

PARENTAL PSYCHOLOGICAL FACTORS OF MOTHER-CHILD AND
FATHER-CHILD REMINISCING ABOUT
NEGATIVE AND POSITIVE EMOTIONAL PAST EXPERIENCES

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by
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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

PARENTAL PSYCHOLOGICAL FACTORS OF MOTHER-CHILD AND
FATHER-CHILD REMINISCING ABOUT
NEGATIVE AND POSITIVE EMOTIONAL PAST EXPERIENCES

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ABSTRACT

Little is known about the significance of parent factors, including attachment representations, depressive symptoms, and personality, in shaping parental elaborative reminiscing, as research has primarily examined child factors for parental reminiscing. Moreover, the majority of research comprises samples of mothers and children, and thus, little is known about the predictors of father-child reminiscing. The current study therefore examined the significance of parent predictors of mothers' (N = 60) and fathers' (N=47) elaboration about past emotional experiences. Mothers higher on deactivation were less elaborative during the hurt event, whereas mothers higher on hyperactivation exhibited more emotion elaboration and greater levels of elaboration when reminiscing the hurt event. Mothers higher on depressive symptoms were more elaborative during the scared event. Fathers higher on positive personality exhibited more emotion elaboration and greater levels of elaboration when reminiscing the scared event. These findings indicate that attachment history and current mood are linked with mothers' (but not fathers') elaboration, whereas more stable personality characteristics are linked with fathers' (but not mothers') elaboration. Findings advance knowledge of the significance of parent factors for their elaboration styles, by indicating that maternal elaboration might be more nuanced to child and contextual cues, whereas paternal elaboration, by contrast, might be more heavily influenced by stable trait characteristics, such as personality.

Chapter 1: Introduction

The way that parents discuss past events with children is important for their development (e.g., Fivush, 2019; Fivush & Haden, 2003; Nelson & Fivush, 2004; Thompson, 2000; Thompson et al., 2003). Elaborative parental reminiscing – in which parents provide a great deal of rich information and encourage children’s contribution to the discussion of past events through open-ended questions, affirmations, and evaluations (Fivush et al., 2006) – supports children’s cognitive and social-emotional development (e.g., Leyva et al., 2020; Wareham & Salmon, 2006; Waters et al., 2019). Parents often include both factual and emotional information during reminiscing. Factual reminiscing is an important predictor for children’s linguistic skills, autobiographical memory, and the development of theory of mind (Haden et al., 2001; Langley et al., 2017; Leyva et al., 2012; Ontai & Thompson, 2008; Reese, 1995; Reese et al., 2010; Reese & Cleveland, 2006; Rudek & Haden, 2005; Ruffman et al., 2002; Sparks & Reese, 2013; Taumoepeau & Reese, 2013; Welch-Ross, 1997). Talking about objects, people, and past events can help children engage in abstract thinking and develop theory of mind and linguistic skills in sophisticated ways (Snow, 1991). It can also scaffold children’s memory of past experiences, creating a coherent structure of past events, which further enhances their autobiographical memory (Rudek & Haden, 2005). Emotional reminiscing is an important predictor for children’s emotional understanding, self-regulation, and social competence (Bird & Reese, 2006; Harris et al., 2017; Kulkofsky et al., 2015; Laible, 2004a, 2004b, 2011; Laible & Panfile, 2009; Reese, 2008; Song & Wong, 2013; Van Bergen & Salmon, 2010). Labeling emotions, explaining the causes of emotions, and

discussing coping methods can help children better understand the personal meaning of past events and allow them to incorporate emotional experience into self-understanding (Fivush et al., 2006; Wang, 2006; Wang et al., 2010). Additionally, reminiscing about negative (vs. positive) emotions uniquely predicts children's higher levels of emotional understanding and regulation, suggesting that working through difficult experiences can be beneficial for children's social emotional maturity and development of adaptive coping skills (Fivush & Sales, 2006; Laible, 2011; Laible et al., 2013a, 2013b; Salmon & Reese, 2015).

Given the developmental significance of elaborative parental reminiscing, identifying predictors that inform greater factual and emotional discourse about past events is important for supporting children's cognitive and social development. To date, research has primarily examined the significance of child factors for parental reminiscing, including linguistic competence (McCabe & Peterson, 1991; Reese et al., 1993), temperament (Farrant & Reese, 2000; Bird et al., 2006; Laible, 2004a), and child attachment security (Bost et al., 2006; Fivush & Reese, 2002; Fivush & Vasudeva, 2002; Laible & Thompson, 2000). However, less is known about the role of parental factors in shaping parents' elaborative reminiscing. Moreover, the majority of research comprises samples of mothers and children, and thus, little is known about the predictors of father-child reminiscing. As such, the current study will examine the significance of parent predictors of mothers' and fathers' factual and emotional reminiscing about past negative and positive emotional experiences.

The Role of Parent Sex and Child Sex in Parental Elaboration

Research on parental elaboration has almost exclusively focused on mothers. However, a handful of studies suggests that mothers and fathers are different in terms of how they discuss past events with their children. Consistent with the gendered language framework (Leaper & Ayres, 2007), in which gender is defined in social contexts according to the variations in societal expectation for men and women, mothers are more elaborative than fathers during parent-child reminiscing (Fivush et al., 2000; Fivush et al., 2009; Reese & Fivush, 1993; Zaman & Fivush, 2013). Specifically, mothers engage in longer conversations, examine past events with more details and perspectives, and incorporate more elaborative questions and statements than fathers (Fivush et al., 2000; Fivush et al., 2009; Reese & Fivush, 1993; Zaman & Fivush, 2013). Mothers also use more emotion words, referring to both children's and others' emotions (Aznar & Tenenbaum, 2013; Fivush et al., 2000; Fivush & Zaman, 2014). Mothers are more likely to discuss events concerning social relationships, whereas fathers are more likely to discuss events related to achievements and independent activities with children (Buckner & Fivush, 2000; Fiese & Skillman, 2000). Nevertheless, some similarities are also observed in mother-child and father-child dyads. Both mothers and fathers elaborate and evaluate past positive events more than negative events (Fivush et al., 2009), suggesting that parental reminiscing styles might vary depending on contexts. Additionally, several studies have examined mothers' and fathers' elaboration according to child sex. Also consistent with the gendered language framework, both parents are more elaborative with daughters than sons (Reese & Fivush, 1993; Zaman & Fivush, 2013). Both mothers and fathers are more emotionally expressive and focus more on social relational aspects of the event with daughters; whereas they focus more on achievements with sons (Aznar &

Tenenbaum, 2013, 2015; Fivush et al., 2000; Fivush & Zaman, 2014). In light of such evidence, the current study examined the significance of parent sex and child sex for mothers' and fathers' elaboration when discussing past events with children.

Parental Psychological Factors of Elaborative Reminiscing

A central goal of elaborative parent-child reminiscing is to help children make sense of themselves and their relationships with others (Fivush et al., 2006; Fivush, 2019). Research consistently shows that some parents are more elaborative than others, that parental elaboration styles remain stable during childhood, and that parents who are more elaborative with one child are also more elaborative with other children (Fivush & Fromhoff, 1988; Haden, 1998; Reese et al., 1993; Reese & Fivush, 1993). Moreover, theory and evidence suggest that individual differences in how parents reminisce with their children informs the construction of children's coherent sense of self, and in turn contribute to children's developmental adaptation (Fivush, 2007, 2011; Fivush & Nelson, 2006; Leyva et al., 2020; Nelson & Fivush, 2004; Waters et al., 2019). Given the developmental significance of elaborative parental reminiscing, identifying factors that contribute to parents' reminiscing style is important. Following prior research (Coppola et al. 2014; Reese, 2008; Valentino, 2011; Vaughn et al., 2006; Williams, 2006), the current study will specifically examine the significance of attachment representations, depressive symptoms, and positive personality, for parental elaborative discourse with children.

Attachment Representations. By adulthood, attachment-relevant experiences have become internalized and formed internal working models that guide individuals' functioning within interpersonal relationships (Bowlby, 1982; Cassidy, 2000). In

particular, adult attachment is thought to play a role in how individuals process social information (Dykas & Cassidy, 2011), and thus, might inform how parents discuss past emotional experiences with children. Specifically, within secure attachment relationships, individuals can flexibly process positive and negative emotional information. In contrast, within insecure attachment relationships, individuals may selectively process emotional information via either excluding psychologically painful information or processing information with negatively biased manner (Dykas & Cassidy, 2011). Given these qualities, compared to insecure parents, parents with secure attachment may be better able to stay engaged with their children and support their exploration of past emotional events by adding new details and evaluating children's contribution to the conversation (Main & Goldwyn, 1998). Alternatively, because parents with secure attachment are more sensitive and responsive to children's communicative signals (Van IJzendoorn, 1995), they may adapt their conversational styles to their children's emotional states, which might lead to a reduction in elaborations if the child signals distress when discussing past negative events. Indeed, Reese (2002) suggested that maternal elaboration may not always be a sensitive strategy, especially within negative emotional contexts. In such cases, it might be expected that compared to insecure parents, parents with secure attachment would adjust their degree of elaboration according to children's comfort level during reminiscing past negative events.

To date, a handful of studies have examined the significance of attachment for mothers' reminiscing. This research uses both narrative measures of attachment, stemming from the developmental attachment tradition, and self-report measures of attachment, stemming from the social-personality attachment tradition. Although

narrative and self-report measures are designed to assess the quality of adults' representations of attachment, these measures are conceptually and empirically distinct (Roisman, 2009). Specifically, narrative measures of attachment, including the Adult Attachment Interview (AAI; Main et al., 1985) and the Attachment Script Assessment (ASA; Waters & Rodrigues-Doolabh, 2004), task individuals with developing either autobiographical (in the case of the AAI) or generic (in the case of the ASA) attachment-relevant narratives. Narratives are evaluated by expert raters for the extent to which they convey an understanding that attachment relationships serve secure base and safe haven functions (Roisman, 2009). Self-report measures of attachment are designed to assess individuals' feelings of security within close adult relationships (e.g., romantic relationships). Research examining links between narrative and self-reported attachment variation indicates that these measures are only weakly associated (Roisman et al., 2007; Steele et al., 2014), contributing to largely distinct literatures on narrative and self-report attachment. Given that narrative measures stem from the developmental attachment tradition, they are commonly used in research on parent-child relationships. However, in an effort to reconcile the developmental and social-personality attachment traditions, some attachment scholars have called for the incorporation of self-report attachment measures in family research (Roisman, 2009; Roisman et al., 2007). As such, the current study leveraged both narrative and self-report measures in evaluating the significance of parental attachment representations for parent-child reminiscing.

