

Post-COVID-19 families: How early educators facilitate socio-emotional development in their students during the COVID-19 pandemic"

by

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B.S., University of Ghana-Legon, 2017

A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Applied Human Sciences
College of Health and Human Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2022

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Abstract

The COVID-19 virus through its mode of transmission and needed adaptations influenced human interaction in several ways which include for the early educator activities known to facilitate socio-emotional development. This study assesses the extent to which professional development, perceived stress, comfort with safety practices, and quarantine status related to teachers' social-emotional development practices (SEDP) in the Early Care and Education (ECE) setting during the COVID-19 pandemic. A cross-sectional survey of early educators working with children aged 0-5 across the U.S. was conducted. The relationships among variables were assessed through hierarchical regression analysis. Results revealed that there was a significant relationship between high levels of comfort with safety practices and increased socio-emotional development practices. Additionally, a significant relationship between the teachers' level of stress and increased socio-emotional development practices existed. These findings suggest that during the COVID-19 pandemic, early educator SEDP were related to their stress levels and their feelings of comfort. Limitations of the study and implications for policy, practice, and research are provided.

Keywords: COVID-19, early childhood education, socio-emotional development, safety practices, stress

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Acknowledgements

It really takes a village to be successful. The completion of this thesis would not have been possible without the support of my village.

To my thesis committee, Dr. Wiles, Dr. Ferraro, and Dr. Francois, thank you very much for your support and guidance and for cheering me on to get this done. Daddy, thank you for reminding me every day that I started this project for a reason. Mummy, Selasi and the Osei-Tutu's thank you for sacrificing our Sunday conversations so I could either rest or work. Your constant calls and texts to check up on me though we are miles apart is one of the reasons this got done. John, this journey began because in the first place you believed in me – thank you. The leadership of KCCTO, Childcare Aware of America, Candelen, NAEYC, GOAEYC, DEAEYC, MAAEYC, and MOAEYC, thank you for facilitating the distribution of the survey. Dr. Hatton-Bowers and Dr. Izenstark, thank you for your willingness to distribute the survey with your connections. To the K-STATE libraries team, thank you for all the support. Special thanks to the Kansas State University Graduate School for sponsoring this study through the Arts and Humanities Small Grants Program.

To all my friends and family who have been patient with me throughout the course of this journey- thank you.

Dedication

“In years to come, you will look back to this brief period and say, you survived, you made a mark.” This thesis is dedicated to all early childhood educators and the families they serve.

Chapter 1 - Introduction

SARS-CoV-2 is a new virus related to the same family of viruses as the severe acute respiratory syndrome (SARS) first observed in China in 2003 and some types of the common cold (WHO, 2020). COVID-19, the result of infection with this virus, hit the world unexpectedly and on March 11, 2020, the World Health Organization (WHO) declared it a global pandemic. Daily activities were dramatically altered because of respiratory droplets of infected people serving as the main mode of transmission of COVID-19. Respiratory droplets have the potential to transmit viruses across multiple modalities, giving rise to a unique set of challenges the world needed to face. This called for modifications of behaviors and ways of interacting, which included changes to core social habits to reduce the spread. For example, fomites, defined as objects or surfaces known to lead to transmission of the disease, have now been identified as low risk, but in 2020, the risk was unknown (Meyerowitz et al., 2020; Kampf et al., 2020).

The resilience of the world's population became evident through the ways they adapted to living with the pandemic as case counts soared. These changes included constantly disinfecting high-touch surfaces, avoiding close contact with people, wearing masks, not showing affection in the form of hugs and handshakes, and maintaining at least six feet of physical distance between persons who are not of the same household (Centers for Disease Control and Prevention (CDC), 2020; Scheid et al., 2020). The changes were not limited to personal life, as they also influenced the education sector (Pfattheicher et al., 2020).

At the initial stages, when COVID-19 was first declared a pandemic, childcare centers and pre-kindergarten to grade 12 schools across the United States were closed to support a public health intervention aimed at reducing the spread of COVID-19 (Donohue & Miller, 2020). As the pandemic continued to run its course, focus turned to attempting to bring the world back

from the consequences resulting from school, businesses, and government office closures. This included reopening early care and education centers.

As schools and early education centers reopened, these facilities had to follow guidelines set by the CDC and the World Health Organization (WHO) aimed at mitigating the spread of the virus while allowing children access to education. This meant that the precautionary practices determined by the CDC and WHO required implementation in early care settings. This was possible to an extent, however, the characteristics of early care and education settings made it difficult to fully implement these recommended protective measures. The practices of hand hygiene and regular cleaning of surfaces were not new to practitioners, (Azor-Martinez et al., 2018). There were two other measures that the COVID-19 pandemic required, namely, (1) maintaining a physical distance of at least six feet and (2) wearing a face mask covering the nose and mouth (CDC, 2020). What this meant, at least for teachers, is that only the upper part of their faces remained visible to the children in their care. Most interactions within early care settings involve close contact because caregivers often model their interactions with children and show warmth and support, which contributes to their socio-emotional health (Funk & Ho, 2018). Caregivers in the early care settings also use facial expressions to communicate and show emotions to children in their care, which can be negatively affected by using face masks.

Early care settings are aimed at helping children develop in several domains. These include the physical, cognitive, language, adaptive, and socio-emotional arenas (Child Development and Early Learning, 2015). These domains, though distinct, are interrelated and critical to the holistic development of the child (Child Development and Early Learning, 2015). The early development of these domains influences the future outcomes of individuals across the lifespan. For instance, the cognitive domain has to do with sensory and perceptual processes, as

well as executive functioning (Harvey, 2019). A well-developed cognitive domain can position a child for academic success, which in turn has the potential to translate to higher earnings and improved individual wellbeing in the future (Williams & Lerner, 2019). Another area of development, the socio-emotional domain, relates to emotions and the formation and maintenance of relationships with others. This area of development is important because it helps children regulate their behaviors, properly express emotions, and learn to navigate social situations (Guerra et.al, 2014; Yoder, 2014). While parents can facilitate the development of these skills at home, teachers also play a critical role in child development, specifically because they spend a significant amount of time with the children in their care. Research results indicate that teachers are known to feel pressured to pay attention to activities facilitating cognitive development (academics), which takes away their attention from facilitating other areas, particularly socio-emotional development (Jones & Bouffard, 2012).

Socio-emotional development is a foundation children need for academic and lifelong success (Greenberg et al., 2016). It is therefore important for teachers to focus on this in the classroom. Unfortunately, some of the mitigation strategies implemented to address the spread of COVID-19 could influence the facilitation of socio-emotional skills because most of the activities aimed at promoting socio-emotional development in the early years require touch, proximity, and expression of emotion (Crucianelli & Filippetti, 2020). During the COVID-19 pandemic, these activities were restricted by the need to wear a face covering and maintain a physical distance of at least six feet between individuals. These restrictions cast a shadow of uncertainty on children's development of socio-emotional skills, and little is known about how these restrictions influenced a teacher's ability to facilitate the socio-emotional development of children in their care.

Problem Statement

The importance of socio-emotional development early in life has long been recognized (Vygotsky, 1978; Housman, 2017; Thompson, 2018). However, most of the focus has been on the developmental milestones the child has to achieve rather than on the factors that influence the teacher's ability to facilitate the holistic development of that particular domain (Schonert-Reichl, 2017). Teachers spend considerable time with the children in their care and as a result, have a profound influence on these children's development (Hamre & Pianta, 2001; Schonert-Reichl, 2017). There has been little research on how, and to what extent, teachers facilitate socio-emotional development in children during pandemics or other public health emergencies. Additionally, little is known about factors that influence a teacher's ability to facilitate socio-emotional development in this context (i.e., the COVID-19 pandemic). The development of positive socio-emotional skills has also been known to be influential to children and families across the life span (i.e., NSCDC, 2004; Jones, Crowley, & Greenberg, 2017; Domitrovich et.al, 2017). Thus, the importance of how teachers facilitate the development of these skills, particularly during the COVID-19 pandemic, requires the attention of early care and education researchers. This point in time (i.e., age, 0-5, the period of critical development while COVID-19 runs its course) is critical in the lives of young children because of potential negative effects on socio-emotional development of children now and in the future. A better understanding of this relationship will help determine what must be done to mitigate any detrimental effects COVID-19 protocols impart on socio-emotional development of children post-COVID-19.

In summary, several factors influence an educator's ability to facilitate socio-emotional development of children in their care. For this study, these factors include the level of stress they

experience, their concerns surrounding safety, as well as their level of professional development (i.e., training and education). Considering the unique characteristics of COVID-19, there is a need to better understand how teachers in early care and education settings facilitated socio-emotional development of children in their care. Additionally, it is important to look at how professional development, the safety precautions adopted at their centers, and their perceived stress influenced their ability to interact with children in ways that facilitate their socio-emotional development since the beginning of the pandemic.

Chapter 2 - Literature Review

Theoretical Framework

Bronfenbrenner and Morris's (2006) bioecological model of human development describes how human development takes place within a series of interrelated systems, which include the *chronosystem* (time), microsystem, mesosystem, exosystem, and macrosystem. The bioecological model highlights four factors that play a role in a person's development. The four factors they highlight are the *process*, the *person*, the *context*, and *time* (PPCT). The four elements of the PPCT function interdependently and bidirectionally, thus the effects of one element requires considering its effect on the others (Bronfenbrenner & Morris, 2006). Proximal processes, according to the model, refer to the repeated patterns of regularly occurring responsive interactions between adult caregivers and children (Bronfenbrenner & Morris, 2006). Daily activities and interactions in which individuals engage would be considered proximal processes. According to Tudge (2017), the characteristics of the developing person, such as age, temperament, and the presence of a responsive caregiver, influence how proximal processes occur. Norris and Horm (2015) explain that regardless of the type of interaction, the quality of interaction and how adults interact and engage with the child is paramount. The COVID-19 pandemic has unfortunately disrupted the nature of interactions between teachers and children, effectively diminishing their quality. Social distancing, mask wearing, and other mitigation procedures have resulted in early care contexts that, in most cases, prevent teachers from interacting with children in ways to which they were accustomed. These changes have the potential to influence a teacher's ability to adequately focus on the socio-emotional needs of children.

In the PPCT model, the quantity and quality of interactions are influenced by the characteristics of both the caregiver and the child (Bronfenbrenner & Morris, 2006). For example, child characteristics such as age and temperament have the potential to influence how an adult responds. The quality-of-care children experience in the early years highly depends on the nature of the teacher's beliefs and their fundamental understanding of appropriate caregiving interactions (McMullen, 2010, Degotardi & Sweller, 2012; Norris & Horm, 2015). The relationship between what a teacher deems appropriate for young children and how they interact with them has direct implications on the nature and quality of care (Brownlee et.al., 2009). Teachers' beliefs about their own needs and roles as a teacher also influence their interactions with children (Norris & Horm, 2015).

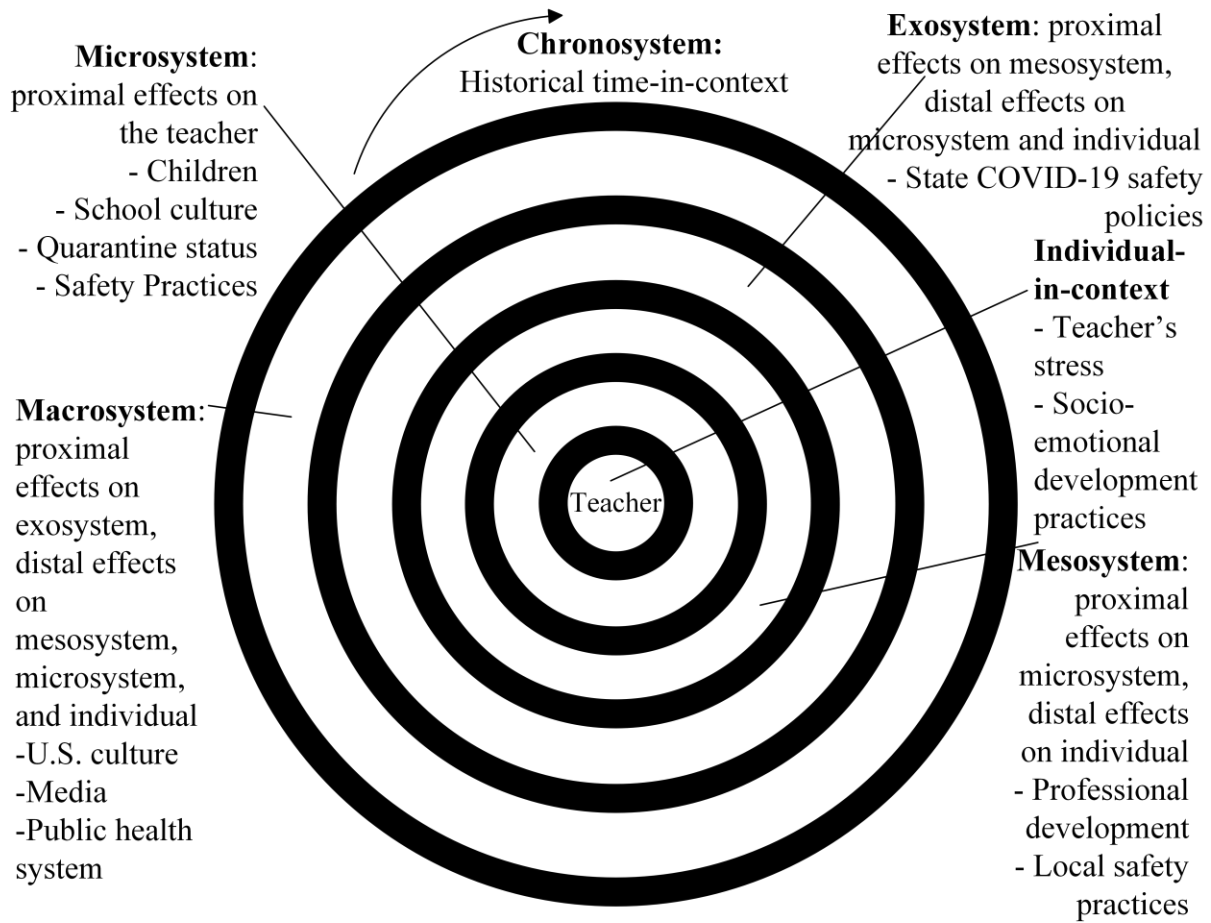
Context also influences the nature and frequency of interactions. The number of times a caregiver interacts with the child and the kind of activities in which they engage are influenced by the kind of environment and the prevailing circumstance (Bronfenbrenner & Morris, 2006). The PPCT model recognizes proximal processes occurring during child-teacher interactions happen within contexts such as classrooms, early childhood education centers, and family childcare homes (Norris & Horm, 2015). Norris and Horm (2015) note that the effects of the social context of classrooms have been examined over time by researchers (see Pallas, 1993 for a full review). However, this has not been assessed within the context of a pandemic. In the current study, the early childhood education setting is identified as the most important microsystem for the child, because it is the context in which teacher-child interactions occur. Because of the bidirectionality of these nested systems, conceptualizing them as wholly interconnected serves as a useful frame. These interconnected systems are integral to the overall development of a child. According to Bronfenbrenner and Morris (2006) what happens in one

system influences the other systems either directly or indirectly. For example, when the teacher experiences stress, such as family problems, attending to sick children, or lack of sleep, it may influence the proximal processes in which they engage with the child. This influence on the child can affect all levels of a child's systems, including the micro-, macro-, exo-, and mesosystems, and cumulatively, these interactions influence a child's later life outcomes.

Additionally, PPCT theory suggests that the chronosystem, i.e., the contextual time (e.g., historical influences, current events) is likely to influence how we think about educating and raising our children (Bronfenbrenner & Morris, 2006; Tudge, 2017). The PPCT model, in the context of early childhood development, includes examining the long-term effects of interactions experienced during infancy and toddlerhood on later development. Within the context of this study, time would refer to the period pre-COVID-19 through the current time period and examine how the chronosystem has influenced teacher-child interactions relating to facilitating development of the socio-emotional domain in children.

Figure 1.

Theoretical Model Adapted from Bronfenbrenner & Morris (2006)



Socio-Emotional Development in Children

One of the most important building blocks of a young child's well-being is socio-emotional development (Edwards & Denham, 2018). Social and emotional development involves several interrelated areas, including social interaction, emotional awareness, and emotional self-regulation (Ashdown & Bernard, 2012; Thompson 2018). This domain of development is a strong foundation for learning, facilitating the formation of relationship bonds, learning to solve interpersonal problems, and managing challenges (Ashdown & Bernard, 2012; Durlak & Weissberg, 2001). The emotional well-being of children during their early years has a strong effect on the quality of their social relationships later in life, such that emotionally healthy children can establish and maintain positive relationships with adults and peers (Ho & Funk, 2018).

The socio-emotional development of children not only consists of a child's ability to regulate emotions, but also includes other important social skills as well. Turn-taking, gaining independence in following routines, interacting with peers, and building meaningful relationships with others are all elements of socio-emotional development. Malik and Marwaha (2020), explain that children begin to explore the face of their caregiver and learn to respond with social smiles to their caregiver's voice, smiles, and other acts. Malik and Marwaha (2020) further explain that children, through sensitive interactions with caregivers, begin to learn how to manage their reactions. Eventually, attachment bonds become clearer, and children begin to positively express their emotions and show empathy toward others. By the time typically developing children reach preschool age, they begin to show impulse control, the ability to navigate peer relationships, and the ability to follow rules.

Several factors influence the socio-emotional development of children. Two of these factors are the child's temperament and how caregivers' model and create an environment supporting socio-emotional development. Temperament is defined as the inborn attributes influencing how a child engages with the world (Thomas & Chess, 1977). The impact of temperament on a child's socio-emotional development is heavily dependent on the *goodness of fit* between the child and their environment (Thomas & Chess, 1977; Rothbart & Bates, 2006). One characteristic that would define a positive goodness-of-fit would be the reciprocal interactions between a caregiver and the child. In environments where caregivers are responsive and reciprocal in their interactions, young children come to understand the importance of relationships. One means for adults to facilitate this is through face-to-face interactions. Face-to-face social interaction with adults is a key social context in which the organizing influence of emotions exists (Izard, 2009). In early childhood settings, face-to-face interactions regularly occur during caregiving activities and social play. Changes in the social climate due to COVID-19 have altered how teachers engage in these face-to-face interactions. Mask wearing, which results in part of the educator's face being concealed, impedes the ability to make determinations about social communication (Spitzer, 2020).

The relationship between the child, the caregiver, and the learning environments in which they spend their time influences how children understand and learn how to manage emotions. This also contributes to their overall socio-emotional development (Osher & Berg, 2017). For children to succeed, it is imperative that they can navigate interactions with adults (Thompson & Goodman, 2009). According to researchers, (Thompson, 2018), the foundation for early social and emotional development is laid when a positive relationship is established between children and caregivers. The process of establishing this relationship influences how children express

themselves, manage their emotions, and establish positive relationships with others. The quality of interactions between young children and their caregivers is the foundation for healthy socio-emotional development (Greenberg, 2016).

Developing strong socio-emotional skills is important for several reasons, including the following: increasing the probability that a child will graduate from high school and transition to college; overall wellness (Jones et.al., 2015), and positive adult relationships, including positive future family outcomes (e.g., quality of interpersonal relationships). Further, a strong socio-emotional foundation has an effect on long-term positive outcomes such as earning a college degree and enjoying stable employment prospects later in life (Damon et.al, 2015). A strong socio-emotional foundation also boosts perseverance, motivation, and self-regulation, skills that are essential for lifelong success (Reis et.al., 2000). These benefits of a strong socio-emotional foundation make the case for focusing on enhancing the socio-emotional development of all children (Thompson, 2018) and makes it important to understand how teachers in the early years settings are navigating this process of facilitating socio-emotional development during the COVID-19 pandemic.

Facilitating socio-emotional development in the early care setting.

In early care and education settings, educators use non-invasive strategies to show warmth and affection, which facilitates socio-emotional health. Some strategies include pleasant facial expressions throughout the day, use of appropriate prosody, and use of appropriate touches (e.g., tickles, hugs, handshakes, soft touches) when needed. Other strategies include maintaining physical proximity that allows crouching or bending over to the eye level of children while interacting with them, having conversations in proximity, and playing together with other children. According to Kragh-Muller and Gloeckler (2010), the current educational

system prioritizes academic learning, making it overlook the other core aspects of children's development, including social and emotional development.

After primary caregivers, teachers are the next group of people building lasting relationships with children, often getting to spend more time with them than some parents (Thompson, 2018). As a result, teachers play a fundamental role in helping children develop emotional and social competence (Kostenik et al., 2015). According to Greenberg and colleagues (2016), teachers play a vital role in shaping the lives of children, not only by facilitating learning but also by influencing the socio-emotional development of children in their care, a task they describe as both rewarding and challenging.

According to research, social skills and competencies are learned within the context of nurturing early relationships, which provide a safe and secure environment fostering growth and development (National Scientific Council on the Developing Child, 2004). This makes the creation of nurturing and sensitive relationships between early educators and children critical. Thus, caregivers focusing on facilitating the development of socio-emotional skills and competencies remains critical (Kragh-Muller & Gloeckler, 2010).

According to Ho and Funk (2018), children who are socially and emotionally healthy have the following characteristics:

- Ability to negotiate and compromise with others
- Clearly express preferences
- Label and recognize emotions, as well as manage them
- Start and maintain close relationships
- Empathize and care for others

There are several ways by which teachers can enhance socio-emotional development of children in their care. These include establishing trusting relationships with the children, stimulating social interactions among children using material-rich environments, and being intentional with teaching (Ho & Funk, 2018). Because young children learn within the context of relationships, caring and trusting teacher-child relationships are key to optimal child development (Raikes & Edwards 2009). Research by O'Connor & McCartney (2007) suggests that, when children have trusting relationships with their teachers, they are more willing to problem-solve and ask questions, both of which are fundamental attributes positioning children for later success. Several classroom activities, from morning greetings to time on the playground and story time, are packed with opportunities for teachers to strengthen the socio-emotional development of children in their care.

According to research, (Thompson 2018), the foundation for early social and emotional development is laid when a positive relationship is established between children and caregivers. The process of establishing this relationship influences how children express themselves, manage their emotions, and establish positive relationships with others. The quality of interactions between young children and their caregivers is the foundation for healthy socio-emotional development (Greenberg, 2016). Additionally, Greenberg, (2016), asserts that the adult-child interaction is a key contributor to classroom learning. For children to succeed, it is imperative that they can navigate interactions with adults (Thompson & Goodman, 2009). Thompson (2018) explains that caregivers/teachers are instrumental in promoting socio-emotional development in children.

The relationship between the child and the caregiver, and the learning environment in which they spend their time, influences how children understand and learn how to manage

emotions and contributes to their overall socio-emotional development (Too Small to Fail, 2016). Greenberg (2016) explains that although most caregivers are warm and responsive, chronic stress, marital difficulty, depression, or anxiety can undermine the levels of responsiveness and warmth they exhibit.

The COVID-19 pandemic has dramatically shifted the ways in which early childhood educators conduct daily activities within the classroom. Mitigation measures have created environments that are more focused on health and sanitation than on meeting the socio-emotional needs of children and staff. Mask wearing interferes with communication, as well as the nuanced facial cues associated with the display of emotion. This can make it challenging to decipher communicative intent and “read” how other people are feeling. It is not well understood how these changes have impacted how teachers facilitate socio-emotional development within their classrooms. This study addresses this gap in the literature.

Factors that influence the facilitation of the socio-emotional domain

Social Interactions

Masks and other face coverings that cover particularly the mouth are needed because the COVID-19 virus is transmitted through the airