's needs and behaviours. On average, parents expressed greater acceptance of their child, provided more complex and multi-faceted description of their child, and became less preoccupied with concerns and worries about their child. These findings highlight how COS-P may promote shifts in parents' internal representations of their child and the parent-child relationship.

In terms of parental emotion regulation, while overall, parents exhibited minimal change in this area, on an individual level some parents did show slight improvements. This indicates that although COS-P participation may not have universally been associated with significant changes in emotion regulation, there were meaningful improvements for certain individuals. Only one parent showed worsening emotion regulation over time.

Parental self-efficacy also increased from pre- to post-intervention, with this improvement being sustained at the three-month follow-up. On the individual level, only one participant showed a pattern of decreasing parental self-efficacy over time, with the remainder reporting stable or increasing levels of parental self-efficacy. This suggests that overall, the COS-P program may help to bolster parents' confidence in their ability to meet their child's needs and fulfill their parenting responsibilities.

In addition, parents generally reported fewer unsupportive responses to children's negative emotions over time. For most parents supportive responses remained consistent over time, though this pattern did vary across individuals.

Overall, the analysis highlighted how parents can exhibit varied and individualized responses to the COS-P intervention. This finding underscores the importance of considering individual differences when evaluating the impact of COS-P and parenting interventions more broadly, as group-level trends may not fully capture the nuanced and diverse trajectories of parents over the course of an intervention.

Development of Narrative Coherence

Past research on COS-P has yielded inconsistent results on the impact of the intervention on parental reflective functioning, a parent's capacity to think and reflect on the inner world of their child. Some studies have found a positive effect of COS-P participation on increasing parental reflective functioning (or mentalization capacities) (Kohlhoff et al., 2016, Maxwell et al., 2021, Dexter & Wong, 2024), while others have found no improvements in parental reflective functioning following intervention (Gray, 2015; Maupin et al., 2017; Zimmer-Gembeck et al., 2022). Measurement challenges have previously been identified as one source of this inconsistency (Maxwell et al., 2021). The present study addressed these concerns by using the FMSS-C as an alternative tool for assessing the impact of COS-P on parents' internal representations of their child and the parent-child relationship. Though the FMSS-C does not directly assess reflective functioning, per say, it captures a closely related construct in the attachment literature, narrative coherence. Reflective functioning and narrative coherence are closely related, as both involve the ability to interpret a child's behaviours in terms of underlying thoughts, feelings, and intentions; while reflective functioning emphasizes a parent's capacity to

reflect on mental states, narrative coherence reflects how clearly and consistently these interpretations are organized when describing the parent-child relationship, making it a meaningful indicator of shifts in parental internal representations.

The finding that participation in COS-P was associated with an increase in narrative coherence provides further support for the notion that COS-P participation positively influences parents' reflective functioning. Despite inconsistent results in the literature regarding COS-P and reflective functioning, there is strong theoretical support that attachment-based interventions, such as COS-P, may lead to improvements in reflective functioning. Parents are helped to reflect on their child's attachment cues and the influence of their own attachment histories and gain a deeper understanding of the underlying needs driving their child's behaviour. Components of the intervention such as the "circle map", "being with", "shark music", and "rupture and repair", are designed to help parents consider the thoughts, feelings, and intentions behind both their own and their child's behaviours – in other words, their capacity for reflective functioning or mentalization. The observed increase in narrative coherence is consistent not only with past research showing improvements in reflective functioning following COS-P participation, and the strong theoretical support, but also with a qualitative study on the intervention in which parents reported that COS-P facilitated a change in their thoughts and feelings about themselves and their child, through deepening awareness of underlying attachment needs, and the caregiving behaviours that meet these needs (Maxwell et al., 2021).