Focusing first on narrative measures of attachment, a handful of studies have leveraged these measures in examining links between mothers' attachment representations and mother-child reminiscing. However, findings from these studies have

been mixed. Specifically, Reese (2008) found that mothers who were more coherent – as reflected by developing internally consistent narratives of early attachment-relevant experiences without becoming emotional or overwhelmed in the AAI (George, Kaplan & Main, 1984) – were more elaborative when reminiscing about everyday past events. However, Bost and colleagues (2006) did not find a significant association between mothers’ secure base script knowledge (SBSK) – as reflected by the capacity to develop narratives in which attachment-relevant problems are effectively resolved in the Attachment Script Assessment (ASA; Waters & Rodrigues-Doolabh, 2004) – and maternal elaboration. Importantly, in these studies, mothers were tasked with discussing any specific past event with their child. Thus, the discrepant findings might be due to variability across mothers in terms of the past events discussed and whether they were relevant to attachment. Indeed, subsequent research has indicated that links between mothers’ attachment and elaborative reminiscing depended on the event discussed. Specifically, Coppola and colleagues (2014) found that mothers with secure (vs. insecure and unresolved) attachment representations as assessed by AAI were more likely to use an elaborative reminiscing style during positive events, but less likely to use an elaborative reminiscing style during negative events. Such evidence is consistent with the expectation that secure attachment might support mothers’ flexibility in adjusting their elaboration when discussing past events according to emotional nature of the event discussed.

Turning to research leveraging self-reported measures of attachment, studies have primarily examined the significance of mothers’ attachment for elaboration while discussing past negative events. In one study, mothers’ self-reported anxiety was

associated with higher levels of maternal elaboration when discussing stressful events, whereas mothers' self-reported avoidance was not associated with elaboration (Fivush & Sales, 2006). In another study, mothers' self-reported avoidance was associated with less structural (i.e., Wh-questions, Y/N questions, statements, and confirmations) elaboration when discussing separation events (e.g., child going to daycare); whereas attachment anxiety was not significantly associated with maternal elaboration (McDonnell et al., 2016). Additionally, a significant three-way interaction among maternal emotional elaboration, attachment avoidance, and attachment anxiety was found during discussions of acutely stressful events (e.g., visit to emergency room; McDonnell et al., 2016). Specifically, mothers high on both avoidance and anxiety demonstrated more emotional (but not structural) elaboration when discussing stressful events. It is possible that mothers high on both avoidance and anxiety may initiate emotional discussions with their children because these mothers desire closeness, but subsequently avoid emotional resolution or closure, and thus provide incoherent reminiscing, an idea should be further examined in future work. When discussing past stressful events, high level of emotional elaboration may not be appropriate, as it is shown to predict less specific child memory and more child internalizing symptoms (McDonnell et al., 2016; Fivush & Sales, 2006). Furthermore, this three-way interaction is only significant when examining acutely stressful events, but not separation, on-going conflict, or happy events, which highlights the potential specificity of self-reported adult attachment within acutely stressful (vs. other negative events) reminiscing contexts. These complex patterns of variable associations across different emotional contexts might explain the lack of consistent findings about self-reported measures of attachment and elaboration in literature.

Taken together, evidence from across studies leveraging narrative and self-report attachment measures suggests that links between adult attachment representations and parental reminiscing are nuanced and likely depend on the type of event discussed and the type of elaboration examined. To advance understanding, the field would benefit from a systematic investigation of the significance of parents' attachment representations for their factual and emotional elaboration when discussing positive and negative past events with their children. Moreover, to date, studies examining the significance of attachment for elaborative reminiscing has exclusively comprised samples of mothers and their children. Thus, it remains unknown whether and how fathers' attachment representations contribute to their elaborative reminiscing when discussing past events with their child.

Depressive Symptoms. Adult psychopathology is implicated in biased memory processes (Williams, 2006; Valentino, 2011). In particular, this study focuses on parental depressive symptoms which have been linked with disruptions to children's cognitive and social emotional functioning (Wareham & Salmon, 2006). Research to date has not directly examined the associations between parental depressive symptoms and their elaboration styles during reminiscing with children. Nevertheless, empirical evidence provides support for the potentially important role depressive symptoms may play in parental elaborative reminiscing. Specifically, previous literature suggests two possibilities. On one hand, parental depressive symptoms are associated with over-general memory reflected by difficulty in recalling specific details in autobiographical memories (Williams, 2006). As such, parents higher on depressive symptoms may have greater difficulty helping their children elaborate on past events because these parents struggle with recalling specific event details themselves (Cicchetti & Valentino, 2006;

Valentino, 2011). In particular, empirical evidence shows that mothers with clinical depression and/or depressed mood demonstrate greater degree of over-generality in their autobiographical memory compared to mothers without depressive symptoms (Moore & Zoellner, 2007). Therefore, it might be expected that maternal depressive symptoms can lead to rigid reminiscing. On the other hand, maternal depression is associated with dwelling on negative aspects of the information (Cornish et al., 2006; Seeley et al., 2019). Therefore, it might be expected that mothers higher on depressive symptoms would be more elaborative as these mothers might be more likely to focus on the negative aspects of past events during reminiscing with children. In particular, empirical evidence shows that mothers higher on depressive symptoms report higher levels of parenting stress and more negative perception of the child (Cornish et al., 2006; Edhborg et al., 2000; Fleming et al., 1988; Milgrom & McCloud, 1996). Therefore, it might be expected that maternal depressive symptoms can lead to overly elaborative reminiscing, particularly emotion elaboration. Although there is reason to believe that maternal depressive symptoms may contribute to the way in which parents discuss past events with their children, to date, no studies have directly tested this link. Moreover, fathers' depressive symptoms, have not been examined in relation to their elaborative reminiscing styles. Therefore, this study assessed both mothers' and fathers' depressive symptoms in relation to their parental elaboration when discussing positive and negative past emotional experiences with children.

Positive Personality. Parent personality may be another factor that contributes to individual differences in parental elaborative discourse with their children. Although fathers have not been examined, research has demonstrated that maternal positive

personality characteristics, including conscientiousness and agreeableness, predict greater empathy, more child-oriented beliefs, and lower negative emotional reactions when interacting with children (Bailes & Leerkes, 2021; Cohen-Bendahan et al., 2014; Crandall et al., 2018; Leerkes et al., 2015; Lorber, 2012), which in turn are associated with more sensitive and warm parenting behaviors (Prinz et al., 2009). Furthermore, it is thought that elaborative parents might have distinct social and emotional goals when engaging in elaborative reminiscing with their children (Fivush et al., 1996). Although fathers have not been examined, a study showed that elaborative mothers reported wanting to build emotional connection with their children and help their children to better understand themselves (Kulkofsky et al., 2009). Given these findings, it might be expected that parents with greater positive personality characteristics are more inclined to cultivate child empathy and perspective taking during reminiscing. As such, it might be expected that mothers' and fathers' positive personality characteristics are associated with elaborative reminiscing when discussing past events with children.

The Current Study

A wealth of research supports the significance of parental reminiscing for children's development. Despite such evidence, questions remain regarding the role of parent factors in contributing to variation in parental elaborative styles. Moreover, the majority of research focuses on overall elaboration rather than comparing how parent predictors might contribute to factual and emotion elaboration differently. Factual and emotion elaboration, rather than overall elaboration, holds unique significance for specific child outcomes across cognitive, social, and emotional domains (Fivush et al., 2006; Leyva et al., 2020; Wareham & Salmon, 2006; Waters et al., 2019). As such, it is

important to understand how parent predictors differentially contribute to factual and emotion parental elaboration. Additionally, fathers are rarely examined in the reminiscing literature. Given fathers' increasing role in caregiving (Craig & Mullan, 2010), it is important to compare how parent predictors might differentially contribute to maternal and paternal elaborative reminiscing. Furthermore, the role of child gender has not been examined in how it might moderate the associations between parent predictors and parental elaboration styles.

The current study addressed these research gaps by examining how parent attachment representations depressive symptoms, collected when infants were 6 months, and parent positive personality, collected when children were 2.5 years old, contribute to mothers' and fathers' elaboration during reminiscing about past positive and negative events. This study focuses on toddlers, a population that often left unexamined in reminiscing literature. The development of autobiographical self begins in toddlerhood. It is through parent-child interaction that toddlers start developing mental representations of self and others, and this process begins when parents invite children to participate in reminiscing about past events (Fivush, 2019; Nelson, 1996; Thompson, 2000). Reminiscing not only help children understand themselves but also others' perspectives (Fivush, 2001; Fivush & Haden, 2005). Incorporating others' perspectives require parental guidance in drawing the connections among the past, the present, and the future events, and organize personal experiences in a temporal sequence that offers meaningful insight to define who they are and their relationships with others (Lagattuta & Wellman, 2001). As toddlers become more assertive about themselves, it is through collaborative communication that children learn to understand their parents' perspectives (Thompson,

2000). As such, reminiscing provides unique opportunities for parents to engage toddlers in shared communication, and it makes toddlerhood a crucial time period to examine how parent predictors might contribute to parental elaborative reminiscing.

The Role of Sex. Consistent with previous findings (Fivush et al., 2000; Fivush et al., 2009; Reese & Fivush, 1993; Zaman & Fivush, 2013), it was expected that mothers would be more emotionally elaborative than fathers, whereas mothers and fathers were expected to demonstrate similar levels of factual elaboration. Also consistent with previous findings (Fivush et al., 2009), it was expected that mothers and fathers would be more elaborative in positive than negative events. Moreover, it was expected that mothers and fathers would be more emotionally elaborative with daughters than sons, whereas mothers and fathers were expected to demonstrate similar levels of factual elaboration with daughters and sons. We would also explore potential interactive effects between parent and child sex in relation to parental elaboration. Despite sex differences in elaborative reminiscing, the direction and magnitude of parental psychological factors were expected to be the same for mothers and fathers. Indeed, although research indicates sex differences in attachment, depression, and personality, the significance of these factors for parenting-related outcomes is generally comparable for mothers and fathers (Gray & Dunlop, 2017; Van IJzendoorn & Bakermans-Kranenburg, 2010; Shafer & Pace, 2015; Rogers et al., 2014; Denkova et al., 2012).

Attachment Representations. The current study examined the significance of parents' attachment representations for elaborative reminiscing with toddlers leveraging both narrative and self-report attachment measures. The narrative measure used in this study is the ASA (Waters & Rodrigues-Doolabh, 2004), a narrative-based measure of

cognitive scripts regarding how secure attachment relationships operate. Generic attachment narratives produced within the context of the ASA are evaluated for secure base script knowledge (SBSK; i.e., the extent to which narratives reflect awareness of and access to a script regarding effective caregiving and care-seeking between attachment figures), deactivation (i.e., the extent to which attachment-relevant themes and emotions are minimized, ignored, and/or disregarded), hyperactivation (i.e., the extent to which attachment-relevant emotions and problems are heightened), and anomalous content (i.e., the extent to which ASA narratives contain themes of fear and disorientation; Waters & Rodrigues-Doolabh, 2004; Groh & Haydon, 2021). Two composite scores were created from ASA. Specifically, ASA deactivation was created by averaging deactivation and reverse-coded SBSK, and ASA hyperactivation was created by averaging hyperactivation and anomalous content. These two composite scores were used in all analyses of the current study. The self-report measure used in this study was the Experiences in Close Relationships-Revised (ECR-R; Fraley, Walker, et al., 2000), which assesses adults' feelings of security within close adult attachment relationships (i.e., romantic relationships) and produces dimensions of avoidance (i.e., the extent to which individuals are uncomfortable being close to others vs. secure depending on others) and anxiety (i.e., the extent to which individuals are insecure vs. secure about the availability and responsiveness of romantic partners).

Given the significance of attachment variation for responding to perceived challenges or threats (Bowlby, 1969), it is expected that parental attachment variation would be particularly relevant to their emotion (vs. factual) elaboration when discussing past negative (vs. positive) events with their children. Specifically, given that higher

levels of ASA deactivation and ECR-R avoidance reflect the tendency to minimize attachment-relevant experiences and emotions, it is expected that these patterns of attachment would be associated with less emotion (vs. factual) elaboration and less elaboration during discussions about past negative events. Moreover, given that higher levels of ASA hyperactivation and higher levels of ECR-R anxiety reflect the tendency to heighten the expression of negative attachment-relevant emotions, it is expected that these patterns of attachment would be associated with more emotion (vs. factual) elaboration and more elaboration during discussions about past negative events.

Depressive Symptoms. Prior research indicates that maternal depression is associated with over-general memory as these mothers recall less specific details about past events compared to mothers without depression (Moore & Zoellner, 2007). As such, it might be expected that parents with higher levels of depressive symptoms are less elaborative when reminiscing about past events with their children. Prior research also indicates that maternal depression is associated with dwelling on negative aspects of the information (Cornish et al., 2006; Seeley et al., 2019). As such, it might be expected that parents with higher levels of depressive symptoms are more elaborative when reminiscing about past events with their children. Given that this will be the first study to examine the significance of parental depressive symptoms for reminiscing, it is difficult to make an *a priori* prediction regarding the direction of elaboration (more, less) and the role of elaboration type (factual, emotional) and event type (positive, negative). Thus, we will explore the significance of parental current depressive symptoms for mothers' and fathers' factual and emotion elaboration about past positive and negative events.

Positive Personality. Prior research indicates that maternal positive personality predict higher empathy, more child-oriented beliefs, and lower negative emotional reactions when interacting with children (Bailes & Leerkes, 2021; Cohen-Bendahan et al., 2014; Crandall et al., 2018; Leerkes et al., 2015; Lorber, 2012). Prior research also indicates that mothers who are more child-oriented, empathic, and want to build emotional connection with their children elaborate more compared to mothers who do not endorse such beliefs (Kulkofsky et al., 2009). As such, it might be expected that positive personality is positively associated with parental elaborating when reminiscing past events with children. Again, given the limited research on personality and reminiscing, we will explore the significance of parents' personality for their factual and emotional elaboration about past positive and negative events.

Chapter 2: Method

Participants

At the first time point, the sample comprised 142 mothers ($M = 31$ years; $SD = 4.67$), 130 fathers ($M = 33$ years; $SD = 5.09$), and their 6-month-old infants ($M = 6.27$ months, $SD = 0.52$; 51% female). Parents were recruited via announcements at hospital birth education and lactation classes, community events for families, and advertisements in university newsletters. The ethnic make-up of parents was consistent with that of the small, mid-western city from which families were recruited. Seventy-eight percent of mothers were Caucasian, 9% were Asian, 6% were Hispanic, 4% were African American, and 3% of mothers were from other racial backgrounds (i.e., Native American, multiracial). Mothers' education ranged from high school degree (1) to advanced degree (5) with a median of 4 (bachelor's degree). Seventy-eight percent of fathers were Caucasian, 8% were Asian, 7% were Hispanic, 5% were African American, and 2% of fathers were from other racial backgrounds (i.e., Native American, multiracial). Fathers' education ranged from high school degree (1) to advanced degree (5) with a median of 4 (bachelor's degree). Annual family income ranged from less than \$10,000 to more than \$100,000 with a median reported range between \$60,000 and \$70,000. At the second time point, 60 mothers, 47 fathers, and their children ($M = 30.49$ months, $SD = 2.06$; 45% female) participated in the follow-up study. The primary reason for attrition was relocation out of the research area. Families who participated in the follow-up study did not differ from those who did not in terms of demographic variables.

Procedure

Families participated in two laboratory visits (~2 hours each). During the first laboratory visit when infants were about 6 months old, parents completed questionnaires assessing their attachment styles and personality traits. Parents also completed the Attachment Script Assessment while being digitally recorded for later transcription and coding. During the second laboratory visit when children were about 2.5-year-old, mothers completed a questionnaire assessing their child's vocabulary. Mothers and fathers completed a questionnaire assessing their depressive symptoms. Mother-child and father-child dyads completed a reminiscing task in which parents were asked to discuss three past emotion-laden events with their child: a time when the child was hurt, a time when the child was scared, and a time when the child was happy. The conversations were video recorded for later transcription and coding.

Measures

Attachment Script Assessment (ASA). Mothers' and fathers' attachment representations were assessed using the ASA (Waters & Rodrigues-Doolabh, 2004). The ASA is a word-prompt method designed to assess access to and awareness of a secure base script thought to be informed by individuals' history of secure base support in childhood (Waters & Waters, 2006). During the ASA, parents were given 6 cards (order counterbalanced), each with a title and a list of 12 words to help them make up each story. Three stories were about children's relationships ("Baby's Morning"; "Doctor's Office"; and "Trip to the Park") and three stories were about adults' relationships ("Camping Trip"; "The Accident"; and "Shopping"). Two adult ("Camping Trip" and "The Accident") and two of the child ("Baby's Morning" and "Doctor's Office") attachment-relevant stories were coded using 7-point scales (Waters & Rodrigues-

Doolabh, 2004; Groh & Haydon, 2021) for secure base script knowledge (i.e., an understanding that attachment relationships serve secure base and safe haven functions), deactivation (i.e., whether attachment-relevant themes and emotions are minimized, ignored, and/or disregarded), hyperactivation (i.e., whether attachment-relevant emotions and problems are heightened), and anomalous content (i.e., the extent to which themes of fear and disorientation emerge). Scores for each dimension were averaged across stories. Coders overlapped on 20% of the stories, and interrater reliability was high ($M ICC = 0.92$, range = 0.86-0.95; $F ICC = 0.83$, range = 0.74-0.91). ASA data were missing for one mother due to a problem with the audio-recording device.

Experiences in Close Relationships – Revised (ECR-R) Questionnaire.

Romantic attachment orientation was assessed using the ECR-R Questionnaire (Fraley, Walker, et al., 2000). The ECR-R measure is a self-report questionnaire that is used to assess trait-like insecurity in relation to romantic attachments. The ECR-R was scored with respect to two dimensions: *attachment-related avoidance* (e.g., “I prefer not to show a partner how I feel deep down”) and *attachment-related anxiety* (e.g., “I’m afraid that I will lose my partner’s love”). As reported in Fraley and colleague (2013), the two dimensions were positively correlated ($r = 0.33$) and had high reliabilities ($\alpha = 0.94$ for both dimensions). For this sample, Cronbach’s alphas are 0.93 for attachment-related avoidance and 0.91 for attachment-related anxiety for mothers; Cronbach’s alphas are 0.91 for attachment-related avoidance and 0.89 for attachment-related anxiety for fathers.

Center for Epidemiologic Studies Depression Scale (CES-D). Parental depressive symptoms were assessed using the CES-D (Radloff, 1977). The CES-D measure is a self-report questionnaire that is used to assess the current level of depressive

symptomatology in the general population. It contains 20 items about symptoms that occurred in the week prior to the second lab visit with response options from 0 to 3 that refer to frequency of the symptoms. For this sample, the score ranged between 0 and 30 for mothers' ($\alpha = 0.91$) and fathers' ($\alpha = 0.90$) sample. Higher scores reflect more depressive symptoms.

NEO Personality Inventory – Revised (NEO-PI-R) Questionnaire. The 60-item NEO-PI-R Questionnaire (Costa & McCrae, 2004) was administered. Parents responded to each item on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). The measure is used to evaluate five personality traits: (1) neuroticism (12 items; e.g., “I often feel inferior to others”), (2) extraversion (12 items; e.g., “I like to have others around me”), (3) openness (12 items; e.g., “I am intrigued by the patterns I find in art and nature”), (4) agreeableness (12 items; e.g., “I would rather cooperate with others than compete with them”), and (5) conscientiousness (12 items; e.g., “I am a productive person who always gets the job done”). For the current study, only two scales were used: agreeableness and conscientiousness, given that they reflect positive personality traits (Leerkes et al., 2021). All agreeableness and conscientiousness items were averaged together to create an overall positive personality score ($\alpha = 0.77$ for mothers; $\alpha = 0.83$ for fathers). Higher scores reflect more positive personality characteristics.

MacArthur-Bates Communicative Development Inventories (CDIs) Short Form. The MacArthur CDIs (Fenson et al., 1993) are widely used parent-report instruments for assessing communicative skills in infants and toddlers. In this study, the toddler short form was used, which was applicable to 16-30 months old children. This

form contains 100 vocabulary items, and mothers were asked to score whether their child has spoken each item (1=yes; 0=no). This short form has shown strong test-retest reliability as Cronbach's alpha approached 1.0 and strong content validity as the items were derived from developmental literature and known to be represented across the 16-30 months age range (Fenson et al., 2000). The short form also correlates strongly with the full CDIs ($r_s=.88-.93$; Fenson et al., 1993, 2000; Hanson, 1994). For this study, the total number of spoken words reported by the mother was calculated for each child (Ganea et al., 2016; Luo et al., 2020; Scott & Fisher, 2012).

