FACTORS RELATED TO VARIABILITY IN PRESCHOOL TEACHERS' EMOTION TALK

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ABSTRACT

Emotion socialization plays a critical role in children's emotional development (Denham, 2006; Denham et al., 2012), social skills (Burchinal et al., 2010), academic achievement (Djambazova-Popordanoska, 2016), behavioral outcomes (Gottman et al., 1997), and more. Emotion socialization, and specifically emotion talk, has been studied by many researchers in the context of parent-child interactions. Very few studies, however, have examined teacher use of emotion talk, defined as any utterance that mentions emotional states, describes possible causes or consequence of emotions, and/or asks questions about emotional states (Denham et al., 2015; Yelinek & Grady, 2019). This is an essential next step in the field as children spend a large portion of their time outside of the home and in the school setting, thus making teachers key emotion socialization agents.

This study sought to provide a descriptive account of the proportion and type of teacher emotion talk used in the classroom and examined potential factors that contribute to variation in teacher emotion talk. Seventeen preschool teachers were audio recorded during a book-reading task and recordings were coded for proportion and function of emotion utterances. Teachers also completed several questionnaires to measure variables of interest (i.e., teacher stress, emotion regulation, emotion beliefs; student characteristics; teacher professional development and perceptions of support) potentially related to teacher use of emotion talk. Results indicated that preschool teachers used emotion talk about 27% of the time they were talking in this book-reading task, but teachers varied widely overall ($M = .27$, $SD = .09$, Min = .11, Max = .45). Functions of emotion utterances were calculated and results showed that teachers used mostly questions (40%) and comments (31%) when discussing emotions, followed by explanation (13%), guide (6%), socialization (5%), label (3%), and clarify (1%). Bivariate analyses were

conducted and results indicated non-significant findings among several study variables and the

outcome measure of emotion talk. However, findings showed a significant relationship between

teacher use of emotion talk and students at-risk for disabilities in the classroom. That is, as

portion of students at risk for disabilities in the classroom increased, teacher emotion talk

decreased and as portion of children in the classroom that were rated as at-risk on the Social

Skills Improvement System Social Emotional Learning Edition Screening and Monitoring Scales

(SSIS-SEL) increased, the use of higher-level emotion talk decreased. Although largely

descriptive and exploratory in nature, these preliminary findings have important implications for

the field of emotion socialization and emotion talk in specific. Limitations, directions for future

research, and implications for practice are discussed.

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CHAPTER I. INTRODUCTION

Problem Significance

Emotion socialization is an important factor in preschool children's emotional development (Denham, 2006; Denham et al., 2012), social skills (Burchinal et al., 2010), academic achievement (Djambazova-Popordanoska, 2016), behavioral outcomes (Gottman et al., 1997), and more. In fact, Dunn et al. (1991) found that 3-year-old children who had families that discussed feelings or emotion states more frequently were more skilled in making judgments regarding others' emotions at six years old. While much of the evidence regarding the importance of discussing emotions comes from parent-child interactions in the home environment (Denham et al., 1992; Denham & Grout, 1992; Dunn et al., 1991), only a handful of studies have expanded this work to the classroom setting. This is an imperative next step in the research as children spend a vast majority of their time outside of the home in the school environment (National Center for Education Statistics, 2016).

School psychologists are in a unique position to support teachers in learning about the importance of emotion talk and encouraging increased emotion talk in the classroom. The current study yields valuable information in terms of the preschool classroom emotional language environment and furthermore, investigates what factors are related to variation in emotion talk across teachers. This study could inform future consultation and coaching practices and/or interventions that aim to facilitate children's emotion socialization and emotional competency.

Identification and Definition of Primary Constructs

To fully understand the purpose and aims of the current study, an explanation of several key concepts must be provided. First, emotion socialization will be defined broadly with an

emphasis on the subcomponent of emotion talk. Next, a brief overview of potential factors

related to variation in teacher emotion talk will be presented.

Emotion Socialization

Emotion socialization is a dynamic process that can involve an array of social practices

by which adults convey relevant ways of expressing and interpreting emotions (Cekaite &

Ekström, 2019). Emotion socialization spans from the macro to micro level of influence. That is,

factors influencing socialization can include contextual stressors (e.g., parent mental health,

stress, socioeconomic status, marital conflict), parenting or teaching style, as well as specific

parenting or teaching practices (Schwartz et al., 2012). Here I focus on teacher factors (i.e.,

stress, emotion beliefs, and emotion regulation) as well as student factors in terms of disability

and behavioral challenges and explore how these factors might relate to teacher emotion

socialization in the form of emotion talk. I also take into consideration influences at the macro

level, specifically in terms factors of perceived support from colleagues and administrators and

professional development opportunities. Although the current study focuses on interactions

between teachers and children, parental emotion socialization will also be discussed here as the

vast majority of research has been conducted on parent-child interactions.

Early in life, children are largely socialized to emotion through interactions with family

members. Morris et al. (2007) proposed a tripartite model of familial influence in the

socialization of ER. It is suggested that children learn about ER through observational learning

and parenting practices related to emotion, and furthermore, that ER is influenced by the

emotional climate of the family through parenting style, attachment style, and family

expressiveness. For example, parents socialize their children to emotion through emotion-

coaching, how they react to their children's negative and positive emotions, and by explicitly

teaching children about ER strategies. Research has shown that punitive reactions from parents to children's emotions are related to escape or revenge-seeking strategies and lower levels of socio-emotional competence in children (Eisenberg & Fabes, 1994; Jones et al., 2002). Alternatively, when parents use problem-focused strategies, research shows children tend to use more constructive coping strategies (Eisenberg et al., 1996). Less explicit strategies can result in emotion socialization as well. For instance, emotional expressivity, or the amount of emotion expressed both verbally and non-verbally, in the family is related to children's socio-emotional development (Morris et al, 2007). Specifically, parental expression of positive emotions is related to prosocial behavior, social competence, and emotion understanding in children (Cumberland-Li et al., 2004; Eisenberg et al., 2001; Rubin et al., 1988). These studies highlight the importance of parents utilizing adaptive emotion socialization practices and modeling the skills themselves.

Parent-child interactions as they relate to emotions can also contribute to, or act as a buffer from, psychological risk for children later in life. Schwartz and colleagues (2012) conducted a review of parent-child emotional interactions and found that mothers who reciprocated the aggressive behavior of their adolescent children in interactions had children who were at an increased risk for Major Depressive Disorder two years later (Schwartz et al., 2011). Furthermore, Jacob and Johnson (2001) found that lower levels of positive reciprocity in interactions between fathers and children were linked to increased externalizing behaviors in those children. However, the research is complex as entirely pulling apart genetic/hereditary factors from environmental factors is near impossible. Nonetheless, evidence indicates that the emotional behaviors and practices of adults play a role in the way children are socialized regarding emotions. One manner in which adults engage in emotion socialization is by talking

about feeling states, as well as labeling and expanding on emotions, or more specifically, using emotion talk.

Emotion Talk

Emotion talk is defined as any utterance that mentions emotional state(s) (e.g., happy, sad, frustrated, anxious, scared, etc.), describes possible causes or consequence of emotions (e.g., "She is mad because he took the toy she was playing with"), and/or asks questions about emotional states (e.g., "Does he seem happy or sad?"; Denham et al., 2015; Yelinek & Grady, 2019). Emotion talk can take the form of contingent responding, or responding to an emotion the child is displaying, and teaching, or helping children form connections about why they may be experiencing this emotion. (Denham & Grout, 1992). For example, an adult might respond to a child that is upset by saying, "I hear you are sad that play time is over, it's okay to be sad." Furthermore, teaching might include an adult saying, "I see you are feeling mad that your tower was knocked over." These statements help children understand that emotional expressiveness is not inherently a negative thing, but rather that there are adaptive ways to cope with big emotions. Additionally, using emotion talk to identify and/or expand on emotions that children display can support children as they begin to understand why they are feeling upset or sad, for example, due to a specific situation.

Socializing agents, often parents and teachers, can use emotion talk to teach, share, clarify, model, and respond to emotions (Denham et al., 2015). For example, a caregiver or teacher might help a child link emotion to the child's own experience by saying, "You were sad when you lost your favorite toy truck" (Brophy-Herb et al., 2015). This conversation not only provides a model of empathy (Garner et al., 2008; Taumopeau & Ruffman, 2006) but also allows space in the conversation for the child to practice using emotion talk (Brophy-Herb et al., 2015).

Emotion talk is related to emotion understanding (Denham et al., 1994), prosocial behavior (Brownell et al., 2013), ER (Kahle et al., 2017), and skills that contribute to school performance (Blankson et al., 2017). The research on emotion talk displayed by both teachers and parents will be discussed in more detail in Chapter II of the proposal. Next, I provide a very brief overview of the theoretical frameworks that support this study. These frameworks will be discussed in more detail in the literature review section.

Theoretical Basis

The current study is grounded in both the theory of constructed emotion and social learning theory. The theory of constructed emotion focuses on the idea that emotions are not innate, hard-wired parts of the brain, but rather concepts which are constructed by the brain and are influenced by experience and environment (Barrett, 2017a; 2017b). This theory supports the current study by highlighting the importance of environment, (e.g., the classroom) and experience (e.g., interactions with teachers, parents, peers) in how emotions are constructed and categorized in the brains of young children. The second theory that supports the current study is social learning theory. This theory suggests that cognitive and environmental processes play a critical role in learning and young children rely heavily on observing, modeling, and imitating adult models in their life (Bandura, 1977). The current study draws from this theory in suggesting the importance of teachers as models and key socializing agents of emotions for students in their classrooms. That is, in accordance with Social Learning Theory, students will attend to the behaviors of models (i.e., teachers) and the consequences of those behaviors and likely imitate the behaviors the model exhibits. Therefore, this theory illustrates the importance of a model that exhibits appropriate emotional responses/regulation and is able to support children in emotion identification and understanding. The Exploration Preparation

Implementation Sustainment (EPIS; Aaron et al., 2011) framework was also used to inform my hypothesis regarding variations in teachers emotion talk in their classrooms. This implementation science framework suggests that when organizations, including schools or center-based programs, are considering whether or not to adopt and implement an evidence based practice (EBP), there is a phased process in which systems explore and adopt a practice, make an implementation plan, consider barriers to implementation and sustainment. Specifically, this is an implementation science framework that helps describes the various factors that influence the uptake or use of an EBP. Using this framework as a guide, I propose that teachers existing in different systems that are at varying points of the four-phase process, might exhibit differences in their use of emotion talk in the classroom. Specifically, based on this implementation science framework, it is possible that teachers working within a school or center system that has adopted social emotional learning curriculum may be more likely to use emotion talk in the classroom than teachers in a program that has not adopted a specific curriculum or practices. Furthermore, teachers in different school districts or center programs might be at different phases of the EPIS framework which could map onto both quantity and quality of teacher emotion talk.

Overall, the current study aligns with these theoretical frameworks, which will be explained later in more detail, in proposing that young children learn about and develop an increased understanding of emotions from models such as teachers and that teachers might vary in their use of emotion talk based on whether their school or center is implementing social emotional curriculum and if so, the stage of implementation that their school or center is currently at. Next, I will provide a brief overview of the potential factors related to variation in emotion talk, or the constructs that this current study investigated. Again, I provide an

overarching introduction to these concepts here, with more detail provided in the literature review.

Potential Factors Related to Variation in Teacher Emotion Talk

Teacher Stress

Teacher stress is one factor that is hypothesized to play a role in capacity to engage in emotion socialization practices, as teachers experiencing high levels of stress may have less energy, time, and cognitive space to focus on these practices. Several studies have examined level of teacher stress and how this factor influences the interactions teachers have with their students. For example, Buettner and colleagues (2016) found that preschool teachers' psychological load, including depression, stress, and emotional burnout, was associated with teachers' negative reactions to children in the classroom. This is corroborated in a study by Jeon et al. (2016) which posits that preschool teachers reporting a more chaotic classroom environment experience higher levels of stress, burnout, and emotional arousal which is related to teacher capacity to respond positively to and support their students. The current study further explored how teacher stress might be related to the use of emotion talk by teachers in preschool classrooms.

Teacher Emotion Beliefs

Teacher beliefs regarding the importance of emotion socialization and discussing emotions with children are also factors that may be related to teacher use of emotion talk in the classroom. Research conducted by Meyer and colleagues (2014) supports this in their findings showing that parents who valued the importance of attending to and accepting emotions, as well as the importance of ER, exhibited more supportive emotion socialization and ER efforts. Parents who endorse the importance of guiding emotional development are more likely to talk

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about and identify emotions with preschool children. Interestingly, these children display more emotion understanding, showing the link between parental emotion socialization practices and child outcomes (Dunsmore & Karn, 2001; Perez Rivera et al., 2011). Some research with teachers has been conducted investigating the link between preschool teacher beliefs regarding emotion and various teaching styles, also pointing to the fact that teachers exhibiting emotionally supportive behavior endorsed viewing social emotional learning (SEL) as crucial to students' overall wellbeing (Zinsser et al., 2014). The current study aimed to build on this literature and examined teacher emotion talk as it relates to teacher beliefs about emotion.

Teacher Emotion Regulation

Another potential factor related to teachers' ability to engage in emotion socialization through the discussion of emotions is teachers' own emotion regulation (ER) skills. While little research has explored teacher ER skills, a number of studies have investigated the relationship between maternal ER skills and components of parent-child interactions. This work can serve as a model for studies focused on teachers, as teachers and parents often act as similar socializing agents for young children. For example, Jones and colleagues (2014) found that mothers who reported struggling to regulate their own emotions, responded to their children's negative emotions with greater levels of distress and furthermore, responded in a more harsh and less supportive manner as compared to parents who reported less difficulty with ER.

Parents that have difficulty with emotion identification and those who are less accepting of their own negative emotions, are often less likely to exhibit supportive emotion socialization practices with their children, as these practices typically involve discussing feelings and emotion states (Salovey et al., 1995; Yap et al., 2008). Research has also indicated that teachers believe engaging in their own ER is an important part of being an effective teacher (Sutton & Wheatley,

2003). However, less is known in regards to how teacher ER might influence teacher use of emotion socialization and specifically, emotion talk and thus, the current study aimed to address this gap in the literature.

Students with Disabilities and Behavioral Concerns

Other potential factors related to variation in teacher emotion talk are student factors such as number of students in the classroom with disabilities or more broadly, behavioral or emotional concerns. It is possible that teachers with more students with disabilities or behavioral concerns in their classroom may experience higher levels of stress, which could limit teachers' capacity to engage in emotion talk and emotion socialization practices. However, it is also conceivable that having more children with behavior concerns in the classroom provides more opportunities to discuss emotions and teach emotion regulation strategies. The literature on this topic reflects mixed findings on the relationship between child disability status and adult emotion socialization practices. Baker and Crnic (2009) investigated the degree to which parents of children with developmental delays (DD) focused on emotion overall, as well as in specific interactions with their children. Parents of children with DD reported focusing less on emotions and emotion talk in comparison to parents of typically developing children. However, other research suggests that child disability status is not related to emotion-related practices of parents. Newland and Crnic (2011) found that developmental risk in early childhood was not associated with the overall emotion socialization process, however, higher levels of both maternal and child negativity were observed for children who exhibited developmental risk. Similarly, Légaré et al. (2019) did not find significant variation in emotion socialization practices of mothers of children with Intellectual Disability (ID) and parents of typically developing (TD) children.

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The aforementioned research displays mixed findings regarding whether disability status or behavioral concerns of children may be related to emotion socialization practices, such as emotion talk, of parents and teachers. The current study aimed to address this gap in the research.

Perceived Support for Managing Challenging Behaviors

Teacher perception of support received from administrators, other teachers, and school staff for managing challenging student behavior is another factor that may be related to teachers' ability to act as a supportive emotion socializing agent for their students. Knobloach and Whittington (2002) conducted a qualitative study of factors that influenced teacher confidence with secondary education student teachers and new teachers and found that support and feedback was a theme that emerged across many teacher reports. Research has also shown that novice teachers reported personal support from other professionals played a key role in staying in the teaching profession and mitigating burnout (Ruhland, 2002). While there is a dearth of research in this area, the research that does exist suggests that teachers who perceive they receive low levels of support from administrators and colleagues may find it more challenging to engage in emotion socialization practices in the classroom, as they may feel less confident in their practices and/or may experience burnout limiting their ability to engage in emotion socialization practices.

Professional Development

In recent years an increased emphasis on social-emotional learning (SEL; Jones et al., 2020) has emerged, especially in early education settings. The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEL as "process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring

decisions" (2013, para. 1). With this increased focus on SEL, there is a need for professional development sessions focused on increasing SEL-related practices in early education teachers. In fact, Weissberg and Cascarino (2013) state that SEL needs to be a key component of teacher preparation and professional development.

Historically, the findings have been mixed in terms of effectiveness of professional development for educators. However, Hamre et al. (2012) examined the effects of a professional development course for preschool teachers that was focused on improving the quality of teacher-child interactions (TCI). Teachers who completed this training reported more intentional teaching beliefs and furthermore, exhibited greater knowledge of the importance of TCI and skills in cultivating quality interactions with their students, and showed more effective emotional interactions (Hamre et al., 2012). A gap in the research exists on whether emotion-related professional development opportunities for preschool teachers are related to specific practices, such as using more emotion coaching statements as opposed to emotion dismissing. Thus, the current study attempted to begin to answer this important question.

Problem Statement

Teachers play an important role in children's socioemotional development. It is especially important for emotion talk to be present in the classroom to help facilitate emotion identification, labeling, understanding, and ultimately, regulation in young children. Some preliminary research has investigated emotion talk in the classroom by observing and coding for emotion talk (Yelinek & Grady, 2019) or by observing a book reading task and identifying emotion-related words (Ahn, 2005). Both studies found variability in number of emotion-related words used by teachers. However, there is a gap in the literature in terms of identifying factors that influence variation in emotion talk produced by teachers. The current study aimed to address

this gap and help increase understanding of factors that are related to differences in teacher practices. This is an essential next step as findings from the current study could inform future interventions in which early education teachers are trained and supported to increase emotion talk with the aim of facilitating children's emotional development. The current study aimed to examine the language used by preschool teachers and identify factors that may be related to variation in emotion talk.

Research Questions

Research Question 1. What function and proportion of emotion utterances do preschool teachers use in the classroom?

Research Question 2a. Are higher levels of stress related to less use of emotion talk?

Research Question 2b. Are stronger beliefs about the importance of guiding emotional development related to more use of emotion talk?

Research Question 2c. Are more adaptive ER skills related to more use of emotion talk?

Research Question 3. Is there is a relationship between portion of students at risk for disabilities in a classroom and teacher use of emotion talk?

Secondary Research Questions

Research Question 4a. Do teachers that perceive higher levels of support from administration and support staff exhibit more emotion talk compared to those that perceive lower levels of support from administration and support staff?

Research Question 4b. Are more emotion-related professional development opportunities related to more use of emotion talk in teachers?

CHAPTER II. LITERATURE REVIEW

This chapter will provide a review of the relevant research literature related to the topic of the current study. First, the theoretical framework of the current study will be discussed. Then parent and teacher use of emotion talk will be discussed, and potential factors related to emotion talk variance will be examined. This section will conclude with an overview of the current study as well as the research questions of the current study.

Theoretical Framework

Theory of Constructed Emotion

In order to fully understand the theory of constructed emotion, one must understand how researchers have historically conceptualized emotion. For years, scholars (see Ekman, 1992; Izard, 1971) have endorsed a classical theory of emotion. In this theory, emotions are innate and different parts of the brain are linked with different emotions (e.g., anger, fear, disgust, happiness, etc.). This view suggests that when an individual experiences something that triggers those parts of the brain, they will exhibit a certain facial expression and bodily response. Furthermore, these responses are thought to be universal (i.e., not requiring learning or experience), according to the classical theory of emotions (Ekman, 1992). In recent years, however, some researchers have started to question this theory and a number of studies in the neuroscience field act as evidence to refute the classical theories of emotion. For example, emotion categories have not been consistently localized to neurons in a sole area of the brain (Vytal & Hamann, 2010), amygdala lesions result in a variety of functional consequences (Becker et al., 2012; Feinstein, 2013), and in studies with rats, aversive learning experience depends on the situation or state the animal is placed in (Iwata & LeDoux, 1988).

These studies indicating that emotions are not purely universal and furthermore, may not be quite as localized to different areas in the brain and as previously thought, prompted researchers to consider other frameworks. The theory of constructed emotion (Barrett, 2017a; 2017b), which is especially relevant to the current study, suggests that emotions are not a hard-wired part of the brain, emotions cannot be recognized merely through facial expressions or bodily reactions (i.e., through physiological measurement like heart rate), universal emotions do not exist, there are no distinct parts of the brain solely devoted to different emotions, and emotions are not solely reactions to events. Specifically, Barrett (2017a; 2017b) suggests, in opposition to the classical theory of emotion, that emotions are concepts which are constructed by the brain. She states that our brains are data-rich, but that information must be interpreted. In the process of interpretation, one shortcut our brain uses is to draw on past experience to guide us. Instead of sorting through all our memories, the brain creates concepts or categories. Barrett (2017b) provides a personal example in which she explains how the emotion of sadness occurred for her when hearing about a recent shooting in the news. She explains how her previous experiences of sadness and knowledge of shootings, caused her brain to predict how her body would need to cope with this situation (e.g., cry, knots in stomach, heart racing). In this way, emotions can often act as predictions or simulations (Barrett, 2017b). Human brains constantly make predictions (e.g., in reading, when playing a sport, etc.) and emotions are not an exception. For example, on the way home from college a student might be excited to see their family. In this situation, the college student's brain begins predicting those feelings of happiness prior to the event actually occurring.

Due to the fact that this is a recently proposed theory, there are limited studies that use this theory in applied research. One of the few applied studies was conducted by Stoll (2019) and

aimed to explore teachers' emotional experiences through the lens of the theory of constructed emotion. From interview data conducted with preschool teachers, Stoll concludes that a gap exists between teacher beliefs regarding the need for ER and teacher understanding of the source and purpose of emotion. The author suggests that applying this theory to teacher emotion and helping teachers understand the origins of their emotions could help facilitate more emotionally informed teachers, who are, in turn, better able to support the emotions of students.

Outside of applied work, scholars have put forth conceptual pieces drawing the link between the theory of constructed emotion and police decision making (Fridman et al., 2019), requirements engineering (Taveter & Iqbal, 2021), craving (Wilson, in press) post-traumatic stress disorder (Coury, 2018) and therapeutic methods in counseling (Givens & Wilkinson, 2022). Furthermore, an article discussing the emotion words, concepts, and emotional development of children (Hoemann et al., 2019) offers support for the use of the theory of constructed emotion. Although not an empirical research study, authors of this article hypothesize that early in life, there is a close dependence between emotion words used by caregivers and infants' categorization or conceptualization of emotions. That is, observing caregivers identify, label, or explain actions or affect using emotion terms, likely contributes to the way that infants conceptualize and perceive varying emotions. This is directly related to the current study in that teachers might identify, label, or explain actions or emotions with emotion talk, which subsequently, helps children to categorize and perceive various emotions or feelings.

Additional support for the theory of constructed emotion comes from a meta-analysis of 202 studies (Siegel et al., 2018) that examined autonomic nervous system (ANS) reactivity during lab-based emotion inductions (e.g., viewing photographs or videos displaying emotion). The classical theory of emotion would suggest that emotion categories have a specific ANS

"fingerprint." On the other hand, the theory of constructed emotion would posit that emotion categories are context-specific and thus, specific emotions would not necessarily have an ANS fingerprint. Findings from this study showed that patterns did not distinguish one emotion category from another in support of the theory of constructed emotion (Siegel et al., 2018). Another relevant concept from the theory of constructed emotion is emotional granularity (Barrett, 2017b). Emotional granularity refers to one's ability to make nuanced distinctions between similar emotional states (Smidt & Suvak, 2015). For example, someone with higher emotional granularity can differentiate between angry and frustrated by attending to relevant information in order to classify experiences into distinct emotional categories. Someone with low emotional granularity may have difficulty handling challenging situations and may have a hard time recognizing their own feelings (Barrett, 2017b). Therefore, high emotional granularity is desirable, as this provides more precision in recognizing emotions and being flexible in responses. While research directly investigating the malleability of emotional granularity in young children is somewhat scarce, other fields have examined ways to promote granularity. For example, a study by Gendron and Barrett (2019) looking at judicial decision-making suggests that emotional granularity can be improved through the ability to explicitly identify and label one's own emotional state. In fact, Brooks et al. (2017) found that labeling one's emotional state influences neural systems, specifically the amygdala, that typically alert other systems in the brain that there is uncertainty or ambiguity that needs to be resolved. Therefore, the act of labeling an emotional state can help alleviate ambiguity and reduce demands in the brain.

Another method of influencing emotional granularity is mere experience. As noted by Gendron and Barrett (2019), children typically begin life with rather undifferentiated emotion terms (i.e., often using happy and sad but potentially not understanding the difference between

mad and sad) and there is a developmental trajectory in which children's emotional granularity increases. De Franca (2019) conducted a study with 264 children ages 9- to 13-years-old in which social skills and emotional granularity were assessed before and after a four-month school-based psychoeducational program. This program included identification and labeling of emotions, ER strategies, and social skills. A moderate increase in emotional granularity was seen from pre- to post-intervention in terms of the ability to discriminate positive emotions. Additional research is needed to confirm similar findings; however, this study suggests that emotional granularity is not a fixed skill but rather can be improved, at least moderately, with intervention.

The theory of constructed emotion is especially relevant to the current study in that young children may be experiencing a variety of feelings as their brains are constructing those emotions and creating categories based on their experiences. Teachers can serve to help support this process and engage in emotion identification, labeling, commenting and more which may help to improve children's emotional granularity over time.

Social Learning Theory

Social learning theory also plays an important role in the current study. Social learning theory (Bandura, 1977) highlights the importance of observing, modeling, and imitating the behaviors and emotional reactions of other individuals. The classic Bobo doll experiment (1961) exhibited the power of observational learning for young children and led to discussions of the importance of appropriate models such as parents, teachers, friends, characters in media, and more. Specifically, Albert Bandura investigated the behavior of children after they observed an adult model act aggressively towards a doll. Social learning theory suggests that individuals learn through observation, imitation, and modeling and results from this study supported this theory.

The study showed that children who were exposed to an aggressive model were more likely to use physically aggressive behavior toward the doll themselves, in comparison to children who were not exposed to an aggressive model.

Social learning theory has been used to explain many processes of learning and socialization in psychology. In terms of the current study, social learning theory demonstrates how powerful observational learning is when children are being socialized to emotions by their parents, teachers, peers, the media, and more. A number of research studies illustrate the relationship between social learning theory and emotion socialization processes. A study by Magai et al. (1995) investigated patterns of emotion traits in adults as they relate to emotion socialization, parenting practices, and attachment experiences early in life as recalled by participants ($N = 129$). Findings indicated that different kinds of parental discipline and attachment styles were related to different patterns of emotion traits and furthermore, participants' performance on an emotion decoding task. Specifically, parents that used reasoning in a matter-of-fact style showed a balanced emotional profile and, on the emotion decoding task, showed low bias in decoding. Bias in decoding in this task is referred to as favoring the identification or selection of one emotion category above others (Kleindienst et al., 2019). The use of more physical punishment was associated with hostile emotions. Secure attachment was related to higher endorsement of trait joy and interest and lower negative emotion biases. Avoidant attachment was related to trait contempt and disgust. Furthermore, interestingly, this attachment style was associated with a decoding bias showing low accuracy on identifying joy. An anxious attachment style was associated with trait fear and shame and additionally, a decoding bias involving the identification of anger (Magai et al., 1995). This study suggests that parents' own attachment styles can be related to the parenting practices they experienced as

children, in addition to their ability to identify emotions. This has important implications in terms of how characteristics of adults' emotional styles can contribute to children's emotion socialization.

Kramer (2014) suggests that children obtain information regarding emotions through observing how others express and discuss feelings and additionally, through observing the consequences that take place as a result of these responses. As noted in social learning theory, children are most likely to imitate models who are similar to them, perceived as powerful, and are attractive and friendly. Kramer (2014) highlights that siblings tend to fit this category and thus often serve as models. Specifically, children observe the emotional displays of their siblings through the process of social learning and may imitate the same reactions when faced with similar experiences. Wu and colleagues (2021) support this idea in their argument that even in infancy, children begin to observe others' expressions of emotion as a source of information in learning about the overall social world. Children are constantly observing others, both peers and adults, and often imitating those models when the models are similar to the child, or perceived as powerful, attractive, or friendly. In many cases, teachers may fit into these categories, especially in terms of being seen as powerful or high in status and friendly by students. Thus, it is likely that teachers serve as a relevant model for many of their students. Teachers who model emotion identification and adaptive ER skills will likely contribute to student imitation of these behaviors and actions. Furthermore, children may act as models to one another in the classroom, as seen with siblings in the study conducted by Kramer (2014). Although not the focus of this study, exploring the influence of peer behavior on children's emotion related competencies could be an interesting next step in the research.

In relation to the current study, social learning theory is related to children's observation of teacher emotional response, emotion identification, and overall emotion talk. According to social learning theory, students will attend to these behaviors and their consequences and likely imitate the behaviors the model demonstrates. Therefore, this theory shows the importance of a model (i.e., teacher) that exhibits appropriate emotional responses/regulation and is able to identify and exhibit emotions in front of children.

Exploration Preparation Implementation Sustainment Framework

Relatedly, it is important to understand why teachers might use emotion talk in the classroom. Drawing from the implementation science literature, one can conceptualize emotion talk, or more broadly engaging in emotion socialization practices, as an evidence based practice in the classroom. According to the Exploration Preparation Implementation Sustainment (EPIS; Aarons, Hurlburt, & Horwitz, 2011) framework, there are four phases of the implementation process. In the Exploration phase, a system or organization considers the needs of the patient or, in this case the student, to identify the best evidence based practice (EBP) and address needs. At this stage, the stakeholders decide whether or not to adopt the EBP. In the Preparation phase, stakeholders identify potential barriers and facilitate both the outer and inner contexts (see below) as well as develop a plan for implementation. In the Implementation phase, the EBP is initiated and used in the system. Finally, in the Sustainment phase, the EBP continues to be delivered, with adaptation as needed. Of note, within the EPIS framework it is essential to consider how the outer context (e.g., leadership, funding, student characteristics) and inner context (e.g., organizational characteristics, quality and fidelity monitoring and support) might play a role and address these considerations iteratively throughout the four phases. Taking this theoretical framework into consideration, it is conceivable that teachers working within a school

or center system that has adopted social emotional learning practices or emotion socialization teaching strategies, would be more likely to use emotion talk in the classroom. Furthermore, teachers in different school districts or center programs might be at different phases of the EPIS framework. For example, one teacher might work in a school that has an identified social emotional curriculum in place, with regular progress monitoring and coaching. Another teacher might work in a system in which the school administrators are exploring potential EBPs to implement but have not yet made it to the preparation phase. Finally, another teacher might work within a system that has implemented the EBP, but stakeholders have not sufficiently considered inner and outer contexts such as barriers to implementation, funding for sustainment of implementation, or individual differences in teacher or student characteristics. In each of these cases, it is plausible to expect that teachers would vary in their use of emotion talk based on what phase of the EPIS framework they and the school or center organization are currently in.

