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Parent's Emotion Coaching of Positive and Negative Emotions as it Relates to Children's Communication of Emotions

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Parent's Emotion Coaching of Positive and Negative Emotions as it Relates to Children's

Communication of Emotions

by

Kyrsten A. Buote

Under the Direction of Erin C. Tully, PhD

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

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ABSTRACT

Children's skills for effective communication about their emotional experiences is important for adaptive expression, regulation, and understanding of emotions. Although research supports associations between parental emotion socialization (e.g., emotion coaching) and distal child outcomes, such as social skills, there is scant research on proximal outcomes, such as children's emotion communication. Additionally, existing research focuses on coaching and communication of negative over positive emotions. In the current study, parents' coaching and children's communication of emotions were rated while parent-child dyads (N=115, M_{age} = 9 years) were observed in the lab discussing past family experiences. Parents coached and children communicated in a more specific and emotion-focused way about negative than positive emotions. The strength of associations between parents' more effective emotion coaching and children's more effective emotion communication were similar for positive and negative discussions, therefore, discussions of positive events may still provide a fruitful context for emotion learning.

INDEX WORDS: Parental emotion socialization, Emotion communication, Parenting, Emotional discussions, Positive emotions, Negative emotions, Behavioral observation, School aged children

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DEDICATION

I would like to thank my family, friends, and colleagues for their continued support. Your

continued encouragement made this process that much easier.

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LIST OF ABBREVIATIONS

X^2 = Chi-squared

β = Beta

CES-D = Center for Epidemiological Studies Depression Scale

CCNES= Coping with Children's Negative Emptions Scale

DTBRM = Discussion Task Behavioral Rating Manual

ECCS= Emotion Coaching Coding System

ERC= Emotion Regulation Checklist

FDT- Family Disccussion Task

FECSS= Family Emotion Communication Scoring System

GEE = Generalized Estimating Equations

ICC = Intraclass correlation coefficient

K-S Test= Kolmorgorov-Smirnov test

M = Mean

M_{age} = Mean

PES=Parental emotion socialization

PFC = Preschool Feelings Checklist

RA's= Research Assistants

SAM = Self-Assessment Manikin

SCAS = Spence Children's Anxiety Scale-Parent Version

SD = Standard deviation

SES = Socioeconomic status

T1= Time 1

T2= Time 2

1 INTRODUCTION

Communicating about one's emotional experiences with friends and family allows for sharing life's joys, giving and receiving help with emotional distress, and building deep interpersonal relationships. Children learn to communicate about emotions through interactions with peers, teachers, and especially parents (Maccoby, 1994). An excited child coming home from school telling their parents about winning an award at school may elicit a response laden with emotion matching as the parent experiences empathic pride and joy and direct questioning to encourage the child to elaborate on the emotional content of the child's emotional experience (e.g., How did you feel? Wow, we are so proud of you!) and the situation (e.g., Tell me about winning the award. Who was at the award ceremony?). Parents who use emotion-laden language, matching affect, and emotion behaviors are engaging in parental emotion socialization (PES) strategies, meaning processes through which parents facilitate children's learning about how to feel and express regulated emotions, talk about their emotional experiences, and understand and respond to others' emotions adaptively (Eisenberg, Cumberland, & Spinrad, 1998).

Although a body of research supports associations between PES and children's social-emotional functioning (e.g., internalizing and externalizing symptoms), there is little research on how specific PES strategies, such as emotion coaching, relate to children's communication about their emotional experiences. The literature on PES as it relates to children's emotion communication is largely theoretical with scant empirical work. The purpose of this study is to build the empirical foundation for theories of how children learn through parent-child interactions and contribute practical knowledge of how to facilitate children's emotion communication. This study includes measures of a PES strategy, emotion coaching, and children's emotion communication of both positive and negative emotions since research has

focused more on how parents socialize negative emotions compared to positive emotions despite positive and negative emotions each possessing unique functions.

1.1 Children's Emotion Communication

Emotion communication refers to communicating through dialogue, behaviors, and affect about one's emotional experiences, including directly labeling the emotions one experienced and providing details of the causes of the emotional experience and the context in which it occurs (Martins, Osório, Veríssimo, & Martins, 2016; Saarni & Harris, 1991). As evidenced in the definition, this construct has various overt and covert components (i.e., nonverbal and verbal components). Theorists posit the construct of emotion communication as being "multi-channeled" with both verbal and nonverbal behaviors being vehicles for communicating emotion (Saarni & Buckley, 2002). Parent-child communication about emotions is complex and nuanced across dyads, and methods that capture different emotion communication patterns across dyads (e.g., different degrees verbal and nonverbal components) may encompass these different patterns more fully. Further, nonverbal behaviors and verbal statements taken out of the context of this wholistic emotional experience may be misinterpreted (e.g., nervous laughter).

Children's emotion communication is one aspect of their emotion understanding, and literature has primarily focused on the broad construct of emotion understanding and other specific aspects such as emotion regulation skills (e.g., Morelen & Suveg, 2012), accurate discernment of emotions from facial expressions (e.g., Gross & Ballif, 1991), and social skills/functioning (e.g., Martins et al., 2016) compared to emotion communication. This study will focus on how parents' emotion coaching relates to children's emotions communication because communicating one's emotions is required for everyday adaptive functioning.

1.1.1 Emotion Communication in Early Childhood

Despite there being less empirical literature on emotion communication, there is some theoretical and empirical literature on emotion understanding that suggests there are typical markers of the development of emotion communication skills throughout childhood. Infancy and toddlerhood are recognized as periods when foundational skills for emotion communication are developing (Thompson & Lagattuta, 2006). For example, in infancy, children discern and mimic facial expressions of a variety of emotions (e.g., happiness, sadness, fear, anger, and surprise), and they respond to vocalizations such as excitement and laughter with echoed vocal replay (Izard, 1991). During early childhood (3-5 years old), children's emotion understanding becomes more sophisticated such that children begin to understand that others can hold false beliefs (Wellman & Liu, 2004), and one's internal emotions may differ from what is externally displayed (Harris, Donnelly, Guz, & Pitt-Watson, 1986) and children begin to self-regulate their emotions through spoken language. Their expanding language skills allow for discussing emotions, including discussing their own and others' feelings (Thompson & Lagattuta, 2006), though they tend to label all negative emotions as "bad" and all positive emotions as "good" unless scaffolded by parents to identify specific basic emotions (Székely et al., 2011). For example, if a child's mother gets stuck in traffic and is late to the child's little league game, a child at this age typically has the language skills to talk about their sad feelings with less detail when prompted by their parent. This level of detail would be less than a kid in proceeding developmental stages, such as a child in middle childhood (6-11 years old).

1.1.2 Emotion Communication in Middle Childhood

The current study investigates children's emotion communication in middle childhood. Much of the work on PES and emotion communication has focused on earlier developmental

periods, like infancy and toddlerhood, when children are acquiring basic skills for communicating about emotions (Zahn-Waxler, 2010). Parents continue to play a role in children's emotion learning throughout childhood (Calkins & Hill, 2007), though nature and content of parent-child communication about emotion likely shifts and becomes more complex.

Work within the realm of middle childhood has focused on a child's broad emotion understanding and less on emotion communication specifically. It can be inferred through theories that emotion communication is an inherent part of these developmental milestones in emotion understanding, though they have not been directly tested. In their recent book chapter describing milestones of emotion understanding in middle childhood, Kramer and Lagattuta (2022) described theoretical work discussing that in middle childhood, children can recognize that one can feel multiple emotions in a single context which helps them more effectively communicate their emotional experience (e.g., Gopnik & Rosati, 2001; Lagattuta et al., 2015; Lagattuta, Sayfan, & Blattman, 2010; Lalonde & Chandler, 2002). Children also begin to understand that two people can experience different emotions in the same situation because of their more advanced perspective-taking skills and this understanding is helpful for optimal regulation of emotional responses (Bengtsson & Arvidsson, 2011). Children's self-regulation skills begin to flourish in middle childhood (Markus & Nurius, 1984), which likely allows them to pause, reflect, and intentionally communicate about emotions, especially when supported by parents (Calkins & Hill, 2007), which creates an optimal developable period to investigate the emotion communication facet of emotion understanding.

1.1.3 Parents' Role in Emotion Communication

PES is likely one important factor that facilitates children's learning to communicate about their emotions with more detailed language and expressive behaviors, but very few studies

have investigated emotion communication of children, especially during parent-child emotional discussions. Several older studies conducted by Dunn and colleagues showed significant correlations between children aged 2-3 years old and their conversations about emotions with family members and their performance on emotion understanding tasks months and years later (Dunn, Brown, & Beardsall, 1991; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Dunn & Brown, 1993; Hughes, 1998). Despite these findings underscoring the need for further investigation of the factors and mechanisms involved in how parents and children talk about emotions (e.g., labeling, explaining the cause and consequences), there has been little work to accommodate this need, specifically as it pertains to children's emotion communication beyond noting that emotion communication occurs within a social system (Saarni & Buckley, 2002).

In one of the few studies that began to address this gap, Lagattuta and Wellman (2002) (Lagattuta & Wellman, 2002), investigated preschoolers' emotion utterances during naturalistic parent-child conversations. Utterances were coded from transcripts to examine whether the quality and content of emotional utterances (e.g., temporal reference, emotion causal explanation, emotion consequence, etc.) differenced across parent-child conversations of positive and negative emotions. They found that dyads talked about the causes of emotions, past emotions, and connections between emotions and other mental states at higher rates during conversations about negative emotions compared to conversations about positive emotions. This is an important study because it is one of the few studies to clearly investigate the construct of child emotion communication in the context of parent-child interactions.

In summary, children's emotion communication allows for them to give and receive help with emotional distress and assists in building deep interpersonal relationships. Though work has been done across the domain of children's emotion understanding, the review chapter by Kramer

and Lagattuta (2022) concluded that more empirical work is needed to understand more intricate aspects of emotion understanding in middle childhood specifically (e.g., examining individual facets such as emotion communication) and contexts in which emotion understanding develops especially since middle childhood is a time of significant growth for a child's emotional development. This recommendation mirrors Dunn et al.'s (1991; 1993; 1998) early conclusions emphasizing the need for further investigation of the factors and mechanisms involved in how parents and children are talking about emotions, demonstrating there has been little to no advances in this critical area.

1.2 Parental Emotion Socialization and Emotion Coaching

Twenty-four years ago, Eisenberg and colleagues (1998) published a model of PES based on available research. This paper laid the foundation for understanding factors contributing to the socialization of children's emotion understanding and concluded that research on PES was "in its infancy" (Eisenberg et al., 1998). This model defined PES practices as processes through which parents influence their child's learning about emotions through their own displays of emotions and parenting behaviors (Eisenberg et al., 1998). PES practices include explaining the causes and consequences of emotions (e.g., "Your sister is sad and crying because she had to say goodbye to her favorite friend who is moving away."), modeling in-vivo adaptive emotion expression (e.g., a parent smiling when experiencing joy when their close friend comes to visit), explicit labeling and identification of emotions, and coaching a child to regulate their emotional expressions in the moment or by reminiscing (e.g., "How did it make you feel to go on that vacation as a family? Why did feel that way?). Some researchers (e.g., Gottman, Katz, & Hooven, 1996; Kliewer & Lewis, 1995) use the term emotion coaching to refer to PES strategies that involve explicit teaching and active facilitation of emotion awareness, which tend to be overt and

observable, and comment that coaching is most effective when delivered with acceptance and warmth. More recently, Lunkenheimer, Shields, and Cortina (2007) describe emotion coaching as parents' pointed talk about their own, their child's, or others' emotions in a way that encourages discussion of emotional experiences in everyday conversations and expression of adaptive emotions during daily living. For example, a parent might ask questions about children's emotional experiences, like asking a child how an emotional encounter made them feel and what specific situational or contextual factors contributed to their feelings in that event.

In the current study, global ratings of parents' emotion coaching that incorporate parents' explicit dialogue that explains or elicits explanations from their children about emotional experiences and paralinguistic behaviors that indicate warmth and acceptance (e.g., tone of voice, physical affection, smiling and other facial affect) will be used as a measure of PES. Given the conversational and overt nature of emotion coaching, this form of PES is best suited for behavioral observations of discussions between parent-child dyads.

1.2.1   *Emotion Coaching and Child Outcomes*

Though many proximal questions remain, empirical literature has expanded over the last decade showing associations between emotion coaching with child outcomes. Existing studies are consistent with emotion coaching protecting against maladaptive psychological outcomes in children (e.g., Kehoe, Havighurst, & Harley, 2014; Lunkenheimer, Shields, & Cortina, 2007; Shaffer, Suveg, Thomassin, & Bradbury, 2012). For instance, Shaffer, Suveg, Thomassin, and Bradbury (2012) found that non-supportive parental responses to emotions (e.g., low emotion coaching; emotion dismissing) measured through the Coping with Children's Negative Emptions Scale (CCNES; Fabes et al., 1990) self-report measure were associated with higher levels of parent-reported emotion dysregulation. Additionally, treatment studies have shown that

improved effectiveness of PES reduces children's internalizing problems. For example, Kehoe, Havighurst, and Harley (2014) conducted a treatment study in which parents were taught how to use PES practices, including emotion coaching, with their pre-teens. Parents who were randomly assigned to receive the intervention showed significant improvements in PES and their children had significant reductions in internalizing difficulties, whereas parents randomly assigned to not receive any intervention showed no significant change in PES and their children had no significant reductions in internalizing problems. Furthermore, research shows that in the face of parental risk factors (e.g., marital conflict, emotionally dismissive behaviors, etc.), emotion coaching acts as a buffer against negative outcomes (e.g., poor emotion regulation, behavioral problems; Katz & Gottman, 1997; Lunkenheimer et al., 2007). Though these are promising findings, there is little known about more proximal correlates of effective emotion coaching, such as children's communication about emotions during conversations with their parents.

1.2.2   *Investigating Emotion Coaching*

Behavioral observation coding is the most common method for investigating emotion coaching (e.g., Lunkenheimer et al., 2007), though self-report rating scales (e.g., Maternal Emotional Styles Questionnaire; Lagacé-Séguin, 2005) and semi-structured interviews (e.g., the meta emotion interview; Katz & Gottman, 1986; Gottman et al., 1997) are also used. Behavioral observations of lab-based or home-based naturalistic discussions between a parent and child are common contexts for observing parents' emotional behaviors, such as emotion flexibility e.g., (e.g., Lougheed, Brinberg, Ram, & Hollenstein, 2020) and emotion coaching (e.g., Lunkenheimer et al., 2007). Since emotion coaching is a PES strategy that involves a high degree of overt behavior, it can be rated reliably by trained raters and is frequently studied PES in behavioral observation studies.

The various behavioral coding systems that have been used to measure emotion coaching (e.g., Katz, Mittman, & Hooven, 1994; Ramsdem & Hubbard, 2002; Lunkenheimer, Shields, & Cortina, 2007) have overlapping and distinct elements. The Emotion Coaching Coding System (ECCS), which was adapted from the meta emotion interview coding system (Katz, Mittman, & Hooven, 1994), was used by Ramsdem and Hubbard (2002) to code parents' vocalizations via audio recordings of their responses to interview questions asking about mothers' coaching of their child's emotions to investigate their feelings, attitudes, and behaviors toward their child's feelings of anger and sadness. This method of behavioral coding measured three dimensions of emotion coaching: parental awareness of the child's emotions, parental acceptance of the child's emotions or parents' comfort with children's emotional expression, and instruction on how to assist the child in their coping of their emotions by talking with the child about the nature of the emotion. The current study will incorporate these three dimensions in global rating of emotion coaching but will rate these behaviors through video footage to enable raters to incorporate paralinguistic behaviors.

Lunkenheimer, Shields, and Cortina (2007) used the Family Emotion Communication Scoring System (FECSS; Shields, Lunkenheimer, & Reed-Twiss, 2002) to code emotion coaching and emotion dismissing from video-taped family interactions involving conversations about three emotional events: a positive family experience, a negative family experience, and a time where the child misbehaved. Coders identified utterances that included at least one emotion word (e.g., that made me very happy) and categorized the statement as an emotion coaching behavior or emotion dismissing behavior. Since Lunkenheimer et al. (2007) coded emotion coaching behaviors within a parent-child interaction, their coding system was heavily influential to the current study's coding system. Their behavioral definitions were adapted to incorporate

elements of The ECCS and the addition of paralinguistics. The FECSS also included coding emotion dismissing. Emotion dismissing was included in the early versions of the current study's coding system as well, but it occurred too infrequently to be a useful variable and for raters to achieve inter-rater reliability.

1.2.3   Limitations of the Current Emotion Coaching Literature

Despite the nearly 25 years of scholarly work on PES, especially emotion coaching, there are still significant limitations of existing studies supporting emotion coaching as an effective PES. First, there are very few studies of children's behaviors (e.g., Lunkenheimer et al., 2007) in the context of parents' emotion coaching during parent-child discussions. Second, there has been a focus on investigating emotion coaching of negative emotions and less on the coaching of positive emotions. The article by Lunkenheimer, Shields, and Cortina (2007) reports that to the authors' knowledge, their study was the first empirical test comparing the coaching of positive and negative emotions. Third, to the primary investigators knowledge, no studies have used a global rating that incorporates both frequency and intensity of emotion coaching during discussions, and there is no existing rating system that incorporates nonverbal behaviors and paralinguistics (e.g., such as facial expressions, hand gestures) as enhancers or contributing factors to a parent's coaching strategies despite some studies recognizing it as a methodological limitation to not include (e.g., Lunkenheimer, Shields, & Cortina 2007). Though various studies have gone beyond coding audio recordings and have coded videotaped parent-child interactions, there has been minimal integration of interaction behaviors other than speech even within these videotaped interactions.