Improvements in narrative coherence were driven primarily by improvements in scores in the domains of complexity, acceptance, and concern/worry. These findings help shed further light on the subcomponents of parents' internal representations of their children that may shift over the course of intervention. Prior research on a 10-week cognitive behavioural therapy

program for parents of children with autism found that lower scores in complexity, acceptance, and overall coherence on the FMSS-C were associated with greater internalizing, externalizing and behavioural symptoms in children. In that study, it was also observed that following intervention, parents had improvements in the domains of acceptance and concern/worry (but not overall coherence). Further, for parents whose narratives changed from incoherent to coherent over the course of intervention, 90% had improvements in concern/worry scores, 48% had narratives that were more accepting, and 33% had more complex descriptions of their child (Vashi, 2022). Similarly in the current study of parents participating in COS-P, there were improvements in the domains of concern/worry and acceptance were observed. The additional gains in complexity suggest that an attachment-focused intervention like COS-P may be particularly well-suited to fostering changes in this aspect of parents' internal representations of their children. Increasing complexity scores on the FMSS-C mean that a parent's narrative about their child and their relationship with their child has become more multi-faceted and nuanced. An increase indicates that the parent portrayed the child in a more balanced way, articulating both positive and negative aspects of the child's personality, behaviours, and the parent-child relationship. Parents with higher scores in complexity are integrating a variety of perspectives and providing a richer, more detailed and multi-dimensional description of the child. Attachment-focused interventions are designed to prompt parents to reflect deeply on their children's internal worlds, encouraging them to consider the thoughts, feelings, and motivations that underlie their children's behaviours. This reflective process may contribute to enhanced narrative complexity, as parents begin to construct more detailed, nuanced understandings of their children. As narratives become more complex, in addition to more accepting and less inundated with concern/worry, they become more coherent.

Kohlhoff and colleagues (2016) reported improvements on a scale assessing 'certainty about mental states' following COS-P participation, indicating that parents had become less certain and more aware of the opacity of their child's mental states. It is possible that these two findings – that is, increased complexity on the FMSS-C and less certainty about mental states – both reflect a similar type of change following COS-P participation, providing converging evidence that COS-P encourages parents to think more deeply about their child's emotions and behaviours, leading to richer, more complex and multi-dimensional views of their child. By developing this type of awareness, COS-P may then enhance parents' ability to mentalize and respond sensitively to their child's needs.

Many decades of research on parenting styles have demonstrated that parental warmth and acceptance is a quintessential dimension of parenting (Baumrind, 1971; Rohner & Lansford, 2017). Several meta-analyses and longitudinal studies have shown that greater parental warmth is associated with better child psychological adjustment (Khaleque, 2013; Pinquart, 2017; Lansford et al., 2018; Rothenberg et al., 2020), and a recent study found this to be true cross-culturally as well (Rothenberg et al., 2022). As such, it is a positive sign that COS-P was associated with increasing parental acceptance and less parental rejection of children in this study. This finding relates to a past qualitative study which found that the COS-P intervention influenced the way parents view and understood their own attachment histories, such that they had access to greater acceptance and self-compassion, as well as a motivation to work hard to break intergenerational patterns of insecure attachment transmission. By increasing acceptance of themselves and their own histories, COS-P parenting may enable parents to extend greater acceptance to their children as well, as observed in this study.

The initially high and subsequently improved scores in the domain of concern/worry may provide insights into the dynamics of parent-child relationships in children's mental health settings. Children with internalizing and externalizing difficulties presenting for treatment often exhibit behaviours that can strain parent-child relationships, leading to heightened parental concern and stress. In addition, it is well-documented that early difficulties in attachment relationships put children at higher risk of developing psychopathologies (DeKlyen & Greenberg, 2008). Improving concern/worry scores on the FMSS-C, indicate that parents' narratives became less inundated and preoccupied with concerns about their child, and that parents exhibited increasing confidence in their child's ability to cope with challenges. From an object relations and attachment theory perspective, shifts in the way a parent conceives of and relates to a child are important because a child's understanding of themselves is significantly shaped by the way their parent conceives of and relates to them (Target & Fonagy, 1996). Therefore, when parents shift from a narrative dominated by concern to one that acknowledges difficulties but also expresses confidence in the child's ability to cope, it can foster a more positive self-concept in the child, supporting healthier emotional and behavioural development. This shift is crucial for improving the parent-child relationship, as it also allows parents to approach their children's challenges with less anxiety and greater flexibility. Consequently, the children may face challenges with greater resilience, without parental anxiety and preoccupation with concern reinforcing their difficulties.