Emotion Socialization

As previously noted, emotion socialization is a dynamic process involving a variety of social practices through which adults convey relevant methods of expressing and interpreting emotions (Cekaite & Ekström, 2019). The research in this area suggests four key processes by which adults engage in emotion socialization with young children: 1) contingent responses to the child's emotions; 2) modeling of emotion-related behaviors; 3) discussions about emotions with the child; and 4) an indirect influence of the adult's "meta-emotion philosophy" or the beliefs the adult holds concerning emotions and feelings (Kitzmann & Howard, 2011). To illustrate the first process of emotion socialization, adults may engage in what are often called supportive responses to emotion. That is, a parent may help their child cope with and manage their emotions, whereas a less supportive response may be to punish or ignore the child for exhibiting

a certain emotion. The second process of emotion socialization can be utilized when adults must manage their own emotional reactions. In these moments, a parent or teacher can model for the child how to effectively cope with an emotion such as frustration (e.g., saying "I'm feeling frustrated but I'm going to take a deep breath"). The third process of emotion socialization is related to discussions of emotions such as labeling an emotion or helping children to understand the causes and consequences of an emotion. Finally, the fourth process of emotion socialization concerns how comfortable adults are with their own and others' emotions and the beliefs they hold regarding acceptable and non-acceptable ways of expressing and managing emotions (Kitzmann & Howard, 2011). These beliefs can influence the way in which adults engage with the previous three processes of emotion socialization. As one can see, all of these processes, but especially the third, highlight that an important component of emotion socialization is talking about emotions or emotion talk.

Emotion Talk

Emotion talk is defined as talk that mentions emotional states (e.g., happy, sad, angry, scared, etc.), describes potential causes and consequences of emotions (e.g., "She is sad because he didn't share his toy with her"), or asks questions regarding emotions (e.g., "Does he seem happy or sad?"). Emotion talk is related to emotion understanding (Denham et al., 1994), prosocial behavior (Brownell et al., 2013), ER (Kahle et al., 2017), and skills that contribute to school performance (Blankson et al., 2017). Specifically, discussing emotional experiences can support children in building knowledge about and understanding of various emotional expressions, situations, and causes (Denham & Kochanoff, 2002). Emotion talk furthermore provides children with a tool for engaging in ER (Thompson, 1991). It is also proposed that teachers can learn what a student values in discussions about emotions (Op 't Eynde, 2004) and

this can help teachers better understand their classroom environment and even help to support teachers' own ER (Fried, 2010). As one can see, emotion talk plays a critical role in supporting young children as they navigate a multitude of experiences.

Parent Use of Emotion Talk

Parent-child interactions play an important role in the facilitation of emotion identification and understanding, which are some of the first steps to supporting emotion regulation (Kujawa et al., 2014). Emotion talk, specifically, is one tool through which parents can engage in emotion socialization with children. In fact, parents that frequently discussed feeling and mental states with their children in early childhood had children that exhibited better emotion understanding later in life (Kujawa et al., 2014), showing the important link between parental use of emotion talk and child outcomes. Furthermore, a key study conducted by Denham and colleagues (1992) highlighted the relationship between maternal emotion talk and children's socio-emotional development. Specifically, researchers conducted a study in which 46 preschoolers and their mothers discussed pictures of infants exhibiting eight different emotions. Conversations were transcribed and coded for both frequency and function of emotion-related language. Components of emotion language in mothers and children were associated with positive social-emotional development including emotion knowledge and positive emotional displays seen in preschool (Denham et al., 1992). Overall, the sophistication of maternal talk regarding emotion was linked to children's capacity to successfully cope with their emotions. This study suggests that the way in which parents discuss emotions with their children can play a role in children's overall social-emotional development.

Brophy-Herb and colleagues (2015) showed the importance of maternal emotion talk for young children with early behavioral problems and those from families with higher demographic

risk. Specifically, researchers looked at mothers' use of emotion bridging in relation to maternal

demographic risk and child behavioral problems. Emotion bridging involves explaining the

context of emotions, emotion labeling, acknowledging behavioral cues of emotions, and linking

emotions to the child's personal experiences. Findings indicated that young children with more

early behavioral problems and from families with higher demographic risk, benefitted the most

from maternal emotion talk and emotion bridging. That is, for families with greater demographic

risk, more maternal emotion talk buffered the relationship between behavior problems at the first

time point and behavior problems at the second time point. Alternatively, higher demographic

risk and less maternal emotion talk amplified behavior problems at the first time point as a

predictor of behavior problems at the second time point (Brophy-Herb et al., 2015). These

findings again highlight the importance of parental emotion talk as it relates to child outcomes

such as emotion understanding, emotion regulation, and behavior problems. Considering this

literature, it is important that not only parents, but teachers, understand the importance of high-

quality emotion socialization with children.

　　　　More support for the importance of emotion talk comes from Dunn and colleagues

(1991). In this study, researchers observed mother-child dyads in the home setting. Findings

indicated an average of eight conversations concerning feeling states per hour. However, these

families varied widely in their use of emotion talk (i.e., from 2 to 25 conversations per hour).

Importantly, children with mothers that exhibited more emotion talk performed more strongly on

tasks of emotion recognition (Dunn et al., 1991). These findings have important implications for

the current study in that emotion talk, or discussing feelings, was variable in frequency across

mothers. This has been found in studies conducted with teachers as well (Ahn, 2005; Yelinek &

Grady, 2019). Furthermore, this study indicates the important link between emotion talk and

child outcomes of emotion recognition, suggesting that teacher emotion talk may have a similar relationship.

An important finding to note is that the quality of emotion talk may be just as important as quantity of emotion talk. Brownell et al. (2013) investigated parental emotion talk as it relates to prosocial behavior in toddlers. In this study, parent-child dyads engaged in a book reading task in which parents were instructed to read the book to their child like they would at home. Categories of emotion talk were coded including emotions, mental states, desire talk, and other internal states. Furthermore, parental emotion talk was categorized into labeling of emotions versus elaboration/explanation of emotions as well as production of emotion talk versus elicitation of children's emotion talk. After completing the book reading task, children completed either a sharing or helping task with an experimenter (e.g., share toys with experimenter, get out-of-reach object for experimenter). Each child's behavior was then scored on a scale of 0 to 5 for the sharing task (0 = did not share; 5 = shared immediately upon experimenter's nonverbal cue) and 0 to 8 for the helping task (0 = did not help; 8 = helped immediately upon experimenter's first, nonverbal cue). Results from this study indicated that parents who more frequently requested that their child label or explain the emotion (i.e., elicitation), had children that helped and shared more quickly and more frequently. Furthermore, this was especially true in tasks in which complex emotional understanding was required (e.g., altruistic helping tasks as opposed to instrumental helping). This study has important implications showing that emotion socialization is especially effective when parents encourage their children to be an active contributor in discussions of emotion (i.e., elicitation of children's emotion talk). These findings suggest that quality of emotion talk may be just as important as quantity. However, it is important to understand that "quality" of emotion talk is rooted in a white, Eurocentric appraisal of what is

"good" and "bad" in terms of emotion socialization practices (El Mallah, 2020; Simmons, 2019). Furthermore, much of the research conducted on emotion talk and social emotional learning (SEL) more generally has been conducted on and by majority groups and then assumed to generalize to diverse populations. However, as found by Farahmand and colleagues (2011), SEL programs implemented with low-income urban youth showed reduced program effectiveness, indicating that the usual SEL programs are likely not sufficient to consider cultural and contextual factors in these groups. More research is needed to understand how cultural backgrounds and experiences determine emotion practices and how white educators and researchers must consider these nuances.

While no meta-analysis focusing solely on parent use of emotion talk currently exists in the literature, several meta-analyses highlight related concepts such as the role of emotion socialization and expressiveness. Furthermore, what is described as emotion talk here is often referred to using a number of more general terms (e.g., emotion responding, emotion socialization, emotion-related practices) making it hard to pull apart studies that focus specifically on parent-child conversations regarding emotions. Nonetheless, Zinsser et al. (2021) conducted a meta-analysis investigating parents' socialization of preschool-aged children's emotion-related skills. Findings from included articles ($N = 24$) indicated a positive correlation between parents' modeling of, instructing about, and responding to emotions and children's emotion-related skills. However, findings were only sometimes significant and effect sizes were often small. Zinsser and colleagues suggest that the use of longitudinal and experimental designs and inclusion of more diverse representative samples can strengthen the literature in this area.

However, another plausible explanation for why this literature showed only moderate effects is because as children begin to spend more time in the school setting, teachers, in addition

to parents, become a significant socializing agent for children. In fact, this idea is broadly supported by Halberstadt and Eaton (2003); specifically, researchers found a curvilinear relationship between family expressiveness and emotion understanding in that family expressiveness was increasingly linked to emotion understanding in the early preschool and elementary years but was negatively related later in life. Thus, it seems early childhood is a crucial period in which family expressiveness contributes to emotion understanding. However, as indicated by Halberstadt and Eaton, the association between family expressiveness and child expressiveness shows a decline from the infant/toddler years to preschool/kindergarten years. This may be due to the fact that children spend more time in schools as they age, and thus teachers become more prominent emotion socialization agents.

Teacher Use of Emotion Talk

As previously noted, much of the research investigating emotion talk and/or emotion socialization has been conducted with mothers and children. However, children spend a significant amount of time outside of the home setting and with nonparental adults. In fact, as of 2016, children under six years spent an average of 31 hours per week in non-parental care and 30% of children were enrolled in center-based care (National Center for Education Statistics, 2016). Therefore, early childhood educators are vital emotion socialization agents and are in a critical position to influence emotion understanding and regulation through the emotion related talk they utilize in the classroom. Even if students are not directly part of an interaction, they can learn about emotions through observing their teacher (Denham & Bassett, 2019). In many ways, teachers may act as emotion socialization agents in a similar manner as parents. However, teachers are also in a unique position by being one of few adults in a classroom of many children. This contextual factor may play a role in teachers' strict reactions to emotions (Denham

et al., 2019) as well as teachers feeling a need to exhibit a calm demeanor, even in the face of a stressful job (Shewark et al., 2018). Therefore, teachers may serve as an important emotion socialization agent for young children in ways that are both similar to and different from parents. Few studies have examined the emotion related practices of teachers and no studies to date have examined what variables are related to variation in emotion talk used by preschool teachers.

Yelinek and Grady (2019) conducted a study in which they investigated the kind of emotion talk teachers use in the classroom. Specifically, the researchers recorded 13 preschool teachers' emotion talk in naturalistic observations and subsequently coded the frequency and function of emotion talk. Preschool teachers were observed for 15 hours total in 1- to 3-hour increments. Emotion utterances were described as an utterance referring to emotions, such as sad or happy, or emotion-related behaviors, such as laughing or screaming. Emotion utterances were transcribed verbatim and directly after the teacher used an emotion-related utterance, the child or children were observed for one minute. Researchers noted descriptions of child behaviors, gender of the child, and classroom activity. Emotion utterances were then coded for type and function using the Parent-Affect Communication Task (PACT; Denham et al., 1992) and child behavior was also coded. The current study will use the same coding scheme for emotion-related utterances.

Results showed that most emotion talk was in the form of a comment, guide, or question about the emotion and tended to reference negative emotions. Specifically, teachers ranged from 14 utterances (fewer than 1 per hour) to 165 utterances (11 per hour). Furthermore, functions of emotion utterances used by teachers resulted in the following percentages: 8.8% label, 33.5% comment, 12.2% explain, 0.5% clarify, 19.9% guide, 6.8% socialization, and 18.3% question. Specifically, the functions of emotion utterances found in this study point to the fact that teachers

most often comment on an emotion without explaining it in any way. Preschool teachers in this study less frequently used emotion talk to explain the cause or consequence of an emotion to children. The current study expands on this study by collecting rich data via a non-intrusive recording device which limits the possibility of the Hawthorne effect, which in this case is the possibility that teachers might behave differently because they are being observed. This could have played a role in the study conducted by Yelinek and Grady as researchers were present in teachers' classrooms observing teacher language and child behavior. Furthermore, Yelinek and Grady noted that overall emotion talk was infrequent and suggested that future research should consider ways to encourage more emotion talk in the classroom in order to facilitate emotion understanding and regulation in their students. Due to the relatively low levels of emotion talk observed by preschool teachers in the study conducted by Yelinek and Grady, the current study utilized a picture book-reading task intended to elicit more opportunities for emotion talk. Furthermore, the present study aimed to investigate factors related to variation and ideally, highlight mechanisms of encouraging teacher emotion talk (Yelinek & Grady, 2019).

Another study (Ahn, 2005) examined 12 childcare center teachers' discussions of emotions in the classroom setting. Toddlers and preschoolers between the age ranges of 18 to 60 months were included in the study. Findings indicated that teachers tended to identify emotions in children (e.g., "You seem sad") and themselves (e.g., "I'm not happy about that"), understand the causes of emotions, and find constructive methods of expressing and regulating emotions. However, only one-third of teachers in this sample used book readings as a method to discuss emotions, despite research showing that book reading is an excellent opportunity for children to learn about feelings (Hyson, 2004; Kuebli, 1994). Findings again suggest that there is room to

increase frequency of teacher emotion talk and explore ways to encourage teachers to take advantage of opportunities, like book reading, to discuss emotion/feeling states.

A recent study by Alamos and colleagues (2023) investigated teacher and child factors associated with emotion talk, specifically with a sample of children displaying elevated externalizing behaviors. Participants included 183 preschool teachers and 470 children across Head Start, state funded, and private preschool programs. Teacher-child interactions were observed using the Classroom Assessment Scoring System (CLASS Pre-K; Pianta et al., 2007) at four data collection time points. Teachers were asked to report on their authoritarian beliefs using the Ideas about Children Scale-Short Form (Schaefer & Edgerton, 1985), their use of preventative classroom management strategies using the Teacher Strategies Questionnaire (Webster-Stratton, 2012), and completed a demographic questionnaire. Teachers rated children's effortful control and externalizing behaviors. Additionally, teacher-child interactions were observed during a book reading task and coded for interactive behaviors and emotion talk. Finally, children's receptive language skills were assessed using the Peabody Picture Vocabulary Test-4th edition (PPVT-4; Dunn & Dunn, 2007). Results from this study indicated that teachers more often discussed emotions with students when they had a degree in an early childhood major and showed more responsive teaching practices. Additionally, teachers used more emotion talk with children that showed lower receptive language skills. These findings have important implications in that they suggest that both teacher and child factors are related to opportunities for children to talk about emotions with their teachers. Furthermore, the identified teacher factors are relatively malleable, suggesting that interventions should consider focusing on increasing early childhood training and teacher capacity to engage in responsive teaching practices. As noted by Alamos and colleagues (2023), these findings highlight the particular importance of

providing young children with frequent opportunities to talk about emotions in order to help scaffold emotion regulation. Findings from this study directly relate to hypotheses in the current study in terms of predictions that teacher factors such as professional development opportunities and teacher emotional style might be related to teacher use of emotion talk. Discussing emotion states can also serve as a way to build children's emotion-specific vocabulary. Streubel et al. (2020) investigated how emotion-specific vocabulary contributes to mechanisms of emotion understanding in 4- to 9-year-old children. These 113 children participated in two sessions in which they completed the Children's Emotion-Specific Vocabulary Vignettes Test (CEVVT; Streubel et al., 2019), a measure of emotion-specific vocabulary. This is a measure that includes 20 illustrated scenarios in which a protagonist is in a situation that elicits emotion and exhibits emotion-specific facial expressions and body language, in addition to physiological responses and thoughts. The vignettes include both pictures and audio-recorded text presented on a tablet. After each vignette was presented, children were asked to indicate how the character in the story feels. These responses were recorded, transcribed, and then coded. Coding of children's answers included frequency of emotion words as well as size and depth of emotion-specific vocabulary used. Emotion understanding and ER were also measured using separate tasks. Findings showed positive associations between overall vocabulary and indicators of emotion understanding. Furthermore, beyond general vocabulary, emotion-specific vocabulary was also associated with children's emotion understanding. That is, there was a significant positive relationship between the size of children's emotion-specific vocabulary and their emotion recognition skills, as well as their knowledge of various ER strategies. Overall, findings showed that for preschoolers, emotion-specific vocabulary clarifies knowledge of ER strategies, while for older students (i.e., primary school age) the depth of emotion-specific vocabulary is an important factor in

differences in emotion understanding (Streubel et al., 2020). This highlights the importance of discussing and labeling emotions in interactions with children, as it increases emotion-specific vocabulary that in turn supports the development of emotion understanding.

An additional study investigated the use of different types of curricula in preschool settings in relation to emotional expressions of children in the classroom as well as teacher emotion practices. Specifically, Garner et al. (2019) looked at classrooms utilizing the Creative Curriculum and the Responsive Classroom (a more emotion-focused approach). Participants included 117 children (ages 4-5 years) and 12 teachers. Findings indicated that classrooms in which the Creative Curriculum was implemented included children that exhibited more negative emotional expressions than those that used the Responsive Classroom approach. Additionally, teachers that reported using more social-emotional teaching practices were more likely to discuss emotions in interactions with their students. Teachers that reported using fewer social-emotional teaching practices had students in their classroom that tended to express more negative emotion (Garner et al., 2019). These findings have important implications as studies show that children that attend programs strongly endorsing a commitment to social-emotional learning tend to perform better on measures of emotional competence later in life (Moore et al. 2015).

Not only is it important to understand how frequently teachers discuss emotions, it is also essential to understand how teachers talk about various emotions. Namely, some researchers differentiate between higher- and lower-level emotion talk. Higher-level emotion talk involves explaining the causes and consequences of emotions and using questions that prompt children to discuss emotions. Lower-level strategies include commenting and labeling emotions in isolation. Higher-level strategies can help support children's social-emotional learning and are associated with prosocial behaviors and inhibitory control (Denham et al., 1994; Zinsser et al., 2014).

Therefore, it is important for teachers to not only label emotions, but also discuss what might be causing a specific emotion or asking children to discuss how they are feeling, again suggesting that quality of emotion talk may be just as important as quantity. It must be noted that the labeling of emotion talk as either higher- or lower-level is inherently flawed. That is, these categorizations come from research that has primarily been conducted on white, middle class samples and largely fails to consider how cultural backgrounds, norms, and expectations might contribute to emotion socialization practices. Thus, it is acknowledged that using the terms higher- and lower-level emotion talk contributes to this potentially flawed and biased language. However, because previous researchers have used this language to describe the distinction between types of emotion talk and associations with social emotional skills and prosocial behaviors, it is used here for consistency and clarity with acknowledgement that continual efforts should be focused on exploring culturally responsive SEL practices.

Some research indicates that teachers may not be explicitly focusing on emotion talk in classrooms. In one study, Morris et al. (2013) observed a book-reading task in which teachers were told to create a story to support a picture book. Teachers in this study used relatively few emotion terms (approximately 3% of story dialogue), even when the pictures provided the opportunity to talk about emotion, again indicating that teachers may not think to take advantage of a natural opportunity to engage in emotion socialization practices. Borrowing from the Positive Behavior Interventions and Supports (PBIS) literature, one can think of this opportunity to engage in emotion socialization practices as a form of vulnerable decision points (VDPs). Vulnerable decision points are typically used to describe situations where increased disproportionality in school discipline tends to occur. In these situations, VDPs might take the form of a teacher deciding to issue an office discipline referral or a decision to suspend a student.

Essentially, teachers are met with a subjective situation in which they must decide how to respond to a student's behavior. I suggest that teachers can view emotion-related situations and interactions as a form of vulnerable decision points. For example, a teacher may see a student exhibiting tantrum behavior or throwing a toy after getting upset. The teacher enters a VDP in deciding how to respond to this behavior. Namely, the teacher can discipline the child and reference the behavior in isolation ("We don't throw toys") or the teacher could view this as an opportunity for emotion socialization and say something along the lines of "I see you're mad that play time is over. Can we take a deep breath together?". This can have extremely important implications for decreasing disproportionality of discipline referrals for children from marginalized backgrounds.

In fact, research indicates that the internal state of the decision maker can influence decisions (Smolkowski et al., 2016). For example, if a teacher is tired, hungry, or experiencing burn out they may be more likely to engage in discipline (e.g., sending a child to the principal's office) as opposed to using the interaction as an opportunity to engage in emotion socialization practices. This can be particularly detrimental for students from minoritized backgrounds. In fact, according to the United States Department of Education (2014), Black children are 3.6 times as likely as white children to be suspended from preschool. Specifically, Black children make up 19% of preschoolers but account for 47% of preschool children receiving one or more school suspensions. Gilliam and colleagues (2016) showed that implicit bias plays a large role in these disciplinary practices in early education. Specifically, White teachers were more likely to hold lower expectations in terms of behavior for Black preschool students while Black teachers were more likely to hold higher expectations for behavior for this group of students. At the same time, Black teachers tended to suggest more harsh discipline for Black boys than White boys.

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Furthermore, this study showed an intersection between race, class, and educational practices in general highlighting the complexity of the associations between these factors. Furthermore, research suggests that preschool teachers who hold more negative perceptions of parents and who perceive less support from the center in working with parents, were more likely to request a student be removed from their classroom (Zulauf & Zinsser, 2019). On the other hand, research from Loomis, Curby, and Zinsser (2023) found that preschool teachers' trauma-informed attitudes moderated the relationship between student's inhibitory control and risk of expulsion. That is, for children with lower inhibitory control, having a teacher with stronger trauma-informed perspectives was significantly related to lower expulsion risk for students. In addition to implicit bias and weaker trauma-informed attitudes, teachers experiencing stress, fatigue, and burn out, as well as perceiving low support from the school or center, may be entering vulnerable decision points and deciding to engage in disciplinary procedures as opposed to being aware of their implicit bias in this area and using the interaction as a teaching moment.

An extension of the idea that the contextual features of a situation may contribute to teacher use of emotion talk can be seen in preliminary research which suggests that teachers may use more positive or negative emotion language depending on children's gender. King (2021) conducted a study in which teachers were videotaped in the classroom environment during free play contexts. Teacher emotion talk was coded for valence (positive or negative valence of emotion language), type (question, explaining, minimizing), and child gender. Results showed that teachers used negative emotion talk more often when talking to boys. Furthermore, the study found that when teachers were talking to girls, they used more emotion labeling than emotion minimizing and when teachers were talking to boys, they used more emotion questioning than emotion explaining. Once again, one can think of these emotion socialization opportunities as

vulnerable decision points, in which it might be important for teachers to stop and consider implicit biases and how they interact with children and discuss emotions based on gender presentation of the student.

Overall, the current state of the literature suggests that teacher emotion talk is variable, there is potential to increase the frequency of emotion talk, and little is known about what factors influence variation in proportion and type of emotion talk in classrooms.

Emotion Regulation Trajectory

As previously noted, the caregiver practice of engaging in emotion talk is related to a number of child outcomes, including the ability to adaptively regulate emotions. Emotion regulation spans across the lifetime and the ability to independently regulate emotions typically begins to emerge during the preschool years with significant gains in development from five to seven years old (Djambazova-Popordanoska, 2016). Kopp and Neufeld (2003) describe a trajectory of processes involved in ER across different periods of infancy. Specifically, by 3 months many infants are able to self-sooth when bored or mildly upset. By 12 months, infants have more active control of the environment, start to use their caregiver in ER, and engage in self-soothing strategies like distraction. Kopp (1982) suggests that by the end of the first year of life, infants are much more active and purposeful in attempting to control affective arousal. By two years of age, some children may begin noticing their rising emotional discomfort and look to trusted adults for support. Between two and three years of age, children begin using language to define feeling states and identify contexts that are upsetting, they begin avoiding unpleasant situations, and can engage in cost-benefit analysis (e.g., attempt to apologize to a parent after disobeying instructions/rules). It is also at this point that the transition from passive to more active methods of ER is complete. This shift is supported by developments in motor skills,

changes in representational ability, brain maturation, and the development of language skills (Rothbart et al., 1992). One can see that a major contributing factor in this developmental trajectory of ER is children's increasing independence. I argue that preschool teachers have a timely opportunity to act as socializing agents to support children's ER development and help children become increasingly independent in their skills through the use of emotion socialization practices such as engaging in emotion talk.

Kopp (1989) also discusses key principles, and mechanisms within those principles, in the development of ER. The third principle in the development of ER proposed by Kopp (1989) is most relevant to the current study. This principle suggests that infants and children require external support in order to regulate emotions. Specifically, caregivers play a critical role in providing learning experiences for infants in terms of ER. However, as pointed out by Kopp (1989), how and when caregivers intervene depends largely on the developmental level of the child, belief systems of the caregiver, and the situation at hand. Specifically, Calkins and Hill (2007) suggest that interactions with caregivers teach children that the use of specific ER strategies might be more useful than other strategies. For example, a parent who successfully and repeatedly redirects a child's attention from a desired but unavailable object is indirectly teaching the child to engage in redirection themselves when similar situations arise in the future. Alternatively, a child who is left to cry when the parent removes the desired object and walks away, may have a more difficult time using constructive ER strategies on their own when experiencing a similar situation in the classroom environment (Calkins & Hill, 2007).

In addition to parents, teachers can also help provide external support to children in order to regulate emotions by engaging in emotion identification and teaching specific ER strategies. As noted by Kopp (1982), preschool-age children begin using language to define feeling states

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and identify contexts that are upsetting. Preschool teachers can provide external support by facilitating and expanding on discussions about emotions and helping children connect a specific situation to a feeling state. Furthermore, at the preschool age, many children can identify facial expressions associated with fundamental emotions and are learning to understand the cause of those emotions (Lucas-Molina et al., 2020). Around this time in development, children are also learning that distraction can be useful when they want something they cannot have (Cole et al., 2011). The tripartite model of the impact of the family on children's emotion regulation and adjustment proposed by Morris and colleagues (2007) suggests that children learn about ER through 1) observation, 2) emotion related parenting practices and behaviors, and 3) the emotional climate of the family (e.g., attachment relationship, styles of parenting, family expressiveness, etc.). Throughout the early years of life, children learn about emotions and ER by observing their parents' displays of emotions. Children also begin to learn about ER through social referencing. That is, looking to another person to understand how to respond, think, or feel about certain stimuli (Saarni et al., 1998). Again, in the preschool years, children learn about ER through parental modeling of strategies. In fact, children with mothers experiencing depression exhibit fewer and less adaptive ER strategies, as compared to children of mothers not reporting experiences of depression (Silk et al., 2006). Although Morris and colleagues (2007) focus this model on parents, researchers have shown that teachers act as essential models of emotion for children as well (Morris et al., 2013).

Although children are still learning about emotions and how to regulate emotions, by kindergarten, teachers expect children to follow directions even when those directions are to transition from a preferred to non-preferred activity, for example (Denham et al., 2014). This is in line with the developmental trajectory of ER proposed by Kopp and Neufeld (2003). Namely,

that as children grow older, they transition from less passive to more active methods of ER which is supported by developmental changes and increasing independence. Overall, children develop through the trajectory of receiving support for co-regulation in infancy, observing emotions and emotional responses in trusted adults, using language to communicate emotional needs in toddlerhood, and begin to use some of their own learned strategies for emotion regulation around the preschool years. Based on this trajectory, preschool students are at a critical stage of ER development and thus, preschool teachers have the capacity to provide external support and act as continued models of emotion regulation in this process through engaging in emotion talk with their students.

Emotion in Special Populations

While emotion identification and regulation are important skills for all children to develop, it is especially critical to explicitly focus on this for children with disabilities and behavioral concerns. This is important as the research presented here demonstrates the link between emotion socialization practices, such as talking about emotions, and many positive outcomes including prosocial behavior, increased school engagement and academic achievement, increased use of adaptive ER skills, and more. Children with or at-risk for disabilities, however, oftentimes exhibit difficulties with emotion identification and regulation (Garon et al., 2009; Shaw et al., 2014) and may benefit from targeted, early intervention in order to develop these skills. Thus, it is essential to understand how parents and teachers of children with disabilities are engaging in emotion socialization practices in order to inform potential intervention.

Research shows that there are certain disorders in which children commonly struggle with aspects of emotionality. For example, children with autism spectrum disorder (ASD) often

exhibit difficulties in various components of emotionality, including emotion processing, expression, understanding, and regulation (Garon et al., 2009). There are a number of potential contributing factors to emotion dysregulation in ASD populations including altered physiological activity, neural circuitry, psychiatric conditions, information processing and perception, cognitive factors, and more (Mazefsky et al., 2013). Children with ASD often require more direct intervention in order to develop ER skills as, without intervention, emotion dysregulation is essentially a stable construct in the preschool and early elementary school years (Berkovits et al., 2017).

Research has shown that children with Attention Deficit Hyperactivity Disorder (ADHD) often have difficulty regulating their emotions as well (see Graziano & Garcia, 2016; Shaw et al., 2014). However, the research is not conclusive in terms of the mechanism contributing to this co-morbidity. Some researchers suggest that emotion dysregulation and ADHD are correlated but distinct constructs, others suggest that emotion dysregulation is a diagnostic characteristic of ADHD, and others propose that the combination of ADHD and emotion dysregulation is a distinct entity (Shaw et al., 2014). Breaux et al. (2018), however, found that supportive parenting practices (i.e., encouraging or coaching as a response to a child's emotion) were related to stronger ER skills (via parent report) for children with ADHD. Conversely, non-supportive parenting practices (i.e., dismissing or discouraging the expression of emotion) were related to greater emotional lability for these children. This study highlights the importance of ensuring parents and teachers are explicitly focusing on supportive emotion socialization practices for children with or at-risk for disabilities, as these efforts can help mitigate potential challenges with emotion regulation.

Another population that has been shown to struggle with components of emotionality is children with Specific Language Impairment (SLI). Due to deficits in expressive and receptive language, children with SLI may have difficulty identifying, labeling and subsequently, regulating their emotions. Fujiki and colleagues (2002) conducted a study in which they examined differences in ER between children with a SLI and their typically developing peers. Teachers rated the ER skills of children in their classroom using the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1998). Overall, teachers rated children with SLI as having more difficulty regulating their emotion than their TD peers and specifically, boys with SLI were reported as having the most difficulty with ER. While this study was correlational in nature, it points to the fact that students with SLI may experience more challenges in regulating their emotions. This may be due to a certain social profile of children with SLI or could be related to deficits in expressive or receptive language that limit children from understanding emotion labels, identifying or recognizing emotions, and ultimately, regulating their own emotions.

Discussion of different emotions in the classroom is one method in which teachers can support overall positive engagement with students. This can be especially crucial for young children exhibiting externalizing behaviors, as teachers have the opportunity to help the child attend to and understand their own emotions. These children often have difficulty understanding and expressing their emotions in an appropriate manner (Southam-Gerow & Kendall, 2002) and therefore require increased opportunities to practice these skills. When a teacher attends to a child's emotions, it indicates to the child that their teacher cares about their emotional experiences and increases the likelihood that the child uses the teacher as a secure base in classroom exploration (Alamos & Williford, 2020). Specifically, Alamos and Williford conducted a study that examined emotion talk in 470 preschool children and 183 teachers.

Teacher-child dyads were observed while completing a storybook reading task and this was then coded for teacher emotion talk. Children's classroom engagement was measured using the Individualized Classroom Assessment Scoring System (inCLASS; Downer et al., 2011), while teacher-child interactions were observed and coded using a Likert-type scale for positive interactions. Finally, teachers were asked to complete a measure of perception of their relationships with students using the Student-Teacher Relationship Scale (STRS; Pianta, 2001) as well as a measure of their perception of children's externalizing behaviors using the ADHD Rating Scale-IV (DuPaul et al., 1998) and ODD Rating Scale (Hommersen et al., 2006). Results indicated that when teachers provided frequent opportunities to discuss emotions and did so in warm and sensitive interactions with children, students in their classroom tended to communicate more with teachers despite their initial classroom engagement level. This study shows the importance of discussing emotions with young children in a warm and welcoming environment and indicates that this can be one way for teachers to increase engagement in the classroom, especially for children with externalizing behaviors.

Overall, there is a solid body of research indicating that emotion identification and regulation skills are important for both emotional well-being as well as cognitive development and academic achievement and furthermore, that emphasizing these skills for young children with disabilities may be especially beneficial for child outcomes. However, it is essential to understand what emotion talk is specifically and what the research suggests regarding the use of emotion talk among parents and teachers.

Potential Factors Related to Emotion Talk

While some studies have investigated frequency and type of teacher emotion talk, it is unknown what factors play a role in the variation observed. For example, as previously noted,

Yelinek and Grady (2019) found that while teachers used both higher- and lower-level emotion talk, the overall frequency was rather low (i.e., average of three emotion-related utterances per hour). As suggested by Yelinek and Grady (2019), further research is needed to identify what factors might play a role in explaining the variation seen in teachers' use of emotion talk. This is an essential next step in order to then identify how intervention or professional development might encourage or facilitate an increase in emotion talk in preschool classrooms. For example, if factors such as teachers' own emotion regulation skills or how supported teachers feel in their schools are related to how often they talk about emotions in the classroom, this is essential data that can inform at what level an intervention might be most effective.

The current study explored factors potentially related to teacher use of emotion talk. Specifically, the study investigated whether factors of teacher stress, teacher emotion beliefs, teacher ER, and students at-risk for disabilities in a classroom were related to proportion of emotion talk observed in preschool teachers. Secondary research questions explored whether factors of perception of support for managing challenging student behavior and emotion-related trainings were related to teacher emotion talk. The literature on these factors is reviewed here.

Teacher Stress

One potential factor related to variation in emotion talk in the classroom, which was measured in the present study, is teacher stress. Blasé (1986) conducted a qualitative analysis that indicated work stress was related to negative feelings in teachers and showed that some teachers experience anger toward other individuals as a result of work stress. In fact, one teacher shared how, when stressed, her interactions with students can change:

"When I'm in a good mood, I think a lot of it boils down to not being tired. On days when I'm not tired, days that I am energetic ... on those days I am more patient. I spend more

time talking to the kids, as opposed to just getting to the material. You get a lot more

action, interaction. It does make a happier situation, I think you're warmer ... more

approachable to them, and ... they will be open with you. They will talk with you. Days

when I'm in a bad mood I just get to the material and don't interact ... you'll continue to

get the point across but you won't expand on it at all or let them talk at all.

Furthermore, using a sample of 1,129 teachers working in child care centers and public preschoolers, Buettner et al. (2016) found that teachers' psychological load (depression, stress, and emotional exhaustion) was related to teachers' negative reactions to children. On the other hand, teachers' coping abilities (reappraisal ER and problem-focused coping strategies) were related to teachers' positive reactions to negative emotions of their students. These findings highlight how teacher stress level can contribute to the way they react to students in their classroom.

Furthermore, a study by Jeon et al. (2016) indicated that teachers in more chaotic child-care settings showed less reappraisal and coping skills. This, subsequently, was related to lower levels of positive responsiveness to children. More specifically, teachers reporting higher chaos in the child-care setting used more suppression strategies which was linked to non-supportive reactions and fewer expressive encouragement reactions to emotions that children expressed. Classroom chaos was measured using an adapted version of the Confusion, Hubbub, and Order Scale (CHAOS-D; Wachs et al., 2004) in which teachers rated their perceptions of environmental crowding, noise, confusion, as well as degree of control and organization of space and time. For example, the items included statements such as, "There is very little commotion in our classroom" and "We almost always seem to be rushed." As noted by Jeon and colleagues (2016), teachers working in more chaotic child-care environments may experience higher levels

of stress, burnout, and emotional arousal. All of these factors can influence teachers' ability to positively respond to and support children (Jeon et al., 2016). Although research has not directly investigated the link between teacher stress and use of emotion talk, these studies suggest that higher levels of stress might be linked to less frequent discussions of emotions with students. For instance, if a teacher feels their classroom constitutes a chaotic environment, they may experience high levels of stress, which may make them more likely to dismiss student's emotions or miss opportunities to engage in emotion socialization practices.

Zinsser et al. (2013) found that Head Start teachers tended to be less stressed, more supportive, and more consistent than private center teachers. Furthermore, within private center classrooms, children with less stressed teachers tended to display more adaptive ER skills and emotionally positive and prosocial behaviors than children in classrooms with more stressed teachers. Teachers reporting higher levels of stress were rated as generally less supportive and additionally, less consistent in emotional support. These findings suggest that teachers experiencing high levels of stress may struggle to facilitate emotionally supportive classrooms. This can make the classroom environment less predictable and comfortable for students which can, in turn, influence children's social-emotional functioning (Zinsser et al., 2013). These findings support the idea that teacher stress and consistency of providing emotional support is related to children's ability to regulate their emotions and engage in prosocial behaviors.

This pattern can be seen in the literature focused on parents as well. Specifically, Havighurst and Kehoe (2017) found that parents who were experiencing mental health challenges, sadness, loneliness, fatigue, illness, child behavior problems, and/or other stressful life events, exhibited more compromised skills in regulating both their own and their child's emotions (Maliken & Katz, 2013; Williford et al., 2007). Furthermore, parents with heightened

sensitivity to stress, due to genetic factors and/or preexisting mental health difficulties, or those who grew up in a high-stress environment, are often at risk of heightened reactivity in moments of parenting-related stress (Laurent, 2014; Platt et al., 2016). Breaux et al. (2015) found that higher levels of psychopathology in parents were associated with less supportive reactions to children's negative emotions. Research has also found that mothers with clinical levels of depression or anxiety exhibit both fewer and less effective ER strategies, as well as greater challenges in communication (Psychogiou & Parry, 2014). As noted by Havighurst and Kehoe (2017), it is especially when parents are in moments of heightened stress that they need to have skills to regulate their own emotions in order to support children's ER.

Friedman-Krauss and colleagues (2014) investigated the influence of child behavior problems and teacher stress on overall classroom emotional climate. This study used data from two clustered randomized control trials, focusing on preschool Head Start classrooms located in high-poverty neighborhoods in Chicago. Researchers found an interesting pattern between teacher stress and classroom emotional climate. Specifically, findings showed that moderate levels of teacher stress were related to higher, or more positive, classroom emotional climates. However, low and high levels of teacher stress were related to lower, or more negative, classroom emotional climates. This is in line with the Yerkes-Dodson law (1908), which posits that the relationship between stress/arousal and performance on tasks that are cognitively demanding observes an inverted U-shaped curve. Therefore, moderate levels of stress are likely to enhance performance on a task, whereas high levels of stress can impede performance (Mendl, 1999) and low levels of stress or arousal are likely to contribute to low performance due to lower levels of motivation (Teigen, 1994). This inverted U-shaped curve has been seen in research on nurses, who exhibit peak job performance when stress is moderate (Abu Al Rub, 2004). Thus, it

seems plausible that teacher performance, in terms of ability to manage their classroom effectively, is related to experiencing moderate levels of stress or arousal.

Another component of teacher stress that is often discussed in the literature is career burnout. Specifically, perceptions of limited growth in one's career, as well as lack of support for career development, is related to a diminished sense of personal accomplishment, which is an important factor in career burnout (Maslach & Jackson, 1981). This diminished sense of personal accomplishment may also contribute, over time, to stress and emotional burnout. According to Jennings and Greenberg (2009), stress and emotional burnout influence teachers' ability to engage in emotional support for their students, and influences teachers' own motivation and cognition. Taking the research presented here into consideration, it is plausible that level of stress experienced by teachers could be related to the proportion and kind of emotion talk teachers use in the classroom.

Teacher Emotion Beliefs

Another area of consideration is how teaching and emotional styles and beliefs regarding the importance of emotion socialization might be related to teacher emotion talk. Research indicates that caregivers who value emotions as positive are more inclined to allow children to experience emotions and to coach them through those experiences (Denham & Kochanoff, 2002; Dunsmore & Karn, 2001; Gottman et al., 1997). Additionally, Meyer et al. (2014) found that parents' values regarding the importance of attending to and accepting emotions, and their beliefs in regulating negative moods and maintaining positive emotion, were each associated with more supportive emotion socialization and regulation efforts as well as with children's adaptive self-regulation strategies. Studies have also found that mothers who believe in the importance of guiding emotional development are more likely to talk about and label emotions

with their preschool children who, consequently, display more developed emotion understanding (Dunsmore & Karn, 2001; Perez Rivera et al., 2011). Taken together, these findings highlight how beliefs regarding the importance of emotion socialization for young children may be related to actual practices of engaging in emotion talk.

On the other hand, caregivers who think that emotion is of little value, or even negative, may attempt to protect their children from experiencing strong emotions (Eisenberg et al., 1998). There are a number of undesirable outcomes for children when their parents engage in punitive reactions to emotional displays (e.g., telling their child they will have to go to their room if they start crying, stating to their child that they are overreacting, or the parent feeling uncomfortable due to their child's reaction). Specifically, these children often exhibit less adaptive coping strategies, even in adulthood, show low levels of knowledge of emotions, display high levels of avoidant coping when met with peer-conflict (Eisenberg & Fabes, 1994; Eisenberg et al.,1996), and exhibit more teacher- and parent-reported externalizing problem behavior, especially for boys (Eisenberg et al., 1999). These studies demonstrate how parental beliefs regarding the importance of accepting and attending to emotions are related to child outcomes such as emotion understanding and coping strategies. The current study draws on these findings and hypothesizes that teacher beliefs about the importance of emotion may contribute to the emotion-socializing practice of engaging in emotion talk in the classroom.

Zinsser and colleagues (2014) provide initial support for this hypothesis. In this study, researchers investigated preschool teachers' (*N*=32) beliefs about social-emotional learning and then observed emotional support. Specifically, teachers were observed and emotional support was coded using the Classroom Assessment Scoring System (CLASS Pre-K; Pianta et al., 2007). Semi-structured focus groups were also conducted with teachers in order to obtain a deeper

understanding of the role that teachers play in the emotional socialization of children. Questions posed to teachers included children's emotional competence, teacher emotional competence, covering emotions in the classroom, and teachers' training experience with SEL. Results indicated that highly emotionally supportive teachers viewed SEL as critical to children's wellbeing and furthermore, saw SEL as a core element of their work. Moderately emotionally supportive teachers tended to focus on specific emotion skills in the context of structured social emotional learning activities and viewed intervention programs as discrete projects rather than as a fundamental and integrated component of their routine teaching activities. Ornaghi et al. (2021) found that teachers who believe that emotions should be discussed with children and that adults are important emotion socialization agents, exhibited higher scores on the emotion coaching style scale and lower scores on the dismissing style scale. Both of these studies highlight how teacher beliefs about the importance of emotion socialization, and their role in that process, are related to teacher practices in the classroom.

Research from Jiang et al. (2016) supports the idea that teacher belief and emotional style can play a role in how the teacher interprets different challenges and what ER strategies they decide to employ in various situations. Using a mixed methods approach, researchers used student surveys ($n = 53$) and teacher interviews ($n = 4$) to explore teachers' own ER strategies. Although this study had a small sample size for teachers, findings indicated that one teacher who endorsed strong beliefs regarding empathy was able to regulate their emotions more effectively in comparison to another teacher who endorsed views of teacher authority (Jiang et al., 2016). Furthermore, the teacher endorsing empathy reported trying to understand student perspectives and practice empathy as a form of ER, whereas the teacher valuing teacher authority noted that he felt he needed to suppress negative emotions in order to maintain authority (Jiang et al.,

2016). Overall, teachers more frequently discussed experiences of negative emotions and strategies used to down-regulate negative emotions than experiences of positive emotions or strategies used to up-regulate those positive emotions. Findings from this study also indicated that reappraisal as an ER strategy was more effective for teachers than suppression. These findings suggest that teacher education programs might consider focusing on promoting adaptive ER strategies and furthermore, empathy beliefs, as these factors appear to help teachers interpret challenging situations while fostering quality relationships with their students (Jiang et al., 2016). Furthermore, these results suggest that teacher beliefs about the display of emotion may be related to emotion talk used in the classroom. For example, the teacher that believed they needed to suppress their emotions in order to maintain authority in the classroom, may be missing out on key opportunities to engage in emotion socialization and model emotion regulation for their students. However, it is important to note that this study was conducted with a very small sample ($n = 4$) and future research is needed to confirm or refute findings.

Some literature suggests that teacher perceptions regarding their own emotional displays in the classroom are linked to teaching practices. Specifically, Moé and Katz (2020) showed that teachers who endorsed engaging in more emotional suppression ER strategies (for their own emotions) also endorsed using a more controlling teaching style in the classroom. Furthermore, Sutton and colleagues (2009) showed that while the majority of teachers (i.e., 97% of 400 teachers) who completed a survey reported that showing positive emotions made them more effective, beliefs regarding exhibiting negative emotions were more mixed. Specifically, approximately 60% of teachers reported that showing negative emotions in the classroom made them sometimes, usually, or always less effective (Sutton et al., 2009). This study suggests that teacher beliefs regarding how their own displays of emotion are related to effectiveness in

teaching may contribute to how often teachers choose to discuss emotions with children, especially when it comes to discussing their own feeling states. These studies have interesting implications for better understanding how teacher beliefs and teaching styles might influence the proportion and type of emotion talk used in the classroom.

Teacher Emotion Regulation

Teachers' ability to regulate their own emotions (i.e., teacher ER skills) constitutes another factor that may contribute to their ability to engage in emotion socialization. Again, drawing upon the literature focused on parents, Jones et al. (2014) found that mothers reporting greater difficulty in regulating their own emotions, tended to respond to their adolescent children's negative emotions with more distress and in a more harsh and less supportive manner. Relatedly, Morelen and colleagues (2016) conducted a study in which mothers completed measures on their own ER, their children's ER, and their emotion-related parenting strategies. Mother-child dyads were also observed completing a conflict discussion task which was coded using an ER behavioral observation system. Findings indicated that the observed adaptive ER skills of mothers were associated with less dismissive parenting practices. On the other hand, self-reported emotion dysregulation in mothers was positively related to unsupportive parenting practices, in addition to child emotion dysregulation and maladaptive ER strategies in children (Morelen et al., 2016). That is, parents exhibiting stronger ER skills showed more supportive emotion parenting practices and mothers that self-reported emotion dysregulation exhibited more unsupportive parenting practices, which was also related to child emotion dysregulation. These findings align with social learning theory and point to the importance of effective models for children as they learn about emotions and learn to regulate their emotions. As it relates to the

current study, teachers can also serve as these essential models in emotion socialization for young children.

Furthermore, parents that struggle to identify their own emotions, and those who are less accepting of their own negative emotions, may be less likely to engage in supportive emotion socialization practices with their children, as these often require discussing feelings (Salovey et al., 1995; Yap et al., 2008). In general, emotion dysregulation in parents has been consistently linked with unsupportive parenting practices and furthermore, emotion- and behavior-related challenges in children (Zahn-Waxler et al., 2002). While the literature on parents, specifically mothers, points to a clear connection between parental ER skills and parents' ability to engage in supportive emotion socialization and regulation practices with children, there is less research investigating whether this association holds true with early childhood educators.

Emotions are inherently an integral part of teachers' lives and teachers experience a range of positive and negative emotions in their job (see Sutton and Wheatley for a review). Consequently, these emotions have the capacity to influence teachers' cognitions, specifically in terms of attention, memory, and problem-solving (Sutton et and Wheatley, 2003). Furthermore, emotions can be related to teachers' motivation, beliefs, and goals. Despite the fact that teachers often try to mask or disguise their emotions, students are acutely aware of and affected by teachers' emotions.

Students with or At-Risk for Disabilities

Another potential factor related to variation in teacher emotion talk concerns student factors such as number of students in the classroom with or at-risk for disabilities. The research presented previously clearly shows that emotion socialization practices are associated with a multitude of positive outcomes for children. However, children with or at-risk for disabilities

often struggle with components of emotion identification and regulation. Therefore, it is important to ensure parents and teachers supporting these children are focusing on emotion socialization practices. However, in order to make recommendations, it is important to first understand whether parents and teachers exhibit differences in the quantity of emotion socialization practices when interacting with children with or at-risk for disabilities and if a difference exists, what factors could be contributing to that variation.

One population that often exhibits difficulties in various components of emotionality, including emotion processing, expression, understanding, and regulation is children with autism spectrum disorder (ASD; Garon et al., 2009). Because of these difficulties, individuals with ASD may require more support and practice in developing skills such as emotion regulation. However, there are often barriers for caregivers to provide said support. For example, a study conducted by Duffet (2016) found that parenting stress moderated emotion coaching in that mothers of children with ASD reported more parenting stress, which, in turn, led to less emotion coaching practices and more child problem behaviors. Relatedly, Pasalich (2011) found a link between parent practices and child behavior/disability status in that parents of children who exhibited higher levels of callous-unemotional traits tended to be less accepting of emotions and exhibit more emotion dismissing styles. However, other research suggests that status of child disability is not related to emotion-related practices of parents. For instance, Newland and Crnic (2011) found that developmental risk in early childhood did not change the overall emotion socialization process; although, higher levels of both maternal and child negativity were observed for children who exhibited developmental risk. Similarly, Légaré et al. (2019) did not find any differences in emotion socialization practices of mothers of children with Intellectual Disability (ID) and

parents of typically developing children. Mothers of children with ID did, however, perceive

their children as having fewer social-emotional competencies (Légaré et al., 2019).

The aforementioned research displays mixed findings regarding whether disability status of

children may influence emotion socialization practices of caregivers. The studies conducted by

Duffet (2016) and Pasalich (2011) suggest that educators may use different emotion socialization

practices, and thus different use of emotion talk, based on disability status of students in their

classroom. On the other hand, the research presented by Newland and Crnic (2011) as well as

Légaré et al. (2019) would suggest that no differences should emerge.

　　　While the research on whether disability status may play a role in emotion socialization

practices is mixed, the link between adult emotion socialization practices and child behavior has

been clearly demonstrated in a number of studies. For example, Bjork and colleagues (2020)

found a relationship between parental expressive encouragement and emotion understanding of

the child, and conversely, between reactions of distress (a non-supportive emotion-related

socialization behavior) in parents and externalizing behaviors of children. Additionally,

Havighurst and colleagues (2010) evaluated an intervention program aimed at developing

parents' emotion socialization practices. Findings indicated that parents in the intervention group

showed significant improvement in emotion awareness and regulation, as well as increases in

emotion coaching practices and decreases in emotion dismissing practices. Importantly,

children's knowledge of emotion also improved and decreases in child behavior problems were

reported by both teachers and parents. These findings highlight the importance of supportive

emotion-related socialization practices in adults as these practices influence child behavior and

outcomes.

The current study examined whether there was a relationship between number of students at-risk for disabilities in the classroom and teacher emotion talk. Although there is not enough research on this topic to form a directional hypothesis, it is interesting to consider what factors might play a role in any potential differences seen. Namely, as suggested by Baker and Crnic (2009), diagnostic overshadowing, or the tendency to overlook emotional and/or psychological components of individuals with disabilities and instead prioritize characteristics more explicitly related to the nature of the disability (e.g., deficits in adaptive behavior or cognition; Reiss et al., 1982), could contribute to teachers discussing emotions less with this population. If this is occurring, it is essential to understand as the aforementioned research indicates the critical importance of engaging in emotion socialization practices with young children with and without disabilities.

Perceived Support for Managing Challenging Behaviors

Another factor that may be related to emotion talk is teacher perception of support. Specifically, teachers' perception of the support they receive from administrators, other teachers, and school staff for managing challenging student behavior may play a role in teachers' ability to act as a supportive emotion socializing agent for their students. Knobloach and Whittington (2002) conducted a qualitative study of student teachers and new teachers investigating factors that influenced teacher confidence. Findings indicated that ten factors influenced the efficacy of novice and student teachers: 1) support and feedback; 2) knowledge and education; 3) teaching and student teaching experience; 4) positive interactions with students; 5) preparation, anticipation, and expectations; 6) resources and facilities; 7) personal background; 8) intrinsic motivation; 9) isolation, overwhelm, and helplessness; and, 10) other factors such as school procedures, paperwork, workload, and unrealistic expectations. In the realm of support,

components of having a mentor and feeling supported from the school principal were related to teacher efficacy (Knobloach & Whittington, 2002), highlighting how feeling supported can contribute to how effective teachers feel in their practice. The current study built on this literature and asked whether teacher perceptions of support were related to practices in the classroom such as emotion socialization.

Research suggests that educators often leave the field due to student behavior and/or classroom or school climate as opposed to matters related to technical components of teaching of pedagogy (Elias et al., 2006). However, Ruhland and colleagues (2002) found that novice teachers reported that personal support from other professionals (e.g., mentoring, peer support groups) played a key role in staying in the teaching profession. Taken together, these findings indicate that feeling supported, whether from other teachers or from administration, is related to how effective teachers feel in their practice and how likely they are to stay in the field in general. These patterns suggest that perceived support may facilitate teachers' self-efficacy by having the resources to educate students effectively and furthermore, that perceived support may act as a buffer against stress and burn out.

Research shows similar findings exhibiting the importance of administrative support for special education teachers. Specifically, Marsal (2001) found that when administrative support was perceived by special education teachers to be present, it was considered an incentive for retention. Conversely, the absence of administrative support was considered a cause for leaving the profession. When administrators placed little value on special education students and teachers, teachers felt that insufficient attention was given to their needs or ideas. This, in turn, eliminated many opportunities for collaborative problem solving and failed to support the importance of teamwork (Marsal, 2001). Teachers indicated needs for administrative support in

the areas of set-aside time to work on special education paperwork, scheduled time for collaboration and planning with general education teachers, providing professional development opportunities, decreasing the size of caseloads and number of students in their classes, and providing sufficient technology and materials for students. Research from Billingsley and Cross (1992) corroborates these findings by reporting that a lack of support in the workplace fails to provide educators with the support they need to effectively collaborate and to reduce attrition. Although the research is not comprehensive in this area, existing research points to the possibility that teachers who feel less support from administrators and colleagues may have less energy and may be distracted by the additional demands placed on them, to engage in emotion socialization processes with students, such as discussing emotions and employing emotion coaching strategies.

Professional Development

In recent years, education has seen an increased focus on emotional support, teacher-child interactions (TCI), and social-emotional learning (SEL; Jones et al., 2020). With this increased focus on components of emotion, there is ample opportunity for professional development sessions focused on increasing emotion socialization and SEL practices in early education teachers. In fact, CASEL (2013) states that there is a need for schools to integrate SEL with the school's aims for teaching, learning, and student outcomes. It is suggested that SEL is embedded within curriculum, instruction, student supports, and after school programs. Weissberg and Cascarino (2013) echo this sentiment and state that it is imperative that SEL be included in both teacher preparation and professional development.

A body of work has emerged focusing on professional development that directly targets target-child interactions (TCI) and has shown promising findings (Bierman et al., 2008;

Domitrovich et al., 2008; Pianta et al., 2008; Raver et al., 2008). Positive teacher-child relationships, characterized by teachers low in conflict and dependency and high in closeness (Pianta, 1999), serve as a protective factor for children's social and academic development (Baker, 2006; Pianta et al., 1995; Pianta et al., 1997; Valiente et al., 2008). Furthermore, Hamre et al. (2012) investigated the effects of a 14-week professional development course for preschool teachers titled "Support of Language and Literacy Development in Preschool Classrooms Through Effective Teacher-Child Interactions and Relationships." This training was developed with the goal of increasing teacher knowledge regarding the importance of quality TCI and to help teachers build skills for increasing TCI quality. Teachers who completed this training, as opposed to the control group, reported more intentional teaching beliefs and furthermore, exhibited greater knowledge of the importance of TCI and skills in cultivating quality interactions with their students. Teachers who completed this training course also showed more effective emotional interactions. Specifically, within the Emotional Support domain as measured with the CLASS, teachers exhibited more child-focused and autonomy supportive interactions (effect size = .45; Hamre et al., 2012).

As previously discussed, teacher stress and emotional burnout can restrict teachers' ability to provide emotional support for students. However, an interesting study by Sandilos et al. (2018) found that participation in professional development buffered the relationship between career stress and teachers' capacity to develop an emotionally supportive classroom. This professional development course attempted to strengthen interactions and also provided a space for teachers to discuss classroom concerns. Therefore, Sandilos and colleagues (2018) posit that this course subsequently strengthened teacher skills in emotional support to an extent that teachers' personal emotional state and stress had less of an impact on their teaching practices.

This study highlights the need for professional development opportunities that not only focus on teacher skills or specific instructional strategies, but more broadly allow teachers to discuss concerns and/or challenges they face and to engage in collaborative problem-solving.

As indicated by a review of the literature, a gap in the research exists on whether emotion-related professional development opportunities for preschool teachers are related to specific practices, such as discussing emotions and engaging in emotion socialization in the classroom. While some promising findings exist, these include one study (Hamre et al., 2012) of a professional program that spanned 14 weeks, as opposed to the typical professional development sessions for teachers which may last one day or even just a few hours. Furthermore, no studies have explicitly investigated whether emotion-focused PD sessions attended by teachers have any association with the actual practice of emotion talk in the classroom. The current study attempted to begin to answer this important question.

In summary, there is a dearth of research related to teacher emotion talk and even less research investigating factors influencing variation in that talk. The research that has investigated frequency and type of emotion talk points to the fact that there is considerable variation across teachers (Yelinek & Grady, 2019). Upon examination of common factors influencing teacher-student interactions and classroom climate, it seems plausible that factors including teacher stress, teacher beliefs about emotion, teacher ER, and number of students at-risk for disabilities in the classroom could play a role in the proportion of emotion talk used by teachers.

Current study

While some research has investigated the use of emotion talk in teachers (Ahn, 2005; Morris et al., 2013; Yelinek & Grady, 2019), limited research exists on what factors are related to the variation present in this use of emotion talk. The current study provided a non-invasive

observation by utilizing the LENA recording device to obtain a language sample of emotion talk used by preschool teachers during a book-reading task and transition time. The main goals of this study were to provide a descriptive account of the preschool classroom emotion language environment and to explore what factors may be related to variation in teacher emotion talk. This is an essential next step in the current research literature as understanding what factors are related to variation in emotion talk will ideally help to inform future intervention. Future interventions might include training and/or coaching opportunities for early education teachers focusing on the importance of increasing higher level emotion talk to support children's emotional development.

Primary Research Questions

Research Question 1. What proportion of overall emotion utterances and function of emotion utterances do preschool teachers use in the classroom?

> **Hypothesis 1.** It is hypothesized that teachers will display the following types of emotion talk (from largest to smallest percentages): comment, guide, question, explain, label, socialization, and clarify. This hypothesis is based on the pattern of functions of emotion utterances used by teachers reported in findings from Yelinek and Grady (2019).

Research Question 2a. Are higher levels of stress related to less use of emotion talk in teachers?

Research Question 2b. Are stronger beliefs about the importance of guiding emotional development related to more use of emotion talk?

Research Question 2c. Are more adaptive ER skills related to more use of emotion talk?

Hypotheses 2a-2c.

> **Hypothesis 2a.** It is hypothesized that higher teacher stress will be related to less frequent use of emotion talk. This hypothesis is based on findings from Buettner et al.

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(2016) showing that teacher psychological load (i.e., stress, depression, emotional exhaustion) was associated with teachers' negative reactions to children. This hypothesis is further justified by research indicating that teachers experiencing more stress in the classroom exhibit more non-supportive reactions and tend to be less encouraging of children's emotions (Jeon et al., 2016; Zinsser et al., 2013).

Hypothesis 2b. It is hypothesized that greater endorsement of emotion socialization practices and beliefs will be related to greater proportion of emotion talk. This hypothesis is supported by research indicating that caregivers who value emotions as positive are more likely to allow children to experience emotions and furthermore, to coach them through emotion-related experiences (Denham & Kochanoff, 2002; Dunsmore & Karn, 2001; Gottman et al., 1997). Additional support for this hypothesis is drawn from Ornaghi and colleagues' (2021) findings that teachers who endorsed beliefs regarding the importance of discussing emotions and beliefs that adults act as important emotion socializers for children, scored higher on a measure of emotion coaching style and lower on an emotion dismissing style scale.

Hypothesis 2c. It is hypothesized that stronger ER skills in teachers will be related to greater proportion of emotion talk. This hypothesis is supported by a number of studies which have found that more adaptive emotion regulation skills of parents were related to more supportive responses to emotions of children. These studies also show that parents who struggle to effectively regulate their emotions tended to use more suppression strategies and react harsher to child emotion (Cabecinha-Alati et al., 2020; Havighurst & Kehoe, 2017; Jones et al., 2014; Morelen et al., 2016).

Research Question 3. Is there is a relationship between portion of students at risk for disabilities in a classroom and teacher use of emotion talk?

> **Hypothesis 3.** This is an exploratory research question; therefore, no directional hypothesis is stated. The current literature on this topic provides mixed findings regarding whether disability status and/or behavioral concerns of children may be related to emotion socialization practices, such as emotion talk, of parents and teachers. Specifically, Baker and Crnic (2009) found that parents of children with developmental delays reported that they focused less on emotions and emotion talk compared to parents of typically developing children. However, Newland and Crnic (2011) found that developmental risk in early childhood was not associated with overall emotion socialization process. Similarly, Légaré et al. (2019) did not find significant variation in emotion socialization practices of mothers of children with ID and parents of typically developing children.

Secondary Research Questions

Research Question 4a. Do teachers that perceive higher levels of support from administration and support staff for challenging student behavior exhibit more emotion talk compared to those that perceive lower levels of support from administration and support staff?

Research Question 4b. Are more emotion-related professional development opportunities related to more use of emotion talk in teachers?

Hypotheses 4a-4b.

> **Hypothesis 4a.** It is hypothesized that teachers who perceive higher levels of support for challenging behavior will exhibit more emotion talk. This hypothesis is supported by research showing that teachers report that feeling supported and receiving feedback is an

important factor in teacher confidence (Knobloach & Whittington, 2002). Furthermore, Ruhland and colleagues (2002) found that perceived support from other professionals played a key role in staying in the teaching profession and mitigating burnout. Although there is limited research in this area, the research that does exist suggests that teachers who perceive that they receive low levels of support from administrators and colleagues may find it more challenging to engage in emotion socialization practices in the classroom.

Hypothesis 4b. It is hypothesized that teachers who have attended more emotion-related professional development sessions will exhibit more emotion talk in the classroom. Hamre et al. (2012) found that teachers who completing a PD training focused on improving the quality of teacher-child interactions, reported more intentional teaching beliefs, exhibited greater knowledge of the importance of TCI in cultivating quality interactions with their students, and showed more effective emotional interactions with students (Hamre et al., 2012). A gap in the research exists on whether emotion-related PD opportunities for preschool teachers are related to specific practices, such as proportion of emotion talk. However, research on related areas such as TCI suggest that teachers who engage in these PD trainings exhibit higher rates of implementing strategies from the trainings in the classroom.

