CHILDREN'S EMOTIONAL RESPONSIVENESS AND THE CONTRIBUTIONS OF PARENTS' EXPRESSIVE TENDENCIES DURING EMOTIONALLY POSITIVE AND NEGATIVE INTERACTIONS

by

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ABSTRACT

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This study examines how children learn emotional information and management from their primary caretakers during interactions with positive and negative narratives. Fifty-six preschoolers and their parents participated in a storytelling and discussion task, where each parent presented a happy and a sad story. Preschoolers were coded for their involvement, emotional comprehension, and concern, while parents were rated on their support, scaffolding, and expressiveness. Findings reveal that warm responsive and expressive parental behaviors contribute significantly to children's cognitive and emotional skills during both positive and negative narrative interactions. Parents high in support and expressiveness (both during the task and within the home) had children who showed higher total expression, in addition to being more positively expressive, more involved, and more understanding of emotional concepts. These results reinforce previously established beliefs on the importance of emotionally open, positively

expressive, and cognitively stimulating parent-child interactions on emotional, social, and regulatory competence.

CHILDREN'S EMOTIONAL RESPONSIVENESS AND THE CONTRIBUTIONS OF PARENTS' EXPRESSIVE TENDENCIES DURING EMOTIONALLY POSITIVE AND NEGATIVE INTERACTIONS

LIST OF TABLES ix

LIST OF FIGURES xi

INTRODUCTION 1

Processes of Emotional Development 1

Parental Cognitive-Emotional Socialization Practices 3

PURPOSE AND HYPOTHESIS 8

Emotion Regulation and Socio-Emotional Development in Children 8

Parental Socialization Strategies and their Effects 11

The Role of Emotional Expressiveness on Development 13

Age and Gender Differences 15

METHOD 17

Participants 17

Procedure 17

Written Measures 18

Behavioral Coding 19

DATA ANALYSIS 32

RESULTS 36

Hypothesis 1 36
Hypothesis 2: 39
Hypothesis 3: 43
Parental Expressiveness during Storytelling and Discussion 43
Parental Expressiveness within the Family (SEFQ) 46
Hypothesis 4: 50
DISCUSSION 53
Overview of Findings 53
Emotional Development and Comprehension 55
Parental Socialization Efforts 58
Parental Expressiveness During the Task 61
Parental Expressiveness Within the Family Context 63
Age and Gender Differences 67
Limitations and Future Directions 70
Conclusions 73
APPENDICES 74
Appendix A. Additional Findings 75
Appendix B. (SEFQ) Self-Expressiveness Within the Family Questionnaire 79
REFERENCES 83

LIST OF TABLES

Table 1. Child Facial and Verbal Affect 21

Table 2. Attention, Hypothesis Testing, and Emotion Talk Frequency (Tallied) 24

Table 3. Child Involvement, Emotional Relevance, and Emotional Comprehension 26

Table 4. Parental Support, Cognitive-Emotional Stimulation, Expressiveness, and Dyadic Unity 29

Table 5. Descriptive statistics for parent and child behaviors coded during the interaction. 34

Table 6. Descriptive statistics for Self-Expressiveness in the Family Questionnaire scores 35

Table 7. Correlations for children's concern, question amount, emotion word use, and emotional comprehension throughout all sessions. 37

Table 8. Correlations for parent support and cognitive emotional stimulation and child emotional comprehension and involvement across all sessions. 40

Table 9. Correlations for parent support and cognitive emotional stimulation and child question amount 41

Table 10. Correlations for parent expressiveness during the task and child expressiveness, positive child expressiveness, and positive child expressiveness during mother-led tasks 44

Table 11. Correlations for parent expressiveness, support, and cognitive-emotional stimulation, and children's positive, negative, and total expressiveness, during the task. 45

Table 12. Correlations for fathers' positive, negative, and total SEFQ, child concern during the sad story and with mothers, and child positive expression (total and with father) 48

Table 13. Correlations for child age during the interaction, emotion word use, involvement, and emotional comprehension (total and with mother). 51

LIST OF FIGURES

Figure 1. Children's Emotional Comprehension Scores during Happy and Sad Story Conditions 38

Figure 2. Children's Question Amount during Happy and Sad Story Conditions 38

Figure 3.Children's Emotion Word Use during Happy and Sad Story Conditions..... 38

Figure 4. Children's Total Expressiveness during Happy and Sad Story Conditions..... 38

Figure 5. Children's Concerned Expression during Happy and Sad Story Conditions... 39

Figure 6. Children's Involvement during Happy and Sad Story Conditions..... 39

Figure 7. Parent Support during Happy and Sad Story Conditions..... 42

Figure 8. Cognitive-Emotional Stimulation during Happy and Sad Story Conditions 42

Figure 9. Parent Cognitive-Emotional Stimulation during Happy Story Conditions 42

Figure 10. Child Expressiveness during Father-led Sessions 52

Figure 11. Parent Positive Expressiveness Within the Family..... 77

Figure 12. Parent Task Expressiveness during the Happy and Sad Story 77

INTRODUCTION

Emotional aptitude is believed to be critical for shaping children into socially competent and successful adults. Learning how to regulate emotional responses and understand the emotional needs of oneself and others is important to the maintenance of positive relationships and emotional wellbeing, as well as to the emergence of moral development (Koss et al., 2011; Zeman et al., 2006). While individual differences in arousal, reactivity, and neural patterns play a large role in emotional development (Jones, & Gagnon, 2007), a major part of children's early emotion skills are learned through socialization patterns within the family. In addition to temperamental variation between children, observations and interactions with caregivers are the primary models through which children learn how to recognize and regulate emotions and respond appropriately in social situations (Laible, 2004). The quality of the parent-child relationship also plays a significant role in this learning process; the presence of parental receptiveness and support, the emotional openness and expressiveness within the family, and the degree to which parents provide cognitive-emotional learning opportunities are all important for the fruition and maturation of children's social skill competence (Padilla-Walker et al., 2020).

Processes of Emotional Development

On their own, children contribute a great deal to the parent-child dynamic, offering a set of unique, biologically based differences in emotional response. Referred to as temperament, these differences dictate how a child reacts to events in the environment,

and influence how others interact with the child in turn (Rothbart & Derryberry, 1981; Padilla-Walker et al., 2020). Aspects of temperament include a tendency for positive or negative emotionality, as well as regulatory capacities involved in managing emotions. These self-regulation processes begin developing early in ontogeny as a way to manage temperamental reactivity. For most infants and toddlers, controlling an emotional response is difficult. When faced with another's negative emotions, for example, young children tend to react with personal distress (Main & Kho, 2020). As children grow older and move into the preschool period, they learn emotion and self regulation skills that help them manage their temperamental reactivity. Thompson (1991) defines emotional regulation as the "extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions"; such mechanisms help manage behaviors like attention, engagement, and emotion management, and allow children to inhibit inappropriate responses within social contexts (Laible, 2004; Rothbart & Rueda, 2005; Dinovo & Vasey, 2011). These behaviors have been found to facilitate emotional understanding of the self and others, leading to confidence and social competency (Zeman et al., 2006), and play a part in children's ability to ask context-relevant questions, allowing them to learn about- and successfully navigate- the world around them (Kurkul, Dwyer, & Corriveau, 2022). Moreover, emotional regulation contributes significantly to children's success in the classroom, allowing effective communication with peers and instructors and increased inclusion in social and peer groups (Mortensen & Barnett, 2019), while children who experience difficulties with emotional management tend to exhibit higher rates of internalizing problems, externalizing problems, and aggressive behaviors (Eisenberg et al., 2009; Murphy et al., 2004).

In addition to social competence, regulation skills foster the development of empathetic concern and can inspire helping and prosocial behaviors. (Sallquist et al., 2009). Eisenberg (2000) and Decety and Meyer (2008) believe that throughout childhood, emotional regulation capacities help self-centered emotions- like personal distress- evolve to include increasing awareness and concern of others. This awareness sets the stage for empathetic reasoning that is complex and proactive, and that promotes positive social adjustment in both childhood and adulthood (Beadle et al., 2013).

Parental Cognitive-Emotional Socialization Practices

Individual temperament is not alone in influencing emotional development throughout childhood; emotion comprehension and regulation capacities evolve across time as children observe communication dynamics within the family and learn socialization strategies taught by parents (Laible et al., 2019). Children learn how to manage their emotions and relate to the emotions of others through how parents teach, talk about, and behave in emotional situations. Paired with supportive parenting strategies, these interactions become critical in communicating other-focused prosocial emotions like sympathy and empathy (Main & Kho, 2020).

Caretaker personality and parenting styles play a large role in emotional socialization, and research on parenting practices suggests that focus on positive emotional synchrony within the parent-child dyad significantly contributes to children's socio-emotional understanding and their prosocial tendencies. For instance, parental warmth and positive expressiveness are shown to improve emotion comprehension and regulation (Spinrad & Gal, 2018) while controlling and disrespectful parenting can disrupt emotional development (Ispa et al, 2004). Parental warmth- marked by traits like

praise, affection, enjoyment of one's child and sensitivity to the child's moods, needs and abilities- sets the stage for secure and emotionally synchronous parent-child dynamics (Main & Kho, 2020). Warm and supportive parents seem to foster positive social interactions and prosocial behaviors by teaching cooperation and reciprocity (Padilla-Walker, Nielson & Day, 2016), and Kestenbaum, Farber and Sroufe (1989) found that children of warm parents had stronger attachments and showed higher empathy-related responding. In contrast, parents who tended to exhibit higher neuroticism and negative emotions were less attentive, less responsive, and less adaptable when interacting with their children (Belsky & Barends, 2002; Clark, Kochanska, & Ready, 2000). Attentiveness and responsiveness are part of parental support and include the degree to which a parent pays attention and responds to a child's cues and attempts at communication. Parents high in responsiveness tend to spend more time engaging their children in conversation; in turn children of responsive parents exhibit more refined self-efficacy, motivation, behavioral regulation, and social competence skills (Padilla-Walker et al., 2020). As with parental warmth, highly responsive parenting styles have been positively related to children's empathetic understanding and prosocial behavior (Spinrad & Stifter, 2002). Parental openness has also been associated with secure attachment and emotional wellbeing (Laible, Panfile-Murphy, & Augustine, 2013). In addition to being more likely to provide novel stimulations and experiences to their children, parents high in openness used more diverse emotion language and were more willing to discuss negative emotions and negative emotion coping strategies with their children (Manczak, 2016).

The family environment is where children first learn how to recognize and appropriately handle intense feelings, and their cognitive and emotional growth relies on caretakers' initiation and encouragement of emotion-centered discussions (Halberstadt, 1995; Padilla-Walker et al., 2020). Since young children are extremely attuned to their parents' messages, parent-child discourse that offers detailed and useful information about what children and those around them feel is critical for early moral development (Laible, 2004). Accordingly, research has focused on activity engagement between the parent-child pair, as well as parent socialization efforts, like emotion-talk and cognitive-emotional stimulation. As Wong, Konishi and Kong (2022) mention, little research has focused on how parent-child activities contribute to children's socio-emotional development; nevertheless, their results indicated that frequent parent-child activities contributed to more prosocial behaviors among preschoolers. Joint storybook reading, in particular, was related to less anxiety, hyperactivity, and aggression. Other work addressing storybook reading found relationships to increased engagement, attention, empathy, and socioemotional adjustment (Aram and Aviram, 2009; Baker, 2013). Parent-child activities, like storybook reading or other media engagement, could be foundational to children's cognitive and emotional development, as they allow the child to benefit from thoughtful and nuanced socio-emotional discourse. Such discourse is guided by caretakers through cognitive-emotional stimulation (also referred to as scaffolding), which refers to instructional support meant to enhance children's cognitive and emotional skills through clarification, verbal prompting, and guidance. Cognitive-emotional stimulation includes asking and answering questions, explaining concepts, fostering inquisitiveness and critical thinking, and encouraging children to form their own

conclusions (Salonen, Lepola, & Vauras, 2007; Landry et al., 2012); additionally, several studies have observed parental cognitive emotional stimulation contributing to children's cognitive performance and emotional regulation (Landry et al., 2000; Hubbs-Tait et al., 2003; Myruski & Dennis-Tiwary, 2022).

Emotion-talk- language referring to, discussing, and explaining emotions- is also an important factor to socio-emotional discourse; as Manczak et al. (2016) note, parent-child emotion discussion and reminiscing relate to perspective-taking, adaptability, emotion regulation, and socioemotional competence. Greater frequency and quality in emotion-talk has been found to lead to a number of benefits in children. For example, parents who use more emotion words during a discussion are thought to give children more opportunities to make connections between their experiences and emotions. Other studies link this type of emotion-talk to improvements in adaptability and resilience, perspective-taking, theory of mind and communication competency (Raikes & Thompson, 2008; Fivush, Robertson, & Duke, 2004; Laible & Song, 2006; Ontai & Thompson, 2008). Along with parent-child discourse, children learn about emotions by observing their caretakers' emotional patterns. Parental expressiveness is the degree to which parents express their own emotions, within or outside of the family context; this can include reactions and responses to events that are not directed towards the child or do not directly involve the child (Eisenberg et al., 2001). Zhou and Eisenberg (2002) describe how parents' expressiveness and warmth interact with children's social competence, externalizing behaviors, and emotional responses. According to their Parent-Driven Socialization Model, parents' emotionality is a strong influence on the emotional environment a child experiences and affects how emotional awareness of oneself and

others develops. More expressive parents can model emotion management in ways that are clearer for the child to understand and that make relating to others' emotions easier. When coupled with parental warmth, patterns of expressiveness characterized by positive emotions can create safe and nurturing environments where children can comfortably explore both positive and negative emotions (Roberts & Strayer, 1996). Likewise, positive family expressiveness is associated with children's prosocial tendencies, socially appropriate behaviors, and lower levels of aggression (Halberstadt, 1995; Denham & Grout, 1992). In contrast, Ackerman (1999) writes that environments characterized by negative emotion patterns can disrupt self-regulation development and model aggressive or externalizing behaviors.