It is possible that the higher rates of insecure attachment observed in children referred to mental health treatment compared to their non-referred peers (Speltz et al., 1990; Greenberg et al., 1991) may be partly explained by a feedback loop in which a child's behavioural and emotional difficulties trigger increasing levels of concern and worry in the parent. This

heightened parental concern can, in turn, reinforce and exacerbate the child's social, emotional and behavioural issues, creating a cycle that perpetuates and intensifies the child's difficulties (e.g., Sameroff, 1995). By intervening to shift the way parents conceptualize their child and their child's challenges—shifting from a narrative dominated by concern and worry to one that is more balanced and confident in the child's ability to cope—the COS-P intervention may help to interrupt this feedback loop. This shift in parental perspective could disrupt the cycle of concern and difficulty, potentially reducing the reinforcement of insecure attachment patterns and supporting the development of more secure attachment and improved emotional and behavioural outcomes for the child. As parents become less preoccupied with their concerns, they might be more capable of tuning into their child's emotional needs and providing the attuned response their child requires.

Overall, there were few difficulties noted on the focus, elaboration and separateness subscales in this sample. Both of the parents who exhibited difficulties on the focus subscale had narratives that were dominated by concerns related to external stressors (e.g., limited access to resources, high stress levels, lack of support, legal issues). From an ecological systems theory perspective, these stressors can be understood as influences from the exosystem – factors in the parents' environment that affect their ability to focus on their child (Bronfenbrenner, 1979). These external stressors may divert the parent's attention away from the child's needs, causing them to focus on other challenges, illustrating how broader systemic factors can permeate the parent-child relationship. In the context of COS-P intervention in a children's mental health setting, issues on the focus subscale of the FMSS-C, may be an indicator of families requiring additional wraparound support to help manage external pressures and increase parents' capacity to hold space in their mind for their child and their relationship.

The sample of parents in this study was notably highly educated, which may account for the lack of variability observed in the elaboration subscale scores. Previous research on the FMSS-C has demonstrated a positive correlation between narrative coherence and maternal receptive vocabulary (Sher-Censor et al., 2016; Sher-Censor et al., 2017). While prior studies have not specifically examined the relationship between maternal receptive vocabulary and individual FMSS-C subscales, it is plausible that the elaboration subscale, which evaluates the richness of detail within the narrative, may be particularly influenced by maternal receptive vocabulary. Given that receptive vocabulary is often correlated with educational attainment, the consistently high elaboration scores observed in this sample could reflect the verbal competencies associated with higher levels of education (Brysbaert et al., 2016).

Regarding the separation subscale, the FMSS-C was developed primarily with parents of children under 5 years of age. Though it has also been used with older samples, it is possible that as children move through middle childhood towards adolescence and develop a more complex, differentiated and autonomous sense of self, parents are less likely to exhibit difficulties in the area of separateness on the FMSS-C. Future research could examine the associations between specific FMSS-C subscales and participants' characteristics such as child age or parental education level.

Development of Parental Emotion Regulation

Minor overall improvements in parental emotion regulation with a small effect size were found in this study; however, individual analysis of participants revealed a more nuanced picture: four out of ten participants exhibited notable improvements in emotion regulation, five remained stable, and one worsened. This variability in individual responses may elucidate the mixed results observed in the broader research on attachment-based parenting interventions. Though

parental emotion regulation has been theorized to be an important mechanism of change in COS-P (Cassidy et al., 2016) and is thought to mediate the relationship between parental attachment style and negative responses to children's distress (Jones et al., 2014), there is a lack of research in this area. This study is one of the first to directly examine parental emotion regulation pre- and post-COS-P. However, research on parent-child interaction therapy (PCIT; Eyberg, 1988; Lieneman et al., 2020), another widely implemented attachment-based parenting intervention, has found mixed results regarding the impact of intervention on parental emotion regulation. Some studies have found a positive effect of attachment-based intervention on parental emotion regulation as measured by the DERS (Lieneman et al., 2020; Zimmer-Gembeck et al., 2019), while others have not (Han, 2022). It has previously been suggested that the DERS may not be the best measure for capturing changes related to emotion regulation difficulties of parents in caregiving situations, as its items focus on broader emotion regulation challenges such as difficulty controlling impulses, engaging in goal-directed behaviour, and accepting one's own emotional responses, rather than those specific to caregiving (e.g., attitudes, attributions, or beliefs about children's emotions; Han, 2022). However, the current findings suggest an alternate explanation, highlighting the importance of considering individual trajectories in intervention research. Parental emotion regulation may indeed serve as an important mechanism of change in attachment-focused interventions, but not uniformly across all participants. Studies focusing solely on aggregate data may overlook the substantial heterogeneity in how participants respond to interventions like COS-P or PCIT. The findings of the present study suggest that future research should incorporate a design that allows for the exploration of individual differences more thoroughly, which might reveal critical insights into the mechanisms through which COS-P or similar interventions exert their effects. Well-powered studies incorporating this type of

design may help to advance understanding and provide some answers regarding the ongoing question in intervention research of "what works for whom and under what conditions?" (Kazdin, 2000).

Development of Parental Self-Efficacy

Consistent with previous research, parental self-efficacy increased from pre- to post-intervention, and this change was maintained at 3-months follow-up. These results align with findings from Maxwell et al. (2021), who reported enhanced parental self-efficacy specifically in the domains of empathy and affection towards children, as well as a reduction in caregiver helplessness following participating in COS-P. Similar positive outcomes have been observed across various studies, reinforcing the effectiveness of COS-P in bolstering parental self-efficacy (Gray, 2016; Kohlhoff et al., 2016; Rose et al., 2018). This finding is not unique to COS-P. Participation in other parenting programs, such as Incredible Years and Triple P has also been associated with increases in parental self-efficacy (e.g., Lindsay et al., 2011). However, in terms of establishing an evidence-base for COS-P in particular, it is promising that COS-P has consistently been shown to promote immediate improvements in parental self-efficacy, which are sustained over a 3-month follow-up period.

Development of Parental Responses to Children's Negative Emotions

Consistent with existing literature on COS-P (Cassidy et al., 2016), this study revealed a reduction in parent's self-reported unsupportive responses to children's negative emotions. This finding is important because unsupportive parental responses have been closely linked with negative developmental outcomes in children, including insecure attachment (Del Carmen et al., 1993) and internalizing and externalizing difficulties (Leerkes et al., 2009; Spinrad et al., 2007). When children come to recognize that their negative emotions or distress can be expressed

without evoking negative responses from caregivers, they become more likely to turn to those caregivers as a secure base and safe haven. Conversely, despite the program's focus on enhancing supportive responses, such increases were not observed in the present study, which aligns with findings from Cassidy et al. (2016). It has previously been noted that only maternal unsupportive responses – and not supportive responses – were significantly correlated with measures of maternal sensitivity, warmth, child separation distress, and child externalizing problems (Eisenberg et al., 2010). Therefore, as suggested by Cassidy et al. (2016), it is possible that while parental self-reports of unsupportive responses may be valid indices of positive parental behaviours, self-reports of supportive responses are not linked to those behaviours and may not be important targets of intervention in the same way. Alternatively, it is possible parents may have over-reported their supportive responses at pre-intervention due to social desirability bias, leaving little room for measurable improvement. In any case, given the potential biases in self-report data, future research could strengthen these findings by incorporating behavioural observations of parental responses to children's distress, which may provide a more objective measure of change over time.

Implications

The present study provides further support for the utility of attachment-based interventions like Circle of Security-Parenting (COS-P). This study adds to the literature showing how even brief attachment-based interventions like COS-P may be linked to meaningful changes in parents, including those with children facing social, emotional, and behavioural challenges. The study demonstrated that participating in COS-P in a community mental health setting as a parental adjunctive intervention to treatment-as-usual, may be associated with meaningful shifts in parents' internal representations of their children, bolster parental self-

efficacy, decrease unsupportive responses to children's emotions, and improve emotion regulation for some parents. While this study describes these shifts as “meaningful,” the term refers to their theoretical and clinical significance in the short term; future research is needed to determine whether these changes are sustained over time and lead to enduring improvements in parenting and child outcomes.

While the findings of this study underscore the potential benefits of attachment-based interventions like COS-P, it was also evident that some parents face significant barriers in fully implementing these principles with their children. Life stressors such as financial instability, work demands, lack of childcare support, mental health challenges, or inadequate access to mental health services can hinder parents' ability to engage with and apply what they learn in interventions like COS-P. To maximize the impact of these programs, it is essential that the children's mental health system not only includes parents but also provides comprehensive support to address these barriers. This support could involve offering flexible scheduling, providing financial assistance, ensuring access to mental health care for parents, and integrating services that address the broader systemic challenges families face. By reducing these barriers, parents will be empowered to create the secure, nurturing environments that are critical for their children's well-being.

The study’s use of both variable-centered and person-centered analyses highlighted the importance of examining individual differences rather than relying solely on aggregate results. Focusing on the individual paths of participants allows researchers to uncover rich, nuanced aspects of the data that might otherwise be obscured in a purely variable-centered analysis. This individual-level focus is particularly valuable in understanding how interventions like COS-P can impact parents differently, depending on their unique contexts, histories, and challenges.

Finally, this study demonstrated the potential utility of the FMSS-C as a tool to evaluate the effectiveness of COS-P and other attachment-based interventions. As discussed previously, the FMSS-C's feasibility, ease of implementation, and cost-effectiveness make it particularly suitable for use with higher-risk populations or in resource-constrained environments.

Limitations and Future Directions

There are several limitations of this study which should be acknowledged. First, the study was exploratory and descriptive in nature and did not include a control group, which restricts the ability to draw conclusions about the efficacy of the Circle of Security Parenting (COS-P) program. The primary objective was to explore potential trends rather than establish causality, and as such, the findings should be interpreted with caution.

It is also important to acknowledge that COS-P was delivered alongside other services the children were receiving at the agency. As such, improvements in parenting outcomes may have been influenced not only by the intervention itself but also by concurrent changes in the child's behavior and emotional functioning. While the goal of COS-P is to support parents in responding more effectively to their children, it is possible that as children improved through other services, parents found it easier to engage with them in more regulated and responsive ways.

Another limitation of this study is that COS-P was originally designed for parents of children aged 0–6 years old, yet many of the parents in this sample had children older than this intended age range. While theoretical and empirical evidence suggests that attachment-based interventions can be effective across the lifespan (Mikulincer & Shaver, 2018; Moretti et al., 2015), the extent to which COS-P is optimally suited for parents of older children remains an open question. It is possible that some aspects of the intervention—such as its emphasis on early

attachment behaviours and parental responsiveness to young children's cues—may not fully align with the needs and experiences of parents raising older children.

Additionally, while key principles of COS-P, such as secure base provision, emotional attunement, and reflective caregiving, remain relevant throughout development, the way parents engage with and apply these concepts may shift as children grow (Moretti & Braber, 2013). Parents of older children may have required different forms of guidance to integrate COS-P's principles into their parenting approaches, potentially influencing their responsiveness to the intervention. Future research should explore whether COS-P requires modifications to enhance its applicability for parents of older children or whether interventions like *Connect* may be better suited for this population.

Despite these considerations, the findings contribute to the growing discussion about the flexibility of attachment-based interventions across developmental stages. Further research is needed to determine whether COS-P can be applied effectively to a broader age range or if adaptations are necessary to optimize its impact for parents of older children.

There are also limitations related to the outcome measures used in this study. While it is promising that changes were observed on the FMSS-C in the domains of concern/worry, complexity, acceptance, and overall coherence following the relatively short 8-week COS-P intervention, the test-retest reliability of the FMSS-C is not well established. This raises questions about how much of the observed change in FMSS-C scores can be attributed to the intervention versus natural fluctuations over time. Additionally, although changes in parents' internal representations were observed on the FMSS-C, we do not know whether these changes translated into actual behavioural changes in the parent-child relationship or a shift in the quality of the attachment relationship, as these were not directly measured in this study. It is possible

that changes in parents' internal representations, as reflected in the FMSS-C, may be an important initial step in the path to behavioural changes, potentially triggering a meaningful cascade of improvement in the parent-child relationship. However, it is also possible that these initial shifts may not be sufficient on their own, and without continued support, they may not result in sustained change. Given the relatively short follow-up period and the absence of behavioural observations or measures, we are unable to determine whether these internal changes led to lasting behavioural transformations.

To address these limitations, it would be beneficial for future research to establish the test-retest reliability of the FMSS-C. This would enable researchers to better distinguish between true changes resulting from interventions like COS-P and natural fluctuations in participants' responses over time. It would also be helpful to further validate the FMSS-C, exploring its association with behavioural indicators of the quality of the parent-child attachment relationship, and its predictive validity regarding parent and child functioning over time. Previous research has already made some important contributions in this area. One study found that maternal coherence on the FMSS-C was associated with maternal emotional availability during play in a sample of mothers of children with autism (Sher-Censor et al., 2019). Another study found that amongst preschoolers with self-regulation difficulties, those whose mothers produced incoherent narratives showed increased externalizing behaviour problems, decreased ego-resilience and lower peer acceptance across the transition to school (Sher-Censor et al., 2016). Validating this measure further is important because the FMSS-C is a valuable tool for attachment-focused intervention research due to its feasibility, ease of implementation, and cost-effectiveness. It is particularly useful in higher risk samples in community settings due to the low burden of measurement it places on participants. As such, providing more evidence of its test-retest

reliability, and convergent and predictive validity is of utmost importance as it would provide a stronger foundation for interpreting the meaning of changes in parents' internal representations as captured by the measure. Finally, longitudinal studies with extended follow-up periods would be valuable in examining whether the changes observed in parents' internal representations lead to sustained improvements in the quality of the parent-child attachment relationship. Such studies could explore whether these initial changes following COS-P participation trigger a cascade of positive behavioural transformations and if so, identify which parents require ongoing support to maintain and consolidate these changes.

The small sample size is both a strength and a limitation of the present study. On one hand, it allowed for an in-depth examination of individual participant trends, providing rich descriptive data. However, the small sample size also constrained the generalizability and reliability of the findings and limited the study's capacity to employ hypothesis testing. Future studies with larger sample sizes would allow for more complex statistical modeling, such as hierarchical linear modeling (HLM) or growth curve analysis, which could provide more robust data regarding individual trajectories over time and provide a more nuanced understanding of the effects of COS-P.

The study did not account for the interdependence of co-parents within the sample. Four out of the ten parents in the study were co-parents of the same child. Given the small sample size, the potential effects of this interdependence on the study's outcomes could not be controlled, which may have introduced bias or confounding variables into the results.

The study also did not control for variability in the COS-P program's implementation. Differences in the COS-P groups that participants attended, who the facilitators were, and the fidelity with which the program was implemented could have influenced the outcomes. Future

research should aim to standardize these variables or account for them in the analysis to ensure that any observed effects are attributable to the program itself rather than to variations in its delivery.

As indicated earlier, future research would benefit from a more detailed analysis of the associations between specific FMSS-C subscales, such as complexity, acceptance, and concern/worry, and various parent and child outcomes. It would also be beneficial to explore whether attachment-focused interventions may be especially suited to promote shifts in specific domains, and how these shifts in parental internal representations may translate into behavioural or emotional improvements in children.

Conclusion

This study contributes to the growing body of research on attachment-based parenting interventions by providing insights into the development of parents who participated in the Circle of Security-Parenting (COS-P) program. Through a mixed-methods approach, this study explored the shifts in parents' internal representations, emotion regulation, self-efficacy, and responses to their children's negative emotions. The findings offer promising evidence for the potential of COS-P to facilitate meaningful changes in parents of children with social, emotional, and behavioural difficulties. One of the most notable findings of this study was the observed increase in narrative coherence among many parents, as measured by the Five-Minute Speech Sample-Coherence (FMSS-C). This increase suggests that parents were able to develop more integrated and balanced views of their children's needs and behaviours. Improvements were most notable in the areas of acceptance, complexity, and concern/worry, underscoring the potential of COS-P to support parents in developing deeper and more nuanced internal representations of their children and the parent-child relationship. The use of FMSS-C also

highlighted its feasibility as a low-burden, cost-effective assessment tool in clinical settings, particularly for capturing shifts in internal representations that may serve as precursors to broader behavioural changes.

In addition to changes in narrative coherence, the study found that parents, on average, reported increased self-efficacy and a reduction in unsupportive responses to their children's distressing emotions. These findings align with existing research suggesting that participation in COS-P can bolster parents' confidence in their ability to meet their children's needs and promote more adaptive responses to children's emotional challenges. There were also slight improvements in parent's reports of emotion regulation, though the effect size for this change was small. The study also revealed variability in individual trajectories, with some parents showing greater improvements than others. This variability underscores the importance of considering both aggregate and individual-level data in understanding the impact of interventions like COS-P. The dual approach of variable-centered and person-centered analyses employed in this study allowed for a more nuanced understanding of the diverse ways these parents responded to the COS-P interventions.

Overall, the results of this study provide preliminary evidence that attachment-based interventions like COS-P can support positive change in key parenting capacities—specifically, improvements in parents' internal representations (as measured by narrative coherence), increases in parental self-efficacy, and reductions in unsupportive responses to children's distressing emotions. These changes reflect important dimensions of caregiving that are theorized to support healthier parent-child relationships. The findings suggest that even brief interventions may foster growth in these areas, which may, in turn, initiate a cascade of positive changes within the parent-child relationship. As such, this research underscores the value of

continued exploration and refinement of attachment-focused interventions to better support the diverse needs of families in clinical and community settings.

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Appendix A

Descriptive Statistics – All Participants

Variable	Pre		Post		Follow-up	
	Mean [95% CI]	SD	Mean [95% CI]	SD	Mean [95 % CI]	SD
DERS	45.0 [36.70, 53.30]	11.60	41.8 [33.6, 50.0]	11.41	42.5	11.66
TOPSE	90.4 [74.20, 106.58]	22.62	102.40 [83.70, 121.15]	26.21	101.60 [83.30, 119.87]	25.54
CCNES						
Supportive	5.65 [5.08, 6.21]	0.79	5.50 [5.11, 5.88]	0.53	5.90	0.60
Unsupportive	2.29 [1.85, 2.74]	0.62	1.83 [1.85, 2.74]	0.38	1.85	0.51
FMSS-C						
Focus	5.78 [4.50, 7.00]	1.79	6.00 [4.83, 7.00]	1.63	6.10 [5.18, 7.00]	1.29
Elaboration	6.78 [6.30, 7.00]	0.67	7.00 [7.00, 7.00]	0.00	6.60 [5.70, 7.00]	1.26
Separateness	6.11 [5.28, 6.95]	1.17	6.40 [5.71, 7.00]	0.97	6.60 [6.00, 7.00]	0.84
Concern	4.78 [4.00, 5.56]	1.09	3.80 [2.80, 4.80]	1.40	3.30 [2.04, 4.56]	1.77
Acceptance	4.56 [3.75, 5.36]	1.13	5.70 [5.02, 6.38]	0.95	5.70 [4.80, 6.60]	1.25
Complexity	3.78 [2.85, 4.71]	11.30	4.50 [3.27, 5.73]	1.72	5.00 [3.88, 6.12]	1.56
Coherence	3.44 [2.64, 4.25]	1.13	4.30 [3.23, 5.37]	1.49	4.90 [3.86, 5.94]	1.45

Note: DERS = Difficulties in Emotion Regulation Scale; TOPSE = Tool to Measure Parenting Self-Efficacy; CCNES = Coping with Children's Negative Emotions Scale; FMSS-C = Five-Minute Speech Sample – Coherence.

Appendix B

Effect Sizes (Cohen's d)

Variable	Pre vs Post	Pre vs Follow-up	Post vs Follow-up
DERS	0.28	0.22	0.06
TOPSE	0.53*	0.50*	0.04
CCNES			
Supportive	0.19	0.32	0.51*
Unsupportive	0.74*	0.71*	0.03
FMSS-C			
Focus	0.12	0.18	0.06
Elaboration	0.33	0.03	0.30
Separateness	0.25	0.42	0.17
Concern	0.93*	1.40*	0.47
Acceptance	1.01*	1.01*	0.00
Complexity	0.55*	0.94 *	0.38
Coherence	0.76*	1.29*	0.53*

Note: * indicates change greater than 0.5 standard deviation