CHAPTER III. METHOD

Method

Participants and Setting

Upon approval from MSU-IRB, participants were recruited across the state of Michigan between January 2023 and June 2023. A brief recruitment message along with a flyer were sent out via e-mail to preschool teachers directly or sent to school administrators asking them to share the recruitment message with eligible teachers. The recruitment flyer was also posted on the Michigan GSRP Teachers Facebook page. The PI met with each teacher that expressed interest in participating in the study via zoom or phone call. In these meetings, the PI described the study, explained what the teacher would be asked to do, reviewed consent process and forms, and answered any questions. The PI met with 23 teachers and 21 of these teachers completed consent forms. Of the 21 teachers that consented, one teacher expressed that they were no longer able to participate and contact was lost with three additional teachers. Thus, seventeen teachers completed the study. Informed consent was obtained from all participating teachers. Parents received passive informed consent via a printed paper or e-mail (depending on school preference) with the chance to opt their children out from this study. For children whose parents opted-out, teachers did not report any information about the student on the Social Skills Improvement System Social Emotional Learning Edition Screening and Progress Monitoring Scales (SSIS SEL). Furthermore, these children went to a separate part of the school (e.g., library, hallway) or were directed to complete a different activity at their desk (e.g., coloring, activity book) during the book-reading task (see below).

All participants in this study were teachers of preschool aged children (3-5 years) in the state of Michigan. All teachers identified as female and 16 were White/Caucasian (94%), with

one teacher selecting Prefer Not to Answer (6%). The average age of participants was 41 years (SD = 9.17). Four participants had an Associate's Degree (22.2%), eight participants had a Bachelor's Degree (44.4%), and five had a Graduate Degree (Master's, Doctorate, etc.; 27.8%). Years of teaching experience ranged from 1 year to 27 years ($M = 11.35$, $SD = 7.55$). Teachers worked in Great Start Readiness Programs (GSRP; $n = 6$, 33.3%), public schools ($n = 3$, 16.7%), private schools ($n = 3$, 16.7%), Head Start ($n = 3$, 16.7%), and Early Childhood Special Education (ECSE) programs ($n = 2$, 11.1%). Students in the classrooms of the participating teachers included 203 preschool children (88.18% White/Caucasian, 4.43% Black/African American, 3.94% Hispanic/Latinx, 1.97% Middle Eastern/Arabic/Chaldean, <1% Native American or Alaskan Native, <1% Asian, and <1% Native Hawaiian or Pacific Islander; See Table 1).

Table 1. Participant Demographics

Participant Demographics	N (%)
Race/Ethnicity	
White/Caucasian	16 (94%)
Prefer Not to Answer	1 (6%)
Education	
Associate's Degree	4 (22.2%)
Bachelor's Degree	8 (44.4%)
Graduate Degree (Master's, Doctorate, etc.)	5 (27.8%)
Years of Teaching Experience	M = 11.35 (SD = 7.55)
	Min = 1 Max = 27
School Type	
Great Start Readiness Program (GSRP)	6 (33.3%)
Public School	3 (16.7%)
Private School	3 (16.7%)
Head Start	3 (16.7%)
Early Childhood Special Education (ECSE) Program	2 (11.1%)
Student Race/Ethnicity	
White/Caucasian	179 (88.18%)
Black/African American	9 (4.43%)
Hispanic/Latinx	8 (3.94%)

Table 1 (cont'd)

Middle Eastern/Arabic/Chaldean	4 (1.97%)
Native American	1 (1%)
Alaskan Native	1 (1%)
Asian	1 (1%)
Native Hawaiian or Pacific Islander	1 (1%)

Constructs and Measures

Language Environment Analysis (LENA) System

The classroom language environment was measured using the language environment analysis (LENA) system (Xu et al., 2008). The LENA system includes a digital recorder that is about the size of a pager. The device has a simple display with a power and record button, display screen, microphone, and USB port to transfer the audio files (Li et al., 2014). The audio files from the recorders were transferred to a computer that uses pattern recognition software and speech signal processing technology to categorize human speech from other environmental sounds and generate a map of the language environment (Xu et al., 2008). For the current study, audio files were transcribed by a software called Otter.ai (Liang & Fu, 2016).

A systematic review conducted by Wang and colleagues (2017) found 38 studies utilizing the LENA device that met researchers' inclusion criteria. Findings highlighted the importance of exposure and input to language development across various populations and settings. Studies have used the LENA device as a quantitative measure in addition to an intervention tool. The studies reviewed by Wang et al. (2017) confirmed that interactions or conversations *with* children are essential, as opposed to talking *at* children.

While the LENA technology offers rich information in terms of the language environment, it is not without challenges. As the LENA device only captures the audio environment, data in terms of nonverbal components such as body language, facial expressions,

and more are missed (Wang et al., 2017). Furthermore, there is some concern in challenges discerning foreground and background noise. However, the LENA device has been successfully used across a wide array of populations and in various settings. Furthermore, as noted by Dykstra et al. (2012) proportions of meaningful data captured in a preschool setting using the LENA device were similar to that of previous studies in the home environment. Therefore, it seems that using this recording device in a classroom setting does not diminish the amount of meaningful data collected.

The LENA recording device has now been utilized in studies with parents of newborn children (Johnson et al., 2014) to older adults ranging in age from 64-91 years (Li et al., 2014). It has also been used with typically developing children (Greenwood et al., 2011) and children with disabilities (Dykstra et al., 2012; Weil & Middleton, 2010), in preschool classrooms (Dykstra et al., 2012), and to capture duration of electronic media in the home (Ambrose et al., 2014). Furthermore, reliability has been tested in various languages including French (Canault et al., 2015), Spanish (Weisleder & Fernald, 2013), German (Oller, 2010), Chinese (Zhang et al., 2015), and Korean (Pae et al., 2016). Although the majority of studies have focused on parent-child interactions in which the child wears the LENA recording device, Li et al. (2014) conducted a study in which older adults wore the device (as outlined above) and found that the auditory environment can be feasibly measured. Furthermore, Wang et al. (2013) has shown the LENA device can be worn by teachers in the classroom setting in order to provide teachers with automated feedback.

Book Reading Task

Teachers were asked to read a wordless picture book titled *The Family Picnic* while being audio recorded using the LENA device. This picture book shows a mother, father, son, and

daughter going on a picnic. Picture books have been employed in a number of studies investigating emotion talk and are useful in prompting emotion-based language (Ahn, 2005; Denham et al., 1997; Garner et al., 2008). This specific book was selected as it has been used as a way to elicit conversations about emotions in various studies (i.e., Garner et al., 1997; Garner & Estep, 2001; Garner et al., 2008). Teachers were simply instructed to "Discuss each picture in the storybook and take as long as necessary to complete the story." Denham et al. (1997) used this method in a study which investigated maternal use of emotion talk. As also described by authors in this study, instructing teachers to focus on emotions in the picture book may lengthen sessions; however, the goal of the present study was to investigate differences in teachers' emotion related language in a naturalistic observation. Teachers were instructed to read this picture book to students in the morning during circle time or large group reading time, common parts of the preschool day.

It is important to note that this book includes inherent assumptions about universal experiences for children. The pictures in the book display a mother, father, daughter, and son going on a picnic (see Figure A1 in Appendix A). This assumes students will be familiar with the experience of a picnic, which may not be the case for all students. Furthermore, the characters in the book appear to have lighter skin complexion, which is likely not representative of all students and teachers in the classroom. This book has been used in studies with diverse samples; specifically, a study by Garner and colleagues (1997) included a sample of families classified as low-income according to federal and state guidelines with 49% of children coming from single parent families. Families in this study include 32 African-American families, 9 Euro-American families, and 4 Mexican-American families. However, authors did not discuss how the use of this book may have influenced interpretation of their findings. Other books were considered for

use in this study including the picture book *Tuesday* (Wiesner, 1991) that is used in the Autism

Diagnostic Observation Schedule (ADOS; Lord et al., 1999). This book was considered as the

characters in the books are frogs as opposed to people from certain racial backgrounds and thus

would address the concern of the racial background of the characters in the book not being

representative of students and teachers in the classroom. However, this book has only been used

in research in which children and adolescents with autism are asked to tell a story using the

picture book. Furthermore, the majority of studies using the *Tuesday* book have examined

grammatical complexity, narrative characteristics, and internal state language. Therefore, *The

Family Picnic* was selected for this study as this book has been used with adults and has been

shown to elicit emotion talk in previous research (Garner & Estep, 2001; Garner et al., 2008).

However, future research should consider developing picture books with non-human characters

or characters from diverse backgrounds in studies of emotion talk.

Transition Time

To capture a naturalistic observation of teacher emotion talk, teachers were instructed to

leave the LENA recording device on before and after the book reading task to capture "transition

time." That is, teachers were recorded as they transitioned into the book reading task and as they

transitioned from the book reading task to the next activity. This added opportunities for teachers

to naturalistically talk about emotions and provided a small representation of typical interactions

between teachers and students throughout the day.

Emotion Related Talk

The audio recordings from the LENA devices were coded for emotion related talk.

Specifically, using the Parent-Child Affect Communication Task (PACT; Denham et al., 1992),

the PI and a research assistant coded the audio files for functions of utterances. Seven functions

were included, as seen also in Denham et al. (1992; 1997). Functions of emotion related talk include label, comment, explain, clarify, guide, socialization, and question. Operational definitions are the same as those provided by Yelinek and Grady (2019).

   Operational definition of comment. Comment is defined as an instance in which the language used notes an emotion but does not expand on it. Examples of comment include a teacher saying, "I'm happy today" or "He looks frustrated."

   Operational definition of label. Label is defined as an instance in which an emotion is referred to as a word or nickname. An example of label includes a teacher saying, "Yes, my love."

   Operational definition of explanation. Explanation is defined as an instance in which an utterance describes a potential cause or consequence related to the emotion. An example of explanation is a teacher saying, "Sometimes I feel scared when I'm high up like that" or "Maybe she's angry because you took the toy she was playing with."

   Operational definition of clarify. Clarify is defined as an instance in which an utterance corrects or expands on a child's description of an emotion. An example of clarify would include a teacher saying, "I'm not angry, I'm disappointed."

   Operational definition of guide. Guide is defined as an instance in which an utterance directs child behavior in some way related to emotion. An example of guide would include a teacher stating, "Show me your mad faces" or "Let's sit down and take a deep breath."

   Operational definition of socialization. Socialization is defined as an instance in which an utterance describes an emotion as good or bad or indicates approval or disapproval of an emotion. An example of socialization would include a teacher saying, "It's okay to be excited about snack time" or "It doesn't matter how mad you are, you can't hit."

Operational definition of question. Question is defined as an instance in which the emotion related phrase takes the form of a question. An example of question would include a teacher asking, "Do you know what it means to be nervous?" or "What could we do to make them feel better?"

For this study, overall use of emotion talk was calculated by taking emotion-related utterances divided by all teacher utterances. This accounts for overall verbosity (i.e., some teachers may just talk more). This proportion of emotion-related utterances acts as the dependent variable of teacher emotion talk in the study. Functions of emotion utterances were also calculated to provide a descriptive account of teacher emotion talk (i.e., Research Question 1) by taking number of utterances for each function divided by overall emotion-related utterances.

Reliability and validity of coding system. Reliability and validity have been demonstrated for this coding system in the study conducted by Yelinek and Grady (2019) in which Cohen's K on double-coded transcripts was .99, .92, and .95 for utterance affect type, utterance function, and child behavior. Furthermore, in a study conducted by Denham et al. (1992), percent agreement for occurrence of emotion words ranged from .86 to .91, with kappas from .72 to .81. Percent agreement for function codes ranged from .81 to .87, with kappas from .65 to .74. Validity of this measure has been reported by Denham and colleagues (1994) showing that emotion words were positively related to children's performance on emotion understanding tasks. While the kappa coefficients are only in the moderate to good range, the inclusion of this coding system outweighs measurement limitations as this tool has been used in a number of studies and is one of the only coding systems to provide clear, operational definitions of functions of emotion talk.

Development and use of coding system. It is important to note that this coding scheme has been largely used in the research in schools serving white, middle- to upper-middle class families. Specifically, many of Denham's early studies using this coding system were conducted in a laboratory preschool in the suburbs of a large metropolitan area (Denham, Cook, & Zoller, 1992; Denham, Renwick-DeBardi, & Hewes, 1994; Denham, Zoller, & Couchoud, 1994). However, a handful of studies have utilized this coding scheme with a slightly more diverse sample. A study by Morris and colleagues (2013) included children and teachers in Head Start classrooms and private childcare centers with 326 children (42% African American or other; the authors did not provide specifics on other races/ethnicities) and 41 lead teachers (54% Caucasian, 39% African American, and 7% Asian or American Indian/Alaska native). Yelinek and Grady's (2019) study included nine teachers that identified as Caucasian, 1 as African American, 2 as Hispanic or Latino, and 1 as other from both private non-profit and state-supported Head Start schools. It is clear this coding system has considerable limitations due to the fact that it was developed largely with families from white, middle- to upper-middle class backgrounds. Furthermore, the coding system does not address cultural differences or the inherent "whiteness" in which SEL and emotion talk is rooted. However, this is one of the only coding systems that has been developed to measure emotion talk and, in more recent years, has been used in a handful of studies with more diverse samples.

Teacher Stress Inventory-Revised

The Teacher Stress Inventory-Revised (Fimian, 1984) asked teachers to identify factors that cause stress in their present position (See Appendix B). Teachers responded to statements on a scale ranging from 1 ('no strength; not noticeable') to 5 ('major strength; extremely noticeable'). Statements are broken into subscales covering time management, work-related

stressors, professional distress, discipline and motivation, professional investment, emotional manifestations, fatigue manifestations, cardiovascular manifestations, gastronomical manifestations, and behavioral manifestations.

The last four subscales (i.e., fatigue, cardiovascular, gastronomical, and behavioral manifestations) were not used in the present study as it was hypothesized that teachers may feel uncomfortable answering personal questions such as "I respond to stress by using alcohol" or "I respond to stress by calling in sick." For each subscale, items were added together and divided by the number of items. Then all calculated scores were divided by the number of subscales to calculate a total score. Higher scores indicated higher levels of stress.

This measure shows high internal consistency reliability with all but one of the subscale alpha reliability estimates exceeding 0.70 and a whole scale alpha of 0.93 (Fimian & Fastenau, 1990). Although four subscales were omitted for the purposes of this study, the remaining subscales all have alpha reliability estimates exceeding 0.75. Scale and subscale intercorrelations showed low to moderate positive correlations between scores (r = 0.20 to 0.62; Fimian & Fastenau, 1990). Construct validity in terms of whether this measure can discriminate between "High," "Medium," and "Low" groups of respondents was supported (p's <.001; Schutz and Long, 1988).

Teacher Emotion Beliefs

The Crèche Educator Emotional Style Questionnaire (Ciucci et al., 2015) was developed to measure meta-emotion philosophy in early childhood educators. Meta-emotion philosophy is conceptualized as the emotional connection between children and teachers that reflects the teachers' own awareness, acceptance, and regulation of the student's emotions (Ciucci et al., 2015). The measure consists of items aimed at measuring coaching and dismissing emotional

styles, self-efficacy of emotion socialization, as well as teachers' perception of how their behavior influences students' emotional development. The CEESQ is a self-report questionnaire (See Appendix C) in which each item is scored on a 5-point Likert scale (1 = rarely or never to 5 = very often). The CEESQ has two sections. The first section focuses on the educator's capacity to respond to children's emotions and support children in ER. Within this section, there are three subscales: emotion coaching, emotion dismissing, and self-efficacy. Seven items are focused on emotion coaching, including teachers' awareness and acceptance of student emotions. For example, "When a child is angry, I help him/her to express what made him/her so angry." Five items aim to measure teacher emotion dismissing style (example: "I help children get over sadness quickly so they can move on") and six items are focused on self-efficacy acting as an emotion socializer (example: "I can easily distinguish the different emotions a child is feeling"). Reliability coefficients for the coaching, dismissing, and self-efficacy subscales are $\alpha = 0.77$, $\alpha = 0.70$, and $\alpha = 0.78$, respectively (Ciucci et al., 2015). These reliability coefficients are regarded as acceptable (Bland & Altman, 1997). Face validity of this measure was assessed by having three early childhood teachers evaluate whether the items reflected teachers' beliefs and behaviors as it relates to children's emotions and their own emotional processes. Feedback from this group of teachers indicated that five items were vague or ambiguous and thus authors discarded these items (Ciucci et al., 2015). One limitation of this measure is that concurrent and discriminant validity have not yet been tested.

The CEESQ also includes a second section focusing on teacher emotional competence. For the purposes of this study, this section was omitted due to the fact that this section asks about ability to manage emotions which was captured by a separate questionnaire in the current study (see below). Furthermore, reliability coefficients of these subscales are $\alpha = 0.86$ *and* $\alpha = 0.59$

(Arace et al., 2021; Ciucci et al., 2015). Due to the low reliability coefficient (i.e., $\alpha = 0.59$) of the denial of emotion subscale, these four items were also deleted from the CEESQ for the current study. (See Appendix C for adapted measure).

Subscale scores were calculated for the first section of the CEESQ which focuses on educator's capacity to respond to children's emotions and support children in ER. Scores for each of the three subscales (i.e., emotion coaching, emotion dismissing, and self-efficacy) were calculated. Responses on the emotion dismissing items were reverse coded. Higher endorsement (i.e., 5 = very often) on emotion coaching items and self-efficacy and lower scores on emotion dismissing items indicated stronger beliefs and self-efficacy regarding the importance of student emotion socialization.

Teacher Emotion Regulation

The Teacher Emotion-Regulation Scale (TERS; Burić et al., 2017; See Appendix D) includes five emotion-regulation strategies or subscales: avoiding the situation, active modification strategy, reappraisal, suppression, and tension reduction. Creators of this scale attempted to operationalize these strategies by developing items based on the conceptual definitions of the strategies. Each of the subscales show acceptable reliability coefficients (i.e., α = .85 to .89 for each of the five subscales) and acceptable variation of scores (i.e., skewness values ranging from -.11 to -.71 and kurtosis ranging from -0.41 to 1.42) indicating consistency of this measure. Furthermore, the majority of latent correlations between various ER strategies were small-to-moderate in size, thus indicating that they can be treated as distinct strategies of the same underlying construct (i.e., strong internal validity). Criterion validity has been initially supported through studies examining TERS subscales' relation to gender, years of teaching experience, self-efficacy, job satisfaction, and well-being (Burić et al., 2017). Convergent

validity is supported by findings that TERS subscales are related to overall emotional labor strategies (Brotheridge & Lee, 2003). There are certain limitations in using this measure as opposed to a more highly researched measure of ER. Specifically, the psychometric properties of the scale need to be confirmed in different samples of teachers and were initially studied outside of the United States. Furthermore, test-retest reliability has not yet been studied with this scale. However, this scale is nonetheless the most relevant to use for the present study as it was created specifically for use with teachers, as opposed to other measures of ER, such as the Difficulties in Emotion Regulation Scale (DERS), which have been used with parents and not educators in the research thus far.

On the TERS, higher scores on the active modification strategy and reappraisal subscales indicated more adaptive ER skills as these strategies have been shown in the emotional labor literature to be related to deep acting, or the management of internal feelings in order to feel and express the emotions one is required to display. Emotional labor is defined as "effort, planning, and control needed to express organizationally desired emotion during interpersonal transactions" (Morris & Feldman, 1996, p. 987). On the other hand, higher scores on the avoiding the situation, suppression, and tension reduction subscales indicated less adaptive ER skills as these strategies have been shown to be related to surface acting, or the act of modifying the observable aspects of undesirable, typically negative, emotions through suppressing the expression or faking positive affect (Brotheridge et al., 2003; Grandey, 2015).

For the current study, subscale scores were calculated with higher endorsement (i.e., 5 = strongly agree) on active modification strategy, reappraisal, and tension reduction and lower scores on the avoiding the situation and suppression subscales indicating stronger teacher ER

skills. Responses on the avoiding the situation and suppression subscales were reverse coded. Subscale scores were totaled and averaged together to produce an overall ER score for teachers.

Students with or At-Risk for Disabilities

Due to the fact that this this study included a preschool population, it was possible that several children exhibited behavioral and/or emotional difficulties but had not yet gone through a diagnostic evaluation. To address this, teachers were asked to complete the Social Skills Improvement System Social Emotional Learning Edition Screening and Monitoring Scales (SSIS SEL; Gresham & Elliot, 2017). This measure is designed to quickly assess student social emotional learning and academic skills in several domains. It is a criterion-referenced tool that screens the whole classroom and can be completed in about 15-20 minutes. This measure of SEL skills was used as an indicator of behavioral and/or emotional concerns in the classroom.

The rating scale utilizes the CASEL Social Emotional Competency framework and measures self-management, social awareness, relationship skills, and responsible decision making and also measures motivation to learn, reading skills, and mathematics skills. The measure provides scores, ranging from 1 to 5, for each of the domains. In addition, this measure produces a Social Emotional (SE) Composite score (ranging from 5 to 25) and an Academic Functioning (AF) Composite (ranging from 3 to 15). In this study, teachers completed this screener to rate each of the students in their classroom. The score used from this measure was total number of students rated as "at-risk" in the classroom. Students were identified as at-risk for disabilities if either their SE Composite or AF Composite were in the at-risk range as indicated by scores of 10 or less on the SE Composite and scores of 6 or less on the AF Composite.

Elliott and colleagues (2018) demonstrated validity and reliability evidence for this measure. Findings suggest acceptable internal consistency estimates for the eight domains (α = .93), and acceptable consistency for the SE Composite (α = .91) and the AF Composite (α = .93). When comparing the SSIS SEL Screening and Monitoring Scales with the Performance Screening Guide (PSG) Prosocial subscale, the SSIS SEL correctly identified 60.5% of students as true positives and 92.4% of students as true negatives for social risk. Byrd (2019) found that test-retest reliability of this measure ranged from .56 to .68 with the SE Composite showing a reliability coefficient of .68 and the AF Composite showing a reliability coefficient of .58.

Perceived Support for Managing Challenging Behavior

Perceived support for managing challenging behavior was measured using a questionnaire with items adapted from the Family and child experiences survey (FACES) Head Start Teacher Interview conducted in Fall 2009, Spring 2010, and Spring 2011 (FACES Research Team, 2013). Questions relevant to teacher perception of support were adapted from this survey for the present study (See Appendix E). Specifically, teachers were asked how well they feel their program/school supports teachers when experiencing challenges in managing student behavior. The following point system was used: 1 = not at all, 2 = not well, 3 = well, 4 = very well. Teachers were also asked from whom this advice or support is available. High scores indicated receiving more support from a wider variety of individuals in the school (e.g., other teachers, center/program director, school principal, mental health professional, other). Due to the fact that this measure was adapted from the FACES survey, which does not report reliability on the items, reliability of the measure cannot be reported from previous literature. This was an inherent limitation of using the current measure; however, considering the dearth of research

explicitly examining perceptions of support for challenging student behavior, adapting questions from the FACES survey was reasonable in order to address the aims of the current study.

Scores of perceived support were calculated by adding together responses from the item asking teachers how well their program/school supports teachers when they experience challenges in managing student behavior (1 = not at all, 2 = not well, 3 = well, 4 = very well). Scores of support sources were calculated by adding together the number of individuals that teachers indicate support or advice is available from. For example, if a teacher responded with a 3 (i.e., well) on the first item and checked that advice or support is available from the center/program director, school psychologist, and behavioral consultant (i.e., three sources), then this teacher would have a perceived support score of 3 and a support sources score of 3. These two items were summed together to provide an overall support score.

Professional Development

Teachers were asked to complete a questionnaire regarding the professional development (PD) sessions they have attended in the past 24 months. Questions were adapted from the Teaching and Learning International Survey (TALIS): Teacher Questionnaire (Jenson, 2010). In this questionnaire, professional development was defined as "activities that develop an individual's skills, knowledge, and expertise and other characteristics as a teacher" (p. 5). Teachers were asked to note what kind of professional development opportunities they attended (see Appendix F for list of options) and for how many hours. Finally, teachers were asked to categorize their various PD sessions as *primarily emotion focused* = social emotional learning/emotion is primary focus of session, *moderately emotion focused* = social emotional learning/emotion is mentioned in description or objectives but is not the primary goal or focus of the session, or *not emotion focused* = social emotional learning/emotion is not mentioned in the

description or objectives. It was initially proposed that for the PD sessions that teachers provide a description for, the PI planned to categorize the sessions using the three categories (i.e., *primarily, moderately, or not emotion focused*). Specifically, professional development opportunities that were primarily emotion focused would receive three points, moderately emotion focused would receive two points, and not emotion focused or unknown would receive one point. Higher scores on this measure indicated more emotion focused professional development opportunities. In the case that teachers had limited access to descriptions of the professional development trainings they have attended, it was proposed that a frequency count of sessions with emotion-related topics in the PD title would be used in place of the previously explained scoring process. After a review of the collected data from this questionnaire, it was apparent that teachers did not have access to descriptions of the professional development trainings they had attended. Therefore, the second proposed scoring system, in which two points were given for a PD with emotion-related topics in the title and one point was given for all other PD trainings, was used. Again, this measure was adapted for the purposes of the current study which inherently has its limitations. It is important to note that the education field is beginning to view coaching practices as a particularly effective form of professional development (Boyle et al., 2021; Lofthouse, 2019). On the questionnaire for this study, teachers had the opportunity to indicate whether they had been involved in coaching as a form of professional development. While research points to the fact that coaching practices are likely more useful than traditional forms of professional development (Desimone & Pak, 2016; Garet et al., 2001), the proposed study measured both forms of PD as it was expected that few teachers have had the opportunity to complete emotion-specific coaching sessions.

Demographic Questionnaire

A demographic questionnaire was developed for the study to obtain information regarding teacher and child characteristics. Specifically, questions regarding years of teaching experience, age, race/ethnicity, and more were posed (See Appendix G). Teachers were also asked to report the race/ethnicity for each student in their classroom.

Study Design

This study used naturalistic observation and a correlational research design. Classroom recordings were obtained using the LENA device and teachers completed the aforementioned questionnaires. The PI then assessed the statistical relationship between the variables in this study. Descriptive statistics were provided to illustrate proportion and type of emotion talk used by teachers and correlations were used to analyze the relationship between various teacher and child factors and emotion talk.

Procedure

Recruitment. Participants were recruited through contacting teachers and administrators working at school districts and early education centers in the greater central and southern regions of Michigan. Potential participants were contacted via e-mail with a recruitment message and electronic flyer briefly describing the study. The flyer was also posted on the Michigan Great Start Readiness Program (GSRP) teachers Facebook page (members only page). Preschool teachers that were interested in participating in the study were instructed to fill out a Google Form and/or e-mail the PI to set up a zoom meeting or phone call to discuss the study and answer any questions. If teachers continued to express interest after learning more about the study, the PI then explained the consent forms, including discussing study duration, confidentiality, procedures, and incentives, as well as any potential risks that may occur as a result of

participating in the study. Teachers were sent the consent form after this meeting and were given time to review it on their own and reach out with any follow-up questions before signing the form. After participating teachers completed informed consent, they were sent the parent opt-out consent form. Teachers were instructed to distribute this form to parents in the classroom along with a brief message from the PI about the study. Teachers sent this consent form home, either via physical form or electronically, and parents had at least five school days to sign and return the form (i.e., opt-out) if they did not want their child to participate in this study. After this step was completed, the PI scheduled a day for the teacher to complete the book-reading task. On the teacher's scheduled day to complete the task, the PI met the teacher at the school to drop off the book, the recording device, and one of the questionnaires (the SSIS-SEL was provided in physical form). Teachers completed the book-reading task while the audio recording device captured the language environment. Then, the PI met the teacher to get the materials back that same day. Audio files were uploaded and stored on a computer on a secure drive. The following day participants were sent the demographic questionnaire, Teacher Stress Inventory-Revised, the CEESQ, the TERS, the perceived support questionnaire, and the professional development questionnaire via Qualtrics.

As an incentive, teachers were provided with a $15 Amazon gift card to buy school supplies for their classroom. The incentive was delivered to teachers electronically via email within one week of completing the study.

Emotion Talk Coding

Audio files were entered into a software called Otter.ai (Liang & Fu, 2016) which produces a speech to text transcription using artificial intelligence and computer learning. Either the PI or an undergraduate RA reviewed transcripts while listening to the audio recordings to

check for any errors in transcription. The PI and the same RA (hereafter referred to as the research team) coded teacher emotion-related talk. The RA completed a training on the coding system. This training included an overview of emotion talk, the coding categories/labels, as well as operational definitions and examples for each of the codes. There was also a live practice component of the training in which the RA listened to examples from audio recordings and coded together with the PI. The RA was given a codebook (See Table H1 in Appendix H) and several research articles that used the same or similar coding systems to review. After completion of the training, the RA was assigned practice recordings and transcripts. It was required that the RA achieve 80% inter-rater reliability with the PI across three consecutive practice recordings. Frequency, or event, recording was used. Namely, coders listened to the audio recordings while looking at the transcripts and recorded each instance of emotion talk. To examine interrater reliability, 15 of the 17 transcripts (82%) were double coded for reliability. Cohen's K on the double-coded transcripts was .88, .75, .82, .90, .96, .81, and .93 for the codes of comment, label, explanation, clarify, guide, socialization, and question, respectively. These levels are all generally accepted as substantial (0.61 – 0.80) to almost perfect (0.81 – 1.00) agreement (McHugh, 2012). All discrepancies in codes were addressed through weekly meetings with the PI and the RA and consensus coding was completed.

Data Analysis

All analyses were conducted using SPSS 27 statistical software. An analysis of standard residuals was carried out, which showed that the data contained no outliers (Std. Residual Min = -1.69, Std. Residual Max = 1.59). Tests to see if the data met the assumption of collinearity indicated that multicollinearity was not a concern (Emotional Style, Tolerance = .76, VIF = 1.31; Stress, Tolerance = .95, VIF = 1.05; Emotion Regulation, Tolerance = .72, VIF = 1.39; Perceived

Support, Tolerance = .56, VIF = 1.80; Professional Development, Tolerance = .60, VIF = 1.66; SSIS-SEL, Tolerance = .74, VIF = 1.34). The data also met the assumption of independent errors (Durbin-Watson value = 2.45). The histogram of standardized residuals indicated that the data contained approximately normally distributed errors, as did the normal P-P plot of standardized residuals. The dataset was also examined to ensure no violations of linearity, homoscedasticity of residuals, or singularity. The criterion of the Mahalanobis distance was $p < .001$. All participants completed all measures and thus there was no missing data.

Planned Data Analysis

Initially, planned analysis for this study included hierarchical multiple regression. However, after several months of recruitment efforts including emails, telephone calls, word of mouth, physical flyers, online recruitment, and more, the dissertation committee approved ending recruitment efforts with the sample size of 17 participating teachers. This did not meet the target sample size of 50 teachers and thus planned analyses were changed accordingly. Below I describe planned analyses from the study proposal and in the results section, I describe subsequent changes agreed upon by the dissertation committee for each research question.

To answer research questions 2 and 3, the original planned analyses included conducting a hierarchical multiple regression. As part of data analysis planning, a power analysis for hierarchical multiple regression was completed using G*Power software. Effect sizes of .15 and .35 (moderate and large, respectively) were entered. Due to the fact that the current study expands on literature that was descriptive (e.g., Yelinek & Grady, 2019) and qualitative (e.g., Ahn, 2005) in nature, estimating effect sizes using previous literature was difficult. Therefore, research on similar populations of interest (i.e., teachers and preschool children) more generally focusing on emotion socialization was used a reference point. Specifically, Morris et al. (2013)

explored the relationships among teachers' emotion socializations beliefs and practices and preschoolers' emotional competence. Havighurst et al. (2010) evaluated a prevention/early intervention parenting program focused on improving emotion socialization practices in parents of preschool children. This research evidenced moderate to large effect sizes (e.g., Havighurst et al., 2010; Morris et al., 2013). Using a significance level of 0.05 and power of .80 the necessary total sample size for hierarchical multiple regression ranges from 77 (with a moderate effect size) to 36 (with a large effect size). The targeted sample size for this study was 50 teachers with anticipated power of .89 and .67 at large and moderate effect sizes, respectively. While a larger sample size was preferred, given the barriers of conducting research in a school setting (e.g., consent from parents and teachers, entry into school building, teacher motivation to engage in research, teacher burnout, time constraints), the targeted sample size took into consideration feasibility of applied research. As previously mentioned, this target sample size was not reached, and recruitment concluded with 17 participants thus influencing the ability to conduct the planned analyses.

To examine the relative contributions to teacher emotion talk, in the initial proposal I planned to use a hierarchical multiple regression analysis. First, however, I planned to examine whether the independent variables (IV) were at least moderately correlated with the dependent variable (DV) of emotion talk in order to potentially increase power by trimming variables with weak or no correlations with the DV. Specifically, I planned to conduct bivariate analyses (Pearson or Spearman depending on the variables) to test the correlation between each of the IVs and the DV. I then planned to eliminate any variables from the regression analyses that were not at least moderately correlated (using a cutoff of $r = .30$) with teacher emotion talk.

After this, I planned to conduct hierarchical multiple regression. I planned to analyze results by examining whether each of the variables significantly contributed to the regression model and what percentage of variation in emotion talk they explained. Then, for each additional variable added to the model, the percentage of variation above and beyond previous variables would have been examined. Specifically, for all regression analyses, covariates (e.g., gender, years of experience) was going to be entered in the first step. In the second step, three indicators of teacher factors (i.e., teacher stress, teacher emotion beliefs, and teacher ER) would have been entered to examine the utility of these factors contributing to variation in teacher emotion talk. In step three, the indicator of students at-risk for disabilities (i.e., SSIS score) would have been entered to examine the additional variance explained by this factor beyond that accounted for by the teacher factors. Results of this analysis would have indicated how much of the variance in teacher emotion talk can be explained by the variables included in this model. The order for entering variables was based on amount and strength of research in these areas.

To determine if my hypotheses are supported, I planned to check the R Square in the Model Summary table in SPSS to examine what percentage of the variance in emotion talk was explained by the variables entered in each block. I also planned to look at the Sig. F Change box to see if the R Square Change was a statistically significant contribution. The ANOVA table would have been examined to see if the model as a whole is significant. Finally, I planned to evaluate each of the IVs by looking at the Coefficients table. This would have indicated which factor was the best predictor of emotion talk and the Standardized Beta value would have indicated the number of standard deviations (SD) that scores in the DV would change if there was a 1 SD unit change in the predictor (IV).

Again, with the sample size of 17 teachers, a hierarchical multiple regression could not be conducted. Thus, I obtained approval from my committee to cease recruitment and run bivariate correlations to examine the research questions. As will be further explained in the discussion section, the smaller sample size and use of bivariate correlations means this study is treated as an exploratory pilot study and results must be interpreted with caution.

CHAPTER IV. RESULTS

Results

Primary Research Questions

Research Question 1. *What proportion of overall emotion utterances and functions of emotion utterances do preschool teachers use in the classroom?*

To answer research question 1, descriptive statistics were calculated. Overall proportion of emotion talk was calculated by taking all teacher emotion-related utterances divided by all teacher utterances. This accounts for overall verbosity (i.e., the fact that some teachers may just talk more). The average length of the recordings was 15 minutes and 40 seconds (Min = 7 minutes; Max = 31 minutes). Overall, teachers ($N = 17$) used emotion talk about 27% of the time they were talking in this book-reading task ($M = .27$, $SD = .09$, Min = .11, Max = .45; See Figures 1, 2, and 3). Functions of emotion utterances were calculated by taking the number of utterances for each function divided by overall emotion-related utterances. On average, teachers used mostly questions (40%) and comments (31%) when discussing emotions, followed by explanation (13%), guide (6%), socialization (5%), label (3%), and clarify (1%). See Table 2 for examples.
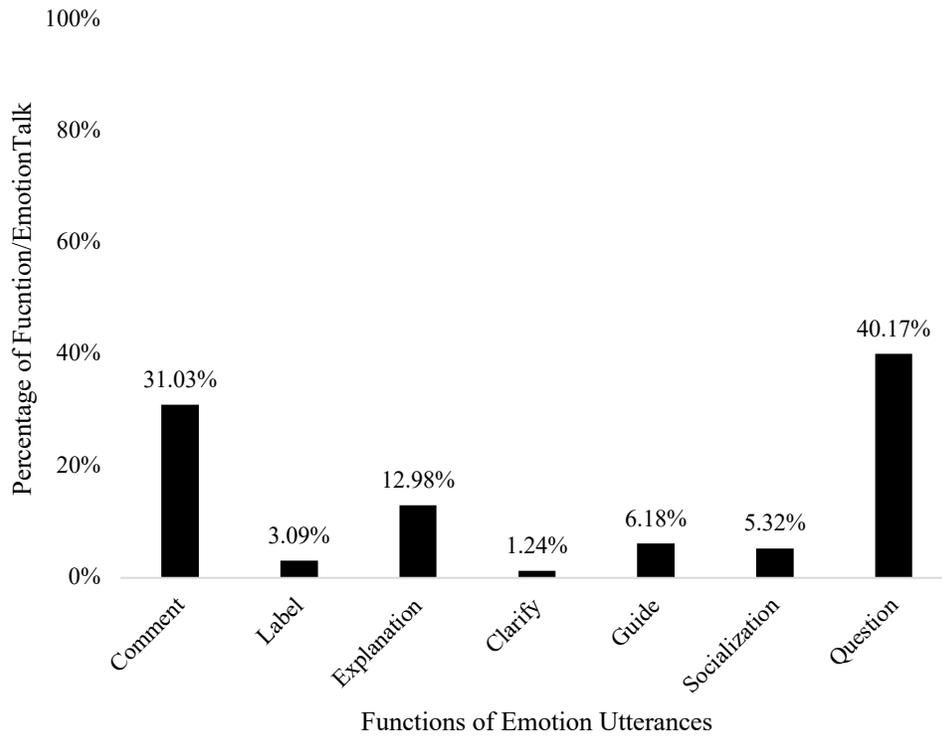
Figure 1. Functions of Emotion Utterances

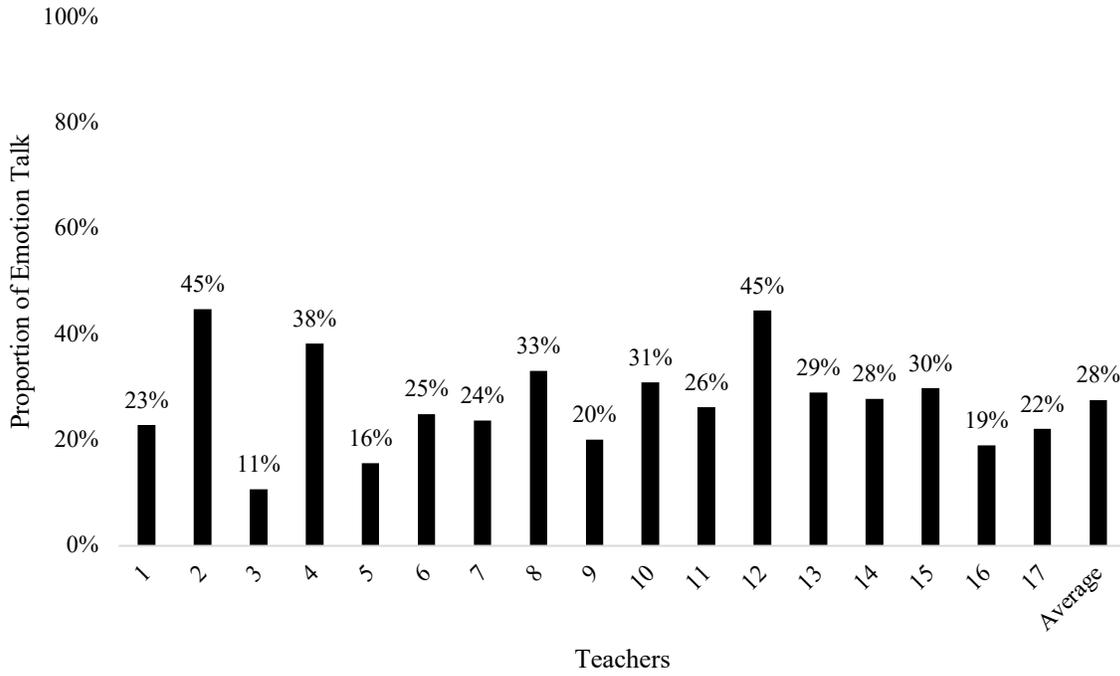***Figure 2. Individual Teacher Emotion Talk***

Figure 3. Individual Teacher Emotion Functions
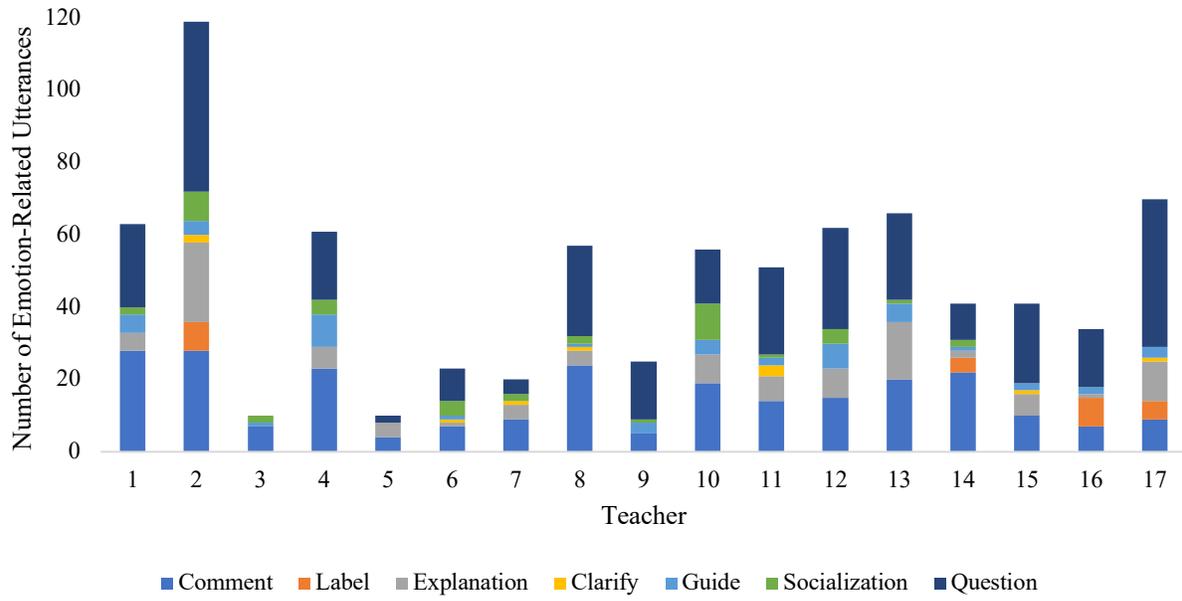
Table 2. Functions of Emotion Utterances and Their Frequencies

Function	Example	Frequency
Question	"Does she look happy?" "What makes you scared?"	325 (40%)
Comment	"The dad is mad." "The kids look surprised."	251 (31%)
Explanation	"Sometimes I get nervous when I have to go to the doctor." "Yeah, he's mad because the kite has a hole in it."	105 (13%)
Guide	"Show me your surprised face."	50 (6%)
Socialization	"It's okay to be excited about getting a snack." "No, we shouldn't smack, even when we're mad."	43 (5%)
Label	"Okay, my love."	25 (3%)
Clarify	"I think they look surprised not mad."	10 (1%)

Teacher age, education level, school type, and years of teaching were not significantly associated with emotion talk ($|rs| < .25$, $ps > .31$; See Figures 4, 5, and 6 for overall patterns). This follows a somewhat similar pattern of emotion talk as seen in the study conducted by Yelinek and Grady (2019). In their study, researchers found the following pattern: Comment (33.5%), Guide (19.9%), Question (18.3%), Explain (12.2%), Label (8.8%), Socialization (6.8%), and Clarify (0.5%). See Figure 7 for comparison. Potential reasons for differences in emotion talk patterns between the two studies will be explored in the discussion section. No changes were made from the planned analysis in the study proposal for research question 1.

Figure 4. Categories of Emotion Talk by Years of Teaching Experience
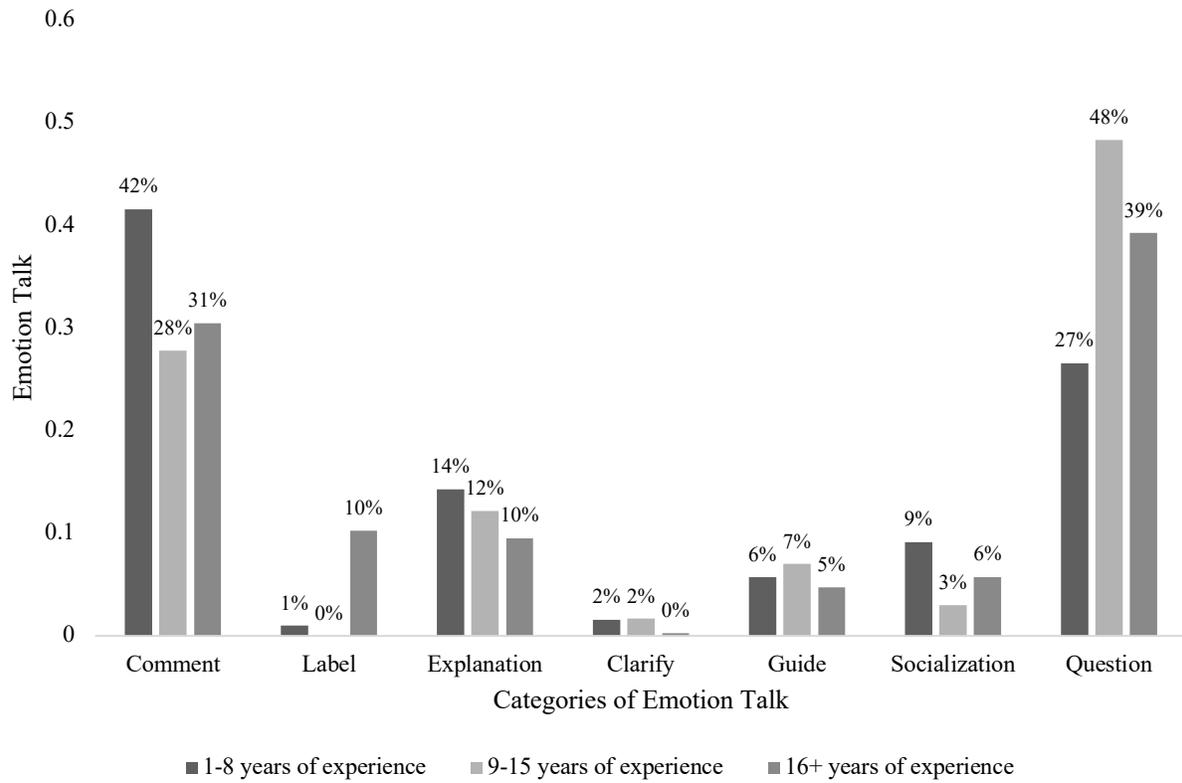
Figure 5. Categories of Emotion Talk by School Type
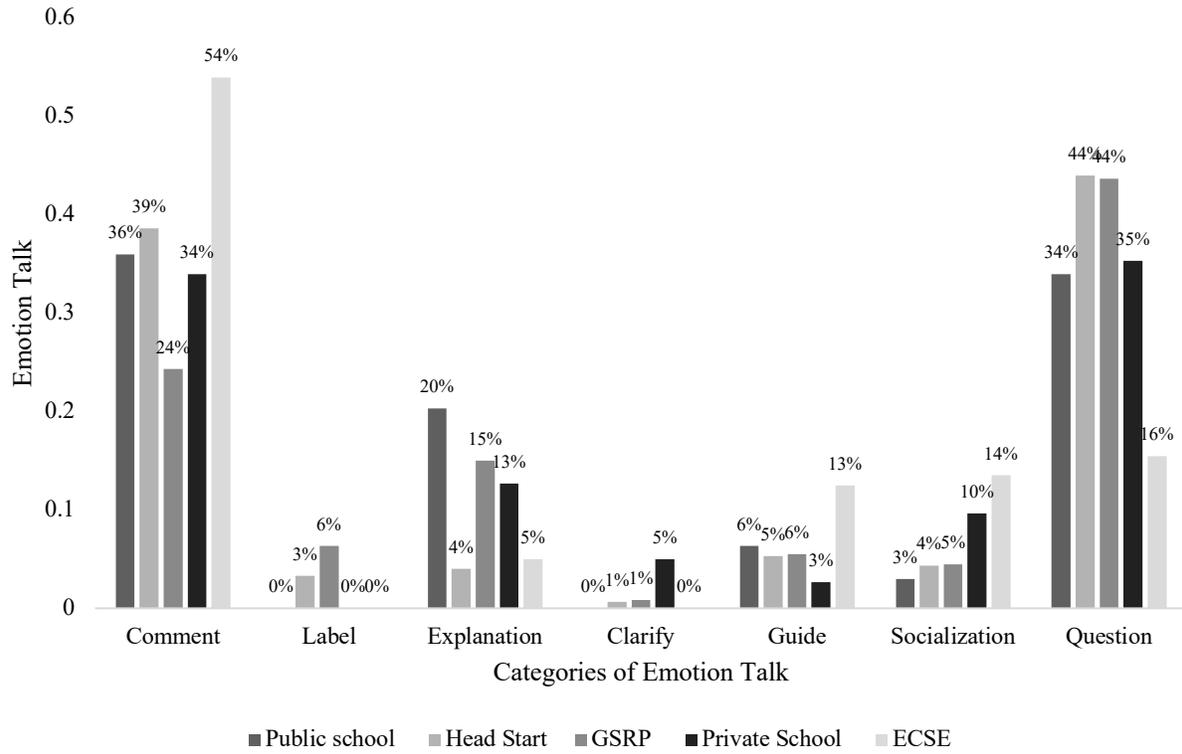
Figure 6. Categories of Emotion Talk by Teacher Education
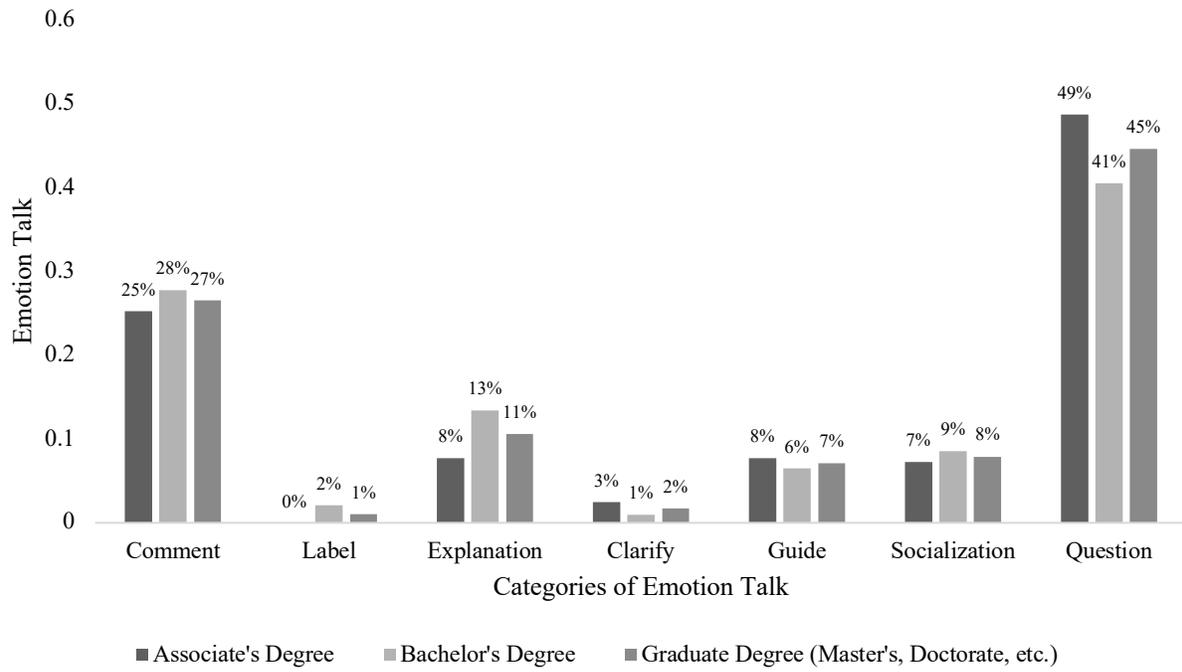
Figure 7. Emotion Talk in Current Study as Compared with Yelinek & Grady (2019)
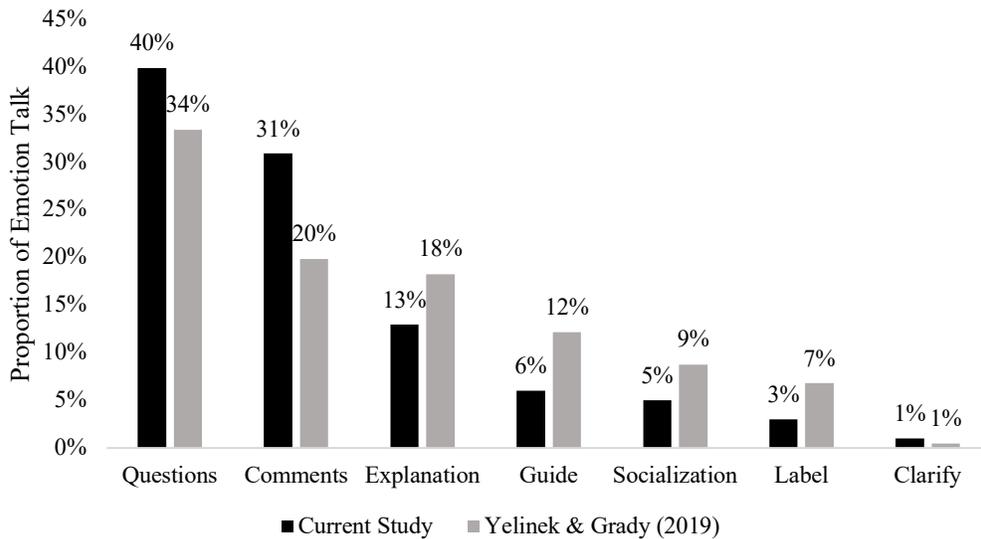
Previous research (e.g., Brownell et al., 2013; Yelinek & Grady, 2019) has used the terms "higher-" and "lower-level" emotion utterances to differentiate between emotion talk that simply labels emotions and emotion talk that elaborates on or explains the emotion. Functions of emotion utterances that label emotions (i.e., comment, label) were grouped together and will be referred to as "labeling" or "lower-level" emotion talk. Functions of emotion utterances elaborating on an emotion (i.e., explanation, clarify, guide, socialization, question) were grouped together and will be referred to as "elaborative" or "higher-level" emotion talk. Teachers varied in their use of these categories, with some teachers using elaborative emotion talk up to 80% of the time they were discussing emotions and others using elaborative emotion talk just 30% ($M =$ 62%; See Figure 8). While no clear patterns or profiles emerged based on teacher use of higher- or lower-level emotion talk, several quotes were pulled from audio-recorded transcripts to provide examples of how different teachers discussed emotions with varying degrees of elaboration in the book-reading task (See Table 3).

Figure 8. Teacher Emotion Talk by Frequency and Quality
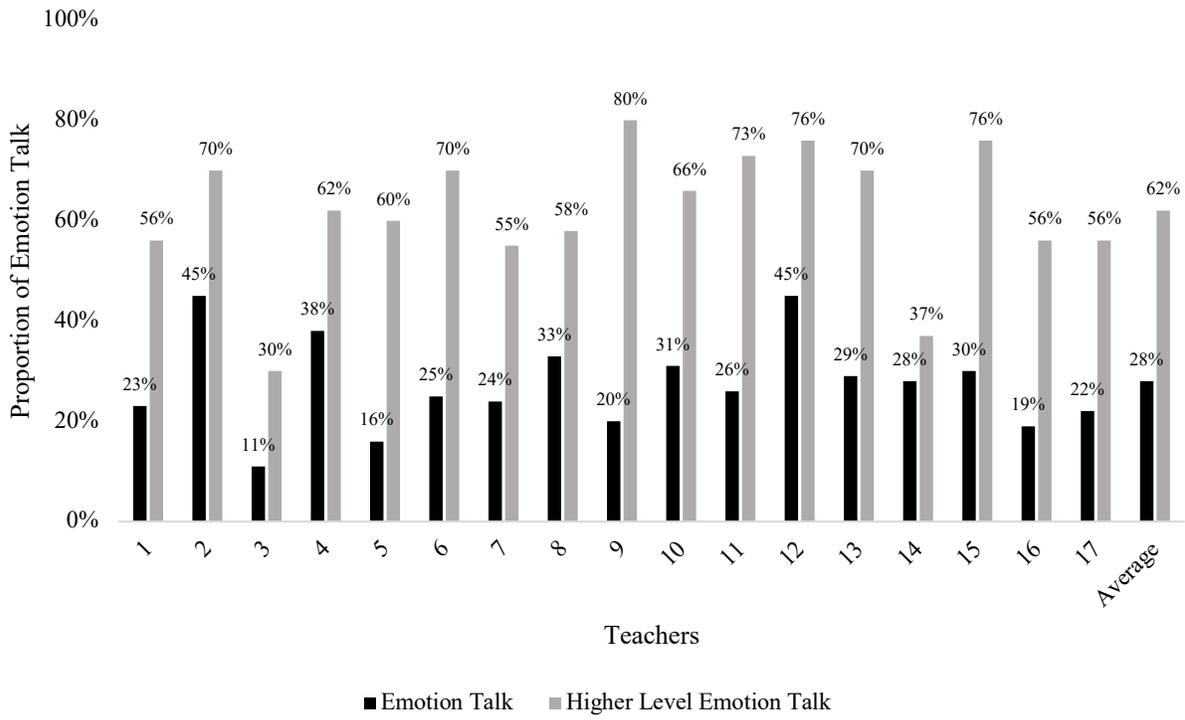
Table 3. Examples of Higher- and Lower-Level Emotion Talk

Examples of lower-level emotion talk:

Comment	"She is angry." "They're so excited and happy!"
Label	"Yes my love"

Examples of higher-level emotion talk:

Explanation	"I think you're right. I think he's mad because she's laughing at him." "Oh, [student's name] says he's wiping his tears away from his face. That tells us he's feeling sad."
Clarify	Teacher: "How does she look?" Student: "Mad." Teacher: "She looks kind of sad and kind of mad. Does she also look kind of worried? Like, 'Oh no, what's gonna happen my ball?'"
Guide	"Show me your surprised face." "When we are upset, we take a deep breath."
Socialization	"It's okay to be excited about getting a snack." "If you're making an angry face, that's okay. But your hands need to stay to your body."
Question	"Do you know what it means to be scared?" "Can you tell they're feeling happy?" "Well, what part about that is making her mad?"

Research Question 2a. *Are higher levels of stress related to less frequent use of emotion talk in teachers?*

Research Question 2b. *Are stronger beliefs about the importance of guiding emotional development related to more use of emotion talk in teachers?*

Research Question 2c. *Are higher levels of ER skills related to more use of emotion talk in teachers?*

Initially, planned analysis for this study included hierarchical multiple regression. However, after several months of recruitment efforts including emails, telephone calls, word of mouth, physical flyers, online recruitment, and more, the study committee approved ending recruitment efforts with the sample size of 17 participating teachers. This did not meet the target sample size of 50 teachers and thus planned analyses were changed accordingly. Below I describe the analyses that were completed with the smaller sample size. All changes were approved by the study committee. Bivariate correlation analysis was used and Pearson correlation coefficients are reported for all tested relationships. Results indicated that the relationship between teacher stress and teacher emotion talk was not significant, $r(15) = -.09$, $p = .72$. Findings showed that the relationship between teacher emotional style and teacher emotion talk was not significant, $r(15) = -.17$, $p = .49$ and finally, the association between teacher emotion regulation and teacher emotion talk was not significant, $r(15) = -.22$, $p = .39$. Unfortunately, as previously mentioned, due to sample size, and because none of the variables were correlated with teacher emotion talk, the planned hierarchical multiple regression could not be conducted.

To further examine potential teacher profiles of emotion talk, teachers were categorized into two groups based on their percentage of emotion talk exhibited in the book-reading task.

Namely, about half of the teachers ($n = 8$) used emotion talk less than or equal to 25% of the time while the other half ($n = 9$) used emotion talk greater than 25% of the time. Although there were no statistically significant differences in teacher characteristics or factors between these two groups, some interesting patterns emerged. Specifically, teachers that used more emotion talk (i.e., > 25% of the time) reported slightly higher ratings, on average, on the perceptions of support questionnaire ($M = 7.89$) as opposed to teachers that used less emotion talk ($\leq$ 25% of the time; $M = 6.37$). Additionally, teachers that used more emotion talk (i.e., > 25% of the time) also reported slightly more emotion-related professional development hours on average ($M = 8.22$) than teachers that used less emotion talk ($\leq$ 25% of the time; $M = 6.25$). However, there were not statistically significant differences between the groups and there was considerable variability in reports of support and professional development within groups.

Research Question 3. *Is there is a relationship between portion of students at risk for disabilities in a classroom and teacher use of emotion talk?*

A Spearman correlation coefficient was performed to evaluate the relationship between the portion of students at-risk for disabilities in the classroom and teacher emotion talk. The results indicated that the relationship between these variables was significant, $r(15), -.62, p = .007$. That is, in this sample, as portion of students at risk for disabilities in the classroom increased, teacher emotion talk decreased.

A separate, exploratory analysis was conducted to look at teachers' use of higher- and lower-level emotion talk and any potential associations with portion of students at risk for disabilities in the classroom. Teachers' use of higher-level emotion talk (explanation, question, socialization, clarify, guide) was significantly negatively related to portion of students in the classroom at-risk for disabilities, $r(15), = -.65, p = .005$. That is, as percentage of children in the

classroom that were rated as at-risk on the SSIS-SEL increases, the use of higher-level emotion talk decreases. Teachers' use of lower-level emotion talk was significantly associated with portion of students in the classroom at-risk for disabilities $r(15)$, = .64, p = .006.

Secondary Research Questions

Research Question 4a. *Do teachers that perceive higher levels of support from administration and support staff for managing challenging behavior exhibit more emotion talk as compared to those that perceive lower levels of support from administration and support staff?*

Research Question 4b. *Are more emotion-related professional development opportunities related to more use of emotion talk in teachers?*

To explore the secondary research questions, bivariate correlations were conducted. A Spearman correlation coefficient was performed to evaluate the relationship between perceived support and teacher emotion talk. The results indicated that the relationship between these variables was not significant, $r(15)$ = .34, p = .18. A Spearman correlation coefficient was performed to evaluate the relationship between professional development and teacher emotion talk. The results indicated that the relationship between these variables was not significant, $r(15)$ = .03, p = .89. See Table 4 for descriptive statistics for all measures. There were no changes between the proposed and actual analyses for Research Question 4.

Table 4. Descriptive Statistics for Study Measures

	Average	Standard Deviation	Minimum	Maximum
Creche Emotional Style Questionnaire	3.76	0.42	3.04	4.62
Teacher Stress Inventory-Revised	2.44	0.30	1.87	2.93
Teacher Emotion Regulation Scale	3.65	0.43	3	4.48
Perceived Support for Managing Challenging Behavior	7.18	2.29	3	12
Professional Development	7.29	10.14	0	41
SSIS SEL (Students with or At-Risk for Disabilities)	1.94	1.29	0	4

CHAPTER V. DISCUSSION

Discussion

Significance of Project

The current study explored preschool teacher emotion talk in the classroom setting. Specifically, a descriptive account of the proportion and type of teacher emotion talk used in the classroom was provided and factors contributing to variation in teacher emotion talk were explored. The findings of this exploratory study contribute to several insights in the field. The study adds to the dearth of literature on teacher emotion talk. While many studies have explored how often and the manner in which parents discuss emotions with their children, fewer studies have explored this in teachers. This study adds to the work done by Yelinek and Grady (2019) and expands on findings in terms of patterns or profiles of teacher emotion talk. Additionally, findings from the current study suggest that characteristics of children in the classroom may be related to variability in teacher emotion talk. This has important implications for future research and practice, specifically in terms of interventions aimed at developing teacher emotion socialization practices.

Interpretation of Results

Prior to interpretation of the results, it is essential to reiterate that any findings from this study must be considered within the context of the larger state of emotion socialization literature and practice. Specifically, it is important to consider the fact that emotion socialization practices vary based on cultural background, traditions, and norms and that the academic definition of emotion socialization is grounded in a white, Eurocentric view of emotions and what constitutes adaptive or maladaptive emotional responses (El Mallah, 2020; Simmons, 2019). Even the language we use to place judgment on forms of emotion talk (i.e., higher- and lower-level

emotion talk) has inherent flaws and likely reduces language down to a level in which important nuances in the intersection between language and culture are missed. This limitation will be discussed in more detail in a separate section, but it is important to frame the entire interpretation of results from the current study within the context of bias.

Variability in Use of Emotion Talk

Overall, teachers completing this book reading task talked about emotions in a variety of ways. For example, many teachers used a comment or question related to the book characters in some way. For example, when the character's kite got stuck in the tree one teacher said, "Oh no! Does she look sad that the kite got stuck in the tree?". Additionally, many teachers asked questions about or commented on the characters' emotions in the book (e.g., "Based on their faces, do you think they're feeling happy?" "They're excited to be out of the car and they're smiling" "He's looking very frustrated"). However, some teachers also expanded upon the story to direct questions toward the students in their classroom. For instance, several teachers asked their students how certain situations in the book would make them feel (e.g., "Would you be happy if you got to go on a picnic?" "Would you be sad if your kite got stuck in the tree?"). Finally, some teachers used the story to teach about emotions in some way. One teacher that was discussing the emotions of the characters in the book posed the question "Did you know you can feel mad and sad at the same time?" to her class. While the vast majority of emotion utterances were related to the story in some way, some teachers also used emotion talk in interactions with students outside of the storybook. For example, when students were fighting one teacher stated, "I see you're feeling mad, but we have to keep our hands to ourselves." A future research step is to analyze the data using qualitative methods. That is, it would be interesting to explore how

teachers in the current study discussed emotions potentially by using content or thematic analysis methods to explore patterns as well as nuances in teacher use of emotion language.

Similar to findings from observational studies of parents, I found that teachers varied in terms of how often they discussed emotions. For example, Dunn and colleagues (1991) observed mother-child dyads in the home setting and found that families varied widely in their use of emotion talk (i.e., from 2 to 25 conversations concerning feeling states per hour). Similarly, findings from teacher-focused studies have shown variability. Yelinek and Grady (2019) found that teacher use of emotion talk ranged from 14 utterances (fewer than 1 per hour) to 165 utterances (11 per hour). Both of these studies relied solely on observation and recorded (either live recordings or audiotaped recordings) interactions and any emotion talk between mother-child or teacher-child dyads. Findings from the current study built on these observational methods and utilized a book reading task. This specific book was selected as it has been used as a way to elicit conversations about emotions in various studies (i.e., Garner et al., 1997; Garner & Estep, 2001; Garner et al., 2008). The current findings showed similar variability and appeared to successfully elicit more emotion talk than studies using naturalistic observation. Specifically, teacher emotion talk per observation ranged from 10 utterances (in a 9 minute recording) to 119 utterances (in a 28 minute recording). In fact, breaking emotion talk down by utterances per minute showed that teachers in this study used an average of 2 emotion related utterances per minute (*SD* = 1.03). Using a book reading task, as opposed to naturalistic observation, we found that teachers used more questions and less guides in their emotion talk as compared to findings from Yelinek and Grady (2019). It is possible that the book reading task is set up in a way in which teachers are more likely to ask children questions about the emotional aspects of the story but less likely to direct children's behavior in some way related to emotion. On the other hand, a

study using solely naturalistic observation of classroom interactions (i.e., without a book reading task) may capture more examples of teachers guiding behavior in interactions. A future study might consider using both a book reading task and observation during regular classroom routines to investigate this further. This nuanced difference in pattern of emotion talk may have important implications for future research in that the design of the study likely has implications in terms of the type of emotion talk that is captured and elicited.

Variability in Use of Higher- and Lower-Level Emotion Talk

The current study also explored the use of higher- and lower-level emotion talk in teachers, with higher-level emotion talk defined as utterances that elaborate on or explain the emotion and lower-level emotion talk defined as utterances that merely label or identify the emotion. Considerable variability was observed in the use of emotion talk as coded this way, with some teachers using higher-level emotion talk up to 80% of the time they were discussing emotions and others using it just 30% of the time. This descriptive finding has important implications for future research and intervention. Future research should consider how the type or quality of emotion talk might be related to child outcomes in terms of emotion identification, emotion understanding, and even emotion regulation. Research should expand upon the work of Brownell and colleagues (2013) in which results showed that parental emotion talk was related to prosocial behavior in toddlers. Specifically, researchers found that parents who more frequently requested that their child label or explain the emotion (i.e., elicitation), had children that helped and shared more quickly and more frequently in a task of prosocial behavior. Having a more sophisticated and nuanced understanding of the importance of how emotions are discussed will be critical in informing interventions and professional development trainings for teachers. That is, future work might consider how existing social emotional learning interventions could

emphasize the importance of the language used when discussing emotions. For example, interventions might encourage teachers to use statements that include socializations or explanations (e.g., "Oh, I see you're having trouble keeping your hands to yourself. That tells me you're frustrated!" "It's okay to be excited to play with the toy but we have to wait our turn. Let's take a deep breath to calm our bodies!") as opposed to merely commenting or labeling an emotion ("He is sad." "They look excited.").

Relationship Between Emotion Talk and Child Behavior

One novel finding from the current study was that as the portion of students at risk for disabilities in the classroom increased, teacher emotion talk decreased. Similarly, as the portion of students at risk for disabilities increased, teacher use of higher-level emotion talk decreased and teacher use of lower-level emotion talk increased. It is essential to note that these findings are preliminary and should be interpreted with caution due to the small sample size and limited response variability on measures of child characteristics. Nonetheless, these findings contribute to the mixed literature on the relationship between child disability status and adult emotion socialization practices. As previously noted, Baker and Crnic (2009) investigated the degree to which parents of children with developmental delays (DD) focused on emotion overall, as well as in specific interactions with their children. Parents of children with DD reported focusing less on emotions and emotion talk in comparison to parents of typically developing children. However, other research suggests that child disability status is not related to emotion-related practices of parents. Newland and Crnic (2011) found that developmental risk in early childhood was not associated with the overall emotion socialization process, however, higher levels of both maternal and child negativity were observed for children who exhibited developmental risk. The current study supports the pattern that as the portion of students at risk for disabilities in the

classroom increased, teacher emotion talk decreased. If this pattern were to hold true with a larger sample size, it could have important implications for students with disabilities and their teachers. Namely, this preliminary finding prompts the following inquires: Are teachers meeting children where they are at in terms of emotion understanding (i.e., teachers are using fewer emotion utterances because this is within the child's zone of proximal development) or is the use of less frequent and less sophisticated emotion talk with children who are at-risk for disabilities limiting the child's opportunity for emotion socialization and development? Additionally, because the current study was conducted with a preschool-age population, a more general measure of emotion and behavior was utilized. Future research with school-aged populations might consider capturing students with different identified disabilities (potentially by examining school IEPs) and explore how emotion talk patterns vary based on child disability category. For example, for children with a learning disability, are teachers more focused on the language and conceptual elements in the story than the social-emotional aspects? While these explorations were beyond the scope of the current study, findings from this study can be used as a starting point for exploring any potential relationship between certain characteristics of students in the classroom and frequency and quality of teacher emotion talk. This is essential to explore as we know that children with disabilities can struggle with components of emotion identification, understanding, and regulation (Berkovits et al., 2017; Garon et al., 2009; Graziano & Garcia, 2016) but supportive parenting practices such as encouraging or coaching as a response to a child's emotion is related to stronger ER skills in children (Breaux et al., 2018).

Limitations and Future Research

This study serves as a preliminary and exploratory description of preschool teacher emotion talk and factors related to variability. It is imperative to note that this study has several

limitations that should be considered when developing future research in this area. First, the sample size of 17 teachers was limiting in terms of analysis, power, and generalizability. Future research should consider how to widen and strengthen recruitment efforts in order to increase teacher participation. For instance, future studies might consider trying to conduct a study of emotion talk fully online. With improvements in technology and accessibility, teachers could use recording devices on computers, laptops, and/or phones to capture the classroom audio environment. This would allow for recruitment across a wider geographical area, increasing generalizability and diversity of the sample.

An additional limitation regarding demographic characteristics of the sample is related to race and ethnicity of the participating teachers. In the current study, all teachers identified as white women. While federal data shows that the majority (i.e., 79%) of school teachers are non-Hispanic White (Taie & Goldring, 2020), the current sample lacks the kind of diversity in participants that is essential for findings to inform intervention. Along these lines, because of the small and homogenous sample in the current study, considerations of culturally responsive social emotional learning are limited. That is, how might the cultural backgrounds and cultural match, or mismatch, of teachers and students play a role in how emotions are discussed and what constitutes "quality" emotion talk.

Methodological and Measurement Limitations

It is important to note that the book selected for this study, *The Family Picnic*, includes inherent assumptions about universal experiences for children. The pictures in the book display a mother, father, daughter, and son going on a picnic. This included an assumption that students were familiar with the experience of a picnic, which was likely not the case for all students. Furthermore, the characters in the book appear to have lighter skin complexion, which is not

representative of all students in the classrooms in the current study. This book has been used in studies with diverse samples; specifically, a study by Garner and colleagues (1997) included a sample of families classified as low-income according to federal and state guidelines with 49% of children coming from single parent families. Families in this study include 32 African-American families, 9 Euro-American families, and 4 Mexican-American families. However, authors did not discuss how the use of this book may have influenced interpretation of their findings. Other books were considered for use in this study including the picture book *Tuesday* (Wiesner, 1991) that is used in the Autism Diagnostic Observation Schedule (ADOS; Lord et al., 1999). This book was considered as the characters in the books are frogs as opposed to people from certain racial backgrounds and thus would address the concern of the racial background of the characters in the book not being representative of students and teachers in the classroom. However, this book has only been used in research in which children and adolescents with autism are asked to tell a story using the picture book. Furthermore, the majority of studies using the *Tuesday* book have examined grammatical complexity, narrative characteristics, and internal state language. Therefore, *The Family Picnic* was selected for this study as this book has been used with adults and has been shown to elicit emotion talk in previous research (Garner & Estep, 2001; Garner et al., 2008). However, future research should consider developing picture books with non-human characters or characters from diverse backgrounds in studies of emotion talk. Additionally, as previously discussed, the use of a book reading task that includes emotion related themes (e.g., the characters appearing sad when a kite gets stuck in the tree) presents a limitation in terms of generalizing teacher behavior to what we might expect in daily classroom interactions. Specifically, in comparing the current findings to research using naturalistic observation (i.e., Yelinek & Grady, 2019), the book reading task appeared to elicit more emotion

talk over as evidenced by rates of emotion talk utterances per minute illustrated previously. Although this is a limitation in terms of generalizability, it is valuable information in that interventions and coaching strategies might consider how to encourage teachers to intentionally choose books that have emotion related themes as a method of encouraging increased emotion talk in the classroom.

Another limitation of the current study is the fact that many of the responses to the measures examining teacher factors (e.g., teacher stress, emotion regulation, emotional style, etc.) showed limited variability. This limitation is related to the dearth of literature in this area or field of study. As previously discussed, while several studies have examined use of emotion socialization practices more broadly, and especially in parents, no studies have looked at the specific factors related to variability in preschool teachers' use of emotion talk. Thus, identifying measures to examine these constructs required looking in literature that was conducted with similar populations or on similar constructs and adapting as necessary. One potential suggestion for future research is to consider the use of mixed-methods approaches to capture a more comprehensive perspective of teacher experience. Specifically, responses on the teacher stress measure showed limited variability despite previous literature pointing to the occurrence of emotional exhaustion and career burnout in educators (Jennings & Greenberg, 2009). However, it is possible that the questionnaire did not capture the nuances of teacher stress like a qualitative approach might. Future research could consider using an approach similar to that of Blasé (1986) in which a qualitative analysis was employed to examine teacher stress and experience.

Similarly, future research conducted in this area should prioritize data collection of more nuanced information regarding demographic factors of the teachers themselves, as well as their training and education. Specifically, it would be interesting to understand how demographic

factors might help contextualize findings regarding differences in emotion talk used by teachers at different school settings/programs. For example, in the current study, ECSE teachers used slightly less emotion talk than GSRP, Head Start, or public school teachers (though not statistically significant). If this pattern held true with larger sample sizes, it would be interesting to explore whether factors such as teacher perceptions of professional development or knowledge/education of emotion socialization might help explain these differences. Furthermore, future research might consider exploring how the social emotional curriculum, or lack thereof, used by the school or program might be related to teacher use of emotion talk. Specifically, it would be interesting to use the EPIS framework (Aarons et al., 2011) or another implementation science framework to conceptualize and examine how SEL curriculum and the school's phase of implementing that curriculum might contribute or be related to teacher practices in the classroom.

Findings from the current study suggested an emerging pattern in that teachers that used more emotion talk reported slightly higher ratings on the perceptions of support questionnaire and reported slightly more emotion-related professional development hours on average. However, these patterns have to be interpreted with caution due to the fact that these measures were created or adapted for the purposes of the current study and there was considerable variation in professional development hours reported. Nonetheless, it is logical and plausible that teachers who feel supported by their administrators and those that have attended more professional development trainings on emotion-related topics would exhibit more emotion talk in the classroom. Future research should expand on this preliminary finding with a larger sample size and validated measures. If findings hold true, there could be important implications for professional development content and coaching methods. Overall, future research should

prioritize using validated measures and potentially using multiple measures or multiple informants. As previously mentioned, a larger and more diverse sample would also help increase variability in teacher report.

Issues with Traditional Social Emotional Learning

Potentially one of the most overarching limitations of the current study is a cross-cutting limitation of the field of emotion socialization and social emotional learning, which is that social emotional learning is rooted in whiteness. That is, traditional SEL endorses white, Eurocentric views of emotions and what are considered adaptive or appropriate emotional responses (El Mallah, 2020; Simmons, 2019). The theory behind SEL focuses largely on the individual level (e.g., the student's ability to understand emotion and respond to everyday challenges) without taking into consideration the historical, cultural, social, and political systems that have systematically oppressed many of these students (DeMartino et al., 2022). Traditional models of SEL fail to account for the fact that emotional development is influenced by socialization practices that vary based on cultural background and experiences. That is, young children learn to understand and regulate their emotions in manners that are favored and acceptable in their culture (Cole & Tan, 2007; Yang & Wang, 2019). When educators fail to acknowledge this, SEL can even be used as a means to surveil and punish Black, Indigenous, and People of Color (BIPOC) students for not adhering to white expectations (Mayes et al., 2022).

In recent years, efforts have been developing in the area of anti-racist or transformative SEL. Transformative SEL adds a layer of justice-oriented citizenship and encourages students and educators to employ activities that are meant to resist, disrupt, and dismantle inequities (Williams & Jagers, 2020). Transformative SEL is largely conceptual in nature and education researchers are only beginning to examine more formalized anti-racist SEL programs and

practices in schools. Forman, Foster, and Rigby (2022) conducted a qualitative study to examine how three school leaders connected SEL with anti-racist practices. They found that these school leaders framed SEL in relation to race and anti-racism by viewing SEL as a tool to address white teachers' emotions. Specifically, the educators noted SEL can be used as a strategy for white teachers to regulate their own emotions when learning and teaching about race and racism. Additionally, educators shared that they saw SEL as a means for disrupting color-evasiveness, defined as actively ignoring race and assuming the act of discounting race will lead to all being treated equally (Annamma et al., 2017). These school leaders again viewed SEL as a tool for teachers to listen to students and learn about their experiences with race and to subsequently engage in more critical discussion of these experiences (Forman et al., 2022).

Mayes and colleagues (2022) have put forth an Antiracist Social Emotional Justice Learning (ASEJL) approach for educators that emphasizes five foundational principles. Namely, authors suggest the application of Critical Theoretical Frameworks, Anti-Bias Building Blocks, Student and Family Voice, Strengths Based Empowerment, and Homeplace as a means to address the colorblind approach to traditional SEL. More research is needed to empirically examine how educators can apply these antiracist SEL practices, but this article offers foundational recommendations that are essential starting points for both educators and researchers. As noted by Simmons (2019), "Why teach relationship skills if the lessons do not reflect on the interpersonal conflicts that result from racism? Why discuss self- and social awareness without considering power and privilege, even if that means examining controversial topics like white supremacy?" (para. 6).

It is acknowledged that the current study includes research that is rooted in traditional SEL which fails to include the cultural, social, and historical nuances inherent in emotional

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development and emotion socialization. While the current study provides a descriptive and correlational account of teacher emotion talk, it is acknowledged that because much of the research on emotion socialization neglects to consider how socialization practices vary based on cultural background and experiences and furthermore, many of the measures used in this study were developed by white researchers and in some cases, have been used largely with white participants, this is a biased account. Additionally, the discussion of higher- and lower-level emotion talk implies a hierarchical ranking of quality of emotion talk. It is important to understand that "quality" of emotion talk is rooted in a white, Eurocentric appraisal of what is "good" and "bad" in terms of emotion socialization practices. More research is needed to understand how cultural backgrounds and experiences determine emotion practices and how white educators and researchers must consider these nuances.

Coding System

While the use of an established coding system to examine teacher emotion talk was a strength of the current study, there are also several limitations inherent in any coding scheme. This coding system was created for parent-child interactions (although it has been used in research with teachers) and for naturalistic observations, not a specific book-reading task. In using this coding system to categorize teacher language in an audio-recorded book reading task, several limitations or areas of consideration emerged. First, there were several instances in which a different code that did not exist in the coding scheme felt appropriate. For example, there were utterances in which teachers appeared to be modeling their own emotion regulation and talking through that process ("I'm feeling upset so I'm going take a deep breath."). As a research team, we struggled with how to categorize these utterances as part of the utterance is a *comment* ("I'm feeling upset") but could also be considered a *socialization* (It's okay to be upset. We all get

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upset sometimes but here is how we appropriately cope with it.) and/or an *explanation* (*Because* I'm upset, I'm going to take a deep breath). There were several instances in which these nuances in the coding scheme were encountered and either we agreed that the utterance fell into multiple categories and/or would fit better in a new category. Along these lines, there were categories that felt less relevant for a teacher population. For example, the category of *label* is defined as an instance in which an emotion is referred to as a word or nickname (e.g., "Yes, my love." "Yes, sweetie"). While this kind of language might be more common with parent-child interactions, we coded this only 3% of the time. Future research should consider developing and validating a coding scheme that is specific to teacher emotion talk and the types of situations and language that would be most common in the classroom setting. Additionally, future research might consider developing not only a language based coding scheme, but a coding system that could be used on video-taped interactions. There were several times in listening to the audio recordings, that having a visual depiction of the interaction between teacher and students would have been highly beneficial. This coding system could try to capture not only categories of emotion talk but also body language, facial expressions, and gestures. Having a more wholistic description of the social emotional learning landscape of classrooms would be highly beneficial in informing emotion socialization interventions. This would allow us to see how teachers use multi-modal methods of displaying and teaching about emotions and engaging in emotion regulation with their students. However, it is also important to note that there are inherent ethical considerations when considering using audio or video-taped recordings from teacher classrooms. The current study took a number of precautions to protect teacher and student confidentiality, utilized the LENA recording device which uses Secure Sockets Layer (SSL) technology to encrypt data, and allowed parents to opt their child out of the book reading task so that they were not present

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during the audio recording. However, larger scale studies using this methodology should be thoughtful about ethical implications of confidentiality, transcription, and data storage. Some useful guidance regarding ethical considerations for data collection and storge is provided in the existing research (e.g., Fletcher et al., 2010; Schuck & Kearney, 2006). However, with considerable technology advancements in recent years, future research should work closely with their affiliated IRB and any relevant technology organizations to consider the ethical implications of the methodologies used, especially when used with young children and in school settings.

Emotion Talk in the Literature

Even during the period of collecting, analyzing, and interpreting data for the current study, the landscape of teacher emotion talk in the literature has changed. Namely, several new studies have tackled describing and investigating early childhood educators' use of emotion talk and emotion socialization practices. The current study fits within this changing landscape and contributes to the literature in this area.

First and foremost, there are several key similarities and differences between the current study and the study conducted by Yelinek and Grady (2019). Specifically, the current study found some important nuanced differences in the kinds of emotion talk most frequently used by teachers. That is, teachers used more questions than comments in the current study whereas the opposite was true in the Yelinek and Grady (2019) findings. Similarly, Yelinek and Grady (2019) found that teachers used more guides than questions while teachers in the current study showed the opposite. It is possible these differences are due to the observational task. That is, in the Yelinek and Grady (2019) study, teachers were observed teaching for a number of hours and language was transcribed in real time. In the current study, on the other hand, participants

completed a book-reading task intended to elicit discussion of emotions and audio recordings were transcribed and coded at a later time. This is related to a second difference in findings between the two studies; namely, that participants in the book reading task used more emotion talk overall. Thus, it is possible that the book reading task elicits more emotion talk from teachers and also plays a role in the kind of emotion talk used (i.e., use of slightly more questions and less guides). It is possible that teachers completing a book reading task had more opportunities to ask questions about what the children thought characters in the book were feeling (i.e., use of *question* emotion talk categorization) but teachers in the naturalistic observation had more spontaneous opportunities to guide children's emotion and behavior in some way (i.e., use of *guide* emotion talk categorization). Future research should be cognizant of these nuanced differences in patterns when deciding on methodology of studying teacher emotion talk in future studies.

As previously described, another important study in the teacher emotion talk literature is a recent study conducted by Alamos and colleagues (2023). This study has important implications for the ways in which emotion talk can be more systematically studied in the future. This study used secondary data analysis from a large-scale randomized control trial of a teacher-child relationship intervention called *Banking Time* (Williford et al., 2017). This intervention included data collection on teacher-child interactions using the CLASS Pre-K (Pianta et al., 2008) which allowed researchers to examine and rate teacher-child interactions. Additionally, interactions were observed during a storybook reading that was part of the Teacher-Child Structured Play Task (TC-SPT; Whittaker et al., 2018). The use of secondary data analysis to examine a larger sample size of teachers and children is novel in the emotion talk literature. Future research should consider utilizing large scale pre-existing datasets with access to

measures such as the CLASS and recorded videotaped observations of teacher-child interactions. With the adequate personnel and monetary resources to code such data for emotion talk, more definitive patterns in teacher emotion talk could be discovered. However, this study by Alamos and colleagues (2023), while a significant contributor to the literature, has several limitations in terms of generalizability. As noted by authors, all children in the study were rated by teachers as displaying elevated externalizing behaviors, limiting generalizability and potentially contributing to limited variability in some of the child characteristics measured in the study. Additionally, authors noted that the data was collected in the setting of an intervention focused on teacher-child relationship and thus it is possible that the intervention may have influenced reported relationships in the study. Finally, Alamos and colleagues (2023) note that emotion talk quantity, or frequency, was reported as opposed to quality (i.e., elaboration, sensitivity) which could change the patterns of findings. The current study in fact addresses many of these limitations and suggestions for future research. Thus, while many of the associations between teacher factors (e.g., stress, emotion regulation, emotion beliefs) were non-significant, the current study can be used as a helpful framework for how to successfully elicit and study emotion talk in the classroom setting.

Implications for Practice

Findings from the current study provide several implications for practice. First, results showed that teachers vary in their use of emotion talk in the classroom. This is important because evidence suggests that children develop social emotional knowledge and understanding, at least in part, from discussing emotions in the classroom setting (Izard et al., 2008). Thus, children in classrooms with teachers producing more emotion talk have more opportunities to develop and practice those social emotional skills. Teachers that use less emotion talk at baseline may benefit

from coaching regarding how to integrate discussions of emotion in the classroom. Interventions and/or teacher coaching could be beneficial in increasing emotion talk in early childhood education settings. This could even be integrated into existing social emotional learning programs/interventions by placing increased emphasis on the language used when discussing emotional or feeling states with children. In fact, initial research conducted by Fatahi and colleagues (2023) supports this idea. Specifically, this study found that when preschool teachers used more emotion-focused teaching practices (including emotion focused instructing, responding, and modeling), students in the classroom exhibited fewer negative emotion expressions, maladaptive emotion regulation strategies, and more learning behaviors at the end of the school year.

Additionally, there is opportunity to use exciting and innovative forms of technology to improve the overall language environment in early childhood settings. For example, the LENA recording device used in the current study has technology called LENA SP that is currently being used to capture the language environment of children 2 to 48 months old. Researchers and clinicians are using this software to support parents. For example, LENA is used by Sound Start Babies which is a nonprofit organization that provides home and center-based early intervention services for children that experience hearing loss. They use a parent-coaching program called The COMPASS Project, which utilizes LENA SP to provide feedback to parents regarding how much language their children experience throughout the day (LENA Team, 2018). This information is then used to target coaching in certain areas of growth. For example, if results from the LENA recording show low adult word counts, the coach can guide parents about ways they might incorporate more language into everyday routines. Additionally, the recording device captures amount of TV/electronic noise throughout the day, which can be helpful in increasing

parents' awareness of screen time and background noise. Based on the data collected, coaches

can work with parents to set realistic and meaningful goals and track progress over time.

Similarly, LENA Grow is a professional development program aimed at helping infant, toddler,

and preschool educators develop robust language environments (Early Learning Coalition of

Escambia County, 2018). Specifically, this software provides feedback for educators including

number of conversational turns, what times during the day and activities show increased talk and

furthermore, provides a record of individual children's language development. Future researchers

might consider partnering with the LENA team to adapt existing professional development

within the LENA Grow program to focus a component of data collection on emotion talk. This

could include adapting software to categorize and code emotion utterances and provide quick

feedback to teachers about the kind of emotion talk they use. Additionally, this device could be

used both in the home and the school and emotion talk could be coded to examine degree of

cultural alignment within emotion talk. Making these changes to the existing program and

software would allow for robust data collection and analysis of the emotion language landscape

of preschool classrooms that was beyond the current study's scope due to time and resource

constraints. Future research and practice should explore the feasibility and acceptability, as well

as effectiveness, of utilizing this kind of language-based technology as a feedback and coaching

system in the classroom setting.

Conclusion

Emotion socialization plays a critical role in children's emotional development (Denham,

2006; Denham et al., 2012), social skills (Burchinal et al., 2010), academic achievement

(Djambazova-Popordanoska, 2016), behavioral outcomes (Gottman et al., 1997), and more.

Furthermore, emotion talk has been shown to facilitate the development of children's emotion

knowledge and skills (Denham et al., 2015; Dunn et al., 1991; Kahle et al., 2017). Much of the existing research on emotion socialization and emotion talk has been conducted with parents of young children. The current study adds to the dearth of literature examining teacher use of emotion talk and found, consistent with results from previous studies, that different teachers vary greatly in their use of emotion talk in the classroom. Additionally, the current study showed that some teachers use relatively few emotion related utterances, even when provided with the opportunity to discuss a book with emotion related themes. Results also indicated a significant association between teacher use of emotion talk and students at-risk for disabilities in the classroom. Specifically, as portion of students at risk for disabilities in the classroom increased, teacher emotion talk decreased. Overall, findings from the current study can be used to inform potential teacher focused professional development interventions and considerations for future research surrounding factors that relate to variability of emotion talk in the education setting.

REFERENCES

Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health, 38,* 4-23.

Abu Al Rub, R. F. (2004). Job stress, job performance, and social support among hospital nurses. *Journal of Nursing Scholarship, 36,* 73–78. doi:10.1111=j.1547-5069.2004.04016.x

Ahn, H. J. (2005). Teachers' discussions of emotion in child care centers. *Early Childhood Education Journal, 32,* 237-242. doi: 10.1007/s10643-004-1424-6

Alamos, P., & Williford, A. P. (2020). Teacher-child emotion talk in preschool children displaying elevated externalizing behaviors. *Journal of Applied Developmental Psychology, 67,* 101107. doi: 10.1016/j.appdev.2019.101107

Alamos, P. Williford, A. P., Partee, A. M., & Lachman, G. (2023). Teacher and child factors associated with emotion talk between teachers and preschoolers displaying elevated externalizing behaviors. *Early Education and Development, 34,* 1075-1092.

Ambrose, S. E., VanDam, M., & Moeller, M. P. (2014). Linguistic input, electronic media, and communication outcomes of toddlers with hearing loss. *Ear and Hearing*, *35*(2), 139–147.

Annamma, S. A., Jackson, D. D., & Morrison, D. (2017). Conceptualizing color- evasiveness: Using dis/ability critical race theory to expand a color-blind racial ideology in education and society. *Race Ethnicity and Education, 20,* 147–162.

Arace, A., Prino, L. E., & Scarzello, D. (2021). Emotional competence of early childhood educators and child socio-emotional wellbeing. *International Journal of Environmental Research and Public Health, 18,* 7633, https://doi.org/10.3390/ijerph18147633

Asher, S. R., Parkhurst, J. T., Hymel, S., & Williams, G. A. (1990). *Peer rejection and loneliness in childhood.* In S. R. Asher & J. D. Coie (Eds.), Peer rejection in childhood. Cambridge studies in social and emotional development (pp. 253–273). New York: Cambridge University Press.

Bahman, S., & Maffini, H. (2008). *Developing Children's Emotional Intelligence.* New York: Continuum International Publishing Group

Baker, J. K., & Crnic, K. A. (2009). Thinking about feelings: Emotion focus in the parenting of children with early developmental risk. *Journal of Intellectual Disability Research, 53,* 450-462. doi: 10.1111/j.1365-2788.2009.01161.x

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. Ross, D., & Ross, S. A. (1961). Transmission of aggression through the imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 63, 575-582

Barrett, L. F. (2017a). *How Emotions Are Made: The Secret Life the Brain.* New York, NY: Houghton-Mifflin-Harcourt.

Barrett, L. F. (2017b). The theory of constructed emotion: An active inference account of interoception and categorization. *Social Cognitive and Affective Neuroscience, 1-23*. doi: 10.1093/scan/nsw154

Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation.* San Diego: Academic.

Becker, B., Mihov, Y., Scheele, D., et al. (2012). Fear processing and social networking in the absence of a functional amygdala. *Biological Psychiatry, 72(1),* 70–7.

Berkovits, L., Eisenhower, A., & Blacher, J. (2017). Emotion regulation in young children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 47,* 68-79. doi: 10.1007/s10803-016-2922-2

Bierman, K., Nix. R. L., Greenberg, M. T., Blair, C., & Domitrovich, C. (2008). Executive functions and school readiness intervention: Impact, moderation, and mention in Head Start REDI program. *Development and Psychopathology, 20,* 821-843.

Billingsley, B. S., & Cross, L. H. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *The Journal of Special Education*, *25*(4), 453-471.

Bjork, R. F., Havighurst, S. S., Pons, F., & Karevold, E. B. (2020). Pathways to behavior problems in Norwegian kindergarten children: The role of parent emotion socialization and child emotion understanding. *Scandanavian Journal of Psychology, 61,* 751-762.

Bland J., & Altman, D. (1997). Statistics notes: Cronbach's alpha. *BMJ, 314,* 570-572.

Blankson, A. N., Weaver, J. M., Leerkes, E. M., O'Brien, M., Calkins, S. D., & Marcovitch, S. (2017). Cognitive and emotional processes as predictors of a successful transition into school. *Early Education and Development, 28,* 1–20. doi:10.1080/10409289.2016.1183434

Blasé, J. J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal, 23*, 13-40.

Boivin, M., Poulin, F., & Vitaro, F. (1994). Depressed mood and peer rejection in childhood. *Development and Psychopathology, 6,* 483–498.

Boyle, T., Petriwskyj, A., Grieshaber, S., & Jones, L. (2021). Coaching practices: Building teacher capability to enhance continuity in the early years. *Teaching and Teacher Education, 108,* 103515.

Breaux, R. P., McQuade, J. D., Harvey, E. Z., & Zakarian, R. J. (2018). Longitudinal associations of parental emotion socialization and children's emotion regulation: The moderating role of ADHD symptomatology. *Journal of Abnormal Child Psychology, 46,* 671-683. doi: 10.1007/s10802-017-0327-0

Brooks, J. A., Shablack, H., Gendron, M., Satpute, A. B., Parrish, M. H., & Lindquist, K. A. (2017). The role of language in the experience and perception of emotion: a neuroimaging meta-analysis. *Social cognitive and affective neuroscience*, *12*(2), 169–183. doi: 10.1093/scan/nsw121

Brophy-Herb, H. E., Bocknek, E., Vallotton, C., Stansbury, K., Senehi, N., Dalimonte-Merckling, D., & Lee, Y. (2015). Toddlers with early behavior problems at higher family demographic risk benefit the most from maternal emotion talk. *Journal of Developmental and Behavioral Pediatrics, 36*, 512–520. doi: 10.1097/DBP.0000000000000196

Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the Emotional Labour Scale. *Journal of Occupational and Organizational Psychology, 76,* 365–379. http://dx.doi.org/10.1348/096317903769647229

Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy, 18*, 91–119. doi:10.1111/j.1532-7078.2012.000125.x

Buettner, C. K., Jeon, L., Hur, E., & Garcia, R. E. (2016) Teachers' social–emotional capacity: Factors associated with teachers' responsiveness and professional commitment. *Early Education and Development, 27,* 1018-1039. doi: 10.1080/10409289.2016.1168227

Bulotsky-Shearer, R., & Fantuzzo, J. (2004). Adjustment Scales for preschool intervention: Extending validity and relevance across multiple perspectives. *Psychology in the Schools, 41,* 725–736. doi:10.1002/pits.2001

Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly, 25,* 166–176. doi:10.1016/j.ecresq.2009.10.004

Burić, I., Penezić, Z., & Sorić, I. (2017). Regulating emotions in the teacher's workplace: Development and initial validation of the teacher emotion-regulation scale. *International Journal of Stress Management. 24(3),* 217–246. https://doi.org/10.1037/str0000035

Burwell, R. A., & Shirk, S. R. (2007). Subtypes of rumination in adolescence: Associations between brooding, reflection, depressive symptoms, and coping. *Journal of Clinical Child and Adolescent Psychology*, *36*(1), 56-65.

Byrd, S. M. (2019). An examination of the technical adequacy, classification accuracy, and usability of the *SSIS SEL Screening/Progress Monitoring Scales* in Elementary School Populations. Available from ProQuest Dissertations & Theses Global. (2665132833).

Cabecinha-Alati, S., O'Hara, G., Kennedy, H., & Montreuil, T. (2020). Parental emotion socialization and adult outcomes: the relationships between parental supportiveness, emotion regulation, and trait anxiety. *Journal of Adult Development*, *27*(4), 268-280.

Calkins, S. D. (1994). Origins and outcomes of individual differences in . *Monographs of the Society for Research in Child Development,* 59 (2-3, Serial No. 240).

Calkins, S. D., & Hill, A. (2007). Caregiver influences on emerging ER: Biological and environmental transactions in early development. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (pp. 229–248). New York: Guilford.

Canault, M., Normand, M., Foudil, S., Loundon, N., & Hung, T. (2015). Reliability of the Language ENvironment Analysis system (LENA) in European French. *Behavioral Research, 48,* 1109-1124. doi:10.3758/s13428- 015- 0634- 8

Carlson, C. (1993). The family-school link: Methodological issues in studies of family processes related to children's school competence. *School Psychology Quarterly, 8*, 264–276. doi:10. 1037/h0088280

Cekaite, A., & Ekström, A. (2019). Emotion socialization in teacher-child interaction: Teachers' responses to children's negative emotions. *Frontiers in Psychology*, *10*, 1546.

Chen, S. H., Zhou, Q., Main, A., & Lee, E. H. (2015). Chinese American immigrant parents' emotional expression in the family: Relations with parents' cultural orientations and children's emotion-related regulation. *Cultural Diversity and Ethnic Minority Psychology 21,* 619–629.

Ciucci, E., Baroncelli, A., & Toselli, M. (2015). Meta-emotion philosophy in early childhood teachers: Psychometric properties of the Créche Educator Emotional Styles Questionnaire. *Early Childhood Research Quarterly, 33,* 1-11. doi: 10.1016/j.ecresq.2015.04.006

Cole, P. M., Dennis, T. A., Smith-Simon, K. E., & Cohen, L. H. (2009). Preschoolers' emotion regulation strategy understanding: Relations with emotion socialization and child self-regulation. *Social Development, 18,* 324–352. doi:10.1111/j.1467-9507.2008.00503.x

Cole, P. M., & Tan, P. Z. (2007). Emotion socialization from a cultural perspective. In P. D. Hasting (Ed.), *Handbook of socialization: Theory and research* (pp. 516–542). London: The Guilford Press.

Cole, P. M., Tan, P. Z., Hall, S. E., Zhang, Y., Crnic, K. A., Blair, C. B., & Li, R. (2011). Developmental changes in anger expression and attention focus: Learning to wait. *Developmental Psychology, 47*, 1078–1089.

Collaborative for Academic, Social, and Emotional Learning. (2013b). *2013 CASEL guide: Effective social and emotional learning programs — Preschool and elementary school edition.* Chicago, IL: Author

Coury, H. (2018). The Theory of Constructed Emotion and Post-Traumatic Stress Disorder. *69 Echo: the Romanticization of Mental Illness on Tumblr| Anima Shrestha*.

Cumberland-Li, A., Eisenberg, N., Champion, C., Gershoff, E., & Fabes, R.A. (2003). The relation of parental emotionality and related dispositional traits to parental expression of emotion and children's social functioning. *Motivation and Emotion, 27,* 27–56.

Daunic, A., Corbett, N., Smith, S., Barnes, T., Santiago-Poventud, L., Chalftant, P., Pitts, D., & Gleaton. J. (2013). Integrating social-emotional learning with literacy instruction: An intervention for children at risk for emotional and behavioural disorders. *Behavioural Disorders 39*, 43–49.

Davis, T. (1995). Gender differences in masking negative emotions: Ability or motivation? *Developmental Psychology, 31,* 660-667.

De Franca, M., Claudineli, B., & Mateus, S. (2019). Measuring emotional granularity in school-age children. doi: 10.31234/osf.io/56wkd

DeMartino, L., Fetman, L., Tucker-White, D. & Brown, A. (2022). From freedom dreams to realities: Adopting Transformative Abolitionist Social Emotional Learning (TASEL) in schools. *Theory Into Practice, 61,* 156-167.

Denham, S. A. (2006). Social-emotional competence as support for school readiness: What is it and how do we assess it? *Early Education and Development, Special Issue: Measurement of School Readiness, 17,* 57-89.

Denham, S. A., & Bassett, H. H. (2019). Early childhood teachers' socialization of children's emotional competence. *Journal of Research in Innovative Teaching and Learning*, 12(2), 133–150.

Denham, S. A., & Grout, L. (1992). Mothers' emotional expressiveness and coping: Relations with preschoolers' social-emotional competence. *Genetic, Social, and General Psychology Monographs, 118*, 73–101.

Denham, S. A., & Kochanoff, A. T. (2002). Parental contributions to preschoolers' understanding of emotions. *Marriage & Family Review, 34,* 3, 311-343.

Denham, S. A., Bassett, H. H., & Wyatt, T. (2015). The socialization of emotional competence. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (2nd ed., pp. 590–613). New York: Guilford Press.

Denham, S. A., Bassett, H. H., & Zinsser, K. (2012). Early childhood teachers as socializers of young children's emotional competence. *Early Childhood Education Journal, 40,* 137–143. doi:10.1007/ s10643-012-0504-2

Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development 74,* 238–256. doi:10.1111/1467-8624.00533.

Denham, S. A., Cook, M., & Zoller, D. (1992). 'Baby looks very sad': Implications of conversations about feelings between mother and preschooler. British Journal of Developmental Psychology, 10, 301–315. doi:10.1111/j.2044-835X.1992.

Denham, S. A., Mitchell-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion, 21,* 65–86.

Denham, S. A., Zoller, D., & Couchoud, E. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30,* 928–936. doi:10.1037/0012-1649.30.6.928

Desimone, L. M. & Pak, K. (2017). Instructional coaching as high-quality professional development. *Theory Into Practice, 56,* 3-12.

Djambazova-Popordanoska, S. (2016) Implications of emotion regulation on young children's emotional wellbeing and educational achievement. *Educational Review, 68,* 497-515, DOI: 10.1080/00131911.2016.1144559

Domitrovich, C. E., Gest, S. D., Gill, S., Bierman, K. L., Welsh, J., & Jones, D. (2008). Fostering high quality teaching with an enriched curriculum and professional development support: The Head Start REDI program. *American Educational Research Journal, 46,* 567-597.

Downer, J. T., Booren, L. M., Hamre, B., Pianta, R. C., & Williford, A. (2011). *The individualized classroom assessment scoring (inCLASS).* Unpublished technical manual. Charlottesville, VA: Curry School of Education, University of Virginia.

Duffet, M. I. "Maternal emotion socialization and child problem behaviours in an Autism Spectrum Disorder Population: The role of the broad autism phenotype and distress." (2016). *Electronic Theses and Dissertations.* 5817.

Dunn, J., Brown, J., & Beardsall, L. (1991). Family talks about feelings and children's later understanding of others' emotions. *Developmental Psychology, 27,* 448–455.

Dunsmore, J. C., & Karn, M. A. (2001). Mothers' beliefs about feelings and children's emotional understanding. *Early Education and Development*, *12*(1), 117-138.

DuPaul, G. J., Power, T. J., Anastopoulos, A. D., & Reid, R. (1998). *ADHD rating scale—IV: Checklists, norms, and clinical interpretation.* New York: Guilford Press.

Durlak, J., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development 82,* 405–432. doi:10.1111/ j.1467-8624.2010.01564.x

Dykstra, J. R., Sabatos- DeVito, M. G., Irvin, D. W., Boyd, B. A., Hume, K. A., & Odom, S. L. (2013). Using the Language Environment Analysis (LENA) system in preschool classrooms with children with autism spectrum disorders. *Autism, 17(5),* 582–594.

Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., & Hawkins, J. (2008). Youth risk behavior surveillance – United States, 2007. *MMWR Surveillance Summaries, 57* (SS04): 1–131. Accessed 18 July, 2015. http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5704a1.htm?scid=ss5704

Early Learning Coalition of Escambia County. (2018). *Results & Lessons Learned from the First Year of LENA Grow™ as part of ELC Escambia's "Grow with Me" Initiative.* https://edcuration.com/resource/vendor/927/LENA%20Grow%20Y1%20ELCE%20Summary_v4.pdf

Eisenberg, N., & Fabes, R. A. (1994). Mothers' reactions to children's negative emotions: Relations to children's temperament and anger behavior. *Merrill-Palmer Quarterly, 40,* 138–156.

Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, *9*(4), 241-273.

Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes. R. A., Shepard, S. A., Reiser, M., et al. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72,* 1112–1134.

Eisenberg, N., Fabes, R. A., & Murphy, B. C. (1996). Parents' reactions to children's negative emotions: Relations to children's social competence and comforting behavior. *Child Development, 67,* 2227–2247.

Eisenberg, N., Fabes, R. A., Bernzweig, J., Karbon, M., Poulin, R., & Hanish, L. (1993). The relations of emotionality and regulation to preschoolers' social skills and sociometric status. *Child Development*, *64*(5), 1418-1438.

Eisenberg, N., Fabes, R. A., Shepard, S. A., Guthrie, I. K., Murphy, B. C., & Reiser, M. (1999). Parental reactions to children's negative emotions: Longitudinal relations to quality of children's social functioning. *Child Development*, *70*(2), 513-534.

Ekman, P. (1992). An argument for basic emotions. *Cognition & Emotion, 6,* 169–200.

Elias, M. J., Utne-O'Brien, M. U., & Weissberg, R. P. (2006). Transformative leadership for social-emotional learning. *Principal Leadership, 12*, 10-13.

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., ... & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Ascd.

Elliott, S. N., Davies, M. D., Frey, J. R., Gresham, F., & Cooper, G. (2018). Development and initial validation of a social emotional learning assessment for universal screening. *Journal of Applied Developmental Psychology, 55,* 39-51.

El Mallah, S. (2020). Toward equity-oriented assessment of social and emotional learning: Examining equivalence of concepts and measures. *Urban Education*, 1–29.

FACES Research Team. (2013). *Head Start Family and Child Experiences Survey: Teacher Interview (FACES 2009): Fall 2009-Spring 2011*. Unpublished instrument.

Farahmand, F. K., Grant, K. E., Polo, A. J., & Duffy, S. N. (2011). School-based mental health and behavioral programs for low-income, urban youth: A systematic and meta-analytic review. *Clinical Psychology: Science and Practice, 18,* 372–390. https://doi.org/10.1111/j.1468-2850.2011.01265.x

Fatahi, N., Park, C., Curby, T. W., Zinsser, K. M., Denham, S. A., Moberg, S., & Gordon, R. A. (2023). *Promoting preschoolers' social and emotional competencies through emotion-focused teaching, early education and development, 34,* 1729-1748.

Feinstein, J. S. (2013). Lesion studies of human emotion and feeling. *Current Opinion in Neurobiology, 23(3),* 304–9.

Fimian, M. J. (1984). Teacher Stress Inventory--Revised [Database record]. Retrieved from PsycTESTS. doi: https://dx.doi.org/10.1037/t10126-000

Fimian, M. J., & Fastenau, P. S. (1990). The validity and reliability of the Teacher Stress Inventory: A re-analysis of aggregate data. *Journal of Organizational Behavior, 11*, 151-157.

Fletcher, J. W., Price, B. A., & Branen, L. J. (2010). Videotaping children and staff in natural environments: Gathering footage for research and training. *Contemporary Issues in Early Childhood, 11,* 219-226.

Fogarty, R. (2009). *Brain Compatible Classrooms.* 3rd ed. Thousand Oaks, CA: Sage.

Forman, S. R., Foster, J. L., & Rigby, J. G. (2022). School leaders' use of social-emotional learning to disrupt whiteness. *Educational Administration Quarterly, 58,* 351-385.

Fridman, J., Barrett, L. F., Wormwood, J. B., & Quigley, K. S. (2019). Applying the theory of constructed emotion to police decision making. *Frontiers in psychology*, *10*, 1946.

Fried, L. J. (2010). *Emotion and motivation regulation strategy use in the middle school classroom.* Doctoral Dissertation, University of Western Australia.

Friedman-Krauss, A. H., Raver, C. C., Morris, P. A., & Jones, S. M. (2014). The role of classroom-level child behavior problems in predicting preschool teacher stress and classroom emotional climate. *Early Education and Development, 25,* 530-552. doi: 10.1080/10409289.2013.817030

Fujiki, M., Brinton, B., & Clarke, D. (2002). Emotion regulation in children with specific language impairment. *Language, Speech, and Hearning Services in Schools, 33,* 102-111.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38,* 915-945.

Garner, P. W. (2010). Emotional competence and its influences on teaching and learning. *Educational Psychology Review 22,* 297–321. doi.10.1007/s10648-010-9129-4.

Garner, P. W., & Estep, K. M. (2001). Emotional competence, emotion socialization, and young children's peer-related social competence. *Early education and development*, *12*(1), 29-48.

Garner, P. W., Bolt, E., & Roth, A. N. (2019). Emotion-focused curricula models and expressions of and talk about emotions between teachers and young children. Journal of *Research in Childhood Education, 33,* 180-193. doi: 10.1080/02568543.2019.1577772

Garner, P. W., Dunsmore, J. C., & Southam-Gerrow, M. (2008). Mother–child conversations about emotions: Linkages to child aggression and prosocial behavior. *Social Development, 17*, 259–277.

Garner, P. W., Dunsmore, J. C., & Southam-Gerrow, M. (2008). Mother–child conversations about emotions: Linkages to child aggression and prosocial behavior. *Social development*, *17*(2), 259-277.

Garon, N., Bryson, S. E., Zwaigenbaum, L., Smith, I. M., Brian, J., Roberts, W., & Szatmari, P. (2009). Temperament and its relationship to autistic symptoms in a high-risk infant sib cohort. *Journal of Abnormal Child Psychology, 37*, 59–78. doi:10.1007/s10802-008-9258-0.

Geller, L. (2005). Emotional regulation in autism spectrum disorders. *Autism Spectrum Quarterly, Summer,* 14–17.

Gendron, M., & Barrett, L.F. (2019). A role for emotional granularity in judging. Received 02 December 2018, Accepted 21 October 2019. *Oñati Socio-Legal Series* [online], 9(5), 557-576. Available from: https://doi.org/10.35295/osls.iisl/0000-0000-0000-1087

Gilliam, W., Maupin, A. N., Reyes, C. R., Accavitti, M., & Shic, F. (2016). *Do educators' implicit bias regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions?* New Haven, CT: Yale University Child Study Center.

Givens, J., & Wilkinson, B. D. (2022). More than a feeling: Constructing emotion in theory and practice. *Journal of Counseling & Development, 100,* 433-441.

Goleman, D. 1995. *Emotional Intelligence.* London: Bloomsbury Publishing

Gottman, J. M., Katz, L. F., & Hooven, C. (1997*). Meta-emotion: How families communicate emotionally.* Mahwah, NJ: Lawrence Erlbaum Associates.

Grandey, A. A. (2015). Smiling for a wage: What emotional labor teaches us about ER. *Psychological Inquiry, 26,* 54–60. http://dx.doi.org/10.1080/1047840X.2015.962444

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 26,* 41-54.

Graziano, P. A., Reavis, R. D., Keane, S. P., & Calkins, S. D. (2007). The role of emotion regulation in children's early academic success. *Journal of School Psychology, 45,* 3–19.

Graziano, P.A., & Garcia, A. (2016). Attention-deficit hyperactivity disorder and children's emotion dysregulation: A metaanalysis. *Clinical Psychology Review, 46,* 103–123.

Greenwood, C. R., Thiemann- Bourque, K., Walker, D., Buzhardt, J., & Gilkerson, J. (2011). Assessing children's home language environments using automatic speech recognition technology. *Communication Disorders Quarterly, 32(2),* 83–92.

Gresham, F. M., & Elliott, S. N. (2017). *Social Skills Improvement System Social Emotional Learning Edition Rating Forms*. Bloomington, MN: Pearson Assessments.

Gross, J. J. (2002). ER: Affective, cognitive, and social consequences. *Psychophysiology 39,* 281–91.

Gumora, G., & Arsenio, W. F. (2002). Emotionality, emotion regulation, and school performance in middle school children. *Journal of School Psychology, 40,* 395–413.

Halberstadt, A., & Eaton, K. L. (2003). A meta-analysis of family expressiveness and children's emotion expressiveness and understanding. *Marriage and Family Review, 34,* 35–62.

Hamre, B. K., Pianta, R. C., Mashburn, A. J., & Downer, J. T. (2012). Promoting young children's social competence through the preschool PATHS curriculum and MyTeachingPartner professional development resources. *Early Education & Development*, *23*(6), 809-832.

Havighurst, S. S., Wilson, K. R., Harley, A. E., Prior, M. R., & Kehoe, C. (2010). Tuning in to Kids: improving emotion socialization practices in parents of preschool children–findings from a community trial. *Journal of Child Psychology and Psychiatry*, *51*(12), 1342-1350.

Havighurst, S., & Kehoe, C. (2017). The role of parental emotion regulation in parent emotion socialization: Implications for intervention. In *Parental stress and early child development* (pp. 285-307). Springer, Cham.

Hoemann, K., Xu, F., & Barrett, L. F. (2019). Emotion words, emotion concepts, and emotional development in children: A constructionist hypothesis. *Developmental psychology*, *55*(9), 1830.

Hommersen, P., Murray, C., Ohan, J. L., & Johnston, C. (2006). Oppositional defiant disorder rating scale preliminary evidence of reliability and validity. *Journal of Emotional and Behavioral Disorders, 14,* 118–125. https://doi.org/10.1177/ 10634266060140020201.

Howse, R. B., Calkins, S. D., Anastopoulos, A. D., Keane, S. P., & Shelton, T. L. (2003). Regulatory Contributors to Children's Kindergarten Achievement. *Early Education and Development, 14,* 101-120. doi: 10.1207/s15566935eed1401_7

Hyson, M. C. (2004). *The emotional development of young children: Building an emotion centered curriculum* (2nd ed.). New York: Teachers College Press.

Iwata, J., & LeDoux, J. E. (1988). Dissociation of associative and nonassociative concomitants of classical fear conditioning in the freely behaving rat. *Behavioral Neuroscience, 102(1),* 66–76.

Izard C. E. (1971). *The face of emotion.* New York, NY: Appleton Century Crofts.

Jacob, T., & Johnson, S. L. (2001). Sequential interactions in the parent–child communications of depressed fathers and depressed mothers. *Journal of Family Psychology, 15,* 38–52

Jacobs, E., Mazzone, S., Simon, P., & Nader-Grosbois, N. (2019). The unexpected impact of parental emotional socialization on theory of mind and emotion regulation: The case of children with intellectual disabilities. *Psychology*, 10, 1302-1332. doi: 10.4236/psych.2019.109084.

Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of educational research*, *79*(1), 491-525.

Jensen, B. (2010). The OECD teaching and learning international survey (TALIS) and teacher education for diversity. *Educational Research and Innovation,* 63-91. Oecd.ilibrary.org

Jeon, L., Hur, E., & Buettner, C. K. (2016). Child-care chaos and teachers' responsiveness: The indirect associations through teachers' emotion regulation and coping. *Journal of school psychology*, *59*, 83–96. https://doi.org/10.1016/j.jsp.2016.09.006

Jiang, J., Vauras, M., Volet, S., & Wang, Y. (2016). Teachers' emotions and emotion regulation strategies: Self- and student' perceptions. *Teaching and Teacher Education, 54*, 22-31. doi: 10.1016/j.tate.2015.11.008

Johnson, K., Caskey, M., Rand, K., Tucker, R., & Vohr, B. (2014). Gender differences in adult infant communication in the first months of life. *Pediatrics, 134(6),* e1603–e1610.

Jones, J. D., Brett, B. E., Ehrlich, K. B., Lejuez, C. W., & Cassidy, J. (2014). Maternal attachment style and responses to adolescents' negative emotions: The mediating role of maternal emotion regulation. *Parenting*, *14*(3-4), 235-257.

Jones, S. M., Bailey, R., Temko, S., Donaher, M., Raisch, N., & Ramirez, T. (2020). SEL and PSS measurement and assessment tools in education in emergencies: Identifying, analyzing, and mapping tools to global guidance documents. *Inter-Agency Network for Education in Emergencies (INEE)*.

Jones, S., Eisenberg, N., & Fabes, R. (2002) Parents' reactions to elementary school children's negative emotions: Relations to social and emotional functioning at school. *Merrill-Palmer Quarterly, 48,* 133–159.

Kahle, S., Grady, J. S., Miller, J. G., Lopez, M., & Hastings, P. D. (2017). Maternal emotion socialization and the development of inhibitory control in an emotional condition. Infant and *Child Development, 26,* e1970. doi:10.1002/icd.1970

King, E. (2021). Fostering toddlers' social emotional competence: Considerations of teachers' emotion language by child gender. *Early Child Development and Care, 191,* 2494-2507.

Kitzmann, K. M., & Howard, K. M. (2011). Emotion socialization by early childhood educators: Conceptual models from psychology. *Asia-Pacific Journal of Research in Early Childhood Education, 5,* 23-44.

Kleindienst, N., Hauschild, S., Liebke, L., Thome, J., Bertsch, K., Hensel, S., & Lis, S. (2019). A negative bias in decoding positive social cues characterizes emotion processing in patients with symptom-remitted Borderline Personality Disorder. *Borderline Personality Disorder and Emotion Dysregulation, 6*. https://doi.org/10.1186/s40479-019-0114-3

Knobloch, N., & Whittington, M. S. (2002). Novice teachers' perceptions of support, teacher preparation quality, and student teaching experience related to teacher efficacy. *Journal of Vocational Education Research*, *27*(3), 331-341.

Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. *Developmental Psychology, 18,* 199-214.

Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental Psychology, 25,* 343–354.

Kopp, C. B., & Neufeld, S. J. (2003). Emotional development during infancy. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 347 – 374). New York: Oxford University Press

Kramer, L. (2014). Learning emotional understanding and emotion regulation through sibling interaction. *Early Education and Development*, *25*(2), 160-184.

Kuebli, J. (1994). Young children's understanding of everyday emotions. *Young Children, 49*, 36–47.

Kujawa, A., Dougherty, L., Durbin, C. E., Laptook, R., Torpey, D., & Klein, D. N. (2014). Emotion recognition in preschool children: Associations with maternal depression and early parenting. *Development and Psychopathology, 26,* 159–170.

Labouvie-Vief, G., DeVoe, M. & Bulka, D. (1989). Speaking about feelings: Conceptions of emotions across the life span. *Psychology and Aging, 4,* 425–437.

Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence? *Child Development 70,* 1373–1400. doi: 10.1111/1467-8624.00101.

Laurent, H. K. (2014). Clarifying the contours of emotion regulation: Insights from parent–child stress research. *Child Development Perspectives*, *8*(1), 30-35.

Légaré, C., Morin, D., Poirier, N., & Nader-Grosbois, N. (2019) Parental socialization of emotion: Differences in mothers of children with and without intellectual disability. *Psychology, 10,* 2062-2079. doi: 10.4236/psych.2019.1015133.

LENA Team. (2018, June 27). *Case study: How sound start babies uses Lena SP to support parents*. LENA. https://www.lena.org/sound-start-babies-case-study/?hsCtaTracking=d4469954-c205-47b8-b7f5-d4020b9db395%7C9b7ec448-6506-4446-a4c1-f3c3e05be31b

Li, L., Vikani, A. R., Harris, G. C., & Lin, F. R. (2014). Feasibility study to quantify the auditory and social environment of older adults using a digital language processor. *Otology and Neurotology, 35(8),* 1301–1305.

Liang, S., & Fu, Y. (2016). Otter. ai.

Lofthouse, R. (2019). Coaching in education: A professional development process in formation. *Professional development in education, 45(1),* 33-45.

Loomis, A. M., Curby, T. W., & Zinsser, K. M. (2023). Beyond the behavior: Teachers' trauma-informed attitudes relate to lower expulsion risk among uninhibited preschoolers. *Children and Youth Services Review, 145,* 106806.

Lord, C., Rutter, M., DiLavore, P. S., & Risi, S. (1999). *Autism diagnostic observation schedule: Manual.* Los Angeles: Western Psychological Services

Lucas-Molina, B., Quintanilla, L., Sarmento-Henrique, R., Martin Babarro, J., & Gimenez-Dasi, M. (2020). The relationship between emotion regulation and emotion knowledge in preschoolers: A longitudinal study. I*nternational Journal of Environmental Research and Public Health, 17,* 5726.

Magai, C., Distel, N., & Liker, R. (1995). Emotion socialisation, attachment, and patterns of adult emotional traits. *Cognition & emotion*, *9*(5), 461-481.

Maliken, A. C., & Katz, L. F. (2013). Exploring the impact of parental psychopathology and emotion regulation on evidence-based parenting interventions: A transdiagnostic approach to improving treatment effectiveness. *Clinical child and family psychology review*, *16*(2), 173-186.

Mangelsdorf, S. C., Shapiro, J. R., & Marzolf, D. (1995). Developmental and temperamental differences in emotional regulation in infancy. *Child Development, 66,* 1817 – 1828.

Maslach, C., & Jackson, S. E. (1981). The measurement of experience burnout. *Journal of Occupational and Behavioral Science, 2,* 99-113.

Mayes, R. D., Pianta, R., Oglesby, A., & Zyromskl, B. (2022). Principles of antiracist social emotional justice learning. *Theory Into Practice, 61,* 178-187.

Mazefsky, C. A., Herrington, J., Siegel, M., Scarpa, A., Maddox, B. B., Scahill, L., & White, S. W. (2013). The role of ER in autism spectrum disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 52*, 679-688. doi: 10.1016/j.jaac.2013.05.006.

McDowell, D. J., O'Neil, R., & Parke, R. D. (2000). Display rule application in a disappointing situation and children's emotional reactivity: Relations with social competence. *Merrill-Palmer Quarterly, 46,* 306-324.

Mendl, M. (1999). Performing under pressure: stress and cognitive function. *Applied animal behaviour science*, *65*(3), 221-244.

Meyer, S., Raikes, H. A., Virmani, E. A., Waters, S., & Thompson, R. A. (2014). Parent emotion representations and the socialization of emotion regulation in the family. *International Journal of Behavioral Development*, *38*(2), 164-173.

Moé, A., & Katz, I. (2020). ER and need satisfaction shape a motivating teaching style. *Teachers and Teaching*. doi: 10.1080/13540602.2020.1777960

Moore, J., Cooper, B., Domitrovich, C., Morgan, N., Cleveland, M., Shah, H., … Greenberg, M. T. (2015). The effects of exposure to an enhanced preschool program on the social-emotional functioning of at-risk children. *Early Childhood Research Quarterly, 32,* 127–138. doi:10.1016/j.ecresq.2015.03.004

Morelen, D., Shaffer, A., & Suveg, C. (2016). Maternal emotion regulation: Links to emotion parenting and child emotion regulation. *Journal of Family Issues*, *37*(13), 1891-1916.

Morris, C. A. S., Denham, S. A., Bassett, H. H., & Curby, T. W. (2013). Relations among teachers' emotion socialization beliefs and practices and preschoolers' emotional competence. *Early Education & Development, 24,* 979-999. doi: 10.1080/10409289.2013.825186

Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Journal, 21*, 989-1010.

Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social development*, *16*(2), 361-388.

Newland, R. P., & Crnic, K. A. (2011). Mother–child affect and emotion socialization processes across the late preschool period: Predictions of emerging behaviour problems. Infant and Child Development, 20, 371-388. doi:10.1002/icd.729

Oller, D. K. (2010). All- day recordings to investigate vocabulary development: A case study of a trilingual toddler. *Communication Disorders Quarterly, 31(4),* 213–222.

Op 't Eynde, P. (2004). A socio-constructivist perspective on the study of affect in mathematics education. In M. Johnsen Høines & A. B. Fugelstad (Eds.), *Proc. 28th Conf. of the Int. Group for the Psychology of Mathematics Education* (Vol. 1, pp. 118- 122). Bergen, Norway: PME.

Oram, R., Ryan, J., Rogers, M., & Heath, N. (2017). Emotion regulation and academic perceptions in adolescence. *Emotional and Behavioural Difficulties*, *22*(2), 162-173.

Ornaghi, V., Agliati, A., Pepe, A., & Gabola, P. (2020). Patterns of association between early childhood teachers' emotion socialization styles, emotion beliefs and mind-mindedness. *Early Education and Development, 31,* 47-65. doi: 10.1080/10409289.2019.1627805

Pae, S., Yoon, H., Seol, A., Gilkerson, J., Richards, J., Ma, L., & Topping, K. (2016). Effects of feedback on parent- child language with infants and toddlers in Korea. *First Language, 36,* 549-569. doi:10.1177/0142723716649273

Parke, R. D., & Buriel, R. (1998). Socialization in the family: Ethnic and ecological perspectives. In N. Eisenberg (Ed.), *Handbook of child psychology: Vol. 3 Social, emotional and personality development* (5th ed., pp. 463–552). New York: Wiley

Pasalich D. S., Dadds M. R., Hawes D. J., Brennan J. (2011). Do callous-unemotional traits moderate the relative importance of parental coercion versus warmth in child conduct problems? An observational study. *J. Child Psychol. Psychiatry Allied Discipl.* 52 1308–1315. 10.1111/j.1469-7610.2011.02435.x

Perez Rivera, M. B., & Dunsmore, J. C. (2011). Mothers' acculturation and beliefs about emotions, mother–child emotion discourse, and children's emotion understanding in Latino families. *Early Education and Development*, *22*, 324-354.

Pianta, R. C. (2001). *Student teacher relationship scale.* Lutz, FL: Psychological Assessment Resources.

Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2007). *Classroom Assessment Scoring System (CLASS).* Baltimore, MD: Brookes.

Pianta, R. C., Nimetz, S. L., & Bennett, E. (1997). Mother-child relationships, teacher-child relationships, and school outcomes in preschool and kindergarten. *Early childhood research quarterly*, *12*(3), 263-280.

Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology, 7,* 295-312.

Platt, R., Williams, S. R., & Ginsburg, G. S. (2016). Stressful life events and child anxiety: Examining parent and child mediators. *Child Psychiatry & Human Development*, *47*(1), 23-34.

Potvin, P., A. Côté-Doré, L. Fortin, E. Royer, D. Marcotte, and D. Leclerc. (2003). *Questionnaire d'identification des élèves à risque de décrochage scolaire.* Université du Québec, Trois-Rivières (Québec). Ce questionnaire est maintenant publié aux Éditions du CETREQ, Québec, 2007.

Psychogiou, L., & Parry, E. (2014). Why do depressed individuals have difficulties in their parenting role?. *Psychological Medicine*, *44*(7), 1345-1347.

Raver, C. C., Jones, A. S., Li-Grining, C. P., Metzger, M., Smallwood, K., & Sardin, L. (2008). Improving preschool classroom processes: Preliminary findings from a randomized trial implemented in Head Start settings. *Early Childhood Research Quarterly, 23,* 10-26.

Reiss, S., Levitan, G. W., & McNally, R. J. (1982). Emotionally disturbed mentally retarded people: An underserved population. *American Psychologist*, *37*(4), 361.

Rogers, M., C. Markel, J. Midgett, B. Ryan, and R. Tannock. 2013. "Measuring Children's Perceptions of Parental Involvement in Conjoint Behavioral Consultation: Factor Structure and Reliability of the Parental Support for Learning Scale." *Assessment for Effective Intervention, 39,* 170-181.

Rothbart, M. K., Ziaie, H., & O'Boyle, C. (1992) Self-regulation and emotion in infancy. In N. Eisenberg & R.A. Fabes (Eds.) *Emotion and its regulation in early development: New directions for child development*, No. 55: The Jossey-Bass education series, (pp. 7-23). San Francisco: Jossey-Bass Publishers.

Ruba, A. L. & Pollak, S. D. (2020). The development of emotion reasoning in infancy and early childhood. *Annual Review of Developmental Psychology, 2,* 503-531.

Rubin, K. H., Hastings, P., Chen, X., Stewart, S., & McNichol, K. (1998). Intrapersonal and maternal correlates of aggression, conflict, and externalizing problems in toddlers. *Child Development, 69,* 1614– 1629.

Ruhland, S. K. (2002). An Examination of Secondary Business Teachers' Retention Factors.

Ruhland, S. K., & Bremer C. D. (2002). *Alternative teacher certification procedures and professional development opportunities for career and technical education teachers*. St. Paul, MN: The National Research Center for Career and Technical Education.

Saarni, C. (1984). An observational study of children's attempt to monitor their expressive behavior. *Child Development, 55,* 1504-1513.

Sala, M. N., Pons, F., & Molina, P. (2014). ER strategies in preschool children. *British Journal of Developmental Psychology, 32,* 440-453. doi: 10.1111/bjdp.12055

Salovey, P., Mayer, J.D., Goldman, S., Turvey, C. and Palfai, T. (1995). *Emotional attention, clarity and repair: exploring emotional intelligence using the trait meta-mood scale.* In: Pennebaker, J.D. (Ed.), Emotion, Disclosure, and Health, pp. 125–154. American Psychological Association, Washington, DC.

Sandilos, L. E., Goble, P., Rimm-Kaufman, S. E., Pianta, R. C. (2018). Does professional development reduce the influence of teacher stress on teacher-child interactions in pre-kindergarten classrooms? *Early Childhood Research Quarterly, 42,* 280-290. doi: 10.0090885-2006

Schuck, S., & Kearney, M. (2006). Using digital video as a research tool: Ethical issues for researchers. *Journal of Educational Multimedia and Hypermedia*, *15*, 447-463.

Schutz, R. W., & Long, B. C. (1988). Confirmatory factor analysis, validation and revision of a teacher stress inventory. *Educational and Psychological Measurement*, *48*(2), 497-511.

Schwartz, O. S., Dudgeon, P., Sheeber, L. B., Yap, M. B. H., Simmons, J. G., & Allen, N. B. (2011). Observed maternal responses to adolescent behavior predict the onset of Major Depression. *Behaviour Research and Therapy, 49,* 331–338.

Schwartz, O. S., Sheeber, L. B., Dudgeon, P., & Allen, N. B. (2012). Emotion socialization within the family environment and adolescent depression. *Clinical Psychology Review, 32,* 447-453. doi: 10.1016/j.cpr.2012.05.002

Shaw, P., Stringaris, A., Nigg, J., & Leibenluft, E. (2014). Emotion dysregulation in Attention Deficit Hyperactivity Disorder. *American Journal of Psychiatry, 171*, 276–293.

Shewark, E. A., Zinsser, K. M., & Denham, S. A. (2018). What's lost in calm classrooms? Teachers' perspectives on the consequences of managing classroom climate. *Child and Youth Care Forum*, 47, 787–802.

Shields, A., & Cicchetti, D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology, 33,* 906–916.

Shields, A., Dickstein, S., Seifer, R., Gusti, L., Magee, K. D., & Spritz, B. (2001). Emotional competence and early school adjustment: A study of preschoolers at risk. *Early Education and Development 12,* 73–96. doi: 10.1207/s15566935eed1201_5

Siegel, E. H., Sands, M. K., Van den Noortgate, W., Condon, P., Chang, Y., Dy, J., ... & Barrett, L. F. (2018). Emotion fingerprints or emotion populations? A meta-analytic investigation of autonomic features of emotion categories. *Psychological bulletin*, *144*(4), 343.

Silk, J. S., Shaw, D. S., Forbes, E. E., Lane, T., & Kovacs, M. (2006). Maternal depression and child internalizing: the Moderating role of child emotion regulation. *Journal of Clinical Child and Adolescent Psychology, 35,* 116–126.

Simmons, D. (2019, April). Why we can't afford whitewashed social-emotional learning. *ASCD Education Update*. https://www.ascd.org/el/articles/why-we-cant-afford-whitewashed-social-emotional-learning

Smidt, K. E., & Suvak, M. K. (2015). A brief, but nuanced, review of emotional granularity and emotion differentiation research. *Current Opinion in Psychology, 3,* 48-51. doi: 10.1016/j.copsyc.2015.02.007

Smolkowski, K., Girvan, E. J., McIntosh, K., Nese, R. N. T., & Horner, R. H. (2016). Vulnerable decision points for disproportionate office discipline referrals: Comparisons of discipline for African American and White elementary school students. *Behavioral Disorders, 41,* 178-195.

Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical Psychology Review, 22,* 189-222.

Stoll, J. (2019). *Teachers' emotional experiences in the classroom: A phenomenological study of preschool teachers' emotion construction* (Publication No. 27669306 [Doctoral dissertation, Fielding Graduate University]. ProQuest Dissertations and Theses Global.

Streubel, B., C. Gunzenhauser, G. Grosse, & H. Saalbach. (2020). Emotion-specific vocabulary and its contribution to emotion understanding in 4- to 9-year-old children. *Journal of Experimental Child Psychology, 193,* 104790.

Streubel, B., Grosse, G., Gunzenhauser, C., & Saalbach, H. (2019). Measuring emotion-specific vocabulary: The Children's Emotion-Specific Vocabulary Vignettes Test (CEVVT) for children aged 4 and older. Manuscript in preparation.

Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education, 7,* 379-398.

Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and direction for future research. *Educational Psychology Review, 15*, 327-358.

Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory into practice*, *48*(2), 130-137.

Taie, S., and Goldring, R. (2020). *Characteristics of Public and Private Elementary and Secondary School Teachers in the United States: Results From the 2017–18 National Teacher and Principal Survey First Look* (NCES 2020- 142). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [10/30/2023] from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020142.

Taumoepeau, M., & Ruffman, T. (2006). Mother and infant talk about mental states relates to desire language and emotion understanding. *Child Development, 77,* 465–481.

Taveter, K., & Iqbal, T. (2021, September). Theory of constructed emotion meets RE. In *2021 IEEE 29th International Requirements Engineering Conference Workshops (REW)* (pp. 383-386). IEEE.

Teigen, K. H. (1994). Yerkes-Dodson: A law for all seasons. *Theory & Psychology*, *4*(4), 525-547.

Thompson, R. A. (1994). Emotion regulation: A Theme in search of definition. *Monographs of the Society for Research in Child Development, 59,* 25-52.

Thompson, R. A., & Goodvin, R. (2007). Taming the tempest in the teapot: Emotion regulation in toddlers. In C. A. Brownell & C .B. Kopp (Eds.), *Transitions in early socioemotional development: The toddler years* (pp. 320–341). New York, NY: Guilford.

Thompson, R.A. (1991). Emotional regulation and emotional development. *Educational Psychology Review, 3(4)*, 269.

Trentacosta, C. J., & Izard, C. E. (2007). Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion, 7,* 77–88.

United States Department of Education, Office for Civil Rights. (2014, March). *Civil Rights Data Collection. Data Snapshot: School Discipline.* Washington, DC. Retrieved from https://ocrdata.ed.gov/Downloads/CRDC-School-Discipline-Snapshot.pdf.

U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the National Household Education Surveys Program (ECPP-NHES:2016).

Valiente, C., Lemery-Chalfant, K., Swanson, J., & Reiser, M. (2008). Prediction of children's academic competence from their effortful control, relationships, and classroom participation. *Journal of educational psychology*, *100*(1), 67.

Vytal, K., & Hamann, S. (2010). Neuroimaging support for discrete neural correlates of basic emotions: a voxel-based meta-analysis. *Journal of Cognitive Neuroscience, 22(12),* 2864–85.

Wachs, T. D., Gurkas, P., & Kontos, S. (2004). Predictors of preschool children's compliance behavior in early childhood classroom settings. *Journal of Applied Developmental Psychology, 25*, 439–457. http://dx.doi.org/10.1016/j.appdev.2004.06.003.

Wang, Y., Hartman, M., Abdul Aziz, N. A., Arora, S., Shi, L. & Tunison, E. (2017). A systematic review of the use of LENA technology. *American Annals of the Deaf, 162*, 295-311.

Wang, Z., Miller, K., & Cortina, K. S. (2013). Using the LENA in teacher training: Promoting student involvement through automated feedback. *Unterrichtswissenschaft, 4,* 290–305.

Wang, Q., & Yang, Y. (2019). Culture and emotional development: Introduction to the special issues. *Culture and Brain, 7,* 95-98.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology 54,* 1063–1070. doi:10.1037/0022-3514.54.6.1063.

Webster-Stratton, C. (2012). *Teaching Strategies Questionnaire (TSQ).* https://incredibleyears.com/for-researchers /measures/

Weil, L. W., & Middleton, L. (2010). Use of the LENA tool to evaluate the effectiveness of a parent intervention program. *SIG 1 Perspectives on Language Learning and Education, 17(3),* 108–111.

Weisleder, A., & Fernald, A. (2013). Talking to children matters: Early language experience strengthens processing and builds vocabulary. *Psychological Science, 24(11),* 2143-2152.

Weissberg, R. P., & Cascarino, J. (2013). Academic learning + social emotional learning = national priority. *Phi Delta Kappan, 95*, 8–13.

Widen, S. C. (2013). Children's interpretation of facial expressions: The long path from valence-based to specific discrete categories. *Emotion Review, 5,* 72–77. https://doi.org/10.1177/1754073912451492

Wiesner, D. (1991). *Tuesday.* New York: Clarion Books.

Williams, B. V., & Jagers, R. J. (2020). Transformative social and emotional learning: Work notes on an action research agenda. *Urban Education, 57, 2.*

Williford, A. P., Calkins, S. D., & Keane, S. P. (2007). Predicting change in parenting stress across early childhood: Child and maternal factors. *Journal of abnormal child psychology*, *35*(2), 251-263.

Wilson, S. J. (2022). Constructing Craving: Applying the Theory of Constructed Emotion to Urge States. *OSF Preprints. March*, *25*.

Wu, Y., Schulz, L. E., Frank, M. C., & Gweon, H. (2021). Emotion as information in early social learning. *Current Directions in Psychological Science*, *30*(6), 468-475.

Xu, D., Yapanel, U., & Gray, S. (2009). *Reliability of the LENA™ language environment analysis system in young children's natural home environment.* Retrieved from http://www.lenafoundation.org/TechReport.aspx/Reliability/LTR-05-2

Yang, Y., & Wang, Q. (2019). Culture in emotional development. In V. LoBue, K. Perez-Edgar, & K. Buss (Eds.), *The handbook of emotional development* (pp. 569–594). New York: Springer.

Yap, M. B., Allen, N. B., & Ladouceur, C. D. (2008). Maternal socialization of positive affect: The impact of invalidation on adolescent emotion regulation and depressive symptomatology. *Child development*, *79*(5), 1415-1431.

Yelinek, J., & Grady, J. S. (2019). 'Show me your mad faces!' Preschool teachers' emotion talk in the classroom. *Early Childhood Development and Care, 189,* 1063-1071. doi: 10.1080/03004430.2017.1363740

Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology, 18*, 459–482.

Zahn-Waxler, C., Druggal, S., & Gruber, R. (2002). *Parental psychopathology.* In M. H. Bornstein (Ed), Handbook of parenting: Vol. 4: Social conditions and applied parenting (pp. 292 – 327). Mahwah, NJ: Lawrence Erlbaum Associates

Zhang, Y., Xu, X., Jiang, F., Gilkerson, J., Xu, D., Richards, J. A., et al. (2015). Effects of quantitative linguistic feedback to caregivers of young children: A pilot study in China. *Communication Disorders Quarterly, 37(1),* 16–24.

Zinsser, K. M., Gordon, R. A., & Jiang, X. (2021). Parents' socialization of preschool-aged children's emotion skills: A meta-analysis using an emotion-focused parenting practices framework. *Early Childhood Research Quarterly, 55*, 377-390.

Zinsser, K. M., Shewark, E. A., Denham, S. A., & Curby, T. W. (2014). A mixed-method examination of preschool teacher beliefs about social emotional learning and relations to observed emotional support. *Infant and Child Development, 23,* 471–493.

Zulauf, C. A., & Zinsser, K. A. (2019). Forestalling preschool expulsion: A mixed-method exploration of the potential protective role of teachers' perceptions of parents. *American Educational Research Journal, 6,* 2189-2220.

Wang, Q., & Yang, Y. (2019). Culture and emotional development: Introduction to the special issues. *Culture and Brain, 7,* 95-98.

APPENDIX A: THE FAMILY PICNIC BOOK EXAMPLE

Figure A1. Sample page in The Family Picnic storybook by E.B. Greif

APPENDIX B: TEACHER STRESS INVENTORY - REVISED

The following are a number teacher concerns. Please identify those factors which cause you stress in your present position. Read each statement carefully and decide if you ever feel this way about your job. Then, indicate how strong the feeling is when you experience it by circling the appropriate rating on the 5-point scale. If you have not experienced this feeling, or if the item is inappropriate for your position, circle number 1 (no strength; not noticeable). The rating scale is as follows: 1 = no strength/not noticeable; 2 = mild strength/barely noticeable; 3 = medium strength/moderately noticeable; 4 = great strength/very noticeable; 5 = major strength/extremely noticeable

TIME MANAGEMENT
1. I easily over-commit myself. 1 2 3 4 5
2. I become impatient if others do things to slowly. 1 2 3 4 5
3. I have to try doing more than one thing at a time. 1 2 3 4 5
4. I have little time to relax/enjoy the time of day. 1 2 3 4 5
5. I think about unrelated matters during conversations. 1 2 3 4 5
6. I feel uncomfortable wasting time. 1 2 3 4 5
7. There isn't enough time to get things done. 1 2 3 4 5
8. I rush in my speech. 1 2 3 4 5

WORK-RELATED STRESSORS
9. There is little time to prepare for my lessons/responsibilities. 1 2 3 4 5
10. There is too much work to do. 1 2 3 4 5
11. The pace of the school day is too fast. 1 2 3 4 5
12. My caseload/class is too big. 1 2 3 4 5
13. My personal priorities are being shortchanged
due to time demands. 1 2 3 4 5
14. There is too much administrative paperwork in my job. 1 2 3 4 5

PROFESSIONAL DISTRESS
15. I lack promotion and/or advancement opportunities. 1 2 3 4 5
16. I am not progressing my job as rapidly as I would like. 1 2 3 4 5
17. I need more status and respect on my job. 1 2 3 4 5
18. I receive an inadequate salary for the work I do. 1 2 3 4 5
19. I lack recognition for the extra work and/or good teaching I do. 1 2 3 4 5

DISCIPLINE AND MOTIVATION
I feel frustrated...
20. ...because of discipline problems in my classroom. 1 2 3 4 5
21. ...having to monitor pupil behavior. 1 2 3 4 5
22. ...because some students would better if they tried. 1 2 3 4 5
23. ...attempting to teach students who are poorly motivated. 1 2 3 4 5
24. ...because of inadequate/poorly defined discipline problems. 1 2 3 4 5
25. ...when my authority is rejected by pupils/administration. 1 2 3 4 5

PROFESSIONAL INVESTMENT

26. My personal opinions are not sufficiently aired. 1 2 3 4 5
27. I lack control over decisions made about
classroom/school matters. 1 2 3 4 5
28. I am not emotionally/intellectually stimulated on the job. 1 2 3 4 5
29. I lack opportunities for professional improvement. 1 2 3 4 5

EMOTIONAL MANIFESTATIONS

I respond to stress...
30. ...by feeling insecure. 1 2 3 4 5
31. ...by feeling vulnerable. 1 2 3 4 5
32. ...by feeling unable to cope. 1 2 3 4 5
33. ...by feeling depressed. 1 2 3 4 5
34. ...by feeling anxious. 1 2 3 4 5

APPENDIX C: CRECHE EDUCATORS EMOTIONAL STYLE QUESTIONNAIRE

CEESQ - Crèche Educators Emotional Style Questionnaire
E. Ciucci, A. Baroncelli, M. Toselli
© Dipartimento di Scienze della Formazione e Psicologia, Università di Firenze

<u>INSTRUCTIONS:</u>
Please think about the following statements with relation to your most recent period of work at the child care cente
Read them carefully and indicate <u>how true</u> you consider each of the statements below to be, <u>on a scale from 1 to</u>
There are no right or wrong answers. The best responses are sincere and immediate.

How true is the statement for you:

1	2	3	4	5
Rarely or never	*A bit*	*Quite*	*Very*	*Very often*

1	When a child is angry, my goal is to make him/her stop	1	2	3	4	5
2	I help children get over sadness quickly so they can move on	1	2	3	4	5
3	The children will learn to manage their emotions by themselves	1	2	3	4	5
4	I feel I am very good at making the children reflect on what made them angry, frightened or sad	1	2	3	4	5
5	If children are sad, I don't get involved unless it lasts too long or it is too intense	1	2	3	4	5
6	The contribution of early childhood teachers to the emotional development of young children is fundamental at the care center	1	2	3	4	5
7	Children's sadness is an emotion worth exploring	1	2	3	4	5
8	I try to change the negative mood of a child into a cheerful one	1	2	3	4	5
9	When a child is happy, I take some time to share this feeling with him/her	1	2	3	4	5
10	I easily recognize the emotions that a child is experiencing	1	2	3	4	5
11	I accept children's fear even if it seems unmotivated	1	2	3	4	5
12	When a child is angry, I help him/her to express what made him/her so angry	1	2	3	4	5
13	The greatest responsibility for children's emotional development lies with the parents	1	2	3	4	5
14	I feel able to help children cope with their fears and their anger	1	2	3	4	5
15	The children will learn to regulate their emotions by experiencing them with their peers	1	2	3	4	5
16	When a child is angry, it's an opportunity for getting close	1	2	3	4	5
17	When a child is afraid, I try to distract him/her	1	2	3	4	5

18	I am able to stay close to an angry child	1	2	3	4	5
19	When a child is feeling a negative emotion, it's an opportunity to use my educational skills	1	2	3	4	5
20	I can easily distinguish the different emotions a child is feeling	1	2	3	4	5
21	I can get the children to express all of their emotions	1	2	3	4	5

APPENDIX D: TEACHER EMOTION-REGULATION SCALE

Here are some statements describing strategies and techniques which you as a teacher can use in order to regulate emotions you experience at work. Please rate the degree of your agreement with each statement.
1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Avoiding the Situation
I try to avoid conflicting situations at school.
I withdraw when the conversation turns in the wrong direction.
In my work I try to avoid discussions about unpleasant topics.
I pull back from conflicting situations at work.
I avoid engaging in discussions with troublesome parents.

Active Modification Strategy
When students make me angry with their behavior, I try to correct them and direct them on the right path.
I question my own teaching methods when I feel helpless about some student.
I am developing additional skills and knowledge to make my work with students less stressful.
I ask more-experienced colleagues for advice when I have a problem at work.
I am seeking additional information in order to solve problems at work that trouble me.

Reappraisal
When I become upset at work, I remind myself of my own priorities in life.
In school, I calm myself by viewing things from another perspective.
When I become furious at students' behavior, I remind myself that they are just kids.
If, for some reason, I feel miserable at work, I redirect my thoughts to something positive.
If I feel helpless, I make myself aware that some things are beyond my control.

Suppression
When I feel unhappy because of my job, I try to suppress that.
I do not even want to think about the frustrations that I experience at work.
I ignore the hurt I feel in some situations at work.
If I feel annoyed with some situations at school, I try to suppress that.
I ignore the anger I experience at work.

Tension Reduction
I breathe deeply in order to reduce the tension from unpleasant situations at work.
If students "drive me crazy" in class, I open the window to take a breath of fresh air.
When I become upset at work, I first take a deep breath.
When I get "out of line" at school, I count to ten.
I breathe deeply in order to reduce the rage I feel occasionally at work.

APPENDIX E: PERCEIVED SUPPORT FOR MANAGING BEHVIOR

How well does your program/school support* you when you experience challenges in managing student's behavior? Would you say…
- o Not at all
- o Not well
- o Well
- o Very well
- o Refuse to answer

From whom is this advice or support available?
- o Other teachers
- o Education coordinator, specialist
- o Center/program director
- o School principal
- o School psychologist
- o Social worker
- o Counselor
- o Other mental health professional
- o Behavioral consultant
- o Other (specify)
- o Refuse to answer

*Support can be conceptualized broadly including discussion managing challenging behavior with other teachers, consulting with the school psychologist, attending professional development recommended by administrators, accessing specialist staff and/or resources.

APPENDIX F: PROFESSIONAL DEVELOPMENT QUESTIONNAIRE

In this questionnaire, professional development (PD) is defined as activities that develop an individual's skills, knowledge, expertise, and other characteristics as a teacher.

During the last 24 months, did you participate in any of the following kinds of professional development activities?

- o Courses/workshops (e.g., on subject matter or methods and/or other education-related topics)
- o Education conferences or seminars (where teachers and/or researchers present their research results and discuss educational problems)
- o Certificate of study
- o Observation visits to other schools
- o Participation in a network of teachers formed specifically for the professional development of teachers
- o Individual or collaborative research on a topic of interest to you professionally
- o Mentoring and/or peer observation and coaching, as part of a formal school arrangement
- o Self-study (e.g., reading an article, watching a webinar)

For each PD activity indicated teachers will answer:
Yes
No
If yes, # of hours:
If yes, was this professional development session primarily, moderately, or not emotion-focused:
primarily emotion focused = primary focus of session is related to social emotional learning* or ER** strategies for children or educators
moderately emotion focused = social emotional learning/ER is mentioned in description or objectives but is not the primary goal or focus of the session
not emotion focused = social emotional learning/emotion is not mentioned in the description or objectives and is not discussed in the session
If you have the description of the PD, please copy and paste it here:

*Social emotional learning is defined as the learning environments that support the development of children's "capacity to recognize and manage emotions, solve problems effectively, and establish and maintain positive relationships with others" (Ragozzino et al., 2003, p. 169).

**ER is defined as the "extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 1994, p. 27).

APPENDIX G: DEMOGRAPHIC SURVEY

*If you would like to participate, please be sure to read and answer **all** questions on this page. This information is being collected for research purposes only. Your information will be kept confidential and will not be shared in any way by the research team.*

Teacher Information

1. What is your date of birth? _____
2. Please indicate the gender to which you most identify:
   - Female
   - Male
   - Transgender Female
   - Transgender Male
   - Gender Non-Conforming
   - Not Listed: _____
   - Prefer Not to Answer

3. Please indicate the race/ethnicity that best describes you (check all that apply):
   - Caucasian/White
   - African American/Black
   - Native American or Alaskan Native
   - Asian
   - Hispanic/Latinx
   - Middle Eastern/Arabic/Chaldean
   - Native Hawaiian or Pacific Islander
   - Not Listed: _____
   - Prefer Not to Answer

4. What is your current level of education? (Please check one box)
   - Associate's Degree
   - Bachelor's Degree
   - Graduate degree (Master's, Doctorate, etc.)
   - Not Listed: _____
   - Prefer Not to Answer

7. How many years of have you taught/worked in daycare and/or preschools?
   _____
8. What kind of school/program do you teach at?
   - Public school (non-profit)
   - Head Start
   - GSRP
   - Private school (for-profit)
   - Not Listed: _____

Student Information

Please indicate the number of students in your classroom that are categorized under the following race/ethnicities:

… Caucasian/White
… African American/Black
… Native American or Alaskan Native
… Asian
… Hispanic/Latinx
… Middle Eastern/Arabic/Chaldean
… Native Hawaiian or Pacific Islander
… Not Listed: _____

APPENDIX H: CODEBOOK

Table H1. Codebook used for categorizing teacher emotion talk

Code	Operational Definition	Examples
Comment	Comment is defined as an instance in which the language used notes an emotion but does not expand on it in any way.	She has a surprised look on her face. Not a happy baby. I'm happy today I feel better now
Label	Label is defined as an instance in which an emotion is referred to as a word or nickname.	Yes my love Yes sweetie
Explanation	Explanation is defined as an instance in which an utterance describes a potential cause or consequence related to the emotion.	She looks surprised (because) her mouth's open and her eyes are wide. Maybe she's angry (because) maybe she wants her diaper changed. Sometimes I feel scared when I'm high up like that I'm gonna be angry (because) you're pulling my shirt. I think you're right. I think she's mad because she's laughing at him.
Clarify	Clarify is defined as an instance in which an utterance corrects or expands on a child's description of an emotion.	I'm not angry, I'm disappointed Kid says "sad." Teacher says "does she also look kind of worried? Like oh no, what's going to happen to my ball?" Student says "sad." Teacher says "Sad. and everybody looks kind of worried."

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Guide	Guide is defined as an instance in which an utterance directs child behavior in some way related to emotion.	Come on. Sit down, just relax. Show me your mad faces. Give me a hug I'm gonna be angry if you do that… Let's take a deep breath
Socialization	Socialization is defined as an instance in which an utterance describes an emotion as good or bad or indicates approval or disapproval of an emotion.	She's happy isn't she. We like happy faces. Well, that would be a good reason (to feel sad), if he wanted his mom and dad. It's okay to be excited about getting a snack I don't care how mad you are. You can't hit He's sad, so I feel sad. It makes me sad to see him sad
Question	Question is defined as an instance in which the emotion related phrase takes the form of a question.	Is she smiling? Is she crying? Do you cry when you want your mother? Do you know what it means to be scared? Do the kids look excited?