Despite the concluding emphasis on the need for further research in Eisenberg's seminal paper, there has been minimal strides made over the past twenty-four years that go beyond our

understanding that greater use of PES parenting practices is related to various healthy child psychological outcomes. Furthermore, we know little about how parents' emotion coaching behaviors impacts children's emotion communication. Despite emerging evidence that PES practices are related to distal outcomes (e.g., children's internalizing problems), there is surprisingly little about more proximal outcomes, such as children's emotion communication during emotional discussions, and more specifically in relation to both positive and negative emotions.

1.3 Valance of Emotions being Coached by Parents and Communicated by Children

Negative emotions are studied more often than positive emotions in both the parental emotion coaching and the child emotion communication literatures. Positive and negative emotions serve unique physical and psychological functions (e.g., Fischer & Manstead, 2016; Fredrickson, 2001), and parents may socialize children's positive and negative emotions differently given their different functions. The present study investigates parents' emotion coaching as it relates to children's communication about positive and negative emotions.

1.3.1 What are the Functions of Positive and Negative Emotions?

Emotions influence how we perceive and engage with people and situations, our actions, and our interpersonal bonds (Lagattuta & Wellman, 2002). The experience of regulated emotions can instigate specific action tendencies (e.g., Jenkins & Oatley, 1996; Levenson, 1999) that facilitate adaptive interpersonal functioning, safety, achieving goals, health and enjoying life (e.g., Fischer & Manstead, 2016; Sels, Tran, Greenaway, Verhofstadt, & Kalokerinos, 2021). Negative emotions signal that something important and potentially threatening is happening, focus attention and energy on the threats and opportunities to overcome threats (Fischer & Manstead, 2016; Parrott, 2002). For example, anxiety focuses attention and energy on potential

threats to our safety or social standing, and a child's skill to regulate this anxiety can influence or hinder a child's social goals (e.g., making a new friend on the playground at school).

Paralleling a greater focus on negative than positive emotions in the psychological literature, parents may spend more time socializing negative emotions than positive emotions. Although a scant literature, existing research supports parents' coaching of negative emotions offers greater opportunity for learning and intimacy than coaching of positive emotions (Dunn & Brown, 1994; Garner, Jones, & Miner, 1994; Lunkenheimer et al., 2007). For example, Lunkenheimeer at al. (2007) found that parents' behaviorally observed coaching of negative emotions was associated with children's greater regulatory abilities as defined on the parent-report Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997), which supports that children learn emotion regulation in part through parents' coaching of negative emotions. Parents may be aware that socializing regulated negative emotions provides their children with tools for "survival," overcoming obstacles, and achieving goals in the face of danger, threats, and disappointments. Ramsden and Hubbard (2002) suggest that parents might also be aware that regulating and coping with negative emotions is more developmentally challenging and may require more parental facilitation than coaching of positive emotions, thus motivating them to spend more time socializing negative than positive emotions. Furthermore, when under-regulated, the functions of negative emotions often cause problems for others, like parents. For example, under-regulated anger may lead a child to exert their will aggressively in situations when aggression is not needed or adaptive, and under-regulated anxiety may motivate a child to prioritize their own safety over others' needs or following rules.

Though not as plentiful as the research on negative emotions, there is a growing literature on the function of positive emotions that shows that positive emotions signal that something

exciting is happening, broaden an individual's attention (Fredrickson, 2001, 2004), motivate us to try new things, and attract others to us to share happiness (Sels et al., 2021). For example, if a child witnesses their parent's happiness and pride for their excellent performance in math, the child may feel inspired to work towards exceeding in another school subject or face another challenge. Their inspiration would be invigorating and lead to other positive emotions, like gratefulness. This chain-like positive emotion reaction benefits the individual by undoing lingering negative emotions, fueling psychological resiliency, building personal resources, and supporting psychological and physical well-being (Fredrickson, 2004).

Positive emotions may not cause as distressing of problems for the individual experiencing them or others. Notably, inappropriate expression (e.g., laughing when someone is crying) and under-regulation (e.g., over-exuberance) of positive emotions can also be problematic (e.g., difficult to manage, infringe on others' happiness), however this may not be as maladaptive as under-regulated negative emotions. Thus, in context-specific positive experiences, parents may overlook opportunities to socialize positive emotions. For example, a child coming home from school saying how exciting it was to play with a new friend on the playground might encourage a parent to comment on the event more broadly versus coaching and discussing in more depth the positive emotions attached to the event since there is no danger or distress to problem-solve. Comparatively, a child coming home from school saying how they were anxious on the playground because they had no friends to play with might encourage parents to discuss and problem solve the anxious feelings.

1.3.2   *Coaching and Communicating Positive and Negative Emotions*

Considering the adaptive role experiencing positive emotions plays in certain childhood outcomes (e.g., fueling psychological and physical well-being; Fredrickson, 2004), obtaining a

foundational understanding of if parents are coaching positive emotions and children are communicating positive emotions with similar frequency and degree of specificity and explanation will provide foundational information about the context that might support positive emotions. Lagattuta and Wellman (2002) began to address the gap in research on socialization of children's positive emotions by investigating if there are characteristic differences in how children and parents talk about negative versus positive emotions in their everyday lives, such as the frequency parents and children talk about the causes of positive relative to negative emotions and if they more frequently discuss present or past positive relative to negative emotions. They averaged rates of the emotion words used (i.e., a frequency count of the number of times each dyad talked about positive and negative emotions) of six parents-child dyads and found that dyads discussed positive and negative emotions at similar rates. They also found that parent-child dyads discussed past emotions, and the causes of emotions at higher rates during discussions about negative emotions compared to discussions about positive emotions.

Understanding how parents influence the development of positive emotions in children has also been investigated in relation to child outcomes (e.g., Moran, Root, Vizy, Wilson, & Gentzler, 2019). For example, down regulating positive affect has been associated with negative outcomes like depression (Bijttebier, Raes, Vasey, & Feldman, 2012; Gentzler, Morey, Palmer, & Yi, 2012). Moran et al (2019) built on this literature by investigating how mothers' use of various PES strategies (e.g.., modeling, emotion coaching) of children's positive affect regulation was related to children's positive affect regulation, and if children's positive affect regulation mediated the association between PES and children's depressive symptoms through a longitudinal study. They found associations between mothers' PES of positive affect and children's positive affect regulations however, emotion coaching was not a mediator in

predicting children's depressive symptoms. This work by Moran et al suggests that there is a need to examine different types of PES and its associations with certain child outcomes.

Understanding characteristics of the language (e.g., how often and degree of specificity in explaining emotions) parents and children use to discuss positive and negative emotions with one another may advance understanding of the context of healthy positive and negative emotion development. Given children's positive emotions may more often be overlooked as opportunities to facilitate healthy emotional development, the current study may provide new insights for interventions aimed at helping children learn healthy emotion communication and regulation.

1.4 Family Discussions of Emotional Events

Discussing and reminiscing about past emotional events is one way parents socialize children's emotions (e.g., Fivush, Haden, & Reese, 2006; McDonnell, Lawson, Speidel, Fondren, & Valentino, 2022) and children learn and expand their understanding of emotions (e.g., Thompson & Lagattuta, 2006). An empirical review of children's early emotional development and emotion understanding conducted by Thompson and Lagattuta (2006) concluded that children's understanding of emotion deepens through witnessing emotional events, reading about emotions during family story time (e.g., reading storybooks with emotional events) parents explaining others' emotions, parents' coaching children on how to manage emotions, and discussions of past emotional events. Additionally, in a study conducted by Lagattuta and Wellman (2002) in which parent-child dyads discussed past emotional events, they found that parents and children (between the ages of 2-5 years old) were active social partners and elaborated on emotion terms reciprocally. Further, Marin, Bohanek, and Fivush (2008) found that when parents and preteen children discussed specific emotions more collaboratively (defined as "a turn that verifies, affirms, or repeats a previous turn"; for example, a parent saying "yeah,

you were scared" after a child says "I was scared'), preteen children self-reported better social and emotional competencies and higher self-esteem (Marin, Bohanek, & Fivush, 2008). Taken together, these findings could mean that the stage is set for an engaging and dynamic process that both children and parents reciprocally participate in where parents can coach their children's emotions and children can subsequently learn.

Coding behaviors and dialogue from audio and video recordings of parent-child conversations about past shared emotional experiences is a common method used to study PES (e.g., Fivush, Berlin, McDermott Sales, Mennuti-Washburn, & Cassidy, 2003; Lougheed & Hollenstein, 2016; Lunkenheimer et al., 2007). Researchers have coded emotion-related behaviors and dialogue from video or audio recordings of family discussions that take place in naturalistic environments (e.g., dinnertime conversations; Fivush, 2009) and laboratory settings (e.g., The Emotional Rollercoaster Task; Lougheed, 2016). Both the naturalistic and lab-based contexts have been found to be valid contexts (e.g., Lougheed & Hollenstein, 2016) and each provides advantages for answering specific questions. Since the current study investigates mean level differences between positive and negative emotions coached by parents and communicated by children, a lab-based discussion imposes a structure in which all parents and children engage in discussion of positive and negative emotions.

1.5 Dyad Characteristics: Race, Gender, Socioeconomic Status

It is important to acknowledge that there may be contextual factors influencing how parents discuss emotions with their children, and in turn, how emotion communication develops across childhood. A theoretical review conducted by Halberstadt and Lozada (2011) posited that the way in which caregivers communicate with their children across development is related to a child's attention to and interpretation of their social and emotional worlds. Characteristics of

parent-child dyads and their social and cultural context including race, gender, and socioeconomic status (Mendes et al.) may influence the way in which parents socialize their children's emotions and children experience, express, and understand emotions (e.g., Halberstadt & Lozada, 2011; Shaffer et al., 2012).

1.5.1   Race

Racial emotional socialization has been examined across various groups revealing there may be differences in that way different cultural groups socialize their children's understanding and display of emotions, especially in families of minority groups who experience racial discrimination (e.g., Dunbar, Leerkes, Coard, Supple, & Calkins, 2017; Lozada, Riley, Catherine, & Brown, 2022). Parents in minority groups, such as Black parents, may engage in racial socialization of emotion, which is where "messages about race and navigating racial experiences are integrated and communicated with Black parents' emotion socialization" (Lozada et al., 2022). Dunbar and collogues (2017) posit a conceptual model that bridges the racial/ethnic socialization literature and the PES among Black families literature to explain the overlap and their influence on Black children's social and emotional adjustment. Racial/ethnic socialization increases cultural pride, awareness of bias, and knowledge of Black history while PES prepares children with skills to manage their emotions and understand the causes and consequences of their emotions (Dunbar et al., 2017). Though the process of PES has the same aim across all cultures, Dunbar and colleagues conceptual model demonstrate that there are other processes occurring that may shift the focuses of how parents are engaging in PES. For example, Black parents might socialize their children to not express anger because of reactions from others.

It is important to consider the context of race, and how that plays a role in how parents engage with their children about emotions. The current study does not explicitly target emotional discussions about race (e.g., racial discrimination), rather, the aim is to observe how parents and children discuss positive and negative emotions. To account for possible differences in racial groups the current study will 1) categorize the parent-child discussions to determine if the topic of race comes up in discussions, 2) include race as a covariate in all hypotheses, and 3) conduct exploratory analyses to look at a possible interaction of parental emotion coaching and race.

1.5.2   Gender and Socioeconomic Status

Studies also support differences in emotional expression by child gender and parent gender. A meta-analytic review by Chaplin & Aldao, 2013 examining gender differences in emotion expression in children found very small but significant differences between male and female children in mean levels of emotions measured by ratings of facial, vocal, and behavioral expressions. Girls displayed higher levels of positive emotions compared to boys, and there were no significant differences of girls and boys display of negative emotions.

Fivush et al. (1989) examined how mothers differed in how they discussed emotions with their 30–35-month-old sons versus their daughters. They found that mothers more frequently discussed positive emotions and less frequently attributed negative emotions to their daughters compared to their sons. With their sons, they discussed positive and negative emotions equally. Another study conducted by Fivush and colleagues (2003) found that when mothers and their preschool-aged children discussed negative events, mothers elaborated more with their daughters compared to their sons, which could indicate variation in how detailed and emotion specific mothers will be with their sons versus daughters (Fivush et al., 2003).

While parenting practices of both mothers and fathers are important to young children's social and emotional development (e.g., Liang, Zhang, Chen, & Zhang, 2012) , research suggests that mothers may play a more key role in facilitating a young children's understanding of and communication about emotions (e.g., Chaplin, Cole, & Zahn-Waxler, 2005; Hastings, McShane, Parker, & Ladha, 2007). Brand and Klimes-Dougan (2010) posit in their conceptual book chapter that mothers may be more involved than fathers in parenting (Paulson & Sputa, 1996), that they may be more emotionally expressive than fathers, and they may provide more opportunities for modeling emotional expressiveness (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). Thus, although understanding the role of both fathers and mothers is important, this study's sample includes mostly mothers.

Lastly, higher SES has been related to parents' more frequent use of emotion coaching and children's better emotion regulation (Kao, Tuladhar, & Tarullo, 2020). For example, Lunkenheimer, Shields, and Cortina (2007) found that parents engaged in more coaching of their children's negative emotions when they had a higher SES. In this same study, children were rated by their parents on the ERC as having higher emotion regulation skills. Furthermore, less frequent emotion coaching in mothers has been associated with higher familial risk, such as family stress, maltreatment, and economic disadvantage (Ellis, Alisic, Reiss, Dishion, & Fisher, 2014). Links between SES and children's emotion communication have not been directly examined.

Contextual factors such as race, gender, and SES can influence the discussion of emotions across parent-child dyads, including how parents discuss emotions with their children, and in turn, how emotion understanding develops across childhood. Therefore, in addition to

including race as a covariate, this study will be sensitive to these considerations through including children's gender and family income as covariates in the study's analyses.

1.6 Current Study

The current study aims to address empirical gaps in both the PES and child emotion communication literatures within the context of parent-child discussions of past emotional events. Communicating one's emotions is critical for sharing life's joys, giving and receiving help with emotional distress, and building deep interpersonal relationships. However, emotion communication is an aspect of emotion understanding that remains understudied. Similarly, despite the declared need nearly 25 years ago for more empirical work on how PES relates to children's emotional development to compliment the copious theoretical literature on PES, there has been minimal progress despite many scholarly works supporting the paramount role in a child's psychological and social outcomes. More specifically, an important next step in this research is studying parents' emotion coaching as it relates to children's communication about positive and negative emotions, and especially distinguishing PES correlates of positive and negative emotions given the experience of positive and negative emotions facilitates adaptive interpersonal functioning, safety, achieving goals, health and enjoying life in unique ways. Parents may be more problem-focused resulting in greater coaching of negative than positive emotions and this has left our understanding of parents' coaching of positive emotions understudied despite theoretical writings and some empirical support for the importance of positive emotions.

I hypothesize that a) parents will use more emotion coaching, meaning more detailed and emotion-specific language, for negative than positive emotions b) children's emotion communication will be more detailed and emotion-specific for negative than positive emotions,

and c) parents who engage in more frequent and emotion specific emotion coaching will have children who have more frequent and emotion specific emotion communication, and this will be true for children's communication of both positive and negative emotions, though the effect will be stronger for negative emotions (coaching and communication).

2 METHOD

2.1 Participants

One hundred and fifteen children (50.4% male, 49.6 female, M_{age}=9.18, SD=1.11 years) and one of their parents (98% mothers) participated in the current study. Parent-reported race/ethnicity of the child was reported as follows: 56.4% White/Non-Hispanic, 36.8% Black/African American, 4.3% Multiracial, 1.7% Hispanic, 0.9% Asian.

Parent-child dyads were a part of a larger longitudinal study with two time points, referred to as Time 1 and Time 2 (T1 and T2, respectively). The larger study's overarching purpose was to examine social and emotional risks for internalizing problems as they are emerging throughout childhood. The target sample aimed to incorporate a range of levels of internalizing problems and was oversampled for children with at-risk levels of internalizing problems to obtain more of a normal distribution. Participants were recruited at either age four to six years during T1, with their second wave of data collection used in the current study, or age seven to nine years for T2 data collection. The current study uses data collected from T2. The same recruitment and eligibility procedures were used for children recruited at both time points. Families with children in the target age range were identified through the Georgia State University Child Research Group Subject Pool and responses to postings on online parenting forums.