Parent-Child Reminiscing Process, Transcription, and Coding. Mothers and fathers were separately instructed to discuss three types of past events with their child: a time when the child was hurt, a time when the child was scared, and a time when the child was happy. Parents were instructed to think of a specific event (i.e., not a routine event that happens regularly) that the parent and the child shared recently for each topic. Parents were also instructed for the events they chose, it was fine if there were more people present, as long as both the parent and the child were there, and it was a specific event that they shared together. Mothers and fathers were given some time to think about these specific events before they wrote down the events. When ready, parents were instructed to discuss the events as they normally would do. There was no set time limit for the parent-child reminiscing task. After parent-child dyads finished discussing the hurt event, they moved onto the scared event, and then they moved onto the happy event.

Mother-child and father-child dyads were videotaped during their conversations, and all mother-child and father-child conversations were transcribed verbatim after the lab visit was complete. Four mother-child and four father-child dyads spoke in Mandarin

during their conversations. All other mother-child and father-child dyads spoke in English during their conversations. The Mandarin conversations were transcribed by a trained research assistant whose native language was Mandarin, and the transcribed conversations were double checked by the author of this study, whose native language was also Mandarin. After transcription, the author of this study translated all four mother-child and father-child Mandarin conversations to English. The translated conversations were double checked by the author of this study. All four Mandarin-speaking families have lived in the U.S. for a number of years due to parents' pursuit of graduate studies. Thus, their reminiscing conversations are preserved in the study sample and are coded in the same way as those of English-speaking families.

Elaboration is defined as open-ended questions, yes-no questions, or statements that provide new (i.e., not previously mentioned by the parent or the child) information about the topic event or a particular aspect of the topic event (Groh & Bohanek, 2019). Before coding, each sentence was divided into utterances. An utterance was defined as a proposition that contains a subject and verb, or the provisions of a stand-alone confirmation or negation (e.g., “Yeah”, “uh-huh”, “No”). Next, parents' utterances were coded for elaborations. The coding system used in this study was developed by Groh and Bohanek (2019), adapted from the standard reminiscing coding literature of previous studies (Bohanek et al., 2008, 2009; Haden, 1998; Lukowski & Bohanek, 2017; Ornstein & Haden, 2001; Reese et al., 1993). Specifically, there are four types of elaboration codes:

- **General Memory Questions Elaboration** (i.e., memory questions that ask for new memory information about an event): examples include “What did we do at

the zoo?”, “Tell me what was your favorite part?”, “Do you remember who went with us?”

- **Yes-No Questions Elaboration** (i.e., questions that ask the child to confirm or deny a new piece of memory information provided by the parent): examples include “Did you miss your friends?”, “That was fun, wasn’t it?”, and “Was it hot or cold outside?”
- **Statement Elaboration** (i.e., declarative comment made by parents that provide new information about the topic event): examples include “It was about a month ago when we went there”, “You dressed up so pretty”, and “I like that”.
- **Confirmations** (i.e., comments that in some way confirm the information provided by the child): examples include “Yes”, “Uh-hum”, and “You’re right”.

When applicable, each utterance was assigned one of the above three elaboration codes.

Total elaboration score was calculated as the total number of elaboration codes across all three events for each mother and father.

Next, each elaboration code was broken into two ways: factual vs. emotion. That is, each elaboration was further coded as to whether it focused on factual or emotional aspects of the event. The master coder read through the transcripts of the events and identified the factual and emotional talk within each event. Specifically, any elaboration that pertained to a fact about the event was considered a factual elaboration. Any elaboration that pertained to an emotional state or behavior was considered an emotional elaboration. The elaboration did not have to contain an emotion word but had to be part of a conversation about an emotional state or reaction. Total factual elaboration score was calculated as the total number of factual elaboration codes across all three events for each

mother and father. Total emotion elaboration score was calculated as the total number of emotional elaboration codes across all three events for each mother and father. Emotion elaboration and factual elaboration are mutually exclusive. For each parent, we have:

- **Total elaboration score** = Factual elaboration score + Emotional elaboration score
- **Total elaboration score** = Happy elaboration score + Hurt elaboration score + Scared elaboration score

Total, factual, emotion, happy, hurt, and scared elaboration scores were used in analyses. Two coders independently coded 20% of randomly selected mother-child transcripts and achieved an average kappa of 0.85 (0.74 - 0.94) for mothers. The remaining mother-child transcripts were divided between the two coders and were coded independently. Two coders independently coded 20% of randomly selected father-child transcripts and achieved an average kappa of 0.80 (0.68 - 0.95) for fathers. The remaining father-child transcripts were divided between the two coders and were coded independently.

Planned Analyses

The G*Power 3.1.9.7 power analysis program was used to determine the needed sample size for data analysis. For mothers (N=60), there was 34% power to detect a small effect ($r = .20$), 91% power to detect a medium effect ($r = .40$), and 99% power to detect a large effect ($r = .60$). For fathers (N=47), there was 28% power to detect a small effect ($r = .20$), 83% power to detect a medium effect ($r = .40$), and 99% power to detect a large effect ($r = .60$).

First, we examined sex differences in parental elaboration variables according to parent sex and child sex. Using multilevel modeling (MLM), each mother's and each father's IDs were nested within each family ID. We conducted three MLM models of analyses for total elaboration, elaboration type (factual, emotion), and event type (happy, hurt, scared). In our first model, we added parent sex to the model. In our second model, we added parent sex and child sex to the model. In our last model, we added parent sex, child sex, and child vocabulary to the model. Next, we examined the correlations between parental psychological factors (i.e., attachment representations, depressive symptoms, positive personality) and parental elaboration variables (i.e., total, factual, emotion, happy, hurt, scared). Specifically, we conducted correlation analyses separately for mothers and fathers. We first conducted correlation analyses among these variables, and then we conducted partial correlation analyses by adding child vocabulary as a control variable to mothers' and fathers' analyses.

Chapter 3: Results

Preliminary Analyses

Mothers' and fathers' descriptive statistics among study variables are displayed in Table 1 and Table 2 respectively. Correlations among study variables were examined to identify potential covariates. Mothers' age was negatively associated with their self-reported attachment anxiety and positively associated with their ASA deactivation. Mothers' education was positively associated with their positive personality. Household income was negatively associated with mothers' self-reported attachment anxiety. Fathers' education was negatively associated with their ASA hyperactivation and positively associated with their emotion elaboration. Fathers' race was positively associated with their self-reported attachment avoidance. Thus, these demographic variables were initially included in the analyses as covariates. However, because the inclusion of these demographic variables did not alter the pattern and significance of the findings, they were dropped from analyses and more parsimonious models are presented below. Additionally, correlations among mothers' and fathers' elaboration variables were examined. Results indicated that mothers' and fathers' elaboration variables were not significantly associated with each other.

Variation in Parental Elaboration According to Sex

Using multilevel modeling method, we conducted separate analyses in examining the variations in parental total elaboration (Table 3), parental elaboration according to elaboration type (Table 4), and parental elaboration according to event type (Table 5). For each analysis, we conducted three models: in our first model, we added parent sex (fathers = 1; mothers = 0) to the model; in our second model, we added parent sex and

child sex (boys = 1; girls = 0) to the model; and in our last model (i.e., full model), we added parent sex, child sex, and child vocabulary to the model.

Total Elaboration According to Parent Sex and Child Sex. For total elaboration, although trending, parent sex is not significant in predicting mothers' and fathers' total elaboration, suggesting that with 2.5 years old sample, mothers and fathers were equally elaborative when discussing past events with their children. Child sex is not significant in predicting parental total elaboration, suggesting that parents were equally elaborative with boys and girls in their total elaboration. Adding child vocabulary did not change the pattern and the significance of parent sex or child sex in our analyses.

Elaboration Type According to Parent Sex and Child Sex. Elaboration type (factual elaboration = 1; emotion elaboration = 2) was a significant predictor for mothers' and fathers' elaborateness. A negative value of estimate ($b = -9.81, p < .001$) indicates that parents were more elaborative in discussing factual content compared to emotional content. Additionally, mothers were not different from fathers, suggesting that mothers and fathers were both more elaborative in discussing factual content compared to emotional content. Child sex was not significant in predicting parental factual and emotion elaboration, suggesting mothers and fathers were equally elaborative in discussing factual content and emotional content with boys and girls. Adding child vocabulary did not change the pattern and the significance of parent sex or child sex in our analyses.

Event Type According to Parent Sex and Child Sex. Event type (happy = 1; hurt = 2; scared = 3) was not a significant predictor for mothers' and fathers' elaborateness. Mothers and fathers were equally elaborative during happy, hurt, and

scared events. Additionally, mothers were not different from fathers, suggesting that mothers and fathers were equally elaborative during all three types of events. Child sex was not significant in predicting parental elaboration during each event, suggesting that mothers and fathers were equally elaborative in discussing happy, hurt, and scared events with boys and girls. Adding child vocabulary did not change the pattern and the significance of parent sex or child sex in our analyses.

Parent Psychological Factors and Elaborative Discourse

Mothers. First, we will focus on results of mothers' psychological factors and their elaborative discourse with children during the discussions of past events.

Attachment Representations. As shown in Table 6, focusing first on findings leveraging a narrative measure from the developmental attachment tradition, findings indicated that mothers' deactivation was negatively associated with elaboration during the hurt event ($r = -0.27, p < .05$). Thus, mothers' higher in deactivation exhibited lower levels of elaboration when discussing a time when their child was hurt in the past. Mothers' hyperactivation was positively associated with both their elaboration when discussing emotional content ($r = 0.29, p < .05$) and their elaboration during the hurt event ($r = 0.36, p < .01$). These findings indicate that mothers' higher on attachment-relevant hyperactivation engage in more elaborative discourse when discussing emotional content of past events and when discussing a time when their child was hurt in the past. Importantly, the direction and magnitude of these associations remained comparable when adding child vocabulary as covariate. Turning next to findings leveraging a self-report measure from the social-personality attachment tradition, findings indicated that mothers' self-reported attachment avoidance and anxiety were not associated with total

elaboration, specific types of elaboration (factual, emotion), or elaboration when discussing specific events (happy, hurt, scared).

Depressive Symptoms. As shown in Table 6, mothers' depressive symptoms were positively associated with elaboration during the scared event ($r = 0.27, p < .05$). The direction and magnitude of this association remained comparable when adding child vocabulary as covariate. This finding indicates that mothers with higher levels of depressive symptoms engage in higher levels of elaborative discourse when discussing a time when the child was scared.

Positive Personality. As shown in Table 6, results indicated that mothers' positive personality was not associated with total elaboration, specific types of elaboration (factual, emotion), or elaboration when discussing specific events (happy, hurt, scared).

Fathers. Next, we will turn to results of fathers' psychological factors and their elaborative discourse with children during the discussions of past events.

Attachment Representations. As shown in Table 7, focusing first on the narrative measure derived from the developmental attachment tradition, in contrast to mothers, fathers' ASA deactivation and hyperactivation were not significantly associated with their elaborative discourse when discussing past events with their children. Similarly, fathers' self-reported attachment was not associated with their total elaboration, specific types of elaboration (factual, emotion), or elaboration when discussing specific events (happy, hurt, scared).

Depressive Symptoms. As shown in Table 7, results indicated that fathers' depressive symptoms were not associated with their total elaboration, specific types of

elaboration (factual, emotion), or elaborative discourse when discussing specific past events (happy, hurt, scared) with their children.

Positive Personality. As shown in Table 7, unlike the findings from mothers, fathers' positive personality was significantly, positively associated with elaboration when discussing emotional content ($r = 0.44, p < .05$) and elaboration during the scared event ($r = 0.31, p < .05$). The pattern and magnitude of these associations remained comparable when adding child vocabulary as covariate. These findings indicate that fathers with a more positive personality engaged more elaborative discourse when discussing the emotional content of past events and when discussing a time when their child was scared in the past.

Chapter 4: Discussion

Despite the significance of parental elaborative reminiscing for children's cognitive and socioemotional development (e.g., Leyva et al., 2020; Wareham & Salmon, 2006; Waters et al., 2019), relatively little is known about parent factors that might contribute to their elaborative discourse during reminiscing with children, as the majority of research to date has focused on child factors (Bird et al., 2006; Bost et al., 2006; Farrant & Reese, 2000, 2002; Fivush & Vasudeva, 2002; Laible, 2004a; Laible & Thompson, 2000; McCabe & Peterson, 1991; Reese et al., 1993). To extend knowledge of the significance of parent factors for their elaborative reminiscing, this study examined the significance of mothers' and fathers' attachment representations, depressive symptoms, and positive personality for their elaboration styles when discussing past positive and negative events with their toddler children. Moreover, although differences in parental elaboration according to parent sex and child sex have been examined (Fivush et al., 2000; Fivush et al., 2009; Reese & Fivush, 1993; Zaman & Fivush, 2013), previous research has primarily focused on parent-child reminiscing with older children, in the preschool years and beyond. As such, this study provided a unique opportunity to examine the roles of parent sex and child sex in parental elaborative reminiscing when parents just begin reminiscing with their children in toddlerhood. Below, findings from this study are discussed, focusing first on the role of parent and child sex in parents' elaborative discourse while reminiscing with their child, and then turning next to parental psychological factors that contribute to variation in parents' elaborative discourse.

The Role of Sex in Parental Elaboration

Findings from this study indicated that mothers and fathers did not vary in their total elaboration. Moreover, mothers and fathers did not differ in terms of the extent to which they engaged in different types of elaboration (i.e., factual vs. emotion) or the extent to which they elaborated when discussing different events (i.e., happy vs. hurt vs. scared). Only two previous studies, both using U.S. samples, have directly compared mothers' and fathers' elaborative reminiscing (Reese & Fivush, 1993; Zaman & Fivush, 2013). Using a 3.5-year-old sample ($N=24$), Reese and Fivush (1993) found mothers and fathers were equally elaborative when discussing past events with children. However, using a 4.5-year-old sample ($N=42$), Zaman and Fivush (2013) found that mothers were more elaborative than fathers in their discourse with children. Together with this prior evidence, findings from this study suggest differences between mothers and fathers might emerge as children age, perhaps as a result of gains in children's linguistic skills. Indeed, previous research suggests that the contribution of children's linguistic skills to parental reminiscing decreases as children age (Farrant & Reese, 2000; Haden et al., 2009; McCabe & Peterson, 1991). Perhaps, by the end of the early childhood, most children have developed sufficient linguistic skills to facilitate discussion of past events (Lagattuta & Wellman, 2001). This may contribute to parents modifying their elaboration less to align with their child's linguistic skills, and instead allow for the emergence of other factors that might shape the way in which parents discuss past events with their child. Consistent with the gender expectation that women value the act of reminiscing more than men (Ross & Homberg, 1990), mothers might become more elaborative than fathers. Furthermore, emotion elaboration is more common among women than men, as women more often imbue their discourse with emotional state language (Bauer et al., 2003;

Fivush & Zaman, 2014). As such, when parents talk about past emotional experiences with children, emotional contexts might activate parental gender schemas and contribute to mothers elaborating more than fathers when reminiscing with children.

Findings from this study also indicated that mothers and fathers were comparably elaborative with boys and girls in terms of their total elaboration, and in terms of the extent to which they engaged in different types of elaboration (factual, emotion) and elaborated during discussion of different events (happy, hurt, scared). These results differ from previous literature, which indicates that both mothers and fathers are more elaborative with daughters than sons in their total elaboration (Reese & Fivush, 1993; Zaman & Fivush, 2013). However, previous studies comprised older children than those examined here. Similar to the findings regarding parent sex, findings from prior research and the current study suggest that variation in parental elaboration according to child sex may not be initially present when families begin reminiscing during toddlerhood. Instead, sex differences might gradually emerge overtime. As children begin talking about past events in toddlerhood, they rely on their parents to help them scaffold the events (Fivush et al., 1987). According to gendered language framework (Graddol & Swann, 1989; Leaper & Ayres, 2007), when children are about four years old, parents start to engage in different styles of communication with boys and girls as a way to shape their communication to be consistent with gender expectations in society. Indeed, evidence suggests that with four- to six-year-old samples, parents are more emotionally expressive and focus more on social emotional aspects of the event when reminiscing with girls, whereas parents focus more on individual activities and achievements with sons (Aznar & Tenenbaum, 2013; Fivush et al., 2000; Fivush & Zaman, 2014). Due to language and

cognitive limitations in toddlerhood, socializing boys and girls according to gender roles might not be parents' priority during reminiscing.

Contribution of Psychological Factors to Parental Elaborative Discourse

Mothers' Elaborative Reminiscing. Mothers with higher levels of ASA deactivation were less elaborative when discussing a time when the child was hurt in the past. In interpreting this finding, it is useful to draw on the literature on attachment and social information processing. A number of studies have examined memory bias as a function of attachment (for review, see Dykas & Cassidy, 2011). Findings have demonstrated that insecure patterns of attachment characterized by deactivation (i.e., avoidant, dismissing) are implicated in defensive suppression of past events. For example, after listening to a tape-recorded clinical interview of a woman describing her family relationships that contained many attachment themes, avoidant individuals had the most difficulty remembering the details of the events described (Fraley & Brumbaugh, 2007). Moreover, individuals higher in avoidance have been found to be slower at recalling past sad and anxious emotional memories and report these memories as being less intense (Mikulincer & Orbach, 1995). In addition to biased memory recall, patterns of attachment characterized by deactivation are implicated in biased attention to attachment-relevant information (see Dykas & Cassidy, 2011). For example, attachment avoidance has been implicated in poorer attention to emotional information, suppression of attention to attachment-relevant information, and diversion of attention away from attachment figure in the context of threat (Fraley, Garner, et al., 2000; Mikulincer et al., 2002; Williams et al., 1996). In light of such evidence, the tendency of individuals higher in deactivation to suppress memory of and attention to attachment-relevant information

might play a role in mothers' elaborative discourse with their children. Specifically, memory suppression of attachment-relevant information might make it difficult for these mothers to remember the details of a time in the past when their child was hurt, which is necessary for mothers to be elaborative when discussing past events. Moreover, when discussing a time in the past when their child was hurt, mothers' higher in deactivation might be less likely to engage in conversational tactics that would prolong the discussion with their child due to a tendency to suppress attention to attachment-relevant information.

Higher levels of ASA hyperactivation were associated with more elaboration on the emotional content of the narrative and when discussing a time that the child was hurt in the past. Again, drawing on the literature on attachment and social information processing (Dykas & Cassidy, 2011), findings have demonstrated that insecure patterns of attachment characterized by hyperactivation (i.e., preoccupied, anxious) are implicated in heightened attention to attachment-relevant information, particularly negative emotions. For example, insecure-anxious individuals have been shown to selectively attend to the names of attachment figures (Dewitte et al., 2007; Mikulincer et al., 2000) and attend more quickly to attachment-relevant words (Mikulincer et al., 2002). Additionally, insecure-anxious individuals were more likely to look for negative information about their own attachment behaviors (Rholes et al., 2007) and seek out negative feedback from their attachment figures (Brennan & Bosson, 1998; Carnelley et al., 2007). In addition to exhibiting heightened attention to negative attachment-relevant information, hyperactivating individuals also exhibit biases in the memory of attachment information. Indeed, insecure-anxious individuals were more quickly in recalling sad and

angry (vs. happy) memories, whereas individuals with secure attachment were more quickly in recalling happy (vs. sad and angry) memories (Mikulincer & Orbach, 1995). Such biases in memory and attention might help explain why mothers' higher on hyperactivation engaged in greater elaboration about the emotional content of past events and when discussing a time in the past when their child was hurt. Specifically, mothers higher in hyperactivation tendency to remember negative attachment-relevant information, might facilitate their ability to discuss the emotional content of past events and the details of their children's experience of being hurt. Moreover, the tendency of these mothers to attend to negative emotions and attachment-relevant information might make them more likely to engage in styles of discourse that prolong the discussion of negative emotions in the past and painful past experiences for the child.

Findings indicated that mothers' attachment variation was associated with their elaboration when discussing a time in which the child was hurt, but not a time when the child was happy or scared. The hurt event was designed to elicit discussion of a past attachment-relevant experience, given that during this event, the child was hurt and often in pain, and thus signaling an attachment need (Bowlby, 1969). As such, the significant association between attachment and elaboration within the hurt event suggests that mothers' attachment variation contributes to their elaborateness when discussing past attachment-relevant events. The past positive event was not intended to be attachment-relevant. Instead, these events were intended to reflect a time when the child was engaged in a positive experience in which the mother was present. Indeed, common topics that mothers discussed with children included: the mother and the child visited a zoo and discussed what animals they saw at the zoo. Unexpectedly, although the scared event

topic was also intended to elicit discussion of a past attachment-relevant experiences, mothers' attachment variation was not associated with their elaboration of this past event. The scared event specifically pertained to children's experience of fear. Although fear is an emotion relevant to the attachment system (Bowlby, 1973; Main, 1981), it is typically implicated in attachment disorganization, a pattern of attachment that is more prevalent among high-risk samples (Carlson et al., 1989; Lyons-Ruth et al., 1990; Speltz et al., 1990; Spieker & Booth, 1988). Indeed, in this normative-risk sample, mothers' variation in ASA anomalous content ranged from 1.00 – 4.58, whereas mothers' attachment variation on the other ASA dimensions ranged from 1.00 – 6.67. As such, the normative-risk nature of this sample might have limited our ability to identify a significant association between mothers' attachment variation and their elaboration when discussing a past experience in which their child was scared.

Previous research suggests that families who have experienced traumatic experiences may have greater difficulty creating elaborative, expressive, and coherent stories that build strength and resilience in children (Fivush & Edwards, 2004). Children who grow up in high-risk families are often silenced, negated, or instructed to stick with sanctioned versions of stories, which can make children feel unauthentic and prevent them from developing a coherent autobiographical self (Fivush, 2010). Such evidence elucidates the particular challenges high-risk families might face when reminiscing about past events. Given that attachment variation shapes the way in which past experiences are remembered and how attachment-relevant information is processed, there is a need for further research on the significance of attachment representations for parental reminiscing among high-risk samples.

Findings from this study contribute to the literature on mothers' attachment and their elaborative reminiscing and help to clarify the inconsistent findings from prior studies (Bost et al., 2006; Coppola et al., 2014; Reese, 2008). Prior research has examined variation in attachment security as captured by AAI coherence and ASA SBSK in relation to mothers' reminiscing (Bost et al., 2006; Reese, 2008). However, various patterns of attachment insecurity and disorganization are captured at the lower end of these scales. Findings from this study demonstrate that specific patterns of attachment insecurity exhibit opposite patterns of associations with mothers' elaborative reminiscing. Specifically, whereas attachment deactivation was associated with lower levels of elaboration, higher hyperactivation was associated with higher levels of elaboration when discussing a time in the past when the child was hurt. The opposite pattern of associations would contribute to the associations being cancelled out when these patterns of attachment are combined. Indeed, findings from this study indicated that mothers' SBSK was not significantly associated with their elaborative reminiscing. Thus, findings from this study signal the need to consider specific patterns of attachment, including patterns of insecurity and disorganization, in investigations of attachment and reminiscing.

Additionally, the past events that mothers and children discussed in prior research varied across studies, with many studies allowing mothers to discuss any past event with children (Bost et al., 2006; Reese, 2008). However, this can be problematic given that attachment is conceptualized as a biobehavioral stress regulatory system (Bowlby, 1969). Thus, attachment variation is expected to be especially relevant for responding to perceived challenges or threats (Bowlby, 1969). As such, attachment variation might be expected to be particularly relevant to reminiscing about past events involving children's

need for protection. Indeed, our findings indicated that mothers' attachment was associated with their reminiscing about a time when their child was hurt, in particular. As such, careful consideration of the events selected when investigating the contribution of attachment to parental reminiscing is important for future research.

In contrast to findings leveraging the ASA, a narrative measure of attachment, attachment variation as assessed via the ECR-R, a self-report measure of attachment, was not associated with mothers' elaborative discourse of past events with children. Prior research leveraging self-reported measures of attachment has yielded inconsistent findings regarding links with parental reminiscing. In one study, attachment avoidance was associated with less elaboration when discussing a separation event, whereas attachment anxiety was not associated with maternal elaboration (McDonnell et al., 2016). In another study, attachment avoidance was not associated with maternal elaboration, whereas attachment anxiety was associated with more elaboration when discussing a stressful event (Fivush & Sales, 2006). Self-report measures of attachment assess individuals' feelings of security in adult romantic relationships (Fraley, Walker, et al., 2000). Findings from the current and past studies suggest that feelings of security in adult romantic relationships may not be reliably associated with mothers' elaborative discourse with children. Indeed, feelings of security in adult romantic relationships would be expected to be more relevant to couples' relationship quality and discourse styles (Fraley & Shaver, 2000; Hazan & Shaver, 1987, 1994; Mikulincer & Shaver, 2012; Pistole et al., 2010), rather than parents' discourse style with offspring. In contrast, given that mothers are thought to engage in elaborative reminiscing to help children better understand themselves and their relationship with others (Conway & Pleydell-Pearce,

2000; Kulkofsky et al., 2009; Rubin, 2006), script-like attachment representations assessed within the context of the ASA might be especially relevant to mothers' reminiscing given that such representations capture a nuanced understanding of how attachment-relevant events typically unfold.

Turning next to depressive symptoms, this is the first study examining the significance of depressive symptoms for maternal elaboration during discourse of past events with children. We evaluated two predictions informed by previous literature. On one hand, research demonstrates an association between maternal depressive symptoms and over general memory (Moore & Zoellner, 2007). As such, it might be expected that mothers higher on depressive symptoms would be less elaborative as these mothers might have difficulty recalling specific details of past events themselves, ultimately contributing to rigid and limited reminiscing with children. On the other hand, research suggests that maternal depression is associated with dwelling on negative aspects of the information (Cornish et al., 2006; Seeley et al., 2019). As such, it might be expected that mothers higher on depressive symptoms would be more elaborative as these mothers might heavily focus on the negative aspects of past events during reminiscing with children. Our finding that maternal depressive symptoms were associated with greater elaboration when discussing a time in the past when the child was scared supports the latter prediction. In interpreting this finding, it is useful to draw on cognitive research focused on maternal depression. Cognitive theories argue that negative thoughts about the self and others are central features of depression (Beck, 1987). In the case of maternal depression, the quality of mothers' experience of parent-child interaction may be particularly affected when negative thoughts encompass maternal feelings of competence

as a parent, enjoyment of the parental role, and maternal perception of the child (Teti & Gelfand, 1997). Empirical evidence suggests that mothers higher on depressive symptoms report higher levels of parenting stress specifically related to their child characteristics (Cornish et al., 2006; Edhborg et al., 2000; Fleming et al., 1988; Milgrom & McCloud, 1996). Mothers higher on depressive symptoms also reported more negative perceptions of their child behaviors and more hostile feelings toward their child (Cornish et al., 2006; Edhborg et al., 2000; Field, 1995; Milgrom et al., 1995). Such evidence suggests that when prompted to engage in reminiscing past events, especially the negative ones, mothers with higher levels of depressive symptoms might be more likely to attend to the problematic behaviors of the child and the negative emotions elicited by the event, perhaps contributing to greater elaboration.

Findings from this study also indicate that the association between maternal depressive symptoms and their elaboration are specific to the scared event, but not the happy or hurt event, suggesting that mothers higher on depressive symptoms might be more likely to dwell on the negative information when discussing a time in which the child was scared. It is possible that mothers higher on depressive symptoms are more prone to fear. Indeed, previous literature found that mothers higher on depressive symptoms reported greater levels of fear within interpersonal contexts (Frech & Kimbro, 2011; Heneghan et al., 2006; Walfisch, 2012). These findings suggest that mothers higher on depressive symptoms might perceive disproportional levels of risks, which might impair their decision-making, behaviors, and reminiscing strategies when discussing a time in which the child was scared. Perhaps, the discussion about a scared event alerts mothers higher on depressive symptoms, which make them more likely to dwell on the

negative thoughts about the child and the context, subsequently contributing to higher levels of elaboration on this topic. In contrast, happy events were intended to reflect a time when the child was engaged in a positive experience with the mother, which would not prompt mothers to dwell on the negative aspects of the event. Most of the discussions about a hurt event in this study only involved physical injuries (e.g., the child's knees were scraped). Greater physical pain is associated with higher levels of maternal postpartum depression during the first year after childbirth (Ansara et al., 2005; Shidhaye & Giri, 2014; Woolhouse et al., 2014). However, this link has not been identified beyond the first year of childbirth, as approximately 80% mothers diagnosed with postpartum depression recover within 12 months (Bauman et al., 2020). Therefore, discussions about a time when the child was hurt might not be relevant to maternal depressive symptoms assessed when children were 2.5 years old.

Fathers' Elaborative Reminiscing. Findings from this study indicated that positive personality was associated with fathers' elaboration when discussing past events with children. Specifically, higher levels of positive personality were associated with more paternal elaboration on emotional content and with more elaboration during discussion of a time when the child was scared. This is the first study to examine the role of positive personality in fathers' elaboration when discussing past events with children. Previous literature suggests that positive personality is linked with greater interpersonal problem solving skills (Arslan, 2016; D'Zurilla et al., 2011). Positive personality has two components: conscientiousness and agreeableness. Past research has found that higher levels of conscientiousness is linked with individuals' willingness to approach the problem and ability to engage in rational thinking to solve the problem (D'zurilla &

Chang, 1995; D’Zurilla et al., 2011; Cam & Tumkaya, 2007). It was also found that higher levels of agreeableness is linked with individuals’ caution and planning when approaching and solving problems (Arslan, 2016; D’Zurilla et al., 2011). In light of such evidence, fathers with higher levels of positive personality might be more elaborative with their child when discussing emotions tied to past events and when discussing a time when the child was scared because they are using elaboration as an opportunity to help the child problem solve. Indeed, an examination of the conversations of fathers higher in positive personality indicated that these fathers were discussing ways to help the child cope with negative emotions. For example, one father and child discussed a time when the child was scared by the lighting and thunder (see Appendix 1). The father helped the child not to be scared by encouraging him to seek help from an adult at home or hide under the pillow. During this reminiscing, the father was motivated to provide solutions for his child and engage in discussions about the solutions collaboratively. In contrast, discussions about a time when the child was happy do not require problem solving. The happy event is intended to elicit a happy memory where the father and the child shared in the past. As such, problem solving does not occur in these conversations. Although reminiscing a time when the child was hurt also involved problem solving, the nature of the event was accident driven (e.g., The child fell and got hurt). For example, the father and the child talked about how the child got hurt and how the father helped the child to recover from the injury, but the father and the child could not fix the problem or prevent it from happening again in the future. However, when discussing a scared experience, fathers can strategize ways for the child not to be scared in the future. Therefore, the

event topic of a scared experience might hold greater implication in social problem solving associated with fathers' positive personality.