During dyadic interactions, parental efforts of warmth, expressiveness, and scaffolding interact with children's unique temperamental traits and regulatory skills. Some studies outline a level of dyadic quality during parent-child interactions, describing the degree of collaboration, togetherness, shared meaning, openness of communication, and harmony of interaction between the dyad (Laible & Song, 2006; Gigi, Oppenheim & Sagi, 2007; Vandermaas-Peeler, Westerberg & Fleishman, 2019). This type of dyadic quality- referred to in this study as dyadic unity- has been linked to children's productive positive and negative emotional expression (Gigi, Oppenheim & Sagi, 2007), meaning-making and knowledge construction (Vandermaas-Peeler, Westerberg & Fleishman, 2019), socioemotional development, and positive and prosocial thinking (Laible & Song, 2006).

PURPOSE AND HYPOTHESIS

This study aims to explore the ways through which preschool-aged children learn emotional information and management from their primary caretakers during interactions with stimuli that are emotionally familiar or emotionally complex. To achieve this, we use an interactive story-reading and discussion task, in which each parent-child pair go through a positively-valanced narrative and a negatively-valanced narrative. Emotionally familiar narratives include themes of friendship, play, and transformation while emotionally complex narratives deal with loss and mourning. Parental socialization strategies are explored, as well as their contributions to children's emotional and moral development. Specifically, how parental expressiveness, support, and scaffolding efforts relate to children's engagement, concern, emotional expressiveness, comprehension, and vocabulary.

Emotion Regulation and Socio-Emotional Development in Children

Hypothesis 1: To begin, we will explore preschoolers' reactions to emotionally familiar narratives, such stories about friendship, and more emotionally complex narratives, such as stories about loss. This will include relationships between children's' regulatory capacities (task involvement, attention, and facial/verbal affect), their socio-emotional capabilities (emotional comprehension and appropriateness, as well as emotional word use and information-seeking), moral development (facial/verbal expression of concern), and story condition (positive/familiar vs. negative/complex).

Differences in these variables between mother-led and father-led sessions will also be explored.

First, we will focus on children's expressions of concern as a way to gauge moral development, along with the circumstances under which children exhibit higher levels of concern throughout the interaction. We expect to see facial and verbal expressions of concern be related to children's emotional understanding and appropriateness, as children's empathetic abilities are thought to develop as a result of improved cognitive and emotion regulation capacities (Eisenberg & Strayer, 1987). Because of this, we also expect to see children who seek more information about the story by asking more questions to show higher concern. Likewise, sustained attention, emotion-talk, and inquisitiveness have been connected to emotion regulation and socioemotional competence (Laible & Panfile-Murphy**,** 2009; Manczak et al., 2016; Chouinard, 2007; Birbili & Karagiorgou, 2010), and can provide opportunities to process, reason about, and understand different emotional situations. Therefore, we suspect that children who pay more attention and are more involved in the task will show more emotional comprehension, use more emotion words, and ask more questions. Similarly, children who ask more questions and use more emotion words should also demonstrate higher emotional comprehension and appropriateness. Overall, we expect to see children who show more concern to show more emotional understanding, ask more questions, and display expressions that are more relevant to the discussion and narrative. We also expect positive relationships between attention, involvement, information-seeking, emotion-talk, and emotional comprehension and appropriateness, such as when the score of one of these variables is high, so is the score of the others.

Next, we will look at how the child-specific behaviors outlined above may differ between the positive and negative narrative conditions, and between which parent is leading the task.

While children tend to have more difficulty processing negative emotions as opposed to positive ones (Laible & Panfile-Murphy, 2009), research by Manczak et al. (2016) and Bird and Reese (2006) showed children initiating more discussion about specific emotions during negative-event conversations. Thus, during negative-narrative interactions where complex emotions such as loss or grief are referenced, we expect to see children show less emotional comprehension- but ask more questions, use more emotion words, and show higher expressions and involvement in the activity. Of course, we also expect significantly higher concern during the more complex narrative.

In terms of differences between mother- and father-led sessions, we expect to see children exhibit more concern when reading and discussion are lead by the mother, as some studies show that mothers tend to use more emotion terms and more elaborate cognitive-emotional scaffolding strategies such as situating the emotional event within an interpersonal context (Fivush et al., 2000). Mothers have also been found to make more references to emotions, engage in more elaborate explanations of emotional scenarios, encourage the expression of sadness, and offer more problem-solving advice (Fivush et al., 2000; Barlola, Hughes & Gullone, 2011; Manczak et al., 2016). Due to this research, we hypothesize that children will exhibit significantly more positive and negative facial/verbal expressions during sessions where the task is led by the mother. We also expect that children will be significantly more involved, ask significantly more questions, and exhibit significantly more emotional understanding during mother-led interactions

than father-led interactions; this should also be true for mother-led interactions during the more complex narrative, as opposed to mother-led interactions during the more familiar narrative, or father-led interactions during both the familiar and the complex narrative. Finally, children should engage in more emotion talk when mothers are engaging with the narrative about loss, as suggested by similar results from Fivush et al. (2000) and Laible and Panfile-Murphy (2009).

Parental Socialization Strategies and their Effects

Hypothesis 2: Hypothesis two will explore how parental efforts to support and scaffold children's emotional knowledge affect children's engagement, understanding, and concern. In this study, parental support refers to the presence of warmth, responsiveness, and positive regard towards the child, while scaffolding- or cognitive-emotional stimulation- describes efforts to enhance knowledge through verbal prompting, encouragement, and explanations. We also consider the interactions between the variables above and level of dyadic unity- the parent-child pair's sense of collaboration, togetherness and harmonious communication.

Evidence consistently suggests that supportive behaviors like positivity, praise, and responsiveness contribute to children's emotional understanding and regulation capacities, as well as higher empathetic responding, higher verbal participation during reading activities, and higher attention, cooperation, and enthusiasm during storytelling tasks (Eisenberg et al., 1998; Laible & Song, 2006; Britto et al., 2006; Spinrad & Gal, 2018; Bus et al., 1997; Landry et al., 2012). Similarly, parental scaffolding and elaboration has been linked to children's increased cognitive and socio-emotional skills, emotional regulation capacities, academic performance, and prosocial outlook (Hubbs-

Tait et al., 2003; Ryan, Martin & Brooks-Gunn, 2006; Laible, Panfile-Murphy & Augustine, 2013; Myruski & Dennis-Tiwary, 2022). Due to these findings, we hypothesize that parents who exhibit high support and parents who provide more cognitive emotional stimulation will have children that are more involved, attentive, and concerned, especially during more emotionally complex narratives. Higher emotional comprehension, emotion-talk, and inquisitiveness in children should also be associated with increased parental support and scaffolding, similar to results by Nelson et al. (2012). We also suspect that highly supportive parents will engage in more cognitive-emotional stimulation.

Work by Akhtar and Tomasello (1998), shows a relationship between child empathy development and parent-child emotional synchrony, which is why we expect parent-child pairs high in dyadic unity to exhibit higher concern scores. Additionally, Laible, Panfile-Murphy, and Augustine (2013), found effortful control to be related to dyadic collaboration and intersubjectivity, so we also expect children from dyads high in unity to be more attentive and involved throughout the task.

Lastly, we consider ways in which parental support, scaffolding, and the pair's dyadic unity may change based on narrative valence and parent gender. Children have a more difficult time processing negative emotions, and studies have shown that when discussing negative events, parents tend to use more emotion words and provide more elaborate explanations (Bariola, Hughes & Gullone, 2011). Research also shows that mothers and fathers take different approaches to discussing emotions with their children, with mothers providing more elaborate explanations and introducing more emotion words to the conversation (Manczak et al., 2016). We believe that during negative or more

emotionally complex discussions, both parents will engage in increased supportive and scaffolding behaviors. On average, however, mothers will provide more support and cognitive emotional stimulation.

The Role of Emotional Expressiveness on Development

Hypothesis 3: Studies point to parental emotional expressiveness patterns as a critical component to children's emotional socialization (Halberstadt, 1986; Nelson et al., 2012; Are & Shaffer, 2016), and according to Morris et al. (2007) positive and emotionally expressive parenting practices are critical to children's ability to self regulate because children model observed emotion-related behaviors within the family. Hypothesis three concerns the emotional expressiveness of both parent and child. Child expressiveness focuses on positive, negative, and overall facial/verbal affect throughout the parent-child interaction, while parental expressiveness includes day-to-day emotional tendencies within the home in addition to the task-specific affectations unique to the parent-child interaction.

Because young children are extremely cognizant of caretakers, they tend to mirror their parents' emotional patterns; likewise, parents who express a lot of positive emotions tend to raise positively expressive children (Isley et al., 1999). As a result, we hypothesize that parents who are high in expressiveness, both at home and during the task, will have highly expressive children. Additionally, parental positive affect has consistently been linked to emotional understanding and regulation capacities, as well as children's empathetic responses and their understanding of others' emotions (Eisenberg et al., 1998; Liable & Song, 2006, Spinrad & Gal, 2018). Given this research, we expect that parents who are more expressive during the parent-child interaction, and who are

more positively expressive at home, will have children who show more concern, more relevant and appropriate facial/verbal affect, and higher emotional understanding. Extrapolating from this research further, we also expect parents who are high in positive expressiveness to provide more support and more cognitive-emotional stimulation. In line with previously described work by Halberstadt (1995), Roberts and Strayer (1996), and Bariola, Gullone and Hughes (2011), we assume that parents who are both highly positive and highly supportive will have children who are more engaged, who ask more questions, and who use more emotion words. Conversely, parents who are highly negatively expressive, and who score low on support, should have children who are less engaged and score lower on emotional comprehension, appropriateness, and information seeking, as suggested by studies in which overly negative or harsh parental expressiveness may result in lower levels of expression, emotion comprehension, and regulatory competence (Eisenberg et al., 1998). Ultimately, the processes through which regulatory, emotional, and moral capacities develop are numerous and complex. This is why we assume that the most significant contributions to children's task performance (their levels of concern, engagement, and emotional competency, for example), will result from interactions between caretaker socialization strategies and expressive tendencies.

Briefly, we address the possibility of expressive differences between narrative valence and parent gender. First, both parents are expected to exhibit higher expressiveness, especially positive expressiveness, during the more emotionally complex narratives. This result would support findings by Fabes et al. (1994), where parents were found to express more positive emotions during negative situations. Furthermore,

Bariola, Hughes and Gullone (2011) note that when discussing negative emotions with children, fathers tended to focus on minimizing and inhibiting unpleasant emotions, while mothers encouraged negative expression and problem-solving. Similarly, we anticipate children to be more expressive around mothers, especially when discussing emotions like loss and sadness. Because of mothers' tendencies to encourage expression and offer problem-solving strategies, we also expect mothers to show more positive expressiveness on average, than fathers.

Age and Gender Differences

*Hypothesis 4***:** Lastly, past studies looking at the development of emotion regulation and socialization have found differences in age and gender, for both children and parents; accordingly, we will explore if any such differences exist in our data.

Regarding age, Laible and Thompson (1998) note that young children are more likely to have difficulties understanding and distinguishing between different negative emotions. Therefore, it is expected that older children will reflect better emotion regulation- for instance, they should be more attentive and involved in the task, and demonstrate more inquisitiveness, emotional comprehension, and emotion talk. However, younger children may be more emotionally expressive, especially for negative emotions, due to less developed inhibition and regulation (Zhou et al., 2002).

Regarding gender differences, research demonstrates that preschool-aged girls tend to show more positive feelings and expressions (Zhou et al., 2002) and more facial concern in regard to negative emotions than boys do (Zahn-Waxler, 2000). Fivush and Wang (2005) and Padilla-Walker et al. (2020) found that parents tend to be more

elaborative when discussing emotions with girls, especially mothers, who engage in more frequent and reciprocal emotional discussions with their daughters. Zhou et al. (2002) also discovered that parents of girls tended to display more supportiveness toward their children than parents of boys; additionally, parents tend to be more supportive in verbal interactions with their daughters than with their sons. Manczak's (2016) study found that fathers referenced or explained emotions less often with daughters than with sons, and overall, less often than mothers did, showing differences based on both parent gender and child gender. While mothers have been observed being more emotionally elaborate with sons than with daughters during negative emotion discourse (Laible & Song, 2006), in regard to positive media engagement, mothers tended to have more frequent and reciprocal emotional discourse with daughters (Padilla-Walker et al., 2020).

While somewhat stereotypical, given previous research, we expect greater overall emotional comprehension and expressed concern from girls, especially during mother-led discussions. Additionally, during story-reading and discussion, mothers should yield more concern, engagement, emotion-word use and questions from children. Mothers are also expected to engage in more cognitive-emotional stimulation, especially for more negative emotions, and specifically with sons; however, discussions centered around more positive emotions could result in higher supportiveness and scaffolding for daughters.

METHOD

Participants

Participants were 56 three-to-six-year-old preschool children (*M*=4.13, *SD*= .65) and their parents (N=102, Mean age=36.87), recruited from preschools in local communities. Families were recruited with flyers left with teachers at participating preschools, with an initial sample of 119, collected in 2008 as part of a larger longitudinal study on familial influences on empathy and regulation in preschoolers. The current sample includes 24 boys and 32 girls, and 56 mothers and 46 fathers of predominantly middle-class homes. Mothers ranged in age from 23 to 54, (*M*=35.00, *SD*= 6.54), and fathers ranged from 29 to 63, (*M*=38.74, *SD*= 7.40). The sample of children was predominantly Caucasian (47, 83.93%) with 7.14% (4) of children from a Hispanic background, 3.57% (2) of children from African background, 3.57% (2) of children from an undisclosed background, and 1.79% (1) of children from an Asian background.

Procedure

Families were visited by research assistants at their homes, and recording equipment was set up to monitor parent-child interaction. Parents were asked to choose a place in the home that felt comfortable and natural for both parent and preschooler, where they would read one 'happy' and one 'sad' story to their child and follow each reading with a minute-long discussion. Materials included excerpts from four stories: *Goodbye Mousy* by Robie H. Haris and *The Tenth Good Thing about Barney* by Judith Viorst were

about the death of a pet and meant to elicit negative emotions whereas *I Know a Rhino* by Charles Fuge and *The Crunching, Munching, Caterpillar* by Sheridan Cain were meant to elicit positive emotions. The excerpts from these stories were chosen to be of similar length, and parents were asked to read to the children as they normally would. Most sessions began with the mother reading one happy and one sad story chosen at random; if the fathers chose to participate, they read the remaining two stories with the happy and sad conditions counterbalanced. Upon completion of each story, parents were asked to discuss with their child any thoughts and feelings they had about the characters or events from the reading. Each session lasted 1-2 hours, with play breaks offered in between readings. An age-appropriate story book and certificate of participation were given to each child at the end of a visit. The original study also collected temperament assessments through the Colorado Childhood Temperament Inventory, as well as electrocardiography (ECG) data for the preschoolers, but this information is not included in the current analysis.

Written Measures

Basic demographic information was collected from parents upon completion of the recording session. Demographic forms included details on ethnicity, parental relationship status, and socioeconomic status of the family.

To assess day-to-day caretaker expressiveness, mothers and fathers were asked to fill out the Self-Expressiveness in the Family Questionnaire (Halberstadt, 1995). The SEFQ, for short, provides measurements on emotional expressiveness within the family. The questionnaire is shown to be reliable over time (mean r= .72), internally consistent (Cronbach's α= .90, and .88 for the positive and negative scales, respectively), and

designed to evaluate a family member's perceived frequency of emotional expression within the family as a whole (Halberstadt, 1995; Halberstadt et al., 2014). The inventory consists of 40 items depicting hypothetical, family-centered affective scenarios. The questionnaire consists of 40 questions, with each scenario rated on a 9-point scale, with higher scores reflecting more frequent or intense emotionality. In this study, the questionnaire was divided into three subscales: positive affect (indicative of praise, affection, accountability, and empathy), negative affect (indicative of contempt, criticism, aggressiveness, and frustration), and total affect (a combination of the positive and negative scales).

Behavioral Coding

Video clips were taken of the parent-child interaction, and behavioral responses for both parents and children were coded from these videos, from the start of reading to the end of discussion. Coding was completed by graduate and undergraduate students, with Cohen's Kappa ranging from .78 to .98. Interrater reliability is included in the variable description tables below.

For preschoolers, coded variables included facial/verbal affect, engagement in task, and emotional competency. Coding for children's facial and verbal affect involved coders blind to the type of story being read. During this section, coders attended to four specific timepoints within the storytelling and discussion interactions. Within these timeframes (each about 30-40 sec. long) coders marked down the amount of times a child exhibited a positive, negative, or concerned facial or verbal expression related to the task, then rated the strength of that expression on a scale of 1(very slight expression) to 4(strong expression). Finally, coders were asked to write down comments relevant to

their decision, in the case of coder disagreement. The absence of expression was not coded, and the strength ratings were added up into a total positive, negative, or concerned score. We added the results into a total child expressiveness score, as well as expressiveness count during the sad and happy stories, and during mother- and father-led tasks.

Table 1. Child Facial and Verbal Affect

Positive Expressiveness- (Kappa=.95)	Emotions such as joy, happiness, positive surprise; can include laughter, giggling, smiling, smiling accompanied by gasping, higher voice pitch, open and present expression and uplifted eyebrows. Exclamations like "I'm happy", "I like this"; affirmative positive response to parents asking about child disposition: "Did the story make you happy?" -"Yes, I'm happy now."
Negative Expressiveness- (Kappa=.87)	Emotions such as disappointment, anger, sadness, or frustration- tend to be self-oriented and can include frowning, crying, tearing up, quivering lip, pouting, staring at the floor or covering up face, or a frown accompanied by eyebrows upturned in sadness or downturned in anger or frustration. Children verbalizing negative emotions such as "I'm sad", "I don't like this"; affirmative negative response to parents asking about child disposition: "Do you feel sad about what happened to the kitty?" -"Yes, I don't like what happened to it."
Concerned Expressiveness- (Kappa=.80)	Concern tends to be other-oriented and can include pity, sympathy, worry, apprehension, or other exclamations of relatedness to the character. Facial and verbal depictions can include furrowed or upturned eyebrows accompanied by a slightly or fully open mouth, a hand covering the mouth in apprehension, looking at the parent in uncertainty/for clarity in story moments of high emotion. Verbally expressing concern or worry, such as "Uh-oh!", "Oh no! What will happen to the little boy now?", "I'm worried about the mouse", "Is the kitty okay?", "Do you think doing this will make the little boy feel better?"; affirmative concerned response when parent asks about child disposition: "What did you think about the story?" -"I was sad, because the little boy felt sad, because his pet died."

Intensity Rating	
1.	Slight facial or verbal expression (reaction is minimal or low in intensity; fleeting; child is mostly silent or very quiet).
2.	Moderate facial or verbal expression (reaction is of moderate or average intensity; significant but not too strong; may include some body language and gesturing).
3.	Strong facial or verbal expression (reaction is clear and strong; child may laugh or make an exclamation; can include wide but brief smiles, or deep but brief frowns; brief gestures, gasps, or exclamations; furrowed brows).
4.	Very strong facial or verbal expression (reaction is strong in intensity; can include loud laughs, very wide smiles or very deep frowns accompanied by animated body language and gestures, rise in volume or pitch, deeply furrowed brows, loud or dramatic gasps of surprise, delight, concern, or shock).

Coding for engagement and emotional competency was done separately; these scales were more globally oriented, with coders watching the full parent-child interaction and giving their behaviors ratings during the story and discussion. This was done by dividing the storytelling and discussion into sections based on their length and giving a 1(low) to 4(high) strength score to the variables of interest for each section. The decision to divide the video interactions was made in case behaviors varied greatly throughout the video and a single score would not translate the full strength of the target behavior; additionally, more ratings would provide a better idea of where issues may lie, in the case of strong coder disagreements. Stories were divided into four sections, and discussions (which tended to be significantly shorter in length) were divided into two sections,

resulting in six scores total. At the end the scores were added into a score for each condition (mother/father leading; happy/sad story), and into a total variable score.

Tallied variables consisted of child attention, questions, and emotion talk. Attention was characterized by the child's sustained focus on the story, discussion, and parental prompting. For ease of coding, raters were asked to tally instances of *inattention* based on the amount of times a child's attention strayed from the task; this included but was not limited to the child's gaze being directed to or following an object off-screen, or their attention being focused on the ECG equipment. The instances of inattention were tallied, added, and then inverted into a total attention score, with higher scores indicating higher attention. Children's questions were also tallied; questions represent children's efforts to further understand the theme or meaning of the narrative by seeking new information about events or relationships relevant to the story and discussion. Coders were asked to pay attention to the subject of children's inquiries and add a tally upon confirming that the question was relevant to the task. Preschoolers' emotion word frequency was the last to be tallied; emotion words were counted when the child referenced an emotion or mentioned a specific emotion; this included words like 'happy', 'sad', 'laughing', 'crying', 'scared', or 'surprised'.

Table 2. Attention, Hypothesis Testing, and Emotion Talk Frequency (Tallied)

Attention (Kappa=.78)	Amount of times child's attention or focus veers off the task; can include the child's eyes focused on a stimulus off-screen, the child's gaze being far away followed by an inability to answer the parent's verbal prompting, or the child's continued inattention despite parental efforts to focus on the task. Does not include instances where the child's lack of attention is due to external stimuli, like a research assistant, caregiver, or sibling entering or exiting the room, moving in front of or by the parent-child pair, or being disruptive (ex: a sibling calling the child to play).
Questions (Kappa=.84)	Amount of times the child asks questions about the narrative, or topics relevant to the narrative; child using questions to make connections amongst the story plot, characters, or past experiences, or making inquiries about emotions and emotional topics; child asking for clarifications of the parent, or asking the parent to confirm an assumption or connection the child has made (ex: "The little boy's mommy made him some toast because he was feeling sad, right? She wanted to make him feel better?"). Does not include questions that do not pertain to the task/narrative (ex: "I'm hungry, when are we going to eat?").
Emotion Talk (Kappa=.84)	Amount of times the child talks about or references emotions and emotional states related to the task. The child mentions words like happy, sad, scared, lonely, sorry, worried, hurt, laughing, crying, excited, surprised; child saying they feel good, feel bad, etc. Does not include emotion exclamations unrelated to the task or referring to physiological needs (ex: "I'm hungry, I'm sleepy, etc.").

The other scales were rated similarly to facial/verbal expression, and included child involvement, emotional relevance and emotional comprehension. Child involvement was rated based on children's verbal or physical engagement and looked at the degree to which children asked questions, made comments, or, for example, nodded or read along with the parent. Emotional relevance looked at how appropriate or

congruent children's facial/verbal expressions were to the situation. Relevant emotions were given a strong rating when the child laughed when a humorous event occurred in the story and expressed sadness when talking about the death of a pet; conversely, irrelevant or incongruent expressions included laughing in response to a somber event or crying during a happy event and were given a lower rating. Finally, emotional comprehension consisted of the degree to which children demonstrated understanding of the feelings or experiences of the story's characters. Statements like, "he lost his pet, so he must be really sad; he is crying because he misses his cat," or "the butterfly is feeling great right now, because his dream came true," were counted as children showing emotional comprehension. These behaviors were evaluated individually and were given a strength rating of 1(low) to 4(high) for each storytelling or discussion section; the strength ratings were then added into a total score, with higher scores denoting higher involvement, emotional understanding, or emotional congruence.

Table 3. Child Involvement, Emotional Relevance, and Emotional Comprehension

Intensity Rating	Behavior Description
	Involvement (Kappa=.90)
1.	Very little to no involvement; focus is not on the task, no comments or gestures in response to the task; child ignores or barely answers to parent's prompting.
2.	Some involvement: slight focus on the task, child sometimes comments or gestures regarding the task; they are somewhat responsive to parent's prompting.
3.	Moderate involvement: the child is mostly focused on the task, make a fair amount of comments and gestures; they are mostly receptive and responsive to parental prompting.
4.	High involvement: the child's attention is fully on the task; they frequently make comments and gestures appropriate to the task; they are highly responsive to parental prompting.
	Emotional Relevance (Kappa=.94)
1.	Very little to no emotional relevance; child's expressions or comments not appropriate to the narrative or discussion (ex: smiling, laughing, or expressing strong positive emotions when sad events or emotions are referenced; frowning, crying, or otherwise expressing strong negative emotions when happy events or emotions are referenced).
2.	Some emotional relevance: child's expressions or comments are somewhat appropriate to the narrative or discussion; they may smile at a sad event or frown at a happy event , but also show what would be considered appropriate expressions for other emotions referenced.
3.	Moderate emotional relevance: child's expressions or comments are fairly appropriate for the narrative or discussion; they mostly express sadness in reference to sad emotions and happiness in reference to happy emotions.
4.	Strong emotional relevance: child's expressions or comments are almost always appropriate for the narrative or discussion; they express strong negative emotions during negative events and strong positive emotions during positive events.
	Emotional Comprehension (Kappa=.89)

1.	Very little to no emotional comprehension; no verbal, facial, or gestural indication of understanding (ex: child has trouble understanding the narrative, or parents' explanations; does not demonstrate understanding of character feelings or actions; cannot relate emotional events to their own experiences).
2.	Some emotional comprehension; slight verbal, facial, or gestural indication of understanding (ex: child shows some understanding of parental explanations or character emotions and actions; rarely relates events to personal experiences.
3.	Moderate emotional comprehension; fair amount of verbal, facial, or gestural indication of understanding (ex: can somewhat relate emotions or events to their personal life; can mostly understand parents' explanations and character motivations and actions; nods or shakes head during appropriate times; uses emotion words or exclamations such as "Ohh!", or "I see now!").
4.	High emotional comprehension; high amounts of facial, verbal, or gestural indications of understanding (ex: relates emotions or events to personal experiences often, demonstrated understanding of parental explanations and character emotions and actions- can include explaining or rephrasing character emotions and actions to parent; can include various and frequent use of emotion words, nodding and shaking head at appropriate times, and using exclamations such as "Ohh, I understand this now", "Mommy, let me tell you what is happening in the story", or "I know why the little girl was doing this!" followed by an explanation).

Using a similar method of averaging section scores, caregivers were coded for their attentiveness and responsiveness to children's behaviors during the task. Parent behavior was coded for supportiveness, cognitive-emotional stimulation, and parental expressiveness. The supportiveness scale looked at factors like praise, affection, empathy for the child's distress, and parent's sensitivity to their child's moods, interests, and abilities (Ispa et al., 2004). Strength of supportiveness was ranked on a -3 (strong hostility/rejection) to +3 (strong sensitivity/affection) scale, with 0 denoting no expression towards the child. Scores were added into a total supportiveness score, with higher scores representing more supportive parent behaviors.

Cognitive-emotional stimulation (also referred to as scaffolding), consisted of caretakers' efforts to enhance their children's cognitive and emotional skills by encouraging children to engage in play, answering their questions about the story thoughtfully, and providing them with opportunities to expand their knowledge through verbal prompting and guidance. This included behaviors like parents asking the child how they would feel in the main character's situation, or parents reminding the child of a similar real-life event, like the death of a family pet, and prompting self reflection or feelings of relatedness to the story's characters. Cognitive-emotional stimulation for each section of the video was rated from 1 (very little to no opportunities taken to expand the child's cognitive-emotional understanding) to 4 (provides many opportunities for learning experiences/answers questions thoughtfully and encourages child to form their own conclusions) with the strength scores added into a total cognitive-emotional score.

Parental expressiveness was coded in the same manner and looked at the parents' facial verbal and gestural translation of the narrative. High parental expressiveness was considered to include the parent adopting different voices for different characters, as well as the parent's tone variations in conjunction with different emotional beats in the story as a tool to help the child narrative events better. Parental expressiveness was rated from 1(monotone/no expression of emotions by parent while reading) to 4 (extremely enthusiastic/engaged/putting effort into improving child's understanding through tone of voice and expression). Finally, borrowing from intersubjectivity measures used by Laible & Song (2006), and Gigi, Oppenheim and Sagi (2007), the parent-child interactions were coded for dyadic unity, which refers to togetherness, shared meaning, unity, and emotional openness between parents and children throughout the task. Dyadic unity was

rated on a scale of 1(no dyadic unity/interactions seem stilted or unnatural/parent and child do not appear as if they are part of a team, or do not appear 'on the same wavelength') to 4 (high dyadic unity/openness, affection and trust between parent and child/parent and child understand one another and show synergy) for each section and scores were added into a total.

Table 4. Parental Support, Cognitive-Emotional Stimulation, Expressiveness, and Dyadic Unity

Intensity Rating	Behavior Description
	Parental Support (Kappa=.97)
-3.	Strong negative regard (disapproval, rejection, criticism, or intrusiveness); ex: parent raises voice at child, criticizes them, ignores their questions, or needs, uses negative emotion language meant to pressure, belittle, or accuse the child; generally, regards their child in a negative light during the task; is not engaged in the task and indicates that they want to finish it quickly.
-2.	Moderate negative regard (disapproval, rejection, criticism, or intrusiveness).
-1.	Slight negative regard (disapproval, rejection, criticism, or intrusiveness).
0.	No expression of positive or negative regard towards child.
1.	Slight positive regard (warmth, responsiveness, and sensitivity).
2.	Moderate positive regard (warmth, responsiveness, and sensitivity).
3.	Strong positive regard (warmth, responsiveness, and sensitivity); ex: parent is affectionate towards the child, uses a soft and warm voice when addressing them, and is sensitive and attentive to the child's needs; parent uses positive or encouraging language and generally regards their child in a positive light during the task; parent appears highly enthusiastic and engaged.
	Parent Cognitive-Emotional Stimulation (Kappa=.87)

1. Very little to no cognitive-emotional stimulation; parent does not prompt child to engage in task and does not engage with child's questions or comments; parent does not attempt to explain story events or character emotions or motivations and does not relate them to past experiences; parent rarely uses emotion language outside of the story text.
2. Some cognitive emotional stimulation: some effort to engage child in task, and some use of emotion words outside of text; only sometimes engages with child's questions or comments, makes brief effort to relate narrative to past experiences or to encourage child to come reach their own conclusions.
3. Moderate cognitive emotional stimulation: moderate effort to engage child in task, and moderate use of emotion words outside of text; mostly engages with child's questions and comments; some efforts to relate narrative to past experiences or to encourage child to reach their own conclusions.
4. High cognitive emotional stimulation: parent always engages with child's questions or comments; parent inquires after child's opinion and encourages them to come to their own conclusion; often attempts to explain story events and character motivations, relating them to relevant experiences in the child's life; often uses emotion language outside of story text.

Parental Expressiveness (Kappa=.93)

1. Very little to no parental expressiveness; parent makes no vocal or gestural effort to engage child in the narrative or task; parent speaks in monotone and shows no facial or verbal affect throughout task.
2. Some parental expressiveness; parent rarely uses vocal or gestural cues to engage child in the narrative or task; parent sometimes, but rarely, exhibits change in tone or expression in relation to events of the story.
3. Moderate parental expressiveness; parent uses gestural and verbal expressions regarding narrative a fair amount; tone is more varied and facial affect is used to indicate appropriate emotional responses to story events.
4. High parental expressiveness; parent displays different voices for characters and consistently changes tone of voice in relation to the events occurring in the story (ex: parent using enthusiastic voice for positive events and a somber voice for negative events); parent often uses vocal or gestural cues to engage child in task (ex: makes gestures with hands head or body to emphasize a story beat;

parent uses exaggerated facial and verbal expressions in reference to events occurring in the story).

Parent-Child Dyadic Unity (Kappa=.98)

1. Very little to no dyadic unity; parent-child pair no not appear comfortable or confident in each others' presence; child does not appear comfortable asking questions or making comments and parent does not appear comfortable or confident in leading the task and prompting the child; parent-child pair not attentive of each other's needs or moods; pair do not seem to have a sense of togetherness and make no effort to collaborate.
2. Slight dyadic unity: parent and child only sometimes appear comfortable or confident around each other; child does not seem confident in asking questions or making comments, and parent engages in little verbal prompting or question answering, pair does not have a very strong sense of togetherness or unity, conversation rarely flows smoothly or naturally.
3. Moderate dyadic unity: parent-child pair appear mostly comfortable around one another; more often than not, child seems comfortable to make comments and ask questions and parent seems comfortable prompting and answering questions; pair have a moderate sense of togetherness and sensitivity towards one another; fair sense of togetherness and collaboration.
4. Strong dyadic unity: parent-child pair seem to work collaboratively and as a team, they are confident and comfortable in each others' presence; child is very comfortable asking questions and making comments, and parent is quick to answer child and prompt child when needed- discussion flows smoothly and naturally; parent-child pair seem sensitive and attentive to each other's needs and moods; pair seems to have strong sense of togetherness.

All behavioral observation variables were counted separately for each condition, so in addition to added total scores, each variable had individual scores for the mother- and father-led sessions, and for the happy and sad stories.

DATA ANALYSIS

Data analysis began with running descriptive statistics and exploring the relationships between variables through correlations. Factor analyses and strong correlations suggested the consolidation of several variables. The merged variables from which results were yielded are as follows:

- Attention and involvement were averaged to create an overall child Involvement variable.
- Emotional comprehension and emotional relevance were averaged to create an overall child emotional comprehension variable.
- Parent support and dyadic unity were averaged to create an overall parent support variable.

In addition, the totals of children's emotion words, questions asked, involvement, emotional comprehension, and expression scores and parents' support, expressiveness, and cognitive emotional stimulation scores were averaged by number of sessions, so comparisons could be made between parents who participated alone (reading two stories) and parents who participated with their partner (reading four stories). An analysis of variance was run to see if there were significant differences between parents who were in a relationship with each other during the time of testing and those who were not; no significant differences were found. In most cases, parents who participated individually and only read one happy and one sad story, were otherwise part of traditional nuclear

units with a partner who was involved in child rearing but was unable to participate. Therefore, we felt comfortable in comparing one and two parent cases.

All data- save for gender- is continuous, consisting of event-based tally marks or low-to-high (1-4) strength scores. Analyses exploring the relationships between children and parent variables include Pearson and Spearman correlations, as well as simple linear regression analyses. Independent sample t-tests and Wilcoxon Rank-Sum tests were run to analyze differences in variables between boys and girls; paired sample t-tests and Wilcoxon Signed-rank tests were run to analyze differences in variables between the happy and sad story conditions and between mother and father sessions. We also ran multiple regression analyses to ascertain the effects of multiple variables on one outcome- for example, the effects of parent supportiveness, cognitive emotional stimulation, and expressiveness on children's emotional comprehension. Finally, multiple analyses of variance were run to ascertain the differences between parent gender and story condition regarding parental expressiveness and cognitive emotional stimulation, and the differences between parental gender and story condition regarding children's emotional expression, regulation, comprehension, and engagement.

Since the data for emotion words and child age did not fulfill normality assumptions, non-parametric tests were used when analyzing these variables. We used IBM SPSS Statistics 26 to analyze data and chose an alpha level of .05 for all statistical tests; all correlations are significant at the two-tailed level, unless otherwise specified.

Table 5. Descriptive statistics for parent and child behaviors coded during the interaction.

Variable	N	Mean	Std. Deviation	Range
Concerned Affect	56	3.34	3.10	10.75
Positive Affect	56	12.36	7.48	28.50
Negative Affect	56	13.80	6.75	28.50
Total Affect	56	44.25	11.76	28.77
Emotion Word Use	56	3.34	3.63	16.00
Question Amount	56	4.70	6.52	8.50
Involvement	56	12.68	2.58	13.63
Attention	56	6.82	2.64	15.50
Involvement	56	18.54	3.72	16.00
Emotional Comprehension	56	13.47	4.02	15.63
Emotional Comprehension	56	11.90	4.25	16.75
Emotional Relevance	56	15.04	4.54	17.50
Parent Support	56	17.02	3.15	12.00
Support	56	15.33	3.37	16.00
Dyadic Unity	56	18.70	3.63	14.00
Cognitive-Emotional Stimulation	56	13.46	3.36	12.75
Task Expressiveness	56	18.12	2.91	12.00

Table 6. Descriptive statistics for Self-Expressiveness in the Family Questionnaire scores

Variables	N	Mean	Std. Deviation	Range
Mother Positive SEFQ	56	6.86	1.16	4.96
Mother Negative SEFQ	56	3.68	1.35	5.69
Mother Total SEFQ	56	5.68	0.97	4.09
Father Positive SEFQ	46	6.30	1.20	5.73
Father Negative SEFQ	46	3.71	1.23	5.08
Father Total SEFQ	46	5.37	0.87	4.40

RESULTS

Hypothesis 1

Pearson correlations were run to determine relationships between preschoolers' involvement, emotional comprehension, and concern scores. Because the variables for question amount and emotion word frequency failed normality tests, we used Spearman's rank correlations to assess any relationships involving them.

As predicted, we found a significant positive correlation between children's question amount and facial/verbal displays of concern, $r(54) = .42$, $p < .01$, with concern predicting questions asked, $R^2 = .13$, $F(1, 54) =$, $p < .05$. Additionally, there was a positive correlation between question amount and emotional comprehension, $r(54) = .35$, $p < .05$, with subsequent regression analysis showing that questions could in-part predict emotional comprehension, $R^2 = .13$, $F(1, 54) =$, $p < .01$. Children's use of emotion words was also positively correlated with their emotional comprehension, $r(54) = .31$, $p < .05$, but regression analyses were not significant. No significant relationships were found between concern and emotional comprehension, or between involvement and emotion-talk, emotional comprehension, and question amount; no relationships were found between involvement and any of the child-specific variables either.

Table 7. Correlations for children's concern, question amount, emotion word use, and emotional comprehension throughout all sessions.

Variables	Overall Concern	Total Question Amount	Total Emotion Word Use	Total Emotional Comprehension
Overall Concern	--	.416**	.024	.221
Total Question Amount		--	.116	.348**
Total Emotion Word Use			--	.312*
Total Emotional Comprehension				--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01.

Comparison of means tests were run to explore variable differences between the happy/sad story conditions, and between mother/father led sessions. Paired sample t-tests showed a significant difference in preschoolers' emotional comprehension between the happy and sad story conditions, with children exhibiting more understanding during the happy story (M= 25.28 , SD= 10.43) than the sad story (M= 22.82, SD= 8.46); $t(55) = 2.25$, $p < .05$. We also saw a difference in question frequency and emotion word amount between the happy and sad stories; children asked significantly more questions during the sad story (M= 2.96, SD= 4.92) than the happy one (M=1.73, SD= 2.31); $t(55) = 2.27$, $p < .05$, and used significantly more emotion words during the sad story (M= 2.00, SD= 2.10) than the happy one (M= 1.34, SD= 1.98); $t(55) = 2.73$, $p < .01$. Children showed significantly more facial/verbal expression during the sad story (M= 59.29, SD= 28.60) than the happy one (M= 44.95, SD= 24.23); $t(55)=5.22$, $p <.001$. Predictably, children also showed more concern during the sad story (M=9.84, SD=10.18), $t(55)= 4.92$, $p < .001$. However, children were not found to exhibit higher involvement during the sad

story; instead, they were significantly more involved during the happy story; (M= 24.78, SD= 6.48) vs. (M= 20.83, SD= 7.45), $t(55)$= 6.97, $p < .001$.

Figure 1. Children's Emotional Comprehension Scores during Happy and Sad Story Conditions

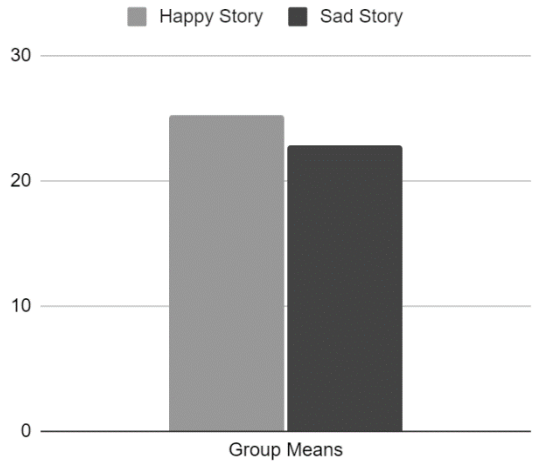


Figure 2. Children's Question Amount during Happy and Sad Story Conditions

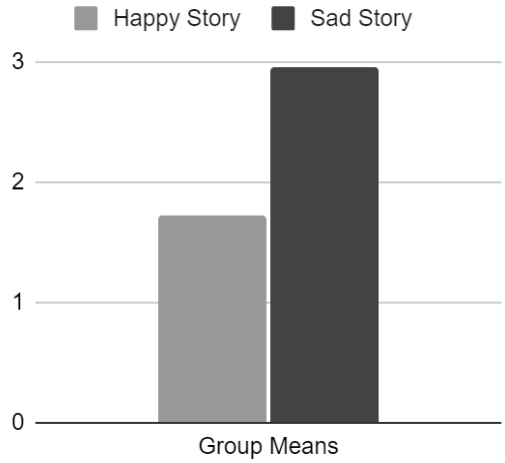


Figure 3.Children's Emotion Word Use during Happy and Sad Story Conditions

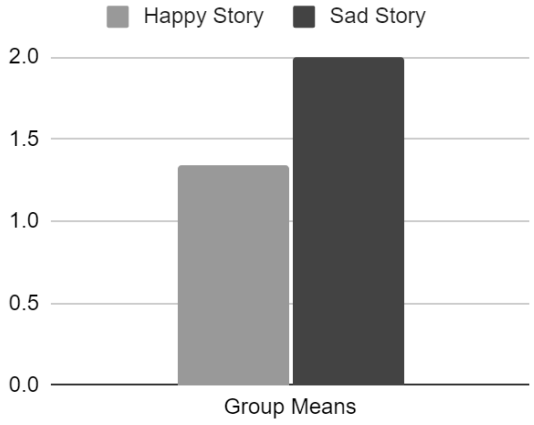


Figure 4. Children's Total Expressiveness during Happy and Sad Story Conditions

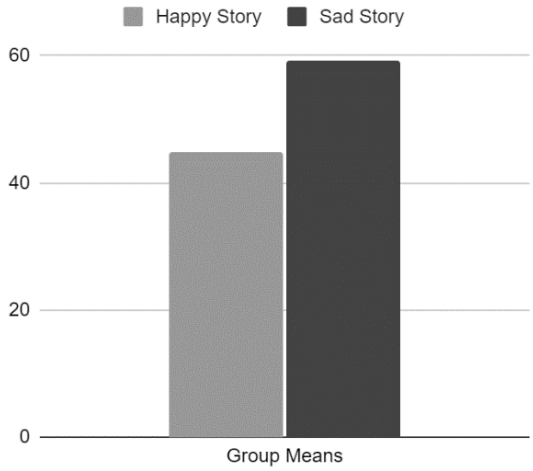


Figure 5. Children's Concerned Expression during Happy and Sad Story Conditions

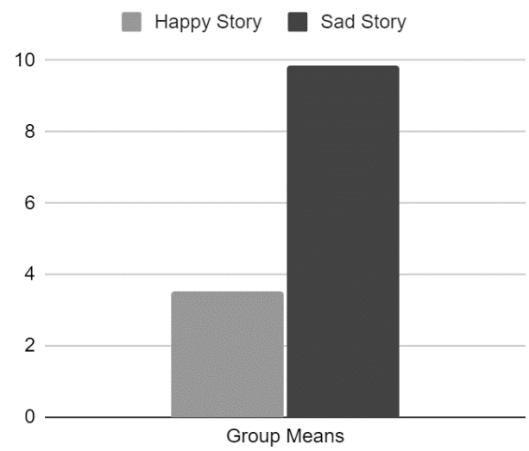
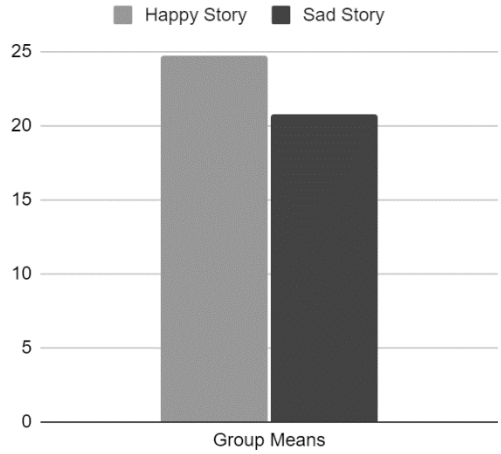


Figure 6. Children's Involvement during Happy and Sad Story Conditions



No significant differences were found between mother- and father-led tasks on any of the child-specific variables, and children did not exhibit higher levels of concern, hypothesis testing, or involvement with their mothers.

Hypothesis 2:

This hypothesis looked at the effects of parental support and cognitive-emotional stimulation on preschoolers' performance during the task, as well as differences in support and cognitive-emotional stimulation that may exist between parent gender and story condition. Because dyadic unity was merged into parental support, hypotheses regarding dyadic unity were tested with the support variable.

Pearson correlations revealed a significant positive relationship between caregiver supportiveness and their cognitive emotional stimulation efforts, $r(54)= .39$, $p < .01$, with parental supportiveness predicting scaffolding behaviors, $R^2= .15$, $F(1,54)= 9.64$, $p < .01$. As hypothesized, there was also a significant positive correlation between parents'

cognitive emotional stimulation and children's emotional comprehension $r(54) = .43$, $p = .001$. Linear regression analyses were significant, with cognitive emotional stimulation being predictive of children's emotional understanding, $R^2 = .18$, $F(1,54) = 11.97$, $p = .001$. Parental support and child involvement in the task were also positively correlated, $r(54) = .53$, $p < .001$, with parental support predicting involvement, $R^2 = .28$, $F(1,54) = 20.85$, $p < .001$.

Table 8. Correlations for parent support and cognitive emotional stimulation and child emotional comprehension and involvement across all sessions.

Variables	Parent Support	Cognitive-Emotional Stimulation	Child Emotional Comprehension	Child Involvement
Parent Support	--	.389**	-.030	.528**
Cognitive-Emotional Stimulation		--	.426**	.059
Child Emotional Comprehension			--	.049
Child Involvement				--

Note: ** Correlation is significant, p<.01.

The number of questions children asked was only significantly correlated with parental scaffolding on the one-tailed level. Children's questions were positively correlated with both total cognitive emotional stimulation, $r(54) = .25$, $p < .05$, and cognitive emotional stimulation parents provided specifically during the sad story, $r(54) = .24$, $p < .05$. Aside from this, parents' cognitive emotional stimulation was not significantly related to child involvement, and parents' support was not significantly

related to emotional comprehension. Neither parental support nor cognitive emotional stimulation were significantly correlated with children's emotion words or concern.

Table 9. Correlations for parent support and cognitive emotional stimulation and child question amount (1-tailed)

Variables	Child Question Amount	Cognitive-Emotional Stimulation	Cognitive-Emotional Stimulation (Sad Story)
Child Question Amount	--	.247*	.235*
Cognitive-Emotional Stimulation		--	.660**
Cognitive-Emotional Stimulation (Sad Story)			--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01

Caregiver scaffolding was not higher during the sad story, as was expected; parents actually engaged in significantly more cognitive emotional stimulation during the happy story (*M*= 25.91, *SD*= 10.32), rather than the sad one (*M*= 22.70, *SD*= 7.80); *t*(55)= 3.31, *p* < .01. Similarly, parents were significantly more supportive during the happy story (*M*=31.77, *SD*=9.94), instead of the sad one (*M*=30.29, *SD*=9.54); *t*(55)= 3.21, *p* <.05. Further paired sample t-tests showed that fathers engaged in significantly more cognitive emotional stimulation during the happy story (*M*=15.24, *SD*=5.11) than mothers did (*M*= 13.78, *SD*=4.65); *t*(44)=2.40, *p* <.05.

Figure 8. Cognitive-Emotional Stimulation during Happy and Sad Story Conditions

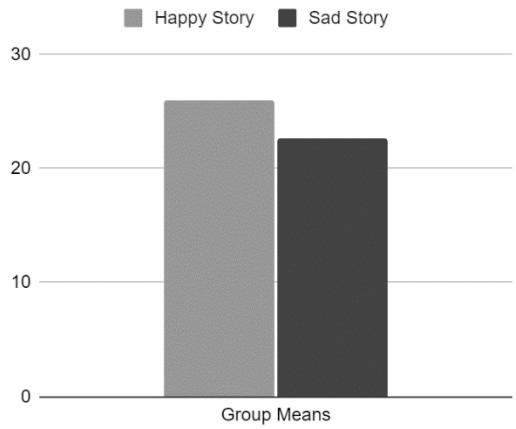


Figure 7. Parent Support during Happy and Sad Story Conditions

Figure 9. Parent Cognitive-Emotional Stimulation during Happy Story Conditions

When looking closer at differences between parents, results indicated that, overall, mothers did not provide significantly different support or cognitive emotional stimulation than fathers. We did, however, find a positive correlation between mothers' cognitive emotional stimulation and number of questions children asked during the sad story, $r(54)= .27$, $p < .05$, though mothers' scaffolding was not significantly predictive of questions. There was also a significant positive correlation between parents' joint

cognitive emotional stimulation and the number of questions children asked their father, $r(45)=.33$, $p < .05$, though this relationship was also not predictive.

Hypothesis 3:

Hypothesis three looked at parent and child expressiveness tendencies, specifically how parents' expressiveness during the task, and their reported self-expressiveness in the home, interacted with children's facial/verbal affect and task performance.

Parental Expressiveness during Storytelling and Discussion

Pearson correlations showed a significant positive relationship between caretaker expressiveness during the task, and children's overall facial/verbal affect, $r(54)= .27$, $p < .05$; regression analyses indicated that parent expressiveness during the task predicted children's total expressiveness during the task, $R^2= .07$, $F(1,54)= 4.13$, $p< .05$. Parental task expressiveness was also positively correlated with the amount of children's positive affect, $r(54)=.30$, $p < .05$, and their positive affect during mother-led tasks, $r(54)=.34$, $p < .05$. Again, parental expressiveness was predictive of children's positive expressions, $R^2= .09$, $F(1,54)= 5.25$, $p< .05$, and particularly, positive expressions during mother-led tasks, $R^2= .12$, $F(1,53)= 6.90$, $p= .01$.

Table 10. Correlations for parent expressiveness during the task and child expressiveness, positive child expressiveness, and positive child expressiveness during mother-led tasks

Variables	Parent Exp.	Child Exp.	Child Positive Exp.	Child Positive Exp. with Mother
Parent Exp.	--	.267*	.298*	.339*
Child Exp.		--	.793**	.709**
Child Positive Exp.			--	.901**
Child Positive Exp. with Mother				--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01.

There were significant positive correlations between parents' task expressiveness and their supportiveness $r(54)=.46$, $p<.001$, and parents' task expressiveness and their cognitive emotional stimulation efforts $r(54)=.56$, $p<.001$. Regression analyses indicated that expressiveness could be predicted from both support, $R^2= .21$, $F(1,54)= 14.15$, $p < .01$, and from cognitive emotional stimulation, $R^2= .31$, $F(1,54)= 24.43$, $p < .001$. Like highly expressive parents, highly supportive parents tended to have children who displayed more facial/verbal affect, $r(54)= .350$, $p<.01$; high parental support was also positively correlated with children's positive emotional expressions, $r(54)=.28$, $p<.05$, and negative emotional expressions, $r(54)=.38$, $p<.01$. Parent support was able to predict total child expression, $R^2= .12$, $F(1,54)= 7.55$, $p<.01$, as well as positive child expression, $R^2= .08$, $F(1,54)= 4.54$, $p<.05$, and negative child expression, $R^2= .14$, $F(1,54)= 8.90$, $p<.01$, throughout the task.

Table 11. Correlations for parent expressiveness, support, and cognitive-emotional stimulation, and children's positive, negative, and total expressiveness, during the task.

Variables	Parent Expressive-ness	Parent Support	Cognitive-Emotional Stimulation	Total Child Expression	Positive Child Expression	Negative Child Expression	Child Emotional Comprehen-sion
Parent Expressive-ness	--	.456**	.558**	.267*	.298*	.212	.268*
Parent Support		--	.389*	.350**	.279*	.376**	-.030
Cognitive-Emotional Stimulation			--	.195	.245	.078	.426**
Total Child Expression				--	.793**	.700**	.353**
Positive Child Expression					--	.201	.408**
Negative Child Expression						--	.105
Child Emotional Comprehen-sion							--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01.

Further correlations show that more expressive parents had children who demonstrated significantly more emotional comprehension, $r(54)=.27$, $p<.05$, with parental expressiveness being predictive of emotional comprehension, $R^2= .07$, $F(1,54)= 4.17$, $p<.05$. Multiple regression analyses were conducted to determine the effect of parent expressiveness and socialization strategies on children's emotional comprehension. Results indicated that interactions between parental support, cognitive-

emotional stimulation, and expressiveness during the task significantly contributed to children's emotional comprehension; R^2= .24 , $F(3, 52)$= 5.42, p <.01.

However, no significant relationships were found between parent expressiveness during the task, and children's levels of concern, involvement, question frequency, or emotion word use; there was no significance even when exploring for joint effects between expressiveness and support. Multiple regression analyses exploring parental support, expressiveness and scaffolding contributions to children's concern levels did not yield a significant model. No parents in our sample exhibited behaviors associated with very low support (ex: intrusiveness, disapproval, strong negative regard; refer to Table 4), so no tests addressing high expressiveness and low support were performed.

Moreover, paired sample t-tests showed no significant differences between mothers' and fathers' expressiveness levels on child-specific variables' totals. There were also no significant differences between children's facial and verbal expressions during story-reading for either parent. Although, parental expressiveness did positively correlate with children's expressions around mothers, only, $r(53)$=.30, p <.05.

Parental Expressiveness within the Family (SEFQ)

Pearson correlations revealed that mothers' self-reported positive expressiveness within the family was positively correlated with children's emotional comprehension during mother-led tasks, $r(54)$=.30, p < .05, and mothers' positive SEFQ index was able to predict emotional comprehension when with mothers, R^2= .08, $F(1,54)$= 5.14, p < .05. At the one-tailed level, mothers' positive SEFQ also positively correlated with child involvement, $r(54)$=.23, p < .05, and total emotional comprehension, $r(54)$=.26, p < .05.

There was a significant positive correlation between parents' combined total expressiveness within the home and children's overall positive expression, $r(44)=.33$, $p < .05$, regression analyses once again indicating that children's positive expression could be predicted by parents' combined expressiveness index, $R^2= .11$, $F(1,44)= 5.32$, $p < .05$.

Contrary to our predictions, only the fathers' self-reported expression within the family was related to child concern and positive expression. There was a significant positive correlation between fathers' total SEFQ index and child positive expression, $r(44)=.29$, $p < .05$, but a significantly negative correlation between father total SEFQ index and child concern during the sad story, $r(44)= -.31$, $p < .05$, and child concern during mother-led sessions, $r(43)= -.33$, $p < .05$.

Upon further inspection, fathers' *positive* SEFQ index negatively correlated with children's concern during the sad stories, $r(44)= -.32$, $p < .05$, and children's concern during mother-led tasks, $r(43)= -.30$, $p < .05$. Additionally, fathers' *negative* SEFQ index positively correlated with children's positive expression amount, $r(44)=.35$, $p < .05$, especially during father-led sessions, $r(44)=.34$, $p < .05$. Regression analyses indicated that fathers' positive SEFQ can in part predict children's concern during the sad story, $R^2= .10$, $F(1,44)= 5.09$, $p < .05$, and children's concern around the mother, $R^2= .09$, $F(1,43)= 4.13$, $p < .05$. Fathers' negative SEFQ could also predict children's positive expression, $R^2= .12$, $F(1,44)= 5.98$, $p < .05$, and their positive expression around the father, $R^2= .11$, $F(1,44)= 5.62$, $p < .05$. No other significant relationships or differences were found between any of the variable totals and parents' SEFQ scores.

Table 12. Correlations for fathers' positive, negative, and total SEFQ, child concern during the sad story and with mothers, and child positive expression (total and with father)

Variables	Father SEFQ Total	Father Positive SEFQ	Father Negative SEFQ	Child Concern for Sad Story	Child Concern with Mother	Child Positive Expression	Child Positive Expression with Father
Father SEFQ Total	--	.819**	.646**	-.314*	-.325*	.292*	.267
Father Positive SEFQ		--	.191	-.322*	-.296*	.157	.139
Father Negative SEFQ			--	-.130	-.082	.345*	.336*
Child Concern for Sad Story				--	.834**	.207	.173
Child Concern with Mother					--	.130	.243
Child Positive Expression						--	.864**
Child Positive Expression with Father							--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01.

Finally, multiple regression analyses were run to observe the joint effect of self-expressiveness in the family on children's emotional comprehension. By themselves, SEFQ scores did not contribute significantly to emotional comprehension. However, when keeping support, expressiveness, and cognitive-emotional stimulation still in the model, results indicated that the best fit for children's emotional comprehension included the positive SEFQ index for both mother and father, and the negative SEFQ index for the

father; R^2= .39, F(6, 39)= 4.20, p <.01. Since children's age and information-seeking their efforts were both positively correlated with emotional comprehension, they were included into the model next, to see if a better fit would emerge; the model was significant, and demonstrated that the interaction between child age and question amount, parent's socialization efforts, and to a degree their expressiveness within the family could predict about 53% of the variance in children's emotional comprehension in this sample; R^2= .53, F(8, 37)= 5.13, p <.001.

Multiple regression analyses were also used to examine the effects of socialization and family expressiveness on child expression. On their own, parental expressiveness and parental support contributed significantly to positive child expression, R^2= .11, F(2, 53)= 3.42, p <.05. The models showed a better fit when accounting for parents' expressiveness within the family, resulting in a significant predictive relationship of positive child expression by parental support, parental task expressiveness, and both mothers' and fathers' total SEFQ scores; R^2= .22, F(4, 41)= 2.90, p <.05.

Lastly, a significant predictive model was also found for child involvement. By themselves, parental support, task expressiveness, and cognitive emotional stimulation contributed about 32% of the variance to predict child involvement; R^2= .32, F(3, 52)= 7.96, p <.001. When accounting for SEFQ scores, the interactions between parental support, expressiveness and scaffolding during the task, and fathers' positive self-expressiveness within the family contributed about 51% of the variance to predict child involvement behaviors; R^2= .51, F(4, 41)= 10.82 , p <.001.

Hypothesis 4:

Analyses of age and gender differences between children did not yield many significant results. Expected results led to the prediction that older children would exhibit significantly more concern and information-seeking behaviors, while younger children would be more emotionally expressive. We also anticipated more differences in emotional comprehension and concern between boys and girls, and more differences in scaffolding and child response between mothers and fathers.

Due to data abnormality, Spearman's rank correlations were used when analyzing age; results did indicate expected positive correlations between children's age during the story task and their emotion word and emotional comprehension scores. Correlations showed a significant positive relationship between children's age and the amount of emotion words they used, $r(54)=.48$, $p= <.01$, with child age being predictive of emotion word use, $R^2= .19$, $F(1,54)= 12.33$, $p < .01$. Additionally, there were significant positive correlations between children's age and their emotional comprehension, $r(54)= .27$, $p <.05$, specifically their emotional comprehension with mothers, $r(54)=.28$, $p <.05$. Regression analyses demonstrated that child age could predict emotional comprehension overall, $R^2= .12$, $F(1,54)= 7.07$, $p = .01$, and with mothers, $R^2= .12$, $F(1,53)= 6.91$, $p <.05$. Finally, child age was also positively correlated with child involvement, $r(54)=.25$, $p <.05$, on a one-tailed level. No significance was found between age and facial/verbal expression, or age and concern.

Table 13. Correlations for child age during the interaction, emotion word use, involvement, and emotional comprehension (total and with mother).

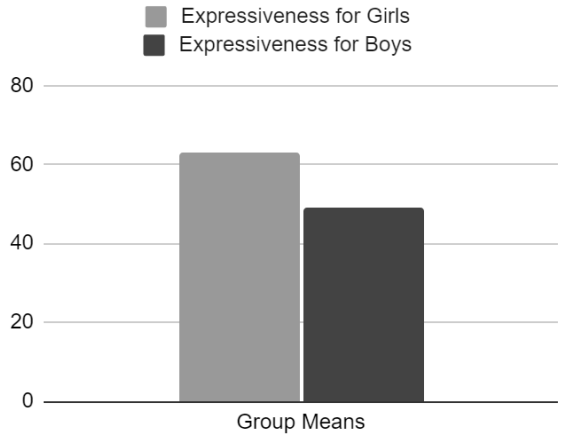
Variables	Child Age	Child Emotion Word Use	Child Emotional Comprehension	Child Emotional Comprehension with Mother	Child Involvement (1-tailed)
Child Age	--	.475**	.266*	.279*	.223*
Child Emotion Word Use		--	.312*	.347**	.219
Child Emotional Comprehension			--	.938**	.062
Child Emotional Comprehension with Mother				--	.039
Child Involvement (1-tailed)					--

Note: * Correlation is significant, p<.05, ** Correlation is significant, p<.01.

Unlike predictions, there were no significant differences between boys and girls on any of the total variables, including concern. There were also no significant differences in concern between mother and father-led tasks, but there was a significant difference between boys and girls' facial/verbal expression around the father. Independent sample t-tests showed that, on average, girls were more expressive (*M*=62.88, *SD*=25.81) around their father than boys (*M*=49.05, *SD*=19.13); *t*(44)= 2.09, *p* <.05. An independent sample t-tests comparing girls and boys' positive expressions around the father approached significance, with girls showing more positive expression (*M*= 30.38, *SD*= 19.63), than boys, (*M*=20.85, *SD*=13.22), *p* =.056. Boys were not more

or less involved in the story depending on parent, although a multiple analysis of variance showed a difference approaching significance between girls' involvement with mothers and their involvement with fathers; girls' involvement when sessions were led by mothers were almost significantly higher than their involvement with fathers, p =.053.

Figure 10. Child Expressiveness during Father-led Sessions



DISCUSSION

Overview of Findings

This study aimed to explore the interconnected processes through which parent-child pairs share knowledge, build meaning, and facilitate the development of children's cognitive, social, and emotional aptitude. We observed caretaker socialization strategies and preschooler cognitive-emotional regulatory capacities; particularly their interactions with, and reactions to, narratives that could be considered both emotionally comforting, and emotionally uncomfortable.

Overall, findings were mixed, with a number of expected relationships resulting in significance, a portion yielding no relationships at all, and a few tests showing significant but surprising results. Analysis of the data generally supports Hypotheses 2 and 3, as warm, responsive, and expressive parental behaviors appeared to contribute significantly to children's cognitive and emotional skills during both positive and negative narrative interactions. Specifically, analysis indicates that parents who displayed high levels of parental support and expressiveness (both during the task and within the home) also had children who showed higher total expression, in addition to being more positively expressive, more involved, and more understanding of emotional concepts. Parents high in expressiveness and support also provided more cognitive-emotional scaffolding to their children, which was related to emotional comprehension and information-seeking behaviors. These findings are consistent with previously mentioned

work that relates patterns of positive expressiveness, responsiveness, and warm affect to children's cognitive, emotional, and social achievements (Roberts & Strayer, 1996; Halberstadt, 1995, Padilla-Walker, Nielson & Day, 2016; Manczak, 2016; Laible et al., 2019; Padilla-Walker et al., 2020). Results from the first and fourth hypothesis were somewhat supported. Children who asked more questions also exhibited higher levels of emotional comprehension and concern. Emotional comprehension was also related to emotion-talk, and while children showed lower emotional understanding during the negative emotional narrative, they asked more questions, showed more concern, and used more emotion words during negative-emotion discussions. This is similar to results by Bird and Reese (2006), Liable and Panfile-Murphy (2009), and Manczak et al. (2016), who found children to have difficulty processing negative emotions, but observed higher engagement and emotion discourse in children during negative-event conversations. Some hypotheses regarding child age were also supported, and older children were more involved, used more emotion words, and exhibited higher emotional understanding as is developmentally expected (Laible & Thompson, 1998; Zhou et al., 2002).

Most of the assumptions not supported by our findings dealt with concern and gender differences. Levels of concern have previously been related to emotional understanding and emotion word use (Eisenberg & Strayer, 1987), as well as to parental socialization strategies like positivity, and support (Landry et al., 2012; Spinrad & Gal, 2018). However, no significance was found between children's concern scores and their emotional comprehension, or emotion word use; parental scaffolding was also unrelated to concern levels. The significance we did find- between concern and parent expressiveness- was surprisingly a negative relationship. Our data indicates that as

parental expressiveness during the task, and fathers' total and positive self-expressiveness within the family increase, children's concerned expressions decrease. While these results contradict the findings above, they may fall in line with work by Fabes et al. (1994), who observed parents expressing more positive emotions during negative situations, in order to keep their children from getting overly upset. Past research (Fivush et al., 2000; Liable & Song, 2006; Bariola, Hughes, & Gullone, 2011; Manczak et al., 2016) led us to anticipate greater differences in behaviors between parent and child gender, as well. While we found some evidence of increased facial/verbal affect, emotional comprehension, and positive expressiveness around mothers, and higher inquisitiveness around fathers, these relationships were correlational, and comparisons of average scores between mother and father-led sessions were nonsignificant. Additionally, no significant differences were found between boys and girls, although trends approaching significance imply that girls may express more emotions around fathers than boys, and be more involved in the task around mothers, than boys are; further research is needed.

Ultimately, our findings spotlight the interactions between parental support, expressiveness, and scaffolding, and their effects on regulatory and emotional capacities such as facial/verbal affect, involvement, emotional comprehension and information-seeking behaviors. Our data also seems to suggest a greater emphasis be placed on parental expressiveness- positive and negative, within the home and during parent-child activity- and its effects on socio-emotional development.

Emotional Development and Comprehension

Based on initial analysis, the data indicate a connection between children's emotional comprehension, emotion word use, and information seeking behaviors. It

appears that more question-asking and emotion word use indicates better understanding of the narrative's emotional themes. Regression analyses indicated that question amount predicted about 13% of preschoolers' emotional understanding during the task, implying that children who felt comfortable asking questions created more opportunities for clarifications from parents, thus leading to more understanding. This was expected as children who ask more questions are expected to receive more explanations and elaborations, and, in studies by Fabes et al. (2001), and Chouinard et al. (2007), children were shown to retain significantly more information when said information pertained to the questions they asked. Additionally, previous work by Beck et al. (2012) and Mancini et al. (2013), already linked emotion word use to emotional and cognitive competency. Emotional comprehension, however, was not predictive of emotion word amount- this could be due to other factors affecting vocabulary use or could be a result of the original study design, which did not prioritize emotional vocabulary measurements.

Results revealed that children who rated high in emotional comprehension asked more questions, and children who showed more concern also asked more questions, but children who exhibited higher emotional comprehension did not show significantly more expressions of concern. This could point to a number of conclusions: first, older children have been sometimes known to mask facial expressions (Cole, 1986, Zhou et al., 2002) while still exhibiting high levels of emotional comprehension. In this case, the nature of the questions that children ask may be a better indicator of their concern. Second, the result may simply indicate that an increased understanding does not necessarily lead to more compassion, and that other factors- parental prompting, for example- may play a larger role in the development of empathy.

Interestingly, there were no significant relationships between child involvement and emotional comprehension, question amount, emotion word use, or concern. It is unlikely that children who do not engage in, or pay attention to, the task get as much development opportunities out of it as children who do, considering that to ask questions and use emotion words, a child must be involved to some degree. However, it appears that involvement, by itself, is not enough to encourage these traits. Considering all of our results, we suspect some combination of involvement and, most likely, parental practices and social interaction, would result in stronger relationships.

As expected, preschoolers seemed to understand the happy stories better than the sad ones, though unlike our predictions, they were also more involved in the task during the happy stories. Similarly, our results suggest that preschoolers were more comfortable engaging in simpler and less emotionally complex narratives, most likely reflecting the types of stories they usually encounter in daily life. However, results demonstrated that children are also willing to engage with and attempt to understand more unfamiliar narratives with the emotional tools at their disposal, given that preschoolers asked significantly more questions during the more emotionally complex stories. Preschoolers also used more emotion words and showed more concern during the sad stories. These findings contradict work by Ahern and Lyon (2013) on children's reluctance to discuss negative emotions or events but fall in line with studies by Bird and Reese (2006) and Manczak et al. (2016), that showed children initiating more discussion and using more emotion words in relation to negative events. Furthermore, increased emotion word use, questioning, and concerned behaviors could demonstrate children's recognition of others' (in this instance, the main character's) unhappiness, and their desire to understand it and

act on it; this type of concern and care for another's welfare can indicate the development of empathy and other prosocial traits and behaviors (Sallquist, 2009; Eisenberg, 2000; Decety and Meyer, 2008; Drummond et al., 2014).

As expected, children showed more facial and verbal affect during the sad story, possibly because preschoolers are still learning how to process and regulate negative emotions like loss and death. More expressive children were found to be more involved in the task, used more emotion words, and showed more overall emotional comprehension; children who were more *positively* expressive, especially around their mothers, also showed greater emotional comprehension. Increased expression could certainly be an indication of engagement and comprehension, though considering that expressive children also had expressive parents, the child's emotional understanding may be more a corollary of caretaker practices. Child and caretaker expressiveness is discussed further in the following sections.

Parental Socialization Efforts

Parents who showed more supportive behaviors (like warmth, openness, and sensitivity), also tended to engage in more scaffolding strategies designed to stimulate children's cognitive and emotional development. Our analyses showed that supportiveness led to more scaffolding behaviors, which is in line with previous research linking parental sensitivity and responsiveness to children's emotional state to parents' cognitive and emotional scaffolding (Neitzel and Stright, 2003; Dix, 1991). These results may suggest that parents who are warmer and more supportive could be more enthusiastic to engage their children in verbal prompting or could be more successful at creating an atmosphere where children feel more comfortable to ask for clarifications-

both scenarios would naturally lead to more cognitive emotional stimulation. Since dyadic unity scores were folded into parental support, results also reflect a degree of unity between parent and child; therefore, more supportive parents could also be more aware of discussion prompts that are specific enough to their child's interests to consistently increase their engagement.

With this in mind, we found that parents who provided more cognitive-emotional stimulation had children who showed better understanding of both happy and sad situations, and that parental cognitive-emotional stimulation was predictive of children's emotional comprehension. Previous studies show similar results, where parental cognitive stimulation was related to greater perceptual and cognitive skills, as well as higher academic achievement (Hubbs-Tait et al., 2003; Landry et al., 2000; Pratt et al., 1992). Our data also showed that parents who scaffolded more, especially during the sad story, had children who asked more questions. Parents who provided more support had children who were more involved in the task, with level of support predicting level of involvement. This falls in line with research by Spinrad and Gal (2018), and Padilla-Walker et al. (2020), who found high parental warmth and responsiveness was related to more motivation as well as behavioral and emotional regulation in children.

No significant relationships were found between parent support and children's emotional understanding, or parents' cognitive-emotional stimulation efforts and children's involvement. This contradicts results by Ryan, Martin, and Brooks-Gunn (2006), and Spinrad and Gal, (2018), who found a relationship between parental warmth and positivity and children's cognitive-emotional comprehension. The result also suggests that, for preschoolers, high engagement in a task or high support by a parent are

not enough to develop emotional or situational understanding. This is not to say that parental support is unimportant (and we will soon touch on the significant role of positive parental affect), but while support may lead to scaffolding, it is the intentional guidance of an adult that is needed for more critical thinking to develop. As in previous studies (Laible, 2004; Birbili and Karagiorgou, 2010; Padilla-Walker et al., 2020), the data continues to showcase the importance of thoughtful discussions on emotions and on media between parent and child.

Despite these results, neither parental support nor cognitive emotional stimulation significantly affected emotion word or concern score totals. The results conflict with previous research linking parental support to more empathetic and prosocial behaviors and more advanced verbal scores (Spinrad & Stifter, 2002; Hubbs-Tait et al., 2003), but are in line with research by Helmerhorst, Lucassen, and Storm (2022), which found no relationship between either parent's sensitivity and their children's language ability. We suspect that support and scaffolding may contribute in some way, or in some combination, to these variables, but in isolation, parental support and scaffolding are not enough to make a significant difference.

Interestingly and unexpectedly, parents seemed to shy away from the more emotionally complex story; on average, parents showed both more support and scaffolding during the happy story sessions. This contradicts past research in which parents that are higher in openness were more willing to discuss negative emotions with children, and in which parents used more elaborate explanations when discussing negative events with their children (Manczak et al., 2016). Furthermore, while mothers and fathers had similar cognitive-emotional stimulation scores during the event

conveying sadness, fathers appeared to provide significantly more cognitive-emotional stimulation during the happy contexts. Perhaps parents were less comfortable discussing loss in depth with their young children, especially in front of a camera, and further research is needed on the topic. Regardless, fathers seemed most in their element when discussing more positive and uplifting emotions and events with their children.

Parental Expressiveness During the Task

In this study, parental expressiveness during the task referred to the degree to which parents adopt expressive facial and verbal affectations- like character voices or positive or negative intonation- as a way to assist their child's cognitive-emotional understanding; consequently, the parental expressiveness variable is associated with more positive affectations on the parents' part, as its purpose is to enhance child experience. In line with research by Zhou and Eisenberg (2002), Roberts and Strayer (1996), Shaffer and Are (2016), and many others, our results pointed to an overall importance of parental expressiveness on children's emotional development.

On average, parents were significantly more expressive during the story that conveyed a happy event. As we expected, we saw a positive relationship between parental expressiveness and children's expressiveness, and more expressive parents were predictive of more expressive children. Parents who were more expressive during the task had children who expressed more positive *and* negative emotions, with positive expressions occurring more overall during the task, and specifically in the presence of their mother. Data suggested that this higher parental expressiveness predicts both overall positive expression, and positive expression with mother. These results are supported by past work outlining how young children tend to mirror their parents' emotional patterns,

and that positively expressive parents tend to raise positively expressive children (Isley et al., 1999; Halberstadt & Eaton, 2002; Laible et al., 2004; Laible & Song, 2006; Speidel et al., 2020).

Importantly, parents who were more expressive with the narrative also provided significantly more support and cognitive-emotional stimulation to their children during the task. It is unsurprising, then, that parents who were more expressive had children who showed more emotional comprehension, and that parental expressiveness could also predict children's degree of emotional understanding. This is in line with past studies finding relationships between positive caregiving and higher parental elaboration (Laible, Panfile-Murphy, Augustine, 2013), and between positive and emotionally elaborate interactions and children's increased emotional understanding (Laible & Song, 2006; Spinrad & Gal, 2018). Our data shows that children who were more positively expressive during mother-led tasks also seemed to show increased understanding, with emotional comprehension predicting positive expression with their mother. These results make sense, seeing as children who asked more questions of their mothers also showed more emotional comprehension, suggesting a link between inquisitiveness and positive expression during mother-led tasks, and child emotional comprehension. Overall, this suggests that more expressive parents, especially more expressive mothers, engage in more discussions involving emotions and emotion regulation with their children, leading to more emotionally knowledgeable children. Similarly, Are and Shaffer (2016), and Speidel and colleagues (2020) found maternal guidance and positive expressiveness to predict children's emotional regulation, especially regulation of negative emotions.

Parental Expressiveness Within the Family Context

We found several similar relationships between concern and parents' self-expressiveness within the family (SEFQ) scores. Unexpectedly, fathers' overall expressiveness scores on the SEFQ index (reflecting both positive and negative expressiveness within the family) was negatively correlated with children's expressed concern during the sad events and during mother-led sessions, or, as at-home self-expressiveness of the father increased, children's concern during the sad situation, and around the mother, decreased. Although, as fathers' overall expressiveness scores increased, children's overall positive expression also increased, leading us to believe that more expressive fathers make more efforts to create a positive atmosphere for their children, as well as to mitigate possible child distress by yielding more positive responses during negative events. We suspect that the decrease in concern is a byproduct of these pacifying efforts, rather than of more expressive fathers having less concerned children. This is further supported by our data showing how child concern during the sad event, and with the mother, also significantly decreases when fathers' *positive* family expressiveness increases, indicating that it is the father's positive expressiveness, (reflecting behaviors like praise, excitement, and affection) that is somehow related to lower concern. This would fall in line with the negative relationship between parent task expressiveness and child concern described in the previous section, though these results are in conflict with ones by Spinrad and Gal (2018), and Padilla-Walker, Nielson and Day (2016), wherein parental openness and positivity was linked with children's empathetic response. However, it is important to consider that child positive expression is not only correlated with overall father expressiveness, but to negative father

expressiveness, as well. The negative expressiveness index reflects an individual family member's tendency to criticize, blame, show dissatisfaction, or express anger regarding trivial irritations. Considering this, it is also possible that children's positive expressions around fathers high in expressiveness- negative expressiveness in particular- may be in part to children's own efforts to mitigate unpleasant interactions. This seems at least somewhat likely, seeing as fathers with more negative expressiveness had children who showed significantly more positive expressions during father-led sessions, but not mother-led sessions. We did find a positive relationship between mothers' and fathers' negative self-reported expressiveness, where, as one parent's negative index went up, so did the other parent's, suggesting that children who have fathers high in negative expressiveness will most likely have mothers who express similarly to their partner. In this case, the possibility of children displaying higher positive expressiveness in-part as a mollifying strategy may stem from both parents' at-home behaviors. Although, as Bariola, Gullone, and Hughes (2011) point out, past forays into parental negative expression's effect on children's emotional states show contradicting results. Further studies would be needed to explore the specific interactions between fathers' expressiveness within the home, parents' positive and negative expressivity, and children's' expressions of concern.

Fathers and mothers' positive, negative, and overall expressiveness scores were also combined, in order to observe their joint effects on children's behavioral responses. Once again, we found an effect on children's positive expression; families who reported more overall expressiveness- where both mothers and fathers were highly expressive overall- tended to have children that showed greater positive expression throughout the

whole task. As discussed before, this result could be due to positive parental expressiveness (plus honest, open, and productive expression of negative emotions) yielding positivity in the child, negative parental expression resulting in appeasing behaviors from the child, a combination of both, or a different factor altogether. Furthermore, the result is reminiscent of findings by Greenberg (1999), which imply that, regardless of its positive or negative valence of the context, greater parental expressiveness still provides ample opportunities for children to learn emotional regulation strategies, thereby becoming more emotionally and socially adept. Increased positive expressiveness from children in response to positive *and* negative dispositions from parents, can indicate regulatory efforts, though further research is needed.

Regarding the mothers' self expressiveness within the family, we found that mothers who are high in positive expressiveness had children who showed more emotional comprehension during mother-led sessions, meaning that highly positively expressive mothers could help children understand the emotional themes of the stories better, but only when mothers were the ones leading interaction. This falls in line with the belief that mothers tend to be more involved with children's emotional management and are more likely to initiate discussions on emotional origins and management strategies (Fuvish et al., 2000; Gullone & Hughes, 2011; Laible, Panfile-Murphy & Augustine, 2013). Aside from these specific occurrences, parent self-reported scores on the SEFQ were not significantly related to any of the other parent- or child-specific variables, suggesting that while such self-reported emotional behaviors may contribute to child emotional development, by themselves they are not enough to affect children's total concern, emotional comprehension, or facial/verbal expression.

Our analyses suggested just that, as around 22% of child positive expression could be predicted by interactions between mothers' and fathers' overall expressiveness scores coupled with parental support and parental expressiveness during the task. What's more, interactions between parental support, task-expressiveness, cognitive-emotional stimulation, mothers' positive and negative self-expressiveness within the family, and fathers' negative self-expressiveness within the family contribute up to 39% of children's cognitive emotional comprehension. Finally, data showed that parental support, task-expressiveness, scaffolding, and fathers' self-reported positive expressiveness contributed about 50% to child involvement.

In line with previous conclusions (Roberts & Strayer, 1996; Hubbs-Tait et al., 2003; Laible & Song, 2006; Teubert & Pinquart, 2010; Laible, Murphy & Augustine, 2013; Myruski & Dennis-Tiwary, 2022), results so far suggest that parents who are not only highly expressive, but also highly supportive and warm in their expression towards children, *and* who couple this expressive supportiveness with verbal prompting which encourages critical thinking skills, raise children who are best equipped to understand and interact with the socio-emotional world around them. While more research on the fathers' role in child development is still needed, (Bariola, Gullone & Hughes, 2011; Fagan, Wildfeuer & Iglesias, 2022) our results continue to support existing data on the importance of fathers' socialization contributions (Valiente et al., 2004; Sanders, Zeman, Poon & Miller, 2015); specifically, fathers' at-home expressiveness on children's engagement, cognitive-emotional awareness, and expressed positivity as well as concern. We suspect that the interaction between parental expressiveness, support, and cognitive emotional stimulation provides the most meaningful effect to children's emotional

comprehension in this study and can be foundational for the development of children's cognitive-emotional skills.

Age and Gender Differences

When it came to evaluating age and gender differences between children, we did see some expected results. Mainly, older children used more emotion words than younger children, and showed more emotional comprehension of the stories than younger children did. Older children also showed more emotional comprehension during mother-led sessions, which may be related to more frequent media engagement and discussion with mothers. Additionally, child age seemed to predict emotion comprehension, emotion comprehension with mother, and use of emotion vocabulary. These findings are in agreement with expected verbal and cognitive development in preschoolers (Fabes et al., 2001), and affirm that children will naturally gain more emotional understanding and language proficiency as they grow. Aside from this, there were no other differences in children based on age, including no differences in expressed concern between older and younger children.

Results from past literature (Fuvish et al., 2000; Zhou et al., 2002; Cassano et al., 2007; Laible & Panfile Murphy, 2009; Manczak, 2016; Padilla-Walker et al., 2020) led us to anticipate more differences between girls and boys than were found, but as with parent gender, no significant differences in child gender could be found for any variable totals. Still, some differences of note were discovered regarding child expression and involvement. On average, girls seemed to be more expressive around their fathers than boys were, and the difference between boys and girls in positive expression around the father approached significance, suggesting that girls were specifically more *positively*

expressive around their fathers. Zhou et al. (2002) found girls to be more positively expressive in general (and especially in relation to positive stimuli), but differences in child positivity amongst mothers or fathers was not reported. Additionally, we found an almost significant difference of girls' involvement between mother and father, with girls being more involved in the task with their mother than with their father. In addition to girls being found to display more engagement in parent-child activities compared to boys (Nordahl et al., 2014), mothers have also previously been observed to have more frequent discussions about emotions and emotion-talk with daughters (Tamis-LeMonda et al., 2001; Padilla-Walker et al., 2020). While we found it important to mention, the results are not conclusive, and further analyses are needed to test relationships approaching significance.

Similarly, our data demonstrated that the gender of the parent leading the task did not differentially influence the children's total involvement, emotional comprehension, question amount, or emotion word frequency. For this sample, children exhibited similar responses in the presence of both the mother and the father, and neither parent was better or worse at stimulating more understanding, engagement, or concern- rather, both parents could elicit these behaviors from their child.

Overall, parents also did not differ on their *total* amount of support, expressiveness, or cognitive emotional stimulation. However, closer examinations revealed some interesting exceptions. For instance, mothers- but not fathers- who provided more cognitive-emotional stimulation had children who asked more questions. Additionally, the more cognitive-emotional stimulation parents provided, the more questions children asked of their fathers. While neither scaffolding by mothers, nor

scaffolding overall, were predictive of children's' questions, these results are still of note. It is possible that mothers who engaged in more cognitive-emotional stimulation also did so often at home, leading to children who were more used to, or comfortable with, asking questions overall. Additionally, when both parents create a supportive environment, children may be more comfortable to ask questions of their father. Our data also shows that about 70% of this sample's fathers earned more than their partners; children may be especially curious of their fathers' opinions if their fathers create a supportive environment, but otherwise do not spend as much time at home due to work obligations.

There were also no overall differences between mothers and fathers' expressiveness levels, but there was a significant relationship between parental expressiveness and children's facial/verbal expressions around their mothers, or the more expressive both parents were, the more emotions the child showed around their mother. In addition, children who understood the narrative better, and who's parents provided more scaffolding, also seemed to display a greater amount of positive expressions around their mothers. Interestingly, children who displayed a lot of negative expressions around mothers and fathers seemed to be more involved in the task and used more emotion words. This could be a result of parents' supportive behaviors in an attempt to soothe the child or manage the child's distress, which seems somewhat likely, since children who displayed more negative expressions around their fathers also had parents high in support, and high parental support resulted in higher child involvement. Finally, mothers were found to be more positively expressive within the family context than fathers were, and their positive SEFQ scores were .59 points higher than that of fathers (see Additional Findings in Appendix A).

As outlined above, our findings are in some agreement with work by Fuvish et al. (2000), Gullone & Hughes (2011) and Laible, Panfile Murphy & Augustine (2013), which suggests that mothers are more involved in the development of their children's social and emotional lives, and thus yield more emotional responses from children. However, we also observed children's responsiveness to fathers: specifically, when parent support and scaffolding was high, children were more willing to ask questions and display negative expressions in front of their fathers.

Aside from these specific instances, there were no major differences between parents on their support, cognitive emotional stimulation, task or family expressiveness, or on children's inquisitiveness, vocabulary, involvement, emotional comprehension, or facial/verbal expressiveness. As with research by Zhou et al. (2002), no differences were found between parents' socialization strategies and children's expressed concern, for either boys or girls. Despite the lack of large differences, these results may better reflect modern family dynamics in which caretakers are equally emotionally present and responsible for child rearing. Certainly, analysis results point to both parents' behaviors- and the interactions between these behaviors- as important components to children's socio-emotional and moral development.

Limitations and Future Directions

A number of limitations are important to consider when looking at the results of this study. First, foundational data- footage of the parent-child interactions, demographic data, and written measures- was collected prior to the conception of this work. This may have resulted in the lack of measurements more suitable and specific to moral and emotional development- for example, questionnaires on children's empathetic

development and distress management, or of caretaker prosocial or empathy-related behaviors. Self-reported concern and empathy measurements would have been useful, as the primary method children used to show concern was through asking questions; utilizing a separate self-reported concern scale would ensure a clearer picture of the relationship between information-seeking and concern. Further, while the parental support scale was designed to measure both positive and negative regard, observed parental support did not go into the negatives and parents in our sample showed no intrusive or stifling behaviors. While this is a more preferred outcome for our younger participants, we were still unable to explore the relationships between parental negative regard and children's involvement, information-seeking, emotion word use, or cognitive emotional comprehension.

Further, this study was designed to model a naturalistic interaction between parent and child, so joint story-reading was chosen as the primary interaction task. However, as Wong, Konishi, and Kong (2020) find, different types of parent-child activities affect socio-emotional functioning in different ways; for example, their results indicate relationships between story-reading and lower anxiety, between story-telling and lower aggression in boys, and between music activities and lower hyperactivity among girls. Additionally, as the media children have access to becomes increasingly digital, parents may be engaging in more television and video related activities with their children. As Padilla-Walker et al. (2020) note, increasing attention should be given to how parents engage their children in conversations about digital media, how the socialization strategies and child regulation skills during this type of activity may differ, and what effect the interaction between parental socialization and media socialization have on the

child's regulatory capacities. As toddlers grow into preschoolers, their interactions begin to include their peers and teachers, so future work should also look into how these parent-child interactions extend into the child's out-of-home life. In order to extrapolate all of the effects of parental support, expressiveness, and scaffolding on children's socio-emotional regulation and competence, children should be observed during both parent-child interactions and peer-child or teacher-child interactions. This can shed light on the effects of at-home socialization strategies, their duration and effects, on children's social life- for example, does the relationship between parental support and child involvement, or between cognitive-emotional stimulation and child emotional comprehension, remain as strong when the child is at school as when the child is at home?

For future work to comprehensively understand and build on past and present results, good operational definitions of abstract concepts like 'concern,' 'empathy,' 'support,' and 'emotional comprehension' are necessary across all research. In trying to design a coding protocol for this study, the numerous, and sometimes overlapping, construct definitions we came across made it challenging at times to understand and define our sample's behaviors. This difficulty can increase when trying to interpret sets of data that look at the same phenomena, but that also come from different labs and use different terms to describe said phenomena. Ultimately, precision is needed to understand and to communicate to parents what the best ways to interact with children are in the context of emotional events, as this will aid in helping children grow into socio-emotionally competent members of their families and society in general.

Finally, as societal norms evolve with time, acknowledging and including more diverse and non-traditional families in developmental research has become increasingly

relevant. In addition to including more specific measurements for both caretakers and preschoolers, future replications of this study should make efforts to increase and diversify sample size by including a larger and more ethnically, economically, and socially diverse sample.

Conclusions

In summary, the current study examined preschoolers' regulatory and cognitive-emotional capacities, and parental efforts to support and enhance these capacities during the introduction and discussion of emotionally familiar and emotionally complex narratives. Despite difficulties with understanding themes of grief and loss, preschool children sought out more information about complex narratives, while demonstrating their developing emotional vocabulary and empathetic reasoning. Successful processing of emotional themes was bolstered by warm, thoughtful, and responsive parental behaviors. Attention is also given to the parent-pair's emotional expressiveness during-task and within the family context; significant results suggest further research into emotionally expressive interactions and effects on development. The results reinforce previously established beliefs on the importance of emotionally open, positively expressive, and cognitively stimulating parent-child interactions on emotional, social, and regulatory competence.

APPENDICES

Appendix A. Additional Findings

Outside of our predicted results, we found several other significant relationships.

First, children's positive expressiveness was significantly positively correlated to their emotional comprehension, $r(54) = .41$, $p < .01$, while total child expressiveness was positively correlated with emotional comprehension, $r(54) = .35$, $p < .01$, and involvement, $r(54) = .37$, $p < .01$ (see table 11). Expressiveness could be predicted from both emotional comprehension, $R^2 = .13$, $F(1,54) = 7.71$, $p = .01$, and involvement, $R^2 = .13$, $F(1,54) = 8.36$, $p = .01$. Emotional comprehension also predicted positive expression, $R^2 = .17$, $F(1,54) = 10.79$, $p = .01$.

On the one-tailed level, total child expressiveness positively correlated with emotion words, $r(54) = .23$, $p < .05$. Also, child negative expressiveness positively correlated with emotion words, $r(54) = .28$, $p < .05$, and involvement, $r(54) = .38$, $p < .01$.

Children's positive expressiveness around mothers was positively correlated with their emotional comprehension, $r(54) = .40$, $p < .01$, and their parents' cognitive emotional scaffolding, $r(54) = .38$, $p < .01$. Positive expressiveness with mothers could be predicted by parents' cognitive emotional stimulation $R^2 = .15$, $F(1,53) = 9.14$, $p < .01$, and children's emotions comprehension, $R^2 = .16$, $F(1,53) = 10.24$, $p < .01$.

Parental expressiveness during the happy story positively correlated with child expressiveness during father-led tasks, $r(44) = .34$, $p < .05$, as well as child expressiveness during the happy, $r(54) = .54$, $p < .001$, and sad, $r(54) = .50$, $p < .001$, stories. Parental expressiveness during the sad story also positively correlated with children's' expressiveness during the happy, $r(54) = .45$, $p = .001$, and sad stories, $r(54) = .52$, $p < .001$.

However, parental expressiveness negatively correlated with concern during mother-led tasks, $r(54) = -.28$, $p < .05$.

Children's negative expression during mother-led stories significantly positively correlated with the number of emotion words children used, $r(54) = .27$, $p < .05$, and their involvement, $r(54) = .35$, $p < .01$. Their negative expression during mother-led tasks also positively correlated with parental support, $r(54) = .28$, $p < .05$. We saw the same results for children's negative expression during father-led stories, which was also positively correlated with their emotion words, $r(54) = .31$, $p < .05$, their involvement $r(54) = .43$, $p < .01$, and with parent support, $r(54) = .34$, $p < .05$.

We also found that parents who provided more cognitive emotional stimulation during the sad story had children who asked significantly more questions overall, $r(54) = .28$, $p < .05$. Similarly, cognitive emotional stimulation by parents significantly positively correlated with child question amount during the sad story, $r(54) = .30$, $p < .05$ and child question amount during father-led sessions, $r(54) = .33$, $p < .05$.

Furthermore, we found positive correlations between mothers' and fathers' mothers' cognitive emotional stimulation scores, $r(43) = .56$, $p < .001$, and support scores, $r(43) = .60$, $p < .001$. Mothers' and fathers' negative SEFQ scores were also positively correlated, $r(44) = .34$, $p < .05$. Paired sample t-tests indicated a significant difference in means between mothers' and fathers' positive expressiveness within the home; the positive SEFQ index for mothers was higher on average ($M = 6.89$, $SD = 1.15$), than that of fathers ($M = 6.30$, $SD = 1.20$); $t(45) = 2.45$, $p < .05$. We also found a significant difference in parental expressiveness between the happy and sad stories, with parents

being more expressive on average during the happy story (M= 34.14, SD= 9.78) as opposed to the sad story (M= 31.14, SD= 8.57); $t(55)$= 4.49, p < .001.

Figure 11. Parent Positive Expressiveness Within the Family

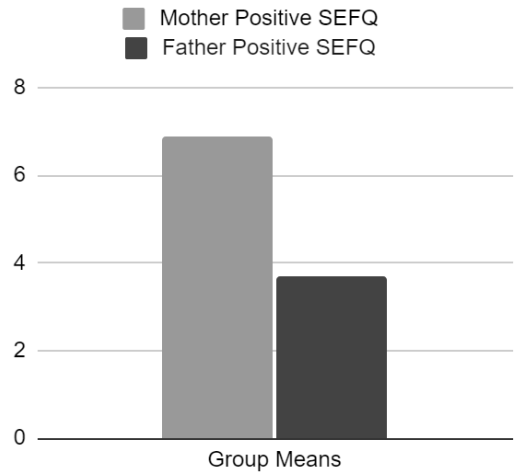
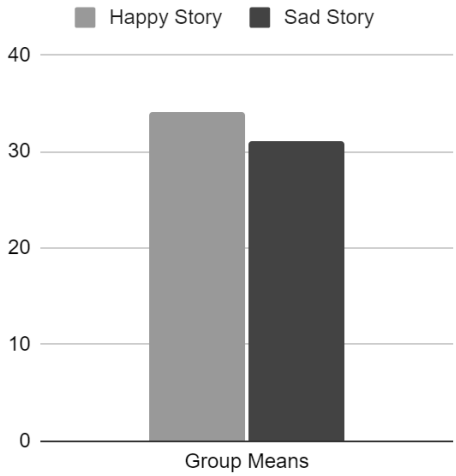


Figure 12. Parent Task Expressiveness during the Happy and Sad Story



Finally, analyses were conducted between the child-specific variables and parental ratings of child temperament through the Colorado Childhood Temperament Inventory. There were significant positive correlations between children's emotional comprehension and children's CCTI attention index as rated by mothers, $r(47)$= .30, p <.05; mothers' attention rating was predictive of children's emotional comprehension, R^2= .09, $F(1, 47)$= 4.64, p < .05. Child attention as rated by mothers also negatively correlated to emotion word use, $r(47)$= -.29, p <.05. Mother-rated soothability negatively correlated with children's total positive expressiveness, $r(47)$= -.38, p <.01, and seemed to be predictive of total positive expressiveness, R^2= .14, $F(1, 47)$= 7.67, p < .01. Mother-

rated shyness negatively correlated with the amount of questions children asked, $r(47) = -.33$, $p < .05$, but no predictive relationship was found.

There was a positive correlation between children's father-rated CCTI sociability score and children's questions during the happy story, $r(38) = .39$, $p < .05$. Father-rated activity was also positively correlated with children's questions during the happy story, $r(38) = .35$, $p < .05$, but was negatively correlated with children's total expressiveness, $r(38) = .32$, $p < .05$. Finally, father-rated emotionality was positively correlated with the amount of questions children asked, $r(38) = .41$, $p < .01$, and the relationship was predictive, $R^2 = .11$, $F(1, 38) = 4.88$, $p < .05$.

Appendix B. (SEFQ) Self-Expressiveness Within the Family Questionnaire

40-Item Self-Expressiveness in Family Questionnaire

Instructions

This is a questionnaire about family expressiveness. We'd like to know more about the degree of expressiveness shown in different families. Therefore, we'd like you to tell us about the frequency of expression in your family while you were growing up. By frequency we mean, "How often does this situation occur in your family, relative to other families?"

Try to think of the following scenarios in terms of how frequently they occurred in your family, compared to other families, while you were growing up. Use the rating scale below to indicate how frequently that activity occurred. Thus, if a situation rarely occurred, or occurred not at all frequently, circle 1, 2, or 3. If it occurred with some or moderate frequency, circle a 4, 5, or 6. And if it occurred very frequently, circle a 7, 8, or 9.

Some items may be difficult to judge. However, it is important to answer every item. Try to respond quickly, but not randomly. Thank you very much.

1. Showing forgiveness to someone who broke a favorite possession.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

2. Thanking family members for something they have done.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

3. Exclaiming over a beautiful day.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

4. Showing contempt for another's actions.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequent

5. Expressing dissatisfaction with someone else's behavior.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

6. Praising someone for good work.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

7. Expressing anger at someone else's carelessness.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

8. Sulking over unfair treatment by a family member.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

9. Blaming one another for family troubles.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

10. Crying after an unpleasant disagreement.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

11. Putting down other people's interests.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

12. Showing dislike for someone.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

13. Seeking approval for an action.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

14. Expressing embarrassment over stupid mistakes.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

15. Going to pieces when tension builds up.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

16. Expressing exhilaration after an unexpected triumph.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

17. Expressing excitement over one's future plans.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

18. Demonstrating admiration.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

19. Expressing sorrow when a pet dies.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

20. Expressing disappointment over something that didn't work out.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

21. Telling someone how nice they look.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

22. Expressing sympathy for someone's troubles.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

23. Expressing deep affection or love for someone.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

24. Quarreling with a family member.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

25. Crying when someone leaves.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

26. Spontaneously hugging a family member.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

27. Expressing momentary anger over a trivial irritation.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

28. Expressing concern for the success of other family members.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

29. Apologizing for being late.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

30. Offering to do somebody a favor.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

31. Snuggling up to a family member.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

32. Crying for being punished.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

33. Trying to cheer up someone who is sad.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

34. Telling family members how hurt you are.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

35. Telling family members how happy you are.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

36. Threatening someone.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

37. Criticizing someone for being late.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

38. Expressing gratitude for a favor.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

39. Surprising someone with a little gift or favor.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

40. Saying "I'm sorry" when one realizes one was wrong.

Not at all frequently 1 2 3 4 5 6 7 8 9 Very frequently

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