Families were contacted via e-mail or phone to determine eligibility using screening instruments that were completed by a parent through an online survey or by phone. The screening instruments included behavioral parent rating scales assessing their child's social anxiety (Spence Children's Anxiety Scale-Parent Version, SCAS; (Spence, 1998) and depression-related symptoms (Preschool Feelings Checklist, PFC; (Luby, Heffelfinger, Koenig-

McNaught, Brown, & Spitznagel, 2004). Parents also answered questions about other characteristics that would make it difficult for the child to participate in the study (e.g., intellectual disability, autism spectrum disorder, significant hearing loss). Mean PFC scores did not differ significantly, $t(1, 55) = 0.95$, $p = .34$, for participants who were recruited at T1 ($M = 1.91$, $SD = 2.02$) and participants recruited at T2 ($M = 1.43$, $SD = 1.74$). Children were eligible for the study if they had either (a) *elevated risk* for internalizing problems, defined as SCAS scores greater than or equal to the mean score of a community sample of similar age child (Edwards, Rapee, Kennedy, & Spence, 2010) or scores of 3 or above on the PFC, which is the threshold by other researchers to identify children at risk for depression (e.g., (Luby, Si, Belden, Tandon, & Spitznagel, 2009), or (b) *low risk* for internalizing problems, defined as scores one standard deviation below the mean of the normative samples for SCAS or a score of 0 on the PFC. The proportion of participants that fall into the high risk and low risk categories based on symptoms reported on the PFC or SCAS (school-aged version) at T2 did not differ significantly, $X^2 (1, N = 52) = 1.34$, $p = .25$, for participants recruited at T1 (high risk = 88.2%, low risk = 11.8%) and those recruited at T2 (high risk = 74.3%, low risk 25.7%).

2.2 Procedure

Parent-child dyads participated in a laboratory visit where they filled out a variety of questionnaires and engaged in several tasks. Thirteen Research Assistants (RA's) were involved in data collection procedures for the larger longitudinal study. The race of the RA's are as followed: 69.2% White/Non-Hispanic, 7.7% Black/African American, 15.4% Hispanic, Latino, or Spanish Origin and 7.7% Middle Eastern.

2.2.1 Family Discussion Task

Parent-child dyads engaged in a 20-minute lab-based Family Discussion Task (FDT) that was in part influenced by the "Emotional Roller Coaster Task" assessing dyadic emotional flexibility (e.g., (Lougheed & Hollenstein, 2016). The FDT task used in the current study included five discussion periods. Four of the discussion periods included discussing and reminiscing about emotional events that the family or child experienced and were presented in random order during the task. These four discussion topics included two positively valanced topics and two negatively valanced topics. The two negatively valanced topics included reminiscing about a sad event experienced by the family (family-related; e.g., the family pet passing away) and a situation in which the parent was disappointed in their child (child-focused; e.g., the child disrupted class and a note was sent home). The two positively valanced topics included reminiscing about a happy event experienced by the family (family-related; e.g., going on a family vacation) while the other focused on reminiscing about an event in which the parent was proud of their child (child-focused; e.g., the child received an award). The 5th discussion topic was a prosocial discussion that was discussed last by all families and was not used in the current project.

2.1.1.2 *Task Set-up & Procedure*

Dyads sat across from one another at a table in a room with no researcher present. Five paper cards (referred to as "topic cards") with large numbers labeling them 1-5 were placed on the table with the numbers facing up. On the back side of these topic cards, the discussion topic, and conversation-prompting questions (used if the parent and child were stuck) were written (see appendix A for discussion card visual). Each dyad member had a pencil and clip board with affect rating scales which were used for task validation purposes and is described in more detail

below. There were two cameras, one recording the parent's behaviors and the other recording the child's behaviors. Adjacent to the table was a 17" Dell computer monitor set up to deliver prompts to the dyad about when to move to the next discussion topic, make affect ratings, and watch the baseline nature videos. Baseline nature videos were used for collecting baseline electrocardiogram data and is not used in the current project. Both dyad members were trained on task procedures prior to the start of the task. This training included an introduction of the general structure of the task and how to use the computer which was a guide for the task. The FDT starts with a baseline video depicting a nature scene. Following the baseline video, an auditory and visual prompt from the computer signaled the dyad to start talking about the first topic. The parent then picked up the topic card labeled with a "1" and begin the discussion (the valence of topics was randomized across participants). After two minutes, the dyad was signaled with an auditory and visual prompt on the computer to immediately make independent ratings. Dyad members independently made their ratings and were allotted as much time as they needed to do so. Once they were both finished with making their ratings, the parent pressed the spacebar and a prompt on the computer instructed the dyad to begin discussing the next topic number. The rest of the task follows this same patterned protocol, aside from the fifth and final discussion period (the prosocial discission), which lasted three minutes for all families. The task finished with another nature video. See Figure1 for a visual depiction of the task.
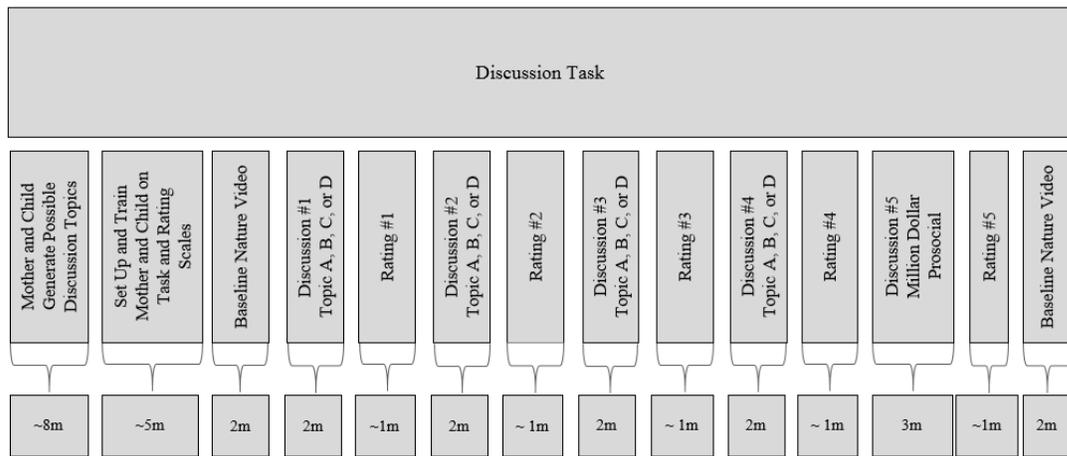
Figure 1

Visual depiction of family discussion task format

2.2.1.2 Discussion Topic Selection

Two RA's (one working with the parent, and one working with the child) generated topic ideas for the task with the parent and child independently in two separate rooms. Parents were introduced to the task (see appendix B for the script) and initial topics were generated by the parent filling out a worksheet with topic prompts and the RA interviewing the child about possible topics (see appendix C for forms). Both the worksheet and the interview asked the parent and child to list or talk about two-three events for each of the following: (1) something that made both the parent and child happy, (2) something that made both the parent and child sad, (3) a time where the parent was disappointed in the child, and (4) a time when the parent was proud of their child. Responses from the structured interview between the RA and the child were communicated to the parent and their respective RA who then compared the topics generated by the parent and child to determine which topics would be included in the task. For a topic to be selected for the task, the following topic inclusion criteria was considered: (1) the topic generates discussion of the intended condition, (2) the event experienced by the family elicited the intended emotional response, (3) both the parent and child recalled the topic, and (4) the parent and child would likely be able to discuss the topic for at least two minutes. Once the final discussion topics were determined, the RA wrote the topics on four separate topic cards in a randomly selected order.

2.3 **Task Validation**

The Self- Assessment Manikin (SAM) pictorial rating scale (Bradley & Lang, 1994) is a rating scale that has been frequently used as a tool to evaluate an individual's reaction to emotional stimuli (e.g., Barrett, Mesquita, Ochsner, & Gross, 2007). It is commonly used to evaluate children's affect responses (Moran et al., 2012) and has been used in studies examining

a variety of cultural groups (Morris, 1995). The rating scale ranges from -4 (*negative*) to 4

(*positive*), with 0 being *neutral* (see Figure 2). Each number on the rating scale was accompanied

by a correspondingly valanced picture.

-4	-3	-2	-1	0	1	2	3	4
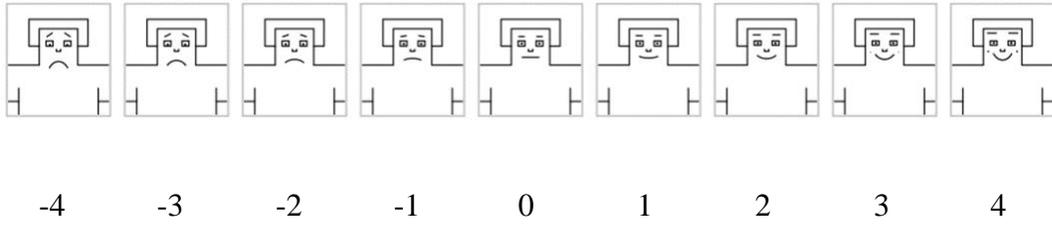
Figure 2

SAM scale completed following each discussion topic

In the current study, ratings on the SAM scale were used in two ways for task validation. First, parents and children rated the intensity of their affective state during the discussions. Sample mean ratings of the SAM scale for each discussion topic were calculated to test whether children's indicated affect aligning with the intended valence of the discussion topic (i.e., sample mean scores below 0). Repeated measures t-tests were used to ensure SAM ratings were significantly lower than 0.

Second, independent raters used the SAM scale to rate the valence of the discussion topics. Six RA's who were blind to the intended valence of the discussion topic and the study hypotheses were trained to rate the expected intensity of positive versus negative emotions a family facing this event was likely to experience. When rating the valence of each topic, raters used the SAM scale. This same team of raters also assigned a theme category code to each discussion topic (e.g., failure, vacation, child interpersonal problem, etc.). There were 8 possible categories for positive discussion topics and 11 possible categories for negative discussion topics. These topic categories were generated by a group of researchers. The discussion topic rating manual can be found in appendix D which provides a list and definition for each of these categories.

Training independent coders to rate the topics involved a training phase where coders learned the manual and then rated topics together as a team. Following training, each rater independently rated randomly selected topics, which the group then discussed and discrepancies in SAM ratings and theme codes were resolved. Inter-rater reliability of the valence ratings was calculated using a two-way random, consistency, single measures intraclass correlation coefficient (ICC; Hallgren, 2012). Fleiss' kappa (Landis & Koch, 1977) was used to calculate agreement for coding the theme categories. The topics used for training were randomly selected

from the full list of topics. Once raters achieved a minimum reliability established in the

behavioral coding literature, specifically greater than or equal to .75 for ICC, indicating excellent

agreement (Cicchetti, 1994), and a minimum of .61 for Fleiss kappa, indicating substantial

agreement (Landis & Koch, 1977), raters were assigned randomly selected discussion topics to

rate. Twenty-eight percent of discussion topics across families were randomly assigned to all

raters for calculating drift reliability to confirm sustained agreement among raters. Raters met

intermittently to remedy inconsistencies, avoid drift, and provide an opportunity to ask questions

about difficult ratings for topics that were not assigned to more than one rater. If the topic was

assigned to all raters for drift reliability, the ratings of one rater was randomly selected to be

included in the dataset for analyses. The drift reliability for rating valence/intensity and category

type, average inter-rater reliability across raters was excellent (ICC = .96) and nearly perfect

(Fleiss kappa = .90).

2.4 Measures

Demographic information was collected through parent-report, including race/ ethnicity, gender, and income, through a Qualtrics survey. All other constructs were behaviorally coded and described below.

2.4.1 ***Behavioral Coding: Manual Construction and Code Descriptions***

All study variables were measured by behaviorally coding affect and behaviors using video footage of parent-child interactions during the FDT. One rating for each variable was made for each two-minute discussion to indicate frequency and intensity (i.e., the use of emotion-specific language and explanations for causes of emotions) of emotion communication or emotion coaching across the entire two-minute discussion. Coding procedures are detailed in the Discussion Task Behavioral Rating Manual (DTBRM; see appendix E) and summarized here. Not all constructs described in the manual were used for the current project. Prior to the coding, video footage was edited to have both the parent camera footage and child camera footage displayed side-by-side in the same video file and synced by time.

2.4.1.1 Manual Construction

The rating manual used in this study was derived from a compilation of empirically based macro coding systems of affect, parent socialization behaviors, and parent-child communication (e.g., Deater-Deckard & O'Connor, 2000; Deater-Deckard, Pylas, & Petrill, 1997; Lunkenheimer et al., 2007) and was adapted to fit the current project's goals of measuring parents' and children's detailed and emotion-specific language with consideration of nonverbal behaviors while engaging in emotion coaching and emotion communication, respectively. All rating scales used in the current study ranged from 1 (*no-extremely low*) to 7 (*high-extremely high*) and incorporated emotion-specific language and explanations for causes of emotions to capture

language that is detailed and emotion specific. Both verbal and non-verbal behaviors (e.g., furrowed eyebrows when talking about something sad; parental warmth through tone of voice) were considered when making ratings and is outlined at the beginning of the DTBRM in the General Coding Rules section (see appendix E). It is important to note that verbal and nonverbal behaviors are not weighted the same when making ratings, rather, nonverbal behaviors are enhancers for verbal coaching and verbal communication behaviors.

A draft of the manual was created and piloted with a team of three individuals (Race=100% White/Non-Hispanic), including the principal investigator of this project, another graduate student, and a post-baccalaureate RA. Team members used the drafted manual to rate 20 parent-child discussions during a six-week period. Team members met once per week to compare ratings and discuss challenges using the rating process, rating scales, and descriptions of ratings. Adjustments to the manual were made prior to rating for the subsequent week. A team of new raters who were not involved in creating the manual were then trained to rate parent-child discussions for the current study. Further minor edits were made to the manual throughout the training phase.

2.4.2.1.2   *Emotion Labeling*

Emotional and non-emotional aspects of family discussions are distinguishable dimensions (Raikes & Thompson, 2008). The dialogue of conversations can be separated into more event-related dialogue (i.e., about basic facts of what happened) and dialogue about emotional states (Bird, Reese, & Tripp, 2006; McDonnell et al., 2022; McDonnell, Valentino, Comas, & Nuttall, 2016). Figure 3 was created for the manual to provide a visual representation of how to incorporate the degree of clarity of dialogue about emotional states (i.e., non-event-related discussion) when parents are coaching, and children are communicating emotions. An

example of "clear emotions" is, "It made me really happy to see you riding your bike," since the emotion word 'happy' is used. An example of a "very loosely related to emotion" statement is, "I was running down the road and saw interesting trees that I liked." The word "like" suggests a positive emotion indirectly and is thus not clear emotion labeling. Parents and children who use more "clear" emotion words are given higher ratings of emotion coaching and emotion communication respectively, whereas parents and children who use more loosely related and very loosely related words will have lower overall ratings.
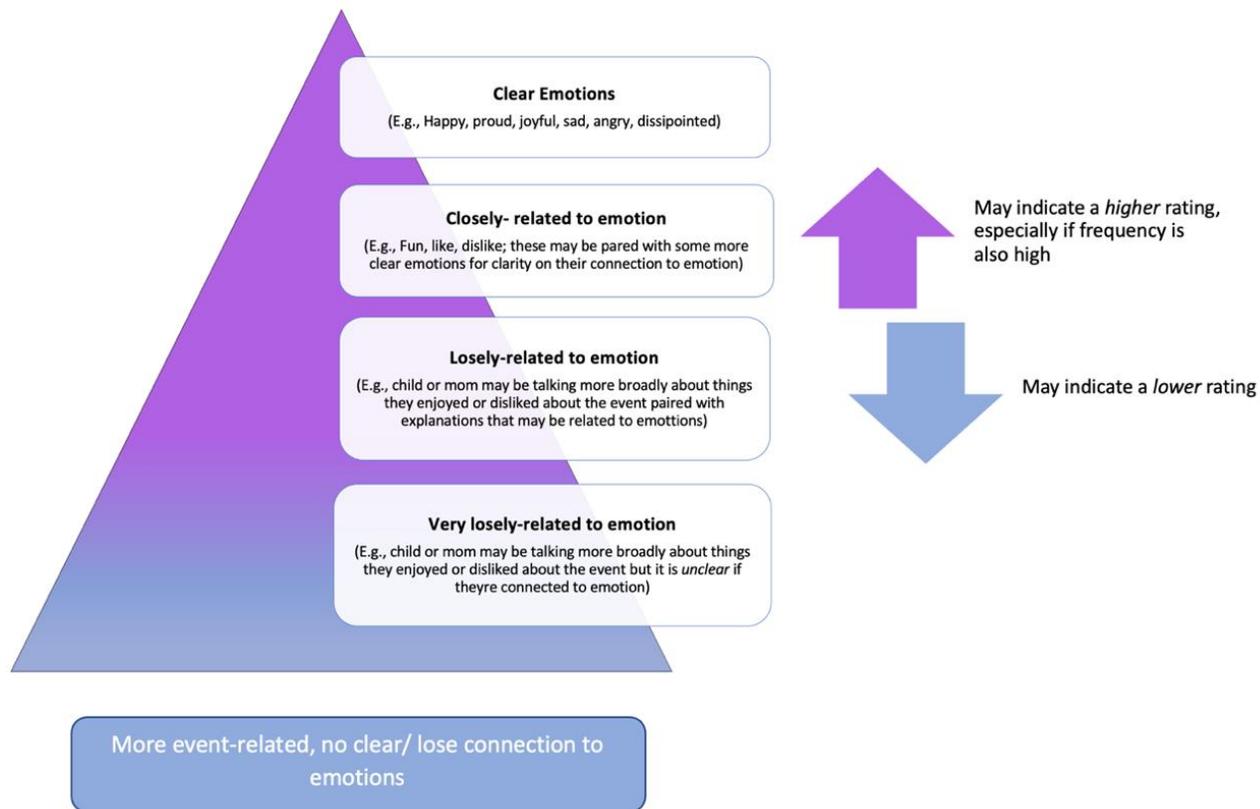
Figure 3

This figure is a visual representation of how to integrate clarity of emotion labeling when making ratings of parental emotion coaching and child emotion communication and was provided to raters in the coding manual. The triangle shape represents the broad (i.e., blue coloring) to specific nature (i.e., purple coloring) of event-related dialogue vs dialogue about emotional states. Frequency is not directly integrated into this figure but is always considered globally in relation to the figure (e.g., a higher frequency of clear dialogue about emotional states may indicate a higher raring).

2.4.2.2 Parental Emotion Coaching

Parents' positive and negative emotion coaching were rated separately for all four discussion topics, with lower scores indicating no evidence and higher scores indicating extremely high evidence. Positive emotion coaching is teaching children about positive emotions and is displayed behaviorally during parent-child discussions as talking about positive emotions through using language and paralinguistics that are detailed and emotion-specific about positive emotions (e.g., happy, proud, joyful) and correspondingly having detailed explanations for the causes of positive emotions (e.g., "It made me happy to see you win that award because I was so proud of you!"). Negative emotion coaching is teaching children about negative emotions and is displayed behaviorally during parent-child discussions as talking about negative emotions through using language and paralinguistics that are detailed and emotion-specific about negative emotions (e.g., sad, mad, disappointed) and correspondingly having detailed explanations for the causes of negative emotions (e.g., "It made me sad when our dog passed away because I knew it would make you sad.").

2.4.2.3 Emotion Communication

Children's positive and negative emotion communication[1] behaviors were coded separately for all four discussion topics, with lower scores indicating no evidence and higher scores indicating extremely high evidence. Positive emotion communication is defined as the degree to which children discuss positive emotions (e.g., happiness, joy, excitement) using language and paralinguistics that are detailed and emotion specific. For example, a child saying, "I was really happy, because I love my sister and love seeing her happy" would contribute to a

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[1] Emotion communication is referred to as emotion talk in the Discussion Task Behavioral Coding Manual; for the purpose of this project, these terms are synonymous.

higher rating. Negative emotion communication is defined as the degree to which children discuss negative emotions (e.g., anger and sadness) using language and paralinguistics that is detailed and emotion specific. For example, a statement such as, "I was so sad when our puppy died, because I knew we would never go on a walk again" would contribute to a higher rating, whereas a statement such as "Yes, that was sad" would need additional details to contribute to a higher rating.

Children who received low ratings did not label emotions or they used a low frequency of very loosely emotion-related words to describe emotions and may have given no explanation about the communicated emotions; for example, responding "yes" to a parent asking if they felt happy. Children who received high ratings labeled several emotions clearly and gave several detailed explanations for their communicated emotion(s) that went beyond the parents' question(s).

2.4.2.4   Coding Process

Six independent raters (Race= 66.7% White/Non-Hispanic and 33.3% Black/African American) were trained on the coding system until they achieved a minimum reliability of ICCs of greater than or equal to .75 across all ratings, indicating excellent agreement. This team of raters was completely independent of the team who piloted the manual. The process of training raters included raters independently reviewing and rating approximately 100 randomly assigned discussion topics. In order to become familiar with a given dyad, thus establishing "norms" of emotion expressiveness for each participant, each rater was assigned at least 2 discussion topics per dyad at the same time, and they were instructed to watch all 4 discussions a dyad engaged in. The training period lasted approximately 33 weeks and involved meeting twice a week to discuss

ratings and come to a consensus agreement. Raters' average initial and final drift inter-rater

reliability for each variable was excellent; see Table 1 for ICC averages and ranges.

Table 1

ICCs for Rated Behavior Variables

Rated Variable	Average (Range) ICCs during Initial Training	Description of Agreement during Initial Training	Average ICCs during (Range) Drift Reliability	Description of Agreement during Drift Reliability
Positive Emotion Coaching	.92 (.83-.99)	Excellent	.96 (.94-.96)	Excellent
Negative Emotion Coaching	.95 (.90-.99)	Excellent	.94 (.88-.98)	Excellent
Positive Emotion Communication	.95 (.94-.98)	Excellent	.92 (.84-.99)	Excellent
Negative Emotion Communication	.95 (.92-.97)	Excellent	.92 (.88-.94)	Excellent

Note. Numbers presented are the average and range ICCs for the five raters. Descriptions of agreement were based on recommendations by Cicchetti (1994).

To test for high sustained agreement among raters, final drift reliability was calculated on 20 percent of discussions across all families. Raters met once a week to discuss ratings for overlapping (reliability) discussions and to come to a consensus on ratings when independent ratings are not identical. This weekly meeting was also an opportunity for raters to remedy any inconsistencies, avoid drift, and provide an opportunity to ask questions about difficult ratings for topics that were not assigned to more than one rater. Ratings from one rater randomly assigned to rate a discussion topic was used in the final analysis dataset. If the discussion was assigned to more than one rater for drift reliability, ratings from one rater were randomly selected to be included in the final analysis dataset. Raters achieved excellent final drift reliability (refer to Table 1 for ICCs).

2.5   **Data Analytic Plan**

All hypotheses included children's race, children's age, children's gender, and income as covariates in the study's analyses. Generalized Estimating Equations (GEE; Liang, 1986) were used to test all three hypothese as well as exploratory analyses. GEE can be used to analyze repeated measures data with continuous predictors (Ballinger, 2004; Liang & Zeger, 1986; Zeger & Liang, 1986) as well as for non-normally distributed data. The GEE approach was selected for this study to account for non-normally distributed data (described in more detail below) as well as to test the interaction of parents' emotion coaching (a continuous variable) and valence of the emotion coached (a repeated-measures categorical variable).

For Hypothesis One, that parents will use more frequent and emotion-specific language to explain negative than positive emotions, positive emotion coaching ratings were averaged across the two positively valanced conversations and negative emotion coaching ratings were averaged across the two negatively valanced conversations. Then, a total emotion coaching score

was calculated by averaging this positive emotion coaching and negative emotion coaching score. This resulted in a GEE model with a 2-level within-subjects variable (positive emotion coaching or negative emotion coaching) predicting emotion coaching to examine mean level differences between positive and negative emotion coaching. Hypothesis two that children will use more frequent and emotion-specific language to discuss negative relative to positive emotions was tested the same way as hypothesis one, except emotion communication was the dependent variable instead of emotion coaching.

Hypothesis Three that parents who use more frequent and emotion-specific language will have children who use more frequent and emotion-specific language with an association particularly strong when discussing negative relative to positive emotions was also tested using GEE given it can be used to analyze repeated measures data with continuous predictors (Ballinger, 2004; Liang & Zeger, 1986; Zeger & Liang, 1986). The GEE approach was selected for this study to test the interaction of parents' emotion coaching (a continuous variable) and valence of the emotion coached (a repeated-measures categorical variable).

2.5.1   *Power Analysis*

Estimates of effect size are not available for GEE. Statisticians have written about the complexities of calculating effective sizes and statical power for GEE models. Simulation (e.g., Monte Carlo) analyses are needed to effectively calculate power and determine sample sizes (Shieh, 2003; Liu & Liang, 1997; Shih, 1997). No statistical software programs have been developed to estimate sample sizes for GEE models. I will thus provide rough estimates of power to detect expected effects that are based on power analysis for a mixed repeated measures ANOVA, which is a similar approach.

For the first and second proposed hypotheses, power was calculated using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009), with an alpha level of .05 and a sample of 115 participants. No previous studies used the exact variables or tested the same hypothesis as the present student. Lunkenheimer et al., (2007) is the closest approximation to the present study design, specifically by coding parents' emotion coaching behaviors, and a sample with a similar mean age ($M = 9.75$ years). The effect size for testing the effects of behaviorally coded negative emotion coaching and positive emotion coaching on mothers' ratings of child outcomes (e.g., emotion regulation, emotion lability, and behavior problems) in Lunkenheimer et al., (2007) was $f^2 = 0.302$. Given these parameters, the power for the current study is very high (.9978). For the third hypothesis, power was estimated using G*Power 3.1 and an alpha level of .05, sample size of 115, and Lunkenheimer et al.'s (2007) effect size of $f^2 = 0.302$ (a nearly large effect). Power based on this repeated measures ANOVA is very high (.9999).

3   RESULTS

3.1 Data Preparation

All analyses were performed using IBM SPSS Statistics for Windows, Version 28.0. Income was missing for 6 families; therefore, multiple imputation procedures were used to impute missing income values for these families since these families would otherwise be discarded from the main analyses (i.e., discarding 24 discussions) that employ listwise deletion. Several demographic variables including mother's age, race, marital status, education, and children's age and scores of parental depression from the Center for Epidemiological Studies Depression self-report scale (CES-D) were used to predict five sets of missing data values. Results from the main analyses (described below) were not meaningfully different across these 5 sets (i.e., all β and p values were very similar), so the average of the five imputed annual income values for each family with missing data were used in the subsequent analyses.

Of the total sample (117 dyads engaging in a total of 468 discussions), 12 total discussions were dropped due to either not completing the FDT[2], missing video footage, or extensive task deviations (e.g., technical difficulties resulting in minimal footage available to code). This resulted in a total of 456 discussions, thus, when averaged across the two discussions of the same valence within families, 228 cases for 115 dyads were included in the tests of hypotheses.

3.2 Task Validation

We used repeated measures t tests to test whether children and parents, on average, felt more negative than neutral affect during the negative discussions or more positive than neutral

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[2] Only one dyad did not complete the FDT.

during the positive discussions. Children's and parents' SAM ratings of their affect during the discussions were compared to a value of 0 (neutral affect). Children's average affect rating was significantly less than 0 during the negative discussions, $t = -13.406$, $p < .001$, $d = -1.261$, with a mean SAM rating of -2.170, $SD = 1.723$, reflecting moderately negative affect. Children's average affect rating was significantly greater than 0 during the positive discussions, $t = 35.812$, $p < .001$, $d = 3.369$, with a mean SAM rating of 3.39, $SD = 1.1006$, reflecting moderately positive affect. Parents' average affect rating was significantly less than 0 during the negative discussions, $t = -13.750$, $p < .001$, $d = -1.294$, with a mean SAM rating of -1.82, $SD = 1.409$, reflecting moderately negative affect. Parents' average affect rating was significantly greater than 0 during the positive discussions, $t = 33.371$, $p < .001$, $d = 3.139$, with a mean SAM rating of 3.170, $SD = 1.0106$, reflecting moderately positive affect. Parents, $t = 9.669$, $p < .001$, $d = .910$, and children, $t = 7.208$, $p < .001$, $d = .678$, rated the positive discussions as more positive than the negative discussions were negative (i.e., the positive ratings were further from 0 than the negative ratings were from 0). Effect sizes for valence of affect during discussions compared to neutral are very large, supporting the validity of this task, though affect was stronger in the positive than negative discussions, which might introduce a confound.

We used repeated measures t-tests to test whether independent raters' ratings of the expected intensity of emotion experienced when discussing the negative and positive topics were significantly different from one another. Absolute values of raters' SAM valance ratings of the topics were calculated and compared, and the t-test revealed a nonsignificant difference, $t = -1.377$, $p = .171$, $d = .128$.

The frequencies of topic categories are presented in Table 2. The most frequently discussed negative topics were about the children's failures (e.g., got a bad report card) and

bereavement of a loved one (e.g., grandmother died) and the most frequently discussed positive

topics were about a family vacation and children's non-interpersonal achievement (e.g., got the

big part in the play).

Table 2

Descriptives of Discussion Topic Categories

Category Code	**Frequency** (% of topics categorized in each discussion topic valence)
Negative Topics	
Failure and disappointment	77 (16.5%)
Bereavement	62 (13.2%)
Varied other negative events	28 (6.0%)
Family's interpersonal problem	22 (4.7%)
Separation	13 (2.8%)
Material loss	8 (1.7%)
Illness, injury, accident- parent	6 (1.3%)
Children's interpersonal problems – family	4 (0.9%)
Children's interpersonal problem- peer	3 (0.6%)
Illness, injury, accident- child	2 (0.4%)
Discrimination	2 (0.4%)

Positive Topics	
Category Code	**Frequency (%)**
Children's achievement (non-interpersonal)	89 (19%)

Vacation	82 (17.5%)
Varied other positive events	31 (6.6%)
Children's prosocial behavior towards others	20 (4.3%)
Children's chore completion	5 (1.1%)
Birth of a new child	4 (0.9%)
Positive interpersonal change	4 (0.9%)
Birthday celebration	2 (0.4%)

3.3 Preliminary Analyses

Given the low frequency of parents' coaching and children's communication of the opposite valanced emotion during discussions (e.g., coaching positive emotions in a negative discussion), only coded variables for congruent emotions during discussions (i.e., the coaching of positive emotions in the positive discussions and the coaching of negative emotions in the negative discussions) were used in this study. First, correlations and descriptive statistics for the coded parental emotion coaching variables and children's emotion communication variables in each of the four discussions were examined. Second, outliers and variable distributions were examined. Third, coded emotion coaching and emotion communication variables were averaged across the two negative discussions and then the two positive discussions. For example, emotion coaching in the two positively valanced discussions were averaged resulting in a 'positive emotion coaching' variable. This calculation was repeated for other variables resulting in four variables: positive emotion coaching, negative emotion coaching, positive emotion communication, and negative emotion communication. Correlations and descriptives for these averaged variables and covariates were then examined.

3.3.1   *Descriptives of Coded variables, Covariates, and Outliers*

Correlations for parental emotion coaching variables are provided in Table 3. These correlations showed that all emotion coaching variables were positive and small to moderate, with most variables significantly correlated. Table 4 provides correlations for children's emotion communication variables. All emotion communication variables had small correlations with one another, and some correlations were significant.

Table 5 includes the means, standard deviations, and ranges for all coded variables. The sample means for all parent coaching and children's communication variables hovered around 4,

indicating on average parents' emotion coaching and children's emotion communication were clear with moderate intensity. The range of all variables included the lowest rating possible (1; extremely low or no evidence) and either the highest possible rating (7; extremely high evidence is clear, strong, and is extremely high in intensity) or 1 point away from the highest rating (6: high evidence. Evidence is clear with high intensity).

Outliers were examined using box plots with outlier detection. Across all 8 coded variables, there were no cases with extreme outliers and 28 cases marked as potential outliers. The 28 (of 912 data points; 3.1%) potential outliers were examined to see if there were methodological reasons for being flagged as potential outliers.

Table 3

Correlations among Parents' Emotion Coaching Coded Variables

	1.	2.	3.	4.
1. Coaching Pos Emotions, Pos Child-Focused Topic	-			
2. Coaching Pos Emotions, Pos Family-Related Topic	.383**	-		
3. Coaching Neg Emotions, Neg Child-Focused Topic	.238*	.197*	-	
4. Coaching Neg Emotions, Neg Family-Related Topic	.340**	.382**	.164	-

Note. Pos = Positive. Neg = Negative. *p* < .05; **p* <.01.

Table 4

Correlations among Children's Emotion Communication Coded Variables

	1.	2.	3.	4.
1. Pos Emotion Communication, Pos Child-Focused	-			
2. Pos Emotion Communication, Pos Family-Related	.200*	-		
3. Neg Emotion Communication, Neg Child-Focused	.168	.149	-	
4. Neg Emotion Communication, Neg Family-Related	.170	.200*	.289*	-

Note. Pos = Positive. Neg = Negative. *$p < .05$.

Table 5

Means, Standard Deviations, and Ranges for Coded Variables

	Mean	*SD*	Range
Emotion Coaching, Pos Child-Focused	4.43	1.16	1 – 7
Emotion Coaching, Pos Family-Related	3.68	1.06	1 – 6
Emotion Coaching, Neg Child-Focused	4.07	1.25	1 – 7
Emotion Coaching, Neg Family-Related	4.51	1.20	1 – 7
Emotion Communication, Pos Child-Focused	3.68	1.27	1 – 6
Emotion Communication, Pos Family-Related	3.53	1.27	1 – 7
Emotion Communication, Neg Child-Focused	3.61	1.31	1 – 6
Emotion Communication, Neg Family-Related	4.11	1.40	1 – 7

Note. Pos = positive. Neg = negative. *SD* = standard deviation.

3.3.2   Descriptive of Coded Variables Averaged across Topics of the Same Valence

Parental emotion coaching variables and children's emotion communication variables were then averaged across discussions of topics of the same valence (negative or positive) resulting in four variables: positive emotion coaching (i.e., parents emotion coaching of positive emotions in the two positively valanced discussions), negative emotion coaching (i.e., parents emotion coaching of negative emotions in the two negatively valanced discussions), positive emotion communication (i.e., children's emotion communication of positive emotions in the two positively valanced discussions) and negative emotion communication (i.e., children's emotion communication of negative emotions in the two negatively valanced discussions). Table 6 provides the correlations among these variables. Correlations between the parent and child variables are moderate in strength for variables of the same valence and small in magnitude across valences. Correlations between the two parent variables are strong and between the two child variables are small.

Table 7 provides the means, standard deviations, and ranges for variables included in tests of the hypotheses, including the positive and negative emotion coaching and emotion communication variables (averaged across topics of the same valence), variables reflecting overall emotion coaching and emotion communication (i.e., an average of the coded variables across all four discussions), and statistical covariates. Averages for all variables hovered around 4, meaning on average, parental emotion coaching and children's emotion communication was clear with moderate intensity. Table 8 provides correlations for all continuous variables to be used in the analyses. Parents emotion coaching and children's emotion communication across valences were significantly correlated with moderate strength.