Differential Factors of Mothers' and Fathers' Elaborative Reminiscing

Findings from this study indicated that attachment representations and depressive symptoms were linked with mothers' (but not fathers') elaboration, whereas positive personality was linked with fathers' (but not mothers') elaboration when discussing past events with 2.5 years old children. These findings suggest that attachment history and current mood contribute to the way in which mothers discuss past events with their children. In contrast, more stable personality characteristics contribute to the way in which fathers discuss past events with their children. The findings from mother-child reminiscing align with the theory regarding the antecedents of parental elaboration that has largely focused on mothers in the literature. It has been theorized that maternal elaborateness is specific to the child characteristics and the reminiscing context (Fivush, 2019). Indeed, empirical studies show that mothers are more elaborative with children who are more attentive, pleasant, and well-behaved (Bauer & Burch, 2004; Farrant & Reese, 2000; Laible et al., 2013a; Lewis, 1999). Additionally, mothers who are more elaborative in reminiscing are not more elaborative during other contexts, such as routine caregiving, book reading, or free play (Haden & Fivush, 1996; Hoff-Ginsburg, 1991; Laible, 2004a). Evidence further shows that maternal elaboration is not associated with stable traits, such as maternal intelligence (Farrant & Reese, 2000; Newcombe & Reese, 2004). These patterns suggest that maternal elaboration does not reflect more general maternal characteristics, such as talkativeness, IQ, or personality.

With regards to father-child reminiscing, findings are somewhat unexpected in light of the theory regarding antecedents of parental elaboration. In interpreting fathers' findings, it is useful to draw on the literature on goals and motivation for reminiscing. Mothers and fathers exhibit different goals during reminiscing with children. Previous literature found mothers want to socialize with their children, to create emotional connection, and to help children understand themselves and social relationships (Kulkofsky et al., 2009). Fathers' motivation in engaging in elaborative reminiscing has never been examined, but previous literature found that fathers focus more on independent activities and achievements during elaborative reminiscing with children (Buckner & Fivush, 2000; Fiese & Skillman, 2000). Perhaps, parental sex differences in communication goals play a crucial role in mothers' and fathers' elaborative reminiscing patterns linked with different variables. Additionally, a meta-analysis indicates that maternal interaction with children is more sensitive to child temperament and social contexts, whereas paternal interaction, by contrast, is more heavily influenced by personality or family-wide factors, such as marital satisfaction (Klahr & Burt, 2014). These findings suggest that mothers' behavioral patterns might be more nuanced to child and environmental cues compared to fathers. Consistent with these findings, research also suggests that mothers spend more time with children, are involved in different kinds of activities relevant to their children, and take greater responsibility for caregiving; comparatively, fathers spend less time with children and often only engage in leisure activities during father-child interaction (Craig, 2006). Although fathers are playing a larger role in caregiving responsibility in the 21st century than before, it remains the case that mothers are the primary caregivers taking on a greater proportion of caregiving

responsibilities, especially in early childhood (Craig & Mullan, 2010). Perhaps, the contextual variations in mothers' caregiving responsibilities and the sheer volume of time mothers spend with their children allow them to be more nuanced and sensitive to their children's needs. Comparatively, fathers' behaviors are largely guided by a single and stable context, such as play time. Our findings align with previous literature and suggest that interpersonal history and affect, reflective of individuals' sensitivity to nuances, are more relevant to maternal elaborative discourse, whereas stable trait characteristics, such as personality, is more relevant to paternal elaboration when discussing past events with children. Although a major strength of the study is the inclusion of father-child reminiscing, findings should be replicated before firm conclusions can be drawn.

Limitations and Future Research

Findings from this study provide novel insight into the significance of parent psychological factors for mothers' and fathers' elaboration while reminiscing with their toddlers. However, we would be remiss if we did not note at least one major limitation of the current study. The current study only examined parental elaboration, but not other crucial variables, during parent-child reminiscing. Parental elaboration is not the only factor that plays an important role in child development during reminiscing. Internal state language, particularly the use of emotion words (i.e., discussions and explanations of emotions during parent-child conversation), also holds unique significance for child development during reminiscing (Bohanek et al., 2008; Marin et al., 2008; Fivush et al., 2003, 2009; Sales et al., 2003). Examining parental use of emotion words can provide additional insight about parent-child reminiscing. Findings of the current study suggest that attachment hyperactivation and depressive symptoms are associated with greater

levels of maternal elaboration. These results might be surprising given that the majority of reminiscing literature suggests that greater levels of maternal elaboration are generally associated with more optimal child outcomes (Fivush & Haden, 2003; Nelson & Fivush, 2004; Thompson, 2000; Thompson et al., 2003; Wareham & Salmon, 2006). However, there is also an increasing awareness and appreciation for nuance of previous findings indicating that greater levels of maternal elaboration is not always linked with better child outcomes (Reese, 2002; Coppola et al., 2014; Fivush & Sales, 2006). Our findings are in line with this argument suggesting that maternal elaboration is not always considered a sensitive reminiscing strategy, depending on the event topic and the comfort level of the child. As such, future research examining parental use of emotion words can support our understanding about the nuances in parental reminiscing strategies. Perhaps, it is not just whether parents are elaborative that is important, but what do parents choose to elaborate on (e.g., negative vs. positive emotions) and the specific context they choose to elaborate in also play a crucial role in supporting subsequent child development. Future research can shed light on when and what contexts would be the most optimal for parents to engage in elaborative reminiscing linked with positive child outcomes.

Additionally, future research should recruit high-risk parents and examine how attachment representations, particularly anomalous content, might be related to their elaboration during reminiscing. High-risk parents might face unique attachment challenges that prevent them from effectively engaging in conversations with their children about past events. Future research should also recruit racially and economically diverse parents and examine how they engage in elaborative reminiscing with their children. Reminiscing studies that examined mother-child and father-child dyads have

largely focused on industrialized, Western, and middle class samples. It is unclear whether findings from this privileged group are generalizable across diverse samples. Moreover, future research should utilize larger sample size. Due to the relatively small sample size of the current study, we did not examine the interaction between elaboration type and event type, which remains to be investigated in the future.

Conclusions

Evidence from this study builds on the growing literature on the significance of parent psychological factors for their elaboration integral to child cognitive and social emotional development. Findings from this research have documented links between attachment representations, depressive symptoms, and positive personality and parental elaboration during past positive and negative experiences with their toddlers. In addition to advancing the foundational science advancing understanding of the distinct patterns associated with mothers' and fathers' elaboration, evidence from such research indicates that parental elaborative reminiscing is complex. Depending on the parent sex (mother vs. fathers), the elaboration type (factual vs. emotion), and the event type (i.e., specific kinds of positive and negative events), parental psychological factors can contribute to elaborative reminiscing differently.

Additionally, the current study advances our understanding by focusing on toddlers, a population that often left unexamined in reminiscing literature. The development of autobiographical self begins in toddlerhood. It is through parent-child interaction that toddlers start developing mental representations of self and others, and this process begins when parents invite children to participate in reminiscing about past events (Fivush, 2019; Nelson, 1996; Thompson, 2000). The current study indicates that

during this initial reminiscing process, mothers and fathers do not differ in their elaboration styles when discussing past positive and negative emotional experiences with toddlers. This finding supplements our understanding that sex differences of parental elaboration styles identified from older samples might gradually emerge over time as parental elaboration goals shift from early to middle childhood. Reminiscing during toddlerhood provides unique opportunities for parents to engage children in shared communication that helps them establish a shared sense of self and history. As children get older, parents may start to differentiate their elaboration styles according to parent and child sex in consistent with gender roles in the society.

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Table 1.

Descriptive Statistics of Mothers' Study Variables

	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Age	31.02	4.69	20.00	43.00
Education	4.12	1.04	1.00	5.00
Income	7.10	2.93	1.00	11.00
Race	0.22	0.42	0.00	1.00
Child Sex	0.45	0.50	0.00	1.00
Child Age (mo)	30.49	2.06	19.17	34.00
Child Vocab	81.30	17.57	29.00	100.00
ASA_Deact	4.20	0.80	1.79	6.67
ASA_Hyp	2.39	0.74	1.13	4.00
ECR_Anxiety	2.27	0.84	1.00	4.05
ECR_Avoidance	2.10	0.78	1.00	4.33
CES_D	10.02	7.77	0.00	30.00
POS_P	3.85	0.29	3.25	4.54
Total Elab	36.88	16.13	8.00	74.00
Fact Elab	23.30	11.71	5.00	51.00
Emot Elab	13.13	8.00	0.00	35.00
Happy Elab	12.87	8.07	0.00	37.00
Hurt Elab	12.90	6.23	0.00	26.00
Scared Elab	11.05	7.61	0.00	33.00

Note. Race (White/Caucasian = 0; Not-White/Caucasian = 1).

Table 2.

Descriptive Statistics of Fathers' Study Variables

	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Age	32.15	5.22	21.00	43.00
Education	3.55	1.14	1.00	5.00
Income	7.30	2.65	1.00	11.00
Race	0.13	0.34	0.00	1.00
Child Sex	0.47	0.50	0.00	1.00
Child Age (mo)	30.42	2.19	19.17	33.63
Child Vocab	79.91	18.45	29.00	100.00
ASA_Deact	4.59	0.81	2.84	5.88
ASA_Hyp	2.42	0.60	1.38	3.96
ECR_Anxiety	2.45	0.84	1.11	4.78
ECR_Avoidance	2.32	0.81	1.06	4.42
CES_D	9.76	8.35	0.00	30.00
POS_P	3.58	0.43	2.38	4.30
Total Elab	31.13	14.09	5.00	62.00
Fact Elab	20.98	10.09	3.00	49.00
Emot Elab	9.94	6.59	0.00	28.00
Happy Elab	10.98	7.67	0.00	32.00
Hurt Elab	11.19	6.83	0.00	30.00
Scared Elab	8.94	6.10	0.00	25.00

Note. Race (White/Caucasian = 0; Not-White/Caucasian = 1).

Table 3.

Variations in Parental Total Elaboration According to Parent Sex & Child Sex

	<i>Estimate</i>	<i>SE</i>	<i>df</i>	<i>t</i>	<i>p</i>	<i>95% CI</i>	
						<i>LL</i>	<i>UL</i>
Model 1:							
Intercept	36.61	2.21	92	16.59	<.001	32.23	40.99
P_Sex	-5.30	3.12	92	-1.79	0.09	-11.50	0.89
Model 2:							
Intercept	37.77	2.62	92	14.42	<.001	32.57	42.98
P_Sex	-5.30	3.11	92	-1.71	0.09	-11.48	0.87
C_Sex	-2.55	3.12	92	-0.82	0.42	-8.75	3.65
Model 3:							
Intercept	23.11	7.87	92	2.94	0.01	7.49	38.73
P_Sex	-5.30	3.05	92	-1.74	0.09	-11.35	0.74
C_Sex	-0.60	3.21	92	-0.19	0.85	-6.98	5.77
Child Vocab	0.17	0.09	92	1.97	0.05	0.00	0.35

Note. P_Sex = Parent Sex (fathers = 1, mothers =0); C_Sex = Child Sex

(boys = 1, girls = 0)

Table 4.

*Variations in Parental Factual vs. Emotion Elaboration According to Parent Sex &**Child Sex*

	<i>Estimate</i>	<i>SE</i>	<i>df</i>	<i>t</i>	<i>p</i>	95% CI	
						<i>LL</i>	<i>UL</i>
Model 1:							
Intercept	32.72	3.33	114.03	9.83	<.001	26.12	39.31
ElabType	-9.81	1.92	164.33	-5.12	<.001	-13.59	-6.02
P_Sex	-0.67	4.71	114.03	-0.14	0.89	-10.01	8.65
ElabType*P_Sex	-1.19	2.71	164.33	-0.44	0.66	-6.55	4.16
Model 2:							
Intercept	33.14	3.96	113.93	8.36	<.001	25.29	40.98
ElabType	-9.72	2.28	164.12	-4.27	<.001	-14.22	-5.22
P_Sex	-0.67	4.70	113.93	-0.14	0.89	-9.99	8.64
C_Sex	-0.92	4.72	113.93	-0.19	0.85	-10.27	8.43
ElabType*P_Sex	-1.20	2.70	164.12	-0.44	0.66	-6.54	4.14
ElabType*C_Sex	-0.18	2.71	164.12	-0.07	0.95	-5.54	5.18
Model 3:							
Intercept	26.99	4.97	163.45	5.43	<.001	17.19	36.80
ElabType	-9.72	2.25	164.64	-4.32	<.001	-14.17	-5.28
P_Sex	-0.67	4.64	114.01	-0.15	0.88	-9.86	8.52
C_Sex	-0.10	4.67	114.96	-0.02	0.98	-9.36	9.15
Child Vocab	0.07	0.04	164.64	2.00	0.05	0.00	0.14
ElabType*P_Sex	-1.20	2.67	164.64	-0.45	0.66	-6.47	4.08
ElabType*C_Sex	-0.18	2.68	164.64	-0.07	0.95	-5.48	5.12

Note. ElabType = Elaboration Type (Factual = 1, Emotion = 2); P_Sex = Parent Sex

(fathers = 1, mothers = 0); C_Sex = Child Sex (boys = 1, girls = 0)

Table 5.

*Variations in Parental Elaboration during Discussions about Happy, Hurt, and Scared**Experiences According to Parent Sex & Child Sex*

	<i>Estimate</i>	<i>SE</i>	<i>df</i>	<i>t</i>	<i>p</i>	95% CI	
						<i>LL</i>	<i>UL</i>
Model 1: Intercept	12.67	1.64	157.77	7.75	<.001	9.44	15.90
EventType	-0.18	0.76	182.89	-0.24	0.81	-1.68	1.32
P_Sex	-0.03	2.31	157.77	-0.01	0.99	-4.60	4.53
EventType*P_Sex	-0.87	1.08	182.89	-0.81	0.42	-2.99	1.25
Model 2: Intercept	12.95	1.94	157.08	6.67	<.001	9.11	16.78
EventType	-0.12	0.90	182.48	-0.13	0.90	-1.90	1.66
P_Sex	-0.03	2.30	157.08	-0.01	0.99	-4.59	4.52
C_Sex	-0.62	2.31	157.08	-0.27	0.79	-5.19	3.95
EventType*P_Sex	-0.87	1.07	182.48	-0.81	0.42	-2.98	1.24
EventType*C_Sex	-0.14	1.07	182.48	-0.13	0.90	-2.26	1.98
Model 3: Intercept	7.93	2.77	245.76	2.86	<.001	2.47	13.40
EventType	-0.13	0.90	182.37	-0.14	0.89	-1.90	1.64
P_Sex	-0.03	2.30	158.56	-0.01	0.99	-4.58	4.52
C_Sex	0.09	2.33	160.58	0.04	0.97	-4.50	4.69
Child Vocab	0.06	0.02	266.96	2.54	0.01	0.01	0.11
EventType*P_Sex	-0.87	1.06	182.37	-0.82	0.41	-2.97	1.23
EventType*C_Sex	-0.16	1.07	182.37	-0.15	0.88	-2.27	1.95

Note. EventType = Event Type (Happy = 1, Hurt = 2, Scared = 3); P_Sex = Parent Sex

(fathers = 1, mothers = 0); C_Sex = Child Sex (boys = 1, girls = 0)

Table 6.

Correlations between Maternal Psychological Factors and their Elaboration Styles

	M	SD	Total	Factual	Emotion	Happy	Hurt	Scared
ASA_Deact	4.20	0.80	-0.18/-0.22	-0.15/-0.21	-0.13/-0.17	-0.05/-0.09	-0.20/-0.27*	-0.12/-0.16
ASA_Hyp	2.39	0.74	0.24/0.24	0.11/0.11	0.29*/0.29*	0.07/0.08	0.37**/0.36**	0.13/0.13
ECR_Avo	2.10	0.80	-0.05/-0.09	0.08/-0.12	-0.04/-0.04	-0.06/-0.09	-0.18/-0.23	0.13/0.10
ECR_Anx	2.27	0.84	0.04/-0.04	-0.07/0.01	-0.01/-0.08	-0.08/-0.12	-0.01/-0.09	0.17/0.12
CES_D	10.02	7.77	0.07/0.04	0.06/0.02	0.04/0.02	-0.08/-0.10	-0.06/-0.1	0.29*/0.27*
POS_P	3.85	0.29	-0.18/-0.15	-0.18/-0.17	-0.05/-0.05	-0.07/-0.06	-0.13/-0.11	-0.16/-0.15

Note. * $p < 0.05$, ** $p < 0.01$. ASA_Deact = ASA Deactivation &; ASA_Hyp = ASA Hyperactivation; ECR_Avo = self-

reported attachment avoidance; ECR_Anx = self-reported attachment anxiety; CES_D = depression symptoms; POS_P =

positive personality The coefficients before “/” are partial correlations when controlling for child vocabulary; the coefficients

after “/” are correlations between psychological factors and elaboration variables

Table 7.

Correlations of Paternal Psychological Factors and Their Elaboration Variables

	M	SD	Total	Factual	Emotion	Happy	Hurt	Scared
ASA_Deact	4.69	0.81	0.05/0.06	0.07/0.08	-0.01/0.01	-0.01/-0.01	0.02/0.03	0.16/0.17
ASA_Hyp	2.43	0.60	0.08/0.10	0.12/0.13	-0.04/0.00	0.09/0.09	0.02/0.05	0.07/0.10
ECR_Avo	2.32	0.81	-0.11/-0.12	-0.16/-0.17	0.05/0.03	0.00/0.00	-0.02/-0.03	-0.21/-0.23
ECR_Anxiety	2.45	0.84	-0.12/-0.11	-0.19/-0.18	0.08/0.09	-0.17/-0.17	-0.02/-0.01	-0.06/-0.04
CES_D	9.76	8.35	-0.14/-0.10	-0.09/-0.08	-0.07/-0.06	-0.11/0.11	-0.09/-0.09	-0.04/-0.03
POS_P	3.58	0.43	0.22/0.25	0.01/0.03	0.42**/0.44**	0.08/0.08	0.14/0.17	0.27/0.31*

Note. * $p < 0.05$, ** $p < 0.01$. ASA_Deact = ASA Deactivation &; ASA_Hyp = ASA Hyperactivation; ECR_Avo = self-

reported attachment avoidance; ECR_Anxiety = self-reported attachment anxiety; CES_D = depression symptoms; POS_P =

positive personality The coefficients before “/” are partial correlations when controlling for child vocabulary; the coefficients

after “/” are correlations between psychological factors and elaboration variables

Appendix

Example of Father-Child Conversation: Scared Event

Dad: Do you like it when it rains outside?

Child: No.

Dad: You don't like the lightning and thunder too much do you?

Child: {{shakes head no}}

Dad: No?

Child: Eh hm {{indicating no}} too scary

Dad: Too scary? {{nods head yes}}

Child: Eh hm {{indicating yes}} {{nods head yes}}

Dad: Yeah? Yeah?

Child: I ran away

Dad: You ran away? {{nods head}} Yes, you did. You ran over to daddy, didn't you? And you grabbed onto my leg and daddy kept you safe like this {{hugs child}} {{grunts}} Yeah, you ran away, didn't you?

Child: Eh hm {{indicating yes}}

Dad: Well, it's always good to find mommy and daddy when you're scared, right?

Child: {{mumbles 1 sec, sounds affirmative}}

Dad: And even brother. Brother, brother will help you too, remember

Child: The thunder will come here

Dad: Really?

Child: {{nods head yes}} Eh hm {{indicating yes}}

Dad: No way

Child: And I will hide under the pillow, hide from the thunder

Dad: {{laughs, 1 sec}} You gonna hide from the thunder? Yeah? And you can always go ask mommy and daddy for help. You know that right?

Child: {{nods head yes}}

Dad: {{nods head yes}} We'll make sure that you're safe, okay?

Child: Eh hm {{yes}} {{transcriber cannot hear next 2 sec}} at home

Dad: At home {{laughs, 1 sec}}

VITA

Prior to joining Mizzou, Nanxi Xu received her bachelor's degree in Business Administration from the University of Wisconsin – Madison (2013) and master's degree in Counseling Psychology from the University of Denver (2017). Nanxi received her second master's degree in Developmental Psychology at the University of Missouri – Columbia (2020). During her time at Mizzou, Nanxi's research focused on how family relationships impact on child social emotional development under the mentorship of Dr. Ashley Groh at Family & Child Development Lab. Outside of academic training, Nanxi was actively involved in promoting social justice and multicultural diversity. She was the inaugural International Student Affairs Committee Chair in AY 2018-2019 when she established the International Graduate Student Award and publicly presented the first recipient at the Mizzou Graduate & Professional Award Banquet. Upon graduation, Nanxi accepted a job offer as the Senior Policy Research Associate at the Prenatal-to-3 Policy Impact Center at Vanderbilt University. Moving forward, Nanxi's interested in integrating developmental science and public policy to advocate for families and children living in historically underserved communities.