Table 6

Correlations between Continuous Variables When Averaged Across Congruent Discussions

	1.	2.	3.	4.
1. Pos Emotion Coaching	-			
2. Neg Emotion Coaching	.453**	-		
3. Pos Emotion Communication	.448**	.273**	-	
4. Neg Emotion Communication	.206*	.501**	.277**	-

Note. *p < .05; **p <.01. Pos = positive. Neg = negative. Positive Emotion Coaching and Positive Emotion Communication is the coaching/ communication of positive emotions in the positive discussions, and Negative Emotion Coaching and Negative Emotion Communication is the coaching/communication off negative emotions in the negative discussions.

Table 7

Means, Standard Deviations, and Ranges for Variables Used in Hypothesis Tests

	Mean	*SD*	Range
Parent's Coaching of Pos Emotions	4.05	.93	1.0 - 6.5
Parent's Coaching of Neg Emotions	4.29	.94	2.0 - 6.5
Children's Communication of Pos Emotions	3.60	.99	1.5- 6.0
Children's Communication of Neg Emotions	3.86	1.09	1.0 - 6.5
Emotion Coaching (across valences)	4.17	.94	1-7
Emotion Communication (across valences)	3.73	1.05	1-7
Income[b]	$118,470	$77,297	$5,000 – $350,000
Children's Age	9.184	1.11	7.08 – 12.08

Note. Pos = positive. Neg = negative. All variables are averaged across topics of the same valence. *SD* = standard deviation. b = includes imputed values for 6 cases with missing income data

Table 8

Correlations between Final Continuous Variables Used in Analyses

	1.	2.	3.	4.
1. Emotion Coaching	-			
2. Emotion Communication	.501**	-		
3. Children's Age	-.081	-.007	-	
4. Income	.054	-.019	-.120	-

Note. *p < .05; **p <.01.

3.3.3   Testing Assumptions and Statistical Approach

The distributions of the emotion coaching and emotion communication variables, the outcome variables for all three hypotheses, were examined using visual inspection of histograms and the Kolmorgorov-Smirnov (K-S) test of normality. The K-S test revealed the distributions of both variables were significantly different from the normal distribution and the skew and kurtosis of both variables were significant. Generalized Estimating Equations (GEE; Liang & Zeger, 1986) were thus used because they produce efficient and unbiased estimates for the analysis of repeated measures designs with non-normally distributed dependent variables (Ballinger, 2004; Liang & Zeger, 1986; Zeger & Liang, 1986).

GEEs assume that observations between clusters are not related i.e., there is no higher-level clustering mechanism. To test this assumption, the residuals of each GEE model were plotted against the predicted values, and no patterns were apparent. Generalized estimating equations also assume that the sample size is adequately large for asymptotic inference, usually around 50 clusters. In this study, clusters of data are equal to number of participants ($N = 115$) and thus adequately large.

3.4 Tests of Hypotheses

The three hypotheses were tested in three separate GEE models. Children's gender, race, age, and income were included as statistical controls in all three models. All continuous variables (emotion coaching, emotion communication, income, and children's age) were sample mean centered. Race was dummy coded. Given the frequency of children's races in the sample, the majority group "White" as the reference group coded as 0 and "Black/African American" and "Other" as the two other race groups.

3.4.1 Hypothesis One: Parents' Emotion Coaching by Valance

The results of a GEE model predicting emotion coaching from valence of the discussion topic and statistical controls are presented in Table 9 and Figure 4. The GEE model revealed a significant main effect of children's race on emotion coaching, such that children identifying as 'White' had parents who engaged in significantly higher levels of detailed and emotion specific emotion coaching than children in the 'Other' group, $b = .12$, $p = .04$, as well as the 'Black' group, $b = .11$, $p = .01$. Mean levels of emotion coaching broken down by racial groups can be seen in Table 10. No other statistical controls significantly predicted emotion coaching. Consistent with Hypothesis 1, parents engaged in significantly more detailed and emotion specific emotion coaching with negative emotions than positive emotions, $b = .06$, $p = .01$.

3.4.2 Hypothesis Two: Children's Emotion Communication by Valance

Results of the GEE model testing Hypothesis 2, children's emotion communication, are presented in Table 11 and Figure 5. Consistent with the hypothesis, children engaged in significantly more detailed and emotion specific emotion communication about negative emotions than positive emotions, $b = .07$, p .02. No statistical controls significantly predicted emotion communication.

Table 9

GEE Model for Predicting Parents' Emotion Coaching

Model	ß	df	Wald $\chi 2$	p
Topic Valence (0 = *negative*, 1=*positive*)	.06	1	6.24	.01
Children's Race (0=*White*,1=*Black*)	.12	1	4.10	.04
Children's Race (0=*White*,1=*Other*)	.11	1	6.47	.01
Children's Gender (0=*female*, 1=*male*)	-.046	1	1.81	.18
Income[a,b]	-5.23	1	0.05	.89
Children's Age[a]	-.01	1	0.37	.54

Note. N = 228. A=sample mean centered. B = includes imputed values for 6 cases with missing income data

Table 10

Comparison of Means, Standard Deviations, and Ranges for Emotion Coaching by Racial Group

Race Group	Mean	*SD*	Range
White	4.36	.883	2 – 7
Black	3.91	.975	1 – 6
Other	3.89	.836	2- 5

Note. White, *N*=132. Black, *N*= 82. Other, *N*=14. *SD* = standard deviation.
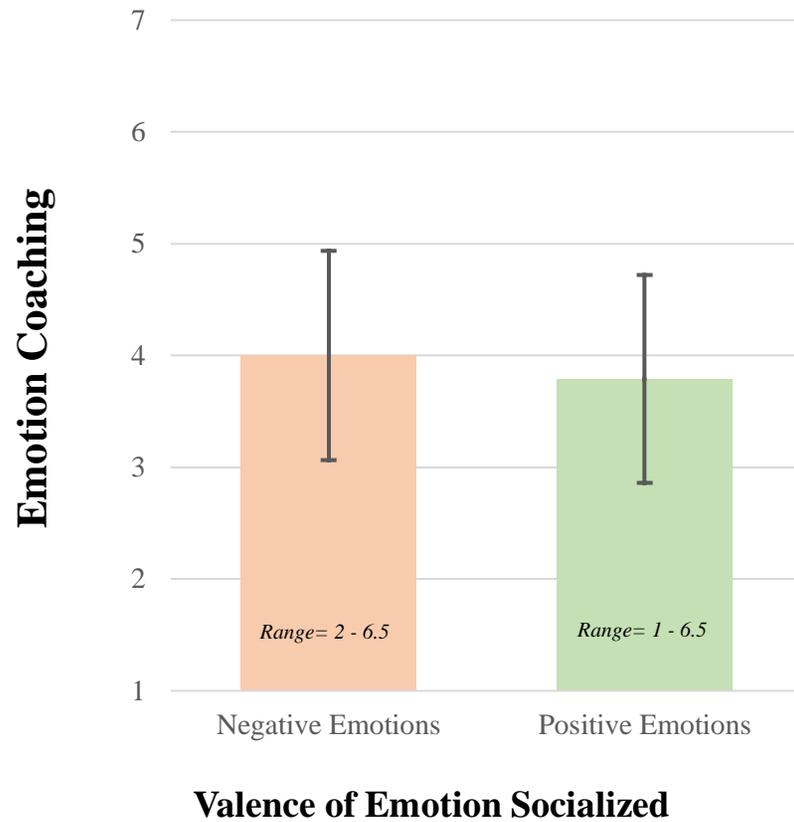
Figure 4

This figure is a bar graph depicting Hypothesis One, showing that negative emotions are coached significantly more than positive emotions, b = .06, p = .01. SDs are plotted.

Table 11

GEE Model for Children's Emotion Communication

Model	β	df	Wald $\chi2$	p
Topic Valence (0 = *neg*, 1=*pos*)	.07	1	5.15	.02
Children's Race (0=*White* and 1=*Black*)	.14	1	1.30	.26
Children's Race (0=*White* and 1=*Other*)	.03	1	0.30	.59
Children's gender	-.01	1	0.02	.89
Income[a,b]	-3.09	1	1.10	.30
Children's age[a]	.01	1	0.28	.60

Note. *N* = 228. A = sample mean centered, b = imputed from missing data; reference group = White, Females, Negative Valence.
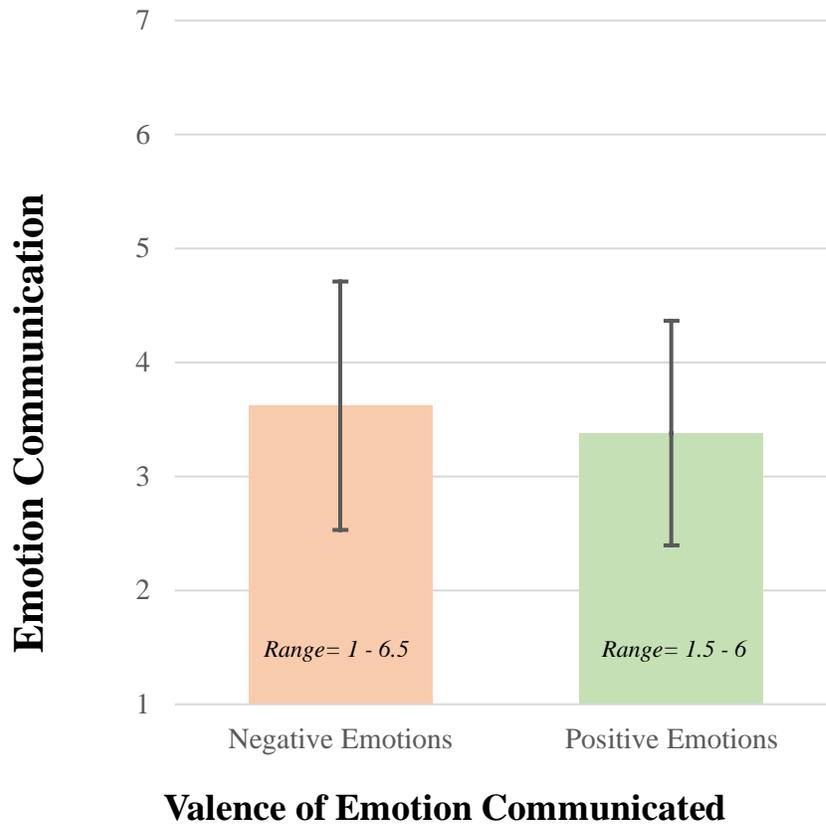
Figure 5

This figure is a bar graph depicting Hypothesis 2, showing that negative emotions are communicated significantly more than positive emotions, b = .07, p = .02. SDs are plotted.

3.4.3   *Hypothesis Three: Emotion coaching predicts Emotion Communication*

Table 12 and Figure 6 presents results for the GEE model testing Hypothesis 3, which is predicting children's emotion communication from parents' emotion coaching with emotion valence as a repeated measures moderator. This model included the interaction effect of parents' detailed and emotion specific emotion coaching and emotion valence on children's emotion communication, controlling for children's gender, age, race, and family income. No statistical controls significantly predicted emotion communication. The hypothesis was not supported in that valance was not a significant moderator. However, there was a significant main effect, with parents' higher levels of emotion coaching on predicted children's better emotion communication, $b = .15$, $p < .001$.

Table 12

GEE Model for Emotion Communication by Valance Predicting Emotion Communication

Model	ß	df	Wald χ2	p
Topic Valence (0 = *neg*, 1=*pos*)	-.06	1	0.17	.68
Children's Race (0=*White* and 1=*Black*)	.07	1	0.45	.50
Children's Race (0=*White* and 1=*Other*)	-.03	1	0.53	.47
Children's Gender	.02	1	0.43	.51
Income[a,b]	-2.81	1	1.34	.25
Children's Age[a]	.02	1	0.98	.32
Emotion Coaching	.15	1	35.52	<.001
Valence X Emotion Coaching	.02	1	0.43	.51

Note. *N* = 228. a = sample mean centered, b = imputed from missing data; reference group = White, Females, Negative Valence.
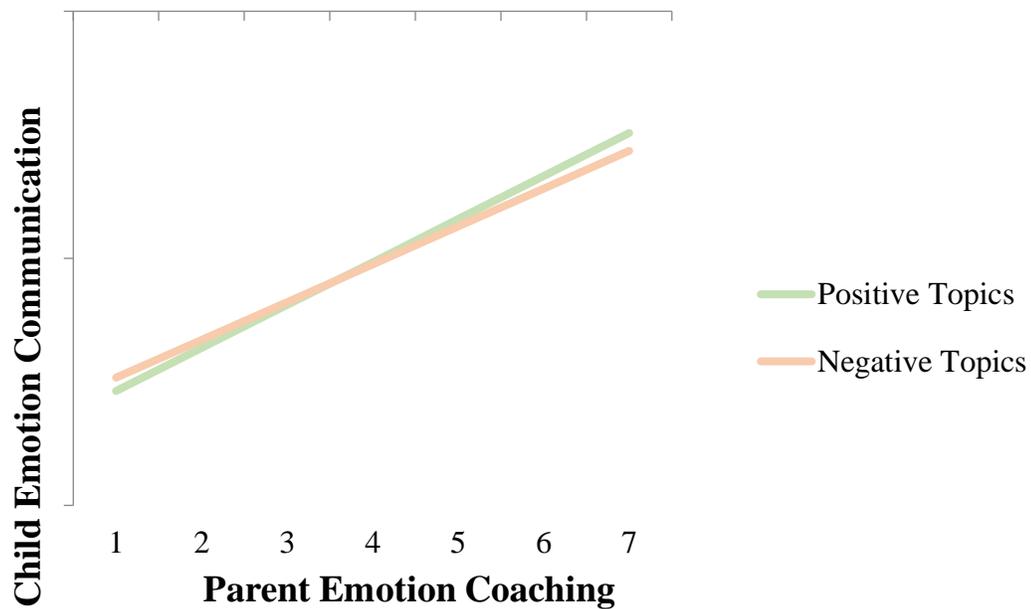
Figure 6

This figure is a line graph depicting Hypothesis Three, showing that valance was not a significant moderator. There was a main effect, with parents' emotion coaching significantly predicted children's emotion communication, b =.15, p <.001.

3.5 Race Exploratory Analyses

Exploratory analyses were conducted to investigate the interaction of parents' emotion coaching and children's race on children's emotion communication and are presented in Table 13. This GEE analyses reveled the interaction was statistically significant. .021. Post hoc comparisons revealed that higher parent's emotion coaching significantly predicts higher children's emotion communication, and this relationship is stronger in 1) the White group when compared to the Black and Other group, b =-.17, p .009 and 2) Black group when compared to the Other group, b =-.10, p .021.

Table 13

GEE Model for Emotion Communication by Race Predicting Emotion Communication

Model	β	df	Wald χ2	p
Topic Valence (0 = *negative*, 1=*positive*)	.04	1	1.53	.22
Children's Race (0=*White* and 1=*Black*)	.78	1	5.94*	.02
Children's Race (0=*White* and 1=*Other*)	.40	1	4.12*	.05
Children's Gender	.03	1	.54	.46
Income[a,b]	-3.61	1	2.41	.12
Children's Age[a]	.02	1	1.08	.30
Emotion Coaching	.39	1	25.98**	<.001
Emotion Coaching X Children's Race (*White* and *Black*)	-.17	1	6.85*	.009
Emotion Coaching X Children's Race (White and Other)	-.10	1	5.33*	.021

Note. *p < .05, two-tailed. **p < .01, two-tailed. *N* = 228. a = sample mean centered, b = imputed from missing data; reference group = White, Females, Negative Valence.

4 DISCUSSION

4.1 Coaching and Communicating More about Negative than Positive Emotions

Parent-child interactions are a primary means through which children learn about emotions (Maccoby, 1994). Parents communicate their emotional experiences through dialogue, behaviors, and affect, including by directly labeling experienced emotions and providing details of the emotions and the context in which they occur (Martins et al., 2016; Saarni & Harris, 1991). Reminiscing about shared family experiences is one context where parents socialize their children's emotion understanding (e.g., Fivush et al., 2006; McDonnell et al., 2022). The current study advanced this line of research by showing that when parents reminisced about past emotional family events with their middle-childhood aged children, they coached negative emotions more than positive emotions, using more emotion-specific language.

Relative to conversations about negative experiences, conversations between parents and their children about positive experiences contained fewer details, more emotionally imprecise language (e.g., "Great job!"), and statements about emotions that provided little detail ("I was excited!") rather dialogue-encouraging questions about emotions. Conversations about negative experiences were more detailed, included more specific emotion labeling (e.g., "Oh, it made you feel sad. It made me feel sad too. I cried a lot."), and dialogue-encouraging questions (e.g., "I was a little angry that it happened. It didn't seem fair. How did you feel?). The current study also showed that when middle childhood aged children reminisce about past emotional family events, similar to their parents' emotion coaching, they communicated with more detailed and emotion-specific dialogue during negative discussions ("It makes me sad that I can't call them anymore. It also makes me sad that you can't call them anymore. It makes me want to cry") than when communicating during positive discussions ("I was happy to see Cinderella's Castle at Disney").

Differences in the function of positive and negative emotions may explain this tendency toward greater emotion coaching and emotion communication during negative experiences compared to positive experiences. First, parents' coaching may be problem-focused versus just reflecting on or describing emotions experienced (Capaldi, Forgatch, & Crosby, 1994; Vuchinich, Angelelli, & Gatherum, 1996). Problematic situations are likely to be more tied to negative than positive emotions, leading to more frequent and detailed parent-child communication about negative than positive emotions. For example, if a child fails to comply with their teacher's instructions a few times a week, a parent may be motivated by their own frustration and worry to decrease the occurrence of these misbehaviors. Parents may also be aware that regulating and coping with negative emotions may be more developmentally challenging and may require more parental facilitation (Ramsden and Hubbard, 2002), thus inclining them to contribute more effort in problem-solving and discussing negative emotions.

Similarly, children may also be motivated to problem-solve to reduce the distress feeling of negative emotions. For example, the discomfort of embarrassment after tripping and falling in front of their classmates may motivate a conversation with their parent who can provide reassurance and support. For example, a child might communicate their emotions attached to this negative experience (e.g., "I was so embarrassed because I thought people were going to laugh at me. I was also sad because I scraped my knee.") and ask emotion-specific questions (e.g., "Would that make you feel embarrassed too?") in a detailed and emotion specific way to relieve their distress.

Emotions also have their own unique evolutionary advantages and functions (e.g., Fischer & Manstead, 2016; Fredrickson, 2001), but those of positive emotions may be overlooked or may be deemed by parents less relevant to healthy child development than the functions of

negative parents. Positive emotions have been proposed to deepen relationships and broaden one's attention to opportunities for positive growth (Fredrickson, 2001, 2004). They motivate us to try new things and attract others to us to share happiness (Sels et al., 2021). These evolutionary advantages of positive emotions differ from those of negative emotions in that the functions are more long term and there may oftentimes not be an immediate problem that needs to be addressed. Given these unique evolutionary advantages and the unique functions positive emotions provide, this study underscores the importance of disseminating this importance to parents and children proactively versus retrospectively.

Paralleling parents' and children's greater communication about negative than positive emotions, considerably more research has focused on the function and parents' socialization of negative emotions than the function and socialization of positive emotions, though research on the function of positive emotions is on the rise (Dunn & Brown, 1994; Garner et al., 1994; Lunkenheimer et al., 2007). The findings of the present study underscore the need for research on parental socialization of positive emotions, especially how parents can foster and facilitate the development of positive emotions. Problem-focused discussions, for example, are likely less helpful for socializing positive emotions. Conversations about how positive emotions linger, build on other emotions, and affect others and the relationship with others may be more important for socializing children's experience of positive emotions.

Psychological interventions that strengthen parents' skills for fostering their children's communication about positive experiences may have the benefits of building up the parent-child relationship, other child-peer relationships, and overall psychological well-being. Research might investigate other ways that parents could incorporate the discussion and recognition of positive

emotions, whether that's though emotion coaching or other forms of parental emotion socialization.

4.2 Parent's Emotion Coaching Predicts Children's Emotion Communication

Parents' detailed and emotion-specific use of emotion coaching was a significant predictor of children's detailed and emotion specific emotion communication. This finding contributes to understanding a more proximal impact of parental emotion coaching on children's emotional development than is typically studied. Parents' emotion coaching is most often studied in relation to distal child outcomes, like children's internalizing problems, social skills, or prosocial behaviors (e.g., internalizing problems, externalizing problems, emotion dysregulation, etc.; Kehoe et al., 2014; Lunkenheimer et al., 2007; Shaffer et al., 2012). Associations between PES and these outcomes are often assumed to be due to parents' socializing healthy emotional development, but little research has tested this assumption. The findings of the current study are consistent with the idea that parents' emotion coaching socializes children's better emotion communication, though future studies, such as RCTs of emotion socialization parenting interventions, should test whether this association is causal. Understanding that parents coaching of emotion predicts children's communication of emotion is a foundational piece of information that may provide clearer directions for the continuation of research within the topic of child emotional development.

This study's findings that parents' more detailed and specific emotion coaching of positive emotions is associated with children's more detailed and emotion-specific emotion communication about positive emotions is a novel finding. Though both parents and children provided more detailed descriptions of their negative than positive experiences, the coaching of both negative and positive emotions was associated with children's more specific and detailed

emotion communication and the associations were similar in magnitude (i.e., not significantly different and the effect size for the differences very small). Given parents coach during positive events less than negative events while reminiscing, parents may be unknowingly missing a great opportunity for encouraging their child's emotional development since discussing positive emotions is oftentimes more enjoyable, builds up self-esteem, and increases relational warmth (e.g., Fredrickson, 2004).

Given that the coaching of emotions during negative discussions generates more detailed and emotion specific language, one might expect negatively valanced discussions to be a better learning context for children as it pertains to their emotion communication. However, findings of the current study showed no significant difference in the strength of the association between parents' emotion coaching and children's emotion communication during positive and negative discussions. Despite parent-child conversations about positive events being less emotion-specific and detailed than conversations about negative events, they may still provide a fruitful context for emotion learning. Consistent with Fredrickson's broaden-and-build theory that posits positive emotions broaden attention and awareness of novel learning opportunities and ultimately build one's repertoire of psychological skills (Fredrickson, 2001, 2004).

4.3 Individual Differences in Emotion Coaching and Children's Emotion Communication

There was variability in the degree to which parents in the current study coached emotions and children communicated their emotions as exhibited by observational ratings that ranged from *no-low evidence* to *extremely high evidence* (Refer to Table 7 for ranges). Future studies may investigate factors that contribute to individual differences in parents' emotion coaching and children's emotion communication and the associations between the two. For example, research could investigate whether conversation topics elicit different degrees of

emotion coaching and emotion communication and identify patterns to infer which types may be more conducive to influencing positive emotions and negative emotions (e.g., self-focused topics verses other-focused topics). The association may be stronger when parental warmth is higher (Moran, Turiano, & Gentzler, 2018), parents' and children's internalizing symptoms are lower, parents ask more emotion questions, and children are better able to regulate their emotional experiences (Ellis et al., 2014).

4.4 The Family Discussion Task Elicits Positive and Negative Emotions

The FDT as used in the current study was an effective methodology for providing a context for parents and children to experience emotions and communicate about their positive and negative experiences. Behavioral observation raters achieved excellent reliability for rating emotion coaching and emotion communication. For both positive and both negative discussion topics in this study, average emotion coaching and communication ratings were in the moderate range, supporting the usefulness of the paradigm for generating emotion dialogue. The range of ratings from 1 to 6.5 for emotion coaching and emotion communication suggest the paradigm allows for individual differences in emotion dialogue across dyads. Further, results from the task validation/manipulation checks suggested that the FDT is a useful methodology for eliciting positive and negative affect. Although parents and children rated the positive discussions as more positive than the negative discussions were negative, this does not explain the current study's findings, since negative discussions generated more frequent and detailed emotion communication than positive discussions rather than the reverse. Furthermore, researchers rated the topics of positive and negative discussions as equally emotion-eliciting.

4.5 The Context of Race is Important

The current study's sample was racially and ethnically diverse. Characteristics of parental emotion socialization and child emotion communication may differ based on various factors, such as parents' meta-emotion philosophies, and some of these factors might be related to a family's racial and ethnic identity. Research on racial socialization of emotions suggests there may be differences in that way different cultural groups socialize their children's understanding and display of emotions, especially in families of minority groups who experience racial discrimination (e.g., Dunbar et al., 2017; Lozada et al., 2022). Our study was not designed to test racial socialization of emotions and families in our study very rarely identified discussion topics related to race, with only two families generating negative family topics that involved discrimination (see Table 2). Nevertheless, given research supporting the idea that parents' socialization of emotion may differ as a function of race, children's race was included as a covariate in all hypotheses and exploratory analyses to test the role of race in the relationship between parental emotion coaching and children's emotion communication were conducted.

There were two interesting findings related to race. First, there was a significant main effect of children's race on parents' coaching of positive and negative emotions, with White parents providing more detailed and emotion-specific coaching of positive and negative emotions than parents of other races. Children's communication about their positive and negative emotions did not differ by children's race. Second, race was a significant moderator in the relationship between parent's emotion coaching and children's emotion communication. Overall, there were higher levels of emotion coaching in White families compared to the families identifying as Black or Other.

These findings suggest that associations between emotion coaching and children's emotion communication are nuanced by cultural context. Dunbar and colleagues (2021) suggest that a "comprehensive parenting approach" that involves a balance of messages warning children about racial bias with moderate suppression of children's emotional distress (e.g., non-supportive or insensitive) in combination with supportive responses to emotions (e.g., validation, acknowledgement of emotions) are most adaptive for Black families (Dunbar, Lozada, Ahn, & Leerkes, 2022). These messages promote safety for Black children, provide a "safe haven" for black children to discuss distress and racial trauma, and promote children's self-worth (Dunbar et al., 2022). In another study, Black college students reported feeling less hurt and ashamed than European American students when their parents engaged in punitive and minimizing parenting practices regarding their emotions (Perry, Leerkes, Dunbar, & Cavanaugh, 2017).

These studies support the idea that the way parents socialize emotion expression and regulation, and the way children perceive parents' messages about emotions may differ across racial groups. The context that may accompany race may shape a dyads experience and understanding of emotion which underscores the importance of investigating the function of emotion coaching and emotion communication in these dyads. More nuanced approaches through context-centered theoretical models that recognize the distinctions of difference groups (e.g., Dunbar et al., 2022). Future studies should aim to contribute to this broader understanding by investigating these novel characteristics within different racial groups.

4.6 Limitations

The findings of this study should be considered within the context of several limitations of the study methodology. First, emotion coaching and communication measured through structured lab observation paradigms may be different than these behaviors outside of the lab

context. For example, parents may use more focused or detailed emotion coaching when provided with detailed instructions in the lab than they would at home. Observational methods, though, offer an alternative to objective parent-report surveys, which rely on parents recall of emotions and behaviors. Further, observational paradigms are a common method for investigating parent-child emotion communication. Researchers are often able to reliably rate/code PES, and ratings of PES have been related in expected ways to various outcomes, supporting their validity (e.g., Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Lunkenheimer et al., 2007).

Second, given the laboratory setting, both parents and children were aware that they were being observed while they engaged in a novel paradigm which involved highly structured conversations about various emotional topics that they helped identify. While there were methodological reasons for utilizing contrived discussions, there are possible extraneous variables that are not accounted for in this study, for example, children and parents may display a more restricted range emotional behaviors due to being observed by others. Additionally, the topic cards provided a variety of questions (see Appendix A), but both emotion coaching and emotion communication verbalizations varied (as displayed by the range of ratings given). There are benefits of the methodological set-up of using highly structured parent-child emotional discussions in that it provides a context through which parents and children are given an equal opportunity to discuss the positive and negative emotions attached to emotional contexts and this also provides measurability.

Third, the coding system used in the current study was created specifically for the FDT parameters in this study, and the validity of the exact rated variables used in this study are not established. However, the system was based on existing systems that were modified to fit the

parameters (e.g., types and frequency of emotion dialogue used during middle childhood) and goals of the current study. However, raters achieved excellent reliability (see Table 1), and nearly the full range of possible ratings were used with the average being right in the middle of the rating scales. Future research evaluating associations between variables generated by the FDT method and coding system and other measures of PES and children's emotion communication (e.g., self-report or parent report measures) are needed to evaluate the validity of the method.

Future research should aim to gain a deeper understanding on the degree to which parents are talking about emotions and emotional experiences in naturalistic environments. Furthermore, research should investigate the primary ways in which parents are doing this to drive intervention efforts (e.g., through reminiscing on past family experiences, or other coaching or socialization opportunities). Investigations of what parents are doing at home in a less structured environment could be an informative next step (e.g., how often are they even reminiscing on past emotional experiences? Are there other ways parents might be fostering positive emotional development?).

4.6.1 Diversity Considerations: Parent Gender and RA Race

The sample was diverse in terms of income, racial and ethnic composition, and child gender, but the vast majority of parents in the study were mothers. The findings might not apply to fathers' emotion coaching because studies suggest mixed findings about fathers' PES. Additionally, a book chapter by Brand and Klimes-Dougan (2010) discusses how PES practices of mothers and fathers have similarities but also differences. For example, mothers may be more involved than fathers in parenting (Paulson & Sputa, 1996), they may be more emotionally expressive than fathers, and they may provide more opportunities for modeling emotional expressiveness (Halberstadt et al., 1995). Given this, the majority of the current study's parent

sample being mothers aligns with the study's goal of capturing displayed emotion coaching behaviors. Future studies should consider investigating the applicability of these findings to fathers.

It is also important to consider the Race of the RA's involved in data collection for the current study as well as the RA's involved in the coding process. First, RA Race may have affected the topic selection process. For example, Black families may have been more likely to select topics related to their racial identity (e.g., racism) with RA's of a similar Race. Second, the Race of the coding team should also be considered given there is research to support in-group advantages for facial emotion expression recognition (Tuminello & Davidson, 2011). In other words, non-verbal behaviors may go more unnoticed when the RA and the participant are of different Races, however, reliability was excellent for all raters. Future research might investigate methodology on the extent to which Race of the RA is associated with differences in the topics generated.

4.7 Future Directions

The findings from current study suggest several key ideas for future research on parents' emotion coaching, children's emotion communication, and the association between these factors. First, future studies might studies might replicate the current study's novel coding system and use a combination of methodologies such as observations in the lab and at home, parent-report, and child-report) to study PES. This could test the validity of the current study's methodology.

Second, there are some promising research questions pertaining to emotions that could advance our understanding of the how parents can maximize their influence on their children's engagement of emotion communication of both positive and negative emotions. Given the complexity of emotions and the vast number of emotions across both positive and negative

valances, research should break down and investigate emotions even further. In other words, most studies focus on broad buckets of emotions such as "happy" and "sad". However, in the current study, families used a wide variety of emotion words (e.g., happy, joyful, love, proud, excited, sad, disappointed, mad, angry, upset). There may be larger differences in parent's emotion coaching and children emotion communication of particular positive and negative emotions or parents' emotion coaching of certain emotions may be more strongly associated with children's emotion communication (e.g., more complicated emotions rather than the basic happy/sad/angry/anxious emotions)?

Third, as evidenced in the findings of the current study, parents were coaching, and children were communicating emotions to varying degrees as shown through the range. Studies investigating this variability and the differing characteristics that distinguish more detailed and emotion specific language of emotions could drive intervention efforts as well as guide further research. For example, investigating children's emotion communication as a mediator between parents' emotion coaching and more distal outcomes in children, like their social and prosocial skills, emotion regulation, and internalizing problems.

Lastly, RCT's to test for causal relations between parents' emotion coaching and children's emotion communication may strengthen the findings and underly the importance of the relationship to drive intervention efforts. For example, interventions that teach children skills on how to effectively communicate their positive and negative emotions and the importance of communicating both positive and negative emotions. Overall, interventions for both parents and children should aim to emphasize the gap and importance of positive emotions specifically.

4.8 Conclusion

This study investigated parents' emotion coaching as it relates to children's communication about both positive and negative emotions by addressing empirical gaps in both the PES and child emotion communication literatures within the context of parent-child discussions of past emotional events. Communicating one's emotions is critical for sharing life's joys, giving and receiving help with emotional distress, and building deep interpersonal relationships. The experience of positive and negative emotions also facilitates adaptive interpersonal functioning, safety, helps achieves goals, promotes health and the enjoyment of life in unique ways.

In summary, this study provides empirical support that 1) parents and children are coaching and communicating in a more detailed and emotion specific way with negative emotions during discussions of negative events compared to discussing past positive events and 2) parent's more detailed and emotion specific emotion coaching during discussions of both positive and negative events predicts children detailed and emotion specific emotion communication during discussions of positive and negative events. These findings provide a proximal impact of parental emotion coaching on middle childhood-aged children's emotional development than is typically studied. They also build on the broader emotion literature by noting significant differences in the detailed and emotion specific coaching and communication during discussions of negative and positive emotions, supporting their unique functions and thus the importance of studying both.

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5 APPENDICIES

Appendix A: Task Topic Cards for Prompting Discussion Topics 1-4

> # Talk about when
>
> _____
>
> _____
>
>   What was the setting/place?
>
>   Who was involved?
>
>   What happened?
>
>   What were you feeling?
>
>   What made you feel that way?
>
> Fam ID #: _____
>
> Card (#/letter): ___/___

Appendix B: Script and for Introducing Parent-Child Discussion

SCRIPT: Introducing discussion task paradigm to parent (please communicate all these points, but you don't have to read it word for word)

- *In the next task, you and your child are going to discuss different events that have happened to your family. Right now, both you and your child are separately generating a number of different events to discuss. Then, you and I will look at your child's list of topics and the best topics for you to discuss together.*

- *Please write three examples of events that your family has experienced under each prompt. Think about family events that happened **because of your child** for the first two prompts. Think about events that you experienced together that were **not because of your child** for the last two prompts.*

- *Good topics are ones that you think you could discuss for a few minutes.* (possibly show prompts on family discussion prompts)

Guidelines for selecting one topic for each scenario

- The researcher works with the parent to make sure that topics will meet the following criteria.

    1. The parent should expect that the topic can be discussed **for 2 minutes**.

    2. The parent and child should strongly agree that the event **elicited the target emotion**.

    3. The events should be **specific, time-limited, and experienced by the family** (not vague, ongoing without a beginning and end, or experienced by a large group that includes the family).

    4. If the parent is having difficulty deciding between topics, prioritize the event that elicits the strongest feelings for both parent and child.

    5. Make sure that the first two topics describe an event that was **caused by the child exclusively** (not the child and other family members) and that the child would agree was caused by him/her.

    6. Make sure that the last two topics describe an event that occurred to their family but that clearly did **not happen as a result of the child**.

Appendix C: Forms for Generating Discussion Topics Introducing

Topic Generation Forms

Parent List for Discussion Task

Directions: Please write three brief scenarios to fill in each blank. Please be specific.

A. I was **proud** of my child when he/she _____.
   Examples: My child made a special gift, did something nice for someone, or earned a special award.

   1. _____

   2. _____

   3. _____

B. I was **disappointed** with my child when he/she _____.
   Examples: My child did something mean to someone, misbehaved, or lost something important.

   1. _____

   2. _____

   3. _____

C. My child and I were **happy** when we _____.
   Examples: We went on a family vacation, celebrated a holiday, or heard good news.

   1. _____

   2. _____

   3. _____

D. My child and I were **sad** when we _____.
   Examples: Something bad happened to our family, a family member got sick, or we heard sad news.

   1. _____

   2. _____

   3. _____

Child List for Discussion Task Interview

Directions for RA:

1. Complete this as an interview.
2. Write three brief scenarios to fill in each blank. Be specific.
3. Try to get 2 or 3 examples, but 1 is fine.
4. You can say, "that is a good example of something sad" or "good job." Try not to comment on the specific details.

I am going to ask you questions about things that made your family happy and sad. Then, you and your mom are going to talk about the stories.

E. *What is something that made you and your mother/father **sad**?*
   For example, maybe someone in your family got sick or you heard sad news.

   1. _____

   2. _____

   3. _____

F. *What is something that made you and your mother/father **happy**?*
   For example, maybe you were happy when you went on a family vacation or celebrated a holiday.

   1. _____

   2. _____

   3. _____

G. *What is something that made your mother/father was **proud** of you?*
   For example, maybe you did something nice for someone or you earned a special award?

   1. _____

   2. _____

   3. _____

H. *What is something that made your mother/father **disappointed** in you? That means, you mother/father was sad about something you did.*
   For example, maybe you did something mean to someone or misbehaved.

   1. _____

   2. _____

   3. _____

Appendix D: Topic Rating Manual

Discussion Topic Rating Manual
Spring 2020

General Coding Rules:

1) There is a lot about the topic that you don't know specific to each family. That's okay, rate each event based on only what you know.
2) Think, "all moms would find this event ____".
3) Think carefully about each code.
4) Take notes on why you decided on a certain code.

TOPIC CODES FOR MOTHERS:

1. Valence
2. Category Code

1. **Valence**

This code assesses how negative versus positive this topic is from the mother's perspective. Rate the valence of this topic out of all the possible events that families might experience. Negative topics can include events that make one feel unhappy, sad, guilty, mad, or scared. Positive topics can include events that make one feel happy, proud, joyful, or cheerful.

What valence is this topic?

|	-4	-3	-2	-1	0	1	2	3	4
	Very negative event	**Negative event**	**Minor negative event**	**Very minor negative event**	**Neither negative nor positive event Neutral activity**	**Very minor positive event**	**Minor positive event**	**Positive event**	**Very positive event**
Anchors	Huge negative change for mother Great loss Very sad event Major disappointment in child	Big negative change for mother Disappointment in child	Minor negative change for mother Minor disappointment in child	Very minor negative change for mother	Not clear if positive or negative event	Slightly positive change for mother Child very minor accomplishment Slightly fun event	Minor positive change for mother Child minor accomplishment Fun event	Positive change for mother Child accomplishment Very fun event	Big positive change for mother Child major accomplishment Extremely fun event
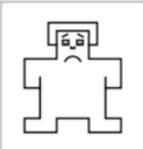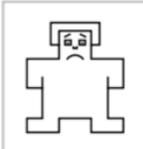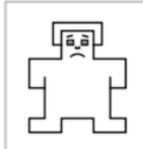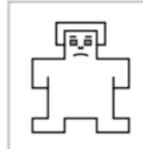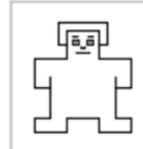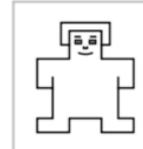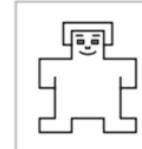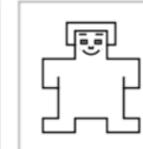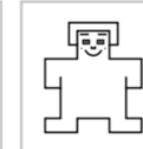
2. **Category Code:**

   1. <u>**Bereavement**</u>: death of a family member or friend; death of pet
   2. <u>**Separation**</u>: child physically removed from family; friend moves away; father moves out of house; hospitalization
   3. <u>**Child Interpersonal problem – Peer**</u>: conflict or argument with friend; conflict of problem with peer at school; argument with girlfriend/boyfriend
   4. <u>**Family interpersonal problem**</u>: Conflict or argument between child and parent; conflict or argument between parents; problem with family member
   5. <u>**Interpersonal problems – Other**</u>: Conflict of problem with teacher, boss
   6. <u>**Illness, injury, accident – Child**</u>: Any illness or injury to the child (include chronic illness, e.g., asthma)
   7. <u>**Illness, injury, accident – Parent**</u>: Any illness or injury to the parent.
   8. <u>**Failure and disappointment**</u>: Child's failure to obtain something strived for (e.g., child gets bad grades, child suspended from school, child drops out of school, child does not make basketball team, didn't do chores).
   9. <u>**Discrimination/Acculturation Event**</u>: Problem pertaining to group identification
   10. <u>**Material loss**</u>: loss of material item, financial problems in family, fire
   11. <u>**Victim of crime**</u>
   12. <u>**Victim of natural disaster**</u>
   13. <u>**Other negative event**</u>: Event affecting child, close friend or family member not captured by the above codes.
   14. <u>**Vacation**</u>: Any extended period of time spent in recreation, especially one spent away from home or in traveling. Time spent in rest, recreation, or travel
   15. <u>**Child achievements (noninterpersonal)**</u>: Child achieved something strived for; parent proud of their award and/or achievement (e.g., child gets good grades, child earned a school award, child earned a girl/boy scout award, child made sports team, child won a sports game)
   16. <u>**Child prosocial/compassionate behavior towards others**</u>: Child demonstrated some kindness towards others (e.g., contributed money, time, effort towards a charitable activity; kind to someone else)
   18. <u>**Birth of a new child**</u>
   19. <u>**Birthday celebration:**</u> Celebration of someone's birthday
   20. <u>**Child chore completion:**</u> Child completed chores
   21. <u>**Other positive event:**</u> Event affecting child, close friend or family member not captured by the above codes
   22. <u>**Change, move, adjustment**</u>: Any change requiring new environmental and social adjustment (e.g., child changes schools, child moves to a new home, new person moves into home; parent remarriage; child sees less of parent)

Appendix E: Discussion Task Behavioral Rating Manual

PART 1: OVERVIEW/ GENERAL CODING RULES

OVERVIEW:

PARENT VARIABLES:

1. Positive Emotion
   Coaching
2. Negative Emotion
   Coaching

CHILD VARIABLES:

1. Positive Affect
2. Negative Affect

3. Positive Emotion Talk
4. Negative Emotion
   Talk

DYAD VARIABLE:

1. Overall Mutuality

GENERAL RATING RULES:

1. Ratings are determined based on the frequency and intensity of verbal and nonverbal behaviors.
   a. Nonverbal behaviors include *facial affect, gestures, body posture*, as well as *pitch*, *volume*, *tone*, and *intonation of voice*.
   b. **Context** and **tone of voice** are extremely important to consider for all discussions and examined codes
2. The level of the assigned rating is neither reduced nor elevated based on the type of interaction observed. This feature of the rating system allows for us to compare behaviors across different types of interactions.
3. Only code what is **within the 2-minute (or 3-minute for the prosocial discussion)** discussion period.
   a. If a behavior occurs before the parent reads the topic, this may not be counted here (e.g., lingering positive affect/ smiles). If the behavior influences the rest of the discussion, the behavior may count, but with less weight.
4. Any given behavior can be used as evidence for more than one code.
5. All discussions are based on emotion. This is something to consider when holistically thinking about ratings
6. **Off-topic contributions** *may* still be codable. For example, if the child contributes something unrelated to the topic and the parent uses this as an opportunity for emotion coaching, the parent's emotion coaching rating could include this, **but with less weight**.
   a. This also may apply to protocol deviations (e.g., child reading the discussion card)

7. **<u>Regardless of which discussion periods are assigned, you must watch ALL discussions before rating the assigned discussion periods. You can skip through the rating periods, but the actual discussion periods must be watched.</u>**

8. You must **watch the assigned discussion many times** and think carefully about each code

9. Data will be entered though individualized Qualtrics forms

10. Coding manual is in this folder: **K:\Tully Lab\Tully Phys\Family Discussion Task\Discussion Task Coding**

FAMILY DISCUSSION TASK INFORMATION:

Task Layout (from PS-FU1 manual):

Part 6: The Task	DISCUSSION TASK
Parent and child watch a 2-minute nature video (*baseline*)	
Parent and child discuss the family (child-unrelated) **happy** topic for 2 minutes	
Parent and child independently make ratings and parent advances when they have both made their ratings	
Parent and child discuss the family (child-unrelated) **sad** topic for 2 minutes	
Parent and child independently make ratings and parent advances when they have both made their ratings	
Parent and child discuss the child-related **proud** topic for 2 minutes	
Parent and child independently make ratings and parent advances when they have both made their ratings	
Parent and child discuss the child-related **disappointed** topic for 2 minutes	
Parent and child independently make ratings and parent advances when they have both made their ratings	
Parent and child discuss the **prosocial act with a million dollars** topic for 3 minutes	
Parent and child independently make ratings and parent advances when they have both made their ratings	
Parent and child watch a 2-minute nature video (*return to baseline*)	

*Note: valence of topics was randomized (for example, the happy topic will not always be the first topic discussed)

2-minute baseline (nature video) — 2-minute *happy family* discussion **Card 1** — ~1-minute ratings — 2-minute *sad family* discussion **Card 2** — ~1-minute ratings — 2-minute *child-related proud* discussion **Card 3** — ~1-minute ratings — 2-minute *child-related disappointed* discussion **Card 4** — ~1-minute ratings — 3-minute *prosocial million dollars* discussion **Card 5** — ~1-minute ratings — 2-minute return to baseline (nature video)

Topic Discussion Cards:

Talk about when

_____

_____

What was the setting/place?
Who was involved?
What happened?
What were you feeling?
What made you feel that way?

Fam ID #: _____
Card (#/letter): ___/___

*NOTE: Topic card template for happy, sad, proud, and disappointed topics

Talk about if

**Your family won a million dollars to make the world better.
You can't keep the money.
You have to use it to help others.**

What you would do with the money?

Who would you help?

What would you hope to make better?

*NOTE: Topic card for the prosocial discussion topic (the same for every family). The prosocial discussion will ALWAYS be the final (5th) discussion.

Emotion Labeling Figure:
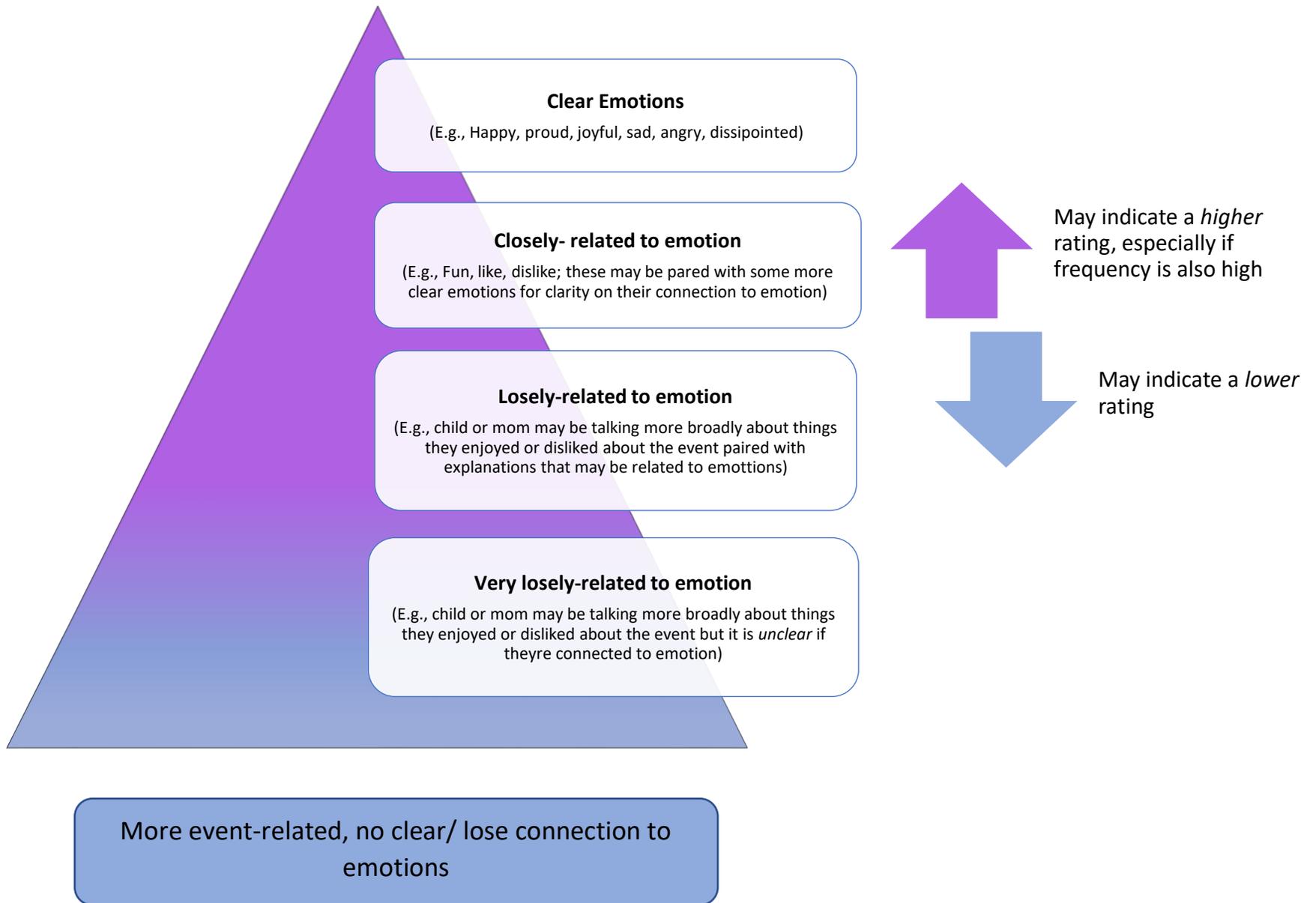
PART 2: STEPS FOR RATING

For each family assigned, you will record the following information:

1. **RECORD NAME.** Select your name in the "Rater" question
2. **RECORD PHASE.** Make note on if the assignment is a training or final coding assignment. *We are in the training phase until stated otherwise.*
3. **RECORD DATE.** Record the date the discussion was coded.
4. **RECORD FAMILY ID.**
5. **RECORD PARENT.** Specify which parent is present in the discussion
6. **RECORD FAMILY ID TOPIC #.** This is the combined family ID and topic number combined. The topic number corresponds with the order of the discussion. For example, for the first discussed topic for family 999, the correct Fam ID Topic# would be 999.1; the second would be 999.2; the 3rd would be 999.3, and so on)
7. **RECORD TOPIC.** Write out the general topic summary in 1 sentence.
8. **RECORD VALENCE.** Valences include Positive and negative. Each family will discuss 2 of each valance. Select "prosocial" for the 5th topic only.
9. **RECORD FOCUS TOPIC.** Was the topic child focused or parent and child together focused? The ***proud/ disappointed*** topics will be categorized as **child focused**, and the ***happy and sad*** discussions will be parent and child focused. Each family will two of each. Select "prosocial" for the 5th topic only.
10. **RECORD TIMES.** Document the start and end time for each discussion period.
    a. The start time will be when the space bar is pressed after ratings are made.
        i. NOTE: the first topic discussed will be starting right after the nature video finishes- so as soon as you no longer hear the nature video, record the time.
    b. The end time for each discussion topic is signified with a high pitched "ding" sound. Record the time of the "ding" as the discussion period end time.
    c. Each discussion period is 2-minutes long, aside from the last discussion, which is the prosocial topic, which is 3-minutes long.
        i. This should be reflected in each start/end time (e.g., if the topic discussion starts at 15:41, the end time will be 17:41 if it is not the prosocial topic). Though this will be the case, always record the start/end time by the visual/auditory cues to double check yourself.
11. **MAKE RATINGS.** You will have to make rating pertaining to the parent, the child, and the dyad. It is recommended to begin with either the parent or child first and then code the dyad last.

    a. **You will need to submit a separate Qualtrics form containing ratings for each discussion a given family has (i.e., each family will have a total of 5 submitted forms)**

12. **TAKE NOTES.** This is a MUST. Make detailed and specific notes about why you gave the ratings you did for each rating category. This is an extremely important step for productive conversations that will ultimately help the team become reliable.

POSITIVE EMOTION COACHING *(Lunkenheimer, E. S., Shields, A. M., & Cortina, K. S. 2007)*

Definition: *Parent's awareness of their own and their children's emotions while viewing positive emotions as opportunities for intimacy or teaching; involves parents talking about emotions in a differentiated fashion and helping their children recognize and modulate their experiences of positive emotions (e.g., happiness, joy, excitement).*

- This code asses when parents use the discussion topic as an opportunity for coaching **positive** emotions. Doing this may involve the parent focusing on their child's internal process (emotions, motivations) in a way that might **help their child learn** more about **positive emotions**.
- Coaching may include questions or comments that will help the child **reflect** on their positive emotional experiences or **extend/ enhance positive emotions**.
- Most often, coaching comments will focus on explicitly **labeling** or **discussing** positive emotions.
- May involve **questions or comments about motivations during positive emotional events.**
- May involve **parent's reflecting on their own emotional experiences** or general discussions of positive emotions that were shared between the child and other family members (this could be to enhance or extend emotions).
    - Consider tone of voice and context to rule out guilt induction or emotion dismissing (e.g., "I was happy because I got to have my coffee everyday" could be interpreted as emotion coaching, guilt induction, or emotion dismissing, depending on the tone of voice and context).
- **NOTE:** Parents have a series of questions written on the topic card (see the topic card image on **page 4** of this manual). If you see the parent directly reading from the card while asking emotion coaching questions, count the instance with LESS weight.
    - For example, if they ask, "What were you feeling" and you see the parent reading from the card, this instance will not count. If they ask "What were you feeling" yet again, this will count as emotion coaching, just not strong evidence.
- Examples of positive emotion coaching:
    - "Did you like it when XXX?"
    - "Were you happy because…"
    - "What could you have done to make it more fun?"

Does the parent engage in any positive emotion coaching of the child's emotions? **Make your ratings of parent's positive emotion coaching based on the following 1-7 scale:**

1	**Extremely low** or no evidence of positive emotion coaching.
2	**Low** evidence, unclear, slight possibility of positive emotion coaching. If present, low intensity.
3	**Low-moderate** evidence of positive emotion coaching. Clear, subtle, or weak indication of positive emotion coaching. Low-moderate intensity.
4	**Moderate** evidence of positive emotion coaching. Evidence of positive emotion coaching is clear with moderate intensity.
5	**Moderate-high** evidence of positive emotion coaching. Evidence of positive emotion coaching is clear with moderate-high intensity.
6	**High** evidence of positive emotion coaching. Evidence of positive emotion coaching is clear with high intensity.
7	**Extremely high** evidence of positive emotion coaching. Evidence of positive emotion coaching is clear, strong, and is extremely high in intensity.

NEGATIVE EMOTION COACHING *(Lunkenheimer, E. S., Shields, A. M., & Cortina, K. S. 2007)*

Definition: *Parent's awareness of their own and their children's emotions while viewing negative emotions as opportunities for intimacy or teaching; Involves parents talking about emotions in a differentiated fashion and helping their children recognize and modulate their experiences of negative emotions (e.g., anger and sadness).*

- This code asses when parents use the discussion topic as an opportunity for coaching **negative** emotions. Doing this may involve the parent focusing on their child's internal process (negative emotions, motivations) in a way that might **help their child learn** more about **negative emotions**.
- Coaching may include questions or comments that will help the child **reflect** on their negative emotional experiences or **problem-solve** about **how to handle** difficult negative emotional experiences or **strategize** for ways to deal with situations leading up to negative emotional experiences.
- Most often, coaching comments will focus on explicitly **labeling** or **discussing** negative emotions
- Negative emotion coaching may involve **parent's reflecting on their own emotional experiences** or general discussions of negative emotions that were shared between the child and other family members.
    - Consider tone of voice and context to rule out guilt induction or emotion dismissing
- Negative emotion coaching may involve **questions or comments about motivations during negative emotional events.**
- **NOTE:** Parents have a series of questions written on the topic card (see the topic card image on **page 4** of this manual). If you see the parent directly reading from the card while asking emotion coaching questions, count the instance with LESS weight.
    - For example, if they ask, "What were you feeling" and you see the parent reading from the card, this instance will not count. If they ask "What were you feeling" yet again, this will count as emotion coaching, just not strong evidence.
- Examples of negative emotion coaching:
    - "Were you sad when XXX?"
    - "Why were you crying?"
    - "I don't think I have ever seen you that upset before"
    - "I could tell you were really sad because you started crying"
    - "Were you upset because…"
    - "Why do you think you acted that way?"
    - "Why didn't you want to talk about this?"

Does the parent engage in any negative emotion coaching of the child's emotions? **Make your ratings of parent's negative emotion coaching based on the following 1-7 scale:**

1	**Extremely low** or no evidence of negative emotion coaching.
2	**Low** evidence, unclear, slight possibility of negative emotion coaching. If present, low intensity.
3	**Low-moderate** evidence of negative emotion coaching. Clear, subtle, or weak indication of negative emotion coaching. Low-moderate intensity.
4	**Moderate** evidence of negative emotion coaching. Evidence of negative emotion coaching is clear with moderate intensity.
5	**Moderate-high** evidence of negative emotion coaching. Evidence of negative emotion coaching is clear with moderate-high intensity.
6	**High** evidence of negative emotion coaching. Evidence of negative emotion coaching is clear with high intensity.

7	**Extremely high** evidence of negative emotion coaching. Evidence of negative emotion coaching is clear, strong, and is extremely high in intensity.

PART 4: CHILD CODES

POSITIVE AFFECT *(Jabson, Venkatraman, & Dishion 2003)*

Is the child exhibiting any positive affect?

- This code assesses the positivity of the child's behavior and their general positive emotional state. They may exhibit positive affect through **verbal or nonverbal** behaviors (including paralinguistic behaviors – everything to do with language except the content of speech, such as pitch, tone, intonation, volume).
- Look for smiles, happy eyes, and raised cheeks
  - The child expresses **joyful, happy, cheerful, playful** behaviors.
  - The child may engage in **joyous laughter, smiling, giggling**. Do not code nervous laughter (e.g., laughter as an icebreaker when the situation becomes tense). If laughter occurs, think about whether or not something funny just occurred. If "no", then it is likely nervous laughter.
  - The child may be playful and engage in **humorous behaviors** that are relaxed and **good-natured** toward the parent. Behaviors considered for this code are not sarcastic or mocking; they contain an underlying tone of affection.
  - The child may exhibit nonsensical speech, exaggerations, or imitation that is meant to be **silly**. They might try to make their parent laugh by using exaggerated, animated, or imitative behavior.
  - The child's **energy is higher** than at baseline, and often accompanied by a deep laugh.
  - Happy phrases (e.g., "that made us all happy") <u>should be accompanied by nonverbal positive affect</u> to be rated as higher than low intensity.

Make your ratings of child's positive affect based on the following 1-9 scale:

Not at all		Infrequently		Sometimes		Fairly Consistently		Frequently
1	2	3	4	5	6	7	8	9
Roughly…	Low intensity		Moderate Intensity		Elevated Intensity		Significant	

NEGATIVE AFFECT *(Jabson, Venkatraman, & Dishion 2003)*

Is the child exhibiting any negative affect?

- This code assesses the negativity of the child's behavior and their general negative emotional state.
- Negative affect refers to sadness, anger, fear, anxiety, and disgust that the child exhibits **nonverbally** and **verbally** during the discussion with their parent. They may exhibit negative affect through **facial expressions**, body gestures, and through **paralinguistic communication** (volume, pitch, intonation).
- It can include measures of **anger** (raised voice, irritation/annoyance, frustration, furrowed brow), **disgust** (sickened, fed-up, repulsed), **contempt** (eye rolls), **distress** (resignation, slow sighing, crying, remorse), **fear**, nervous laughter, fidgeting, fear face, postures of withdrawal/fear, whining.
- Do not code nervous laughter (e.g., laughter as an icebreaker when the situation becomes tense). If laughter occurs, think about whether or not something funny just occurred. If "no", then it is likely nervous laughter.

Make your ratings of child's negative affect based on the following 1-9 scale:

Not at all		Infrequently		Sometimes		Fairly Consistently		Frequently
1	2	3	4	5	6	7	8	9
Roughly…	Low intensity		Moderate Intensity		Elevated Intensity		Significant	

POSITIVE EMOTION TALK

Definition: *the degree to which children discuss positive emotions (e.g., happiness, joy, excitement).*

- Positive Emotion Talk (PET) asses when children use the discussion topic as an opportunity to talk about **positive** emotions, either prompted or unprompted by mom
- PET may involve the child focusing on their **own** internal process (emotions, motivations) and/or their **perception of others'** positive emotions.
- PET may include questions or comments that are about positive emotions. This can be exhibited through:
    - **Reflecting** or **reminiscing** on a certain positive event and the emotions attached to it (e.g., talking about the event itself and labeling various emotions attached to the experience). This reflecting/ reminiscing could also be a verbalization that is **extending or enhancing positive emotions** or providing more detail about the emotions surrounding an event.
        - It can be their own OR someone else's positive emotions
    - Discussion of **why** an event is associated with certain positive emotions (e.g., the reason why something was joyful)
    - Asking **questions or comments about feelings or motivations during positive emotional events.**
- Most often, PET will focus on explicitly **labeling** or **discussing** positive emotions.
- Remember: Parents will likely ask emotion questions. If the child answers this question, i.e., they are talking about emotion, you will count that here in this code.
- **NOTE:** Parents have a series of questions written on the topic card (see the topic card image on **page 4** of this manual). It is against the task's protocol for the child to read from the card, but it does happen occasionally. If you see the child directly reading from the card while asking an emotion question or comment, count the instance with LESS weight.
- ***NOTE:*** *You can think of this code as being extremely similar to* ***Positive Emotion Coaching****. The main difference is that this is* ***a child code,*** *and there is less of a "teaching" piece attached to its definition. You are looking for any talk of emotion from the child and categorizing it here.*
- ***Things to consider when thinking about intensity of PET:***
    - *Is the child's talk of positive emotion prompted or unprompted?*
    - *How interested does the child seem to be? (e.g., eye-contact with parent, possibly shared affect)*
- Examples of PET:
    - "I felt really happy when…"
    - "Why did that make you happy, mom?"
    - "It was such an exciting trip. I hope we get to do that again soon!"

*SEE EMOTION LABELING FIGURE ON *PAGE 5* **WHEN CONSIDERING RATING**

Does the child engage in any positive emotion talk? **Make your ratings of children's positive emotion talk based on the following 1-7 scale:**

1	**No** evidence of positive emotion talk
2	**Extremely Low** evidence of positive emotion talk. Children label <u>no</u> emotions, or they use a low frequency of very-loosely related words to describe positive emotions. They may give <u>no explanation</u> about the positive emotions. They may respond to 1-2 questions regarding positive emotions, but the answers are short or lack in detail (e.g., yes/ no).
3	**Low** evidence of emotion talk. Children may label <u>no clear or closely related</u> (i.e., they may be more loosely or very loosely related) positive emotions and may give <u>little-no explanation</u> behind the emitted positive emotion. They may respond to 3 or more questions regarding emotions, but the answers are short (e.g., yes/ no).
4	**Low- Moderate** evidence of positive emotion talk. Children are clearly labeling or responding to <u>*at least one*</u> <u>clear-closely related</u> positive emotion. Children may also use some loosely related words to describe positive emotions to supplement their emotion talk. They may give <u>little explanation</u> behind the emitted positive emotion.
5	**Moderate** evidence of positive emotion talk. Children are <u>clearly labeling</u> or responding to <u>*one-several*</u> positive emotions and may be giving <u>some explanation</u> behind the positive emotion.

6	**Moderate-High** evidence of positive emotion talk. Children are <u>clearly labeling</u> *several* positive emotions and are giving <u>some explanation</u> behind the positive emotion (this explanation may be slightly less detailed)
7	**High- Extremely high** evidence of positive emotion talk. Children are <u>clearly labeling</u> *several* positive emotions and are giving <u>at least one detailed</u> explanation. This may be *paired with* some additional <u>less-detailed explanation</u> about the positive emotion.

NEGATIVE EMOTION TALK

Definition: *the degree to which children discuss negative emotions (e.g., sadness, pain, anger, disappointment).*

- Negative Emotion Talk (NET) asses when children use the discussion topic as an opportunity to talk about **negative** emotions, either prompted or unprompted by mom
- NET may involve the child focusing on their **own** internal process (emotions, motivations) and/or their **perception of others'** negative emotions.
- NET may include questions or comments that are about negative emotions. This can be exhibited through:
  - **Reflecting** or **reminiscing** on a certain negative event and the emotions attached to it (e.g., talking about the event itself and labeling various emotions attached to the experience). This reflecting/ reminiscing could also be a verbalization that is **extending or enhancing negative emotions** or providing more detail about the emotions surrounding an event.
    - It can be their own OR someone else's negative emotions
  - Discussion of **why** an event is associated with certain negative emotions (e.g., the reason why something was sad)
  - Asking **questions or comments about feelings or motivations during negative emotional events.**
- <u>Most often</u>, NET will focus on explicitly **labeling** or **discussing** negative emotions.
- <u>Remember:</u> Parents will likely ask emotion questions. If the child answers this question, i.e., they are talking about emotion, you will count that here in this code.
- <u>**NOTE:**</u> Parents have a series of questions written on the topic card (see the topic card image on **page 4** of this manual). It is against the task's protocol for the child to read from the card, but it does happen occasionally. <u>If you see the child directly reading from the card while asking an emotion question or comment, count the instance with LESS weight.</u>
- ***NOTE:*** *You can think of this code as being extremely similar to **Negative Emotion Coaching**. The main difference is that this is **a child code,** and there is less of a "teaching" piece attached to its definition. You are looking for any talk of emotion from the child and categorizing it here.*
- ***Things to consider when thinking about intensity of NET:***
  - *Is the child's talk of negative emotion prompted or unprompted?*
  - *How interested does the child seem to be? (e.g., eye-contact with parent, possibly shared affect)*
- Examples of NET:
  - "I felt really sad when…"
  - "Why did that make you angry, mom?"
  - "It was such a frustrating argument I had with my sister"

*SEE EMOTION LABELING FIGURE ON *PAGE 5* WHEN CONSIDERING RATING

Does the child engage in any negative emotion talk? **Make your ratings of children's negative emotion talk based on the following 1-7 scale:**

1	**No** evidence of negative emotion talk
2	**Extremely Low** evidence of negative emotion talk. Children label <u>no</u> emotions, or they use a low frequency of very-loosely related words to describe negative emotions. They may give <u>no explanation</u> about the negative emotions. They may respond to 1-2 questions regarding negative emotions, but the answers are short or lack in detail (e.g., yes/ no).
3	**Low** evidence of negative emotion talk. Children may label <u>no clear or closely related</u> (i.e., they may be more loosely or very loosely related) negative emotions and may give <u>little-no explanation</u> behind the emitted positive emotion. They may respond to 3 or more questions regarding emotions, but the answers are short (e.g., yes/ no).

4	**Low- Moderate** evidence of negative emotion talk. Children are clearly labeling or responding to <u>*at least one*</u> <u>clear-closely related</u> negative emotion. Children may also use some loosely related words to describe negative emotions to supplement their emotion talk. They may give <u>little explanation</u> behind the emitted negative emotion.
5	**Moderate** evidence of positive emotion talk. Children are <u>clearly labeling</u> or responding to <u>*one-several*</u> positive emotions and may be giving <u>some explanation</u> behind the positive emotion.
6	**Moderate-High** evidence of negative emotion talk. Children are <u>clearly labeling</u> *several* negative emotions and are giving <u>some explanation</u> behind the negative emotion (this explanation may be slightly less detailed)
7	**High- Extremely high** evidence of negative emotion talk. Children are <u>clearly labeling</u> *several* negative emotions and are giving <u>at least one detailed</u> explanation. This may be *paired with* some additional <u>less-detailed explanation</u> about the negative emotion.

PART 5: DYAD CODE

OVERALL MUTUALITY

Definition: ***The coordinated and reciprocal interaction between members of a dyad; the interaction is harmonious, reciprocal, cooperative, and dyad members are responsive to one another.***

- When making this rating, take into consideration **responsiveness of each individual**, **reciprocity**, **shared affect**, and overall **cooperative** nature of the conversation.
- When members of the dyad are highly mutualistic, they are described as:
  - Feeling invested in and responsible for each other's welfare
  - They hold concern for and acts responsively to the others' needs
  - There is a simultaneous (or reciprocal) expectation that the other is also feeling invested, involved, holds concern, and is going to act responsively
- Mutualistic dyads may be characterized with parents who do not exhibit overuse of parental power, coercion, or overactivity. (*Please note: all children need structure. So, there may be instances of structuring that should not count as "overuse")
- Mutuality DOES NOT incorporate argumentative behaviors. Please note that disagreeing is not always "argumentative". Dyads may disagree with one another but discuss it in a conducive way.
- Things to consider when making this rating:
  - Consider the bidirectional movement of **feelings**, **thoughts** (through verbalizations), and **activity** (facial expressions).
  - Consider if there was a lot of emotion dismissing (this will lower the overall mutuality rating)
  - Consider if there was a lot of emotion coaching and reciprocal understanding or receiving of this information from the child (this may raise the overall mutuality rating)

Make your ratings of overall mutuality based on the following 1-7 scale:

1	**Extremely low** or no evidence of mutuality.
2	**Low** evidence of mutuality. Unclear, or possible indication of mutuality. If present, low intensity.
3	**Low-moderate** evidence of mutuality. Clear, subtle, or weak indication of mutuality. Low-moderate intensity.
4	**Moderate** evidence of mutuality. Evidence for mutuality must be clear. Moderate intensity.
5	**Moderate-high** evidence of mutuality. Evidence of mutuality is clear with moderate-high intensity.
6	**High** evidence of mutuality. Evidence of mutuality is clear with high intensity.
7	**Extremely high** evidence of mutuality. Evidence of mutuality is clear, strong, and is extremely high in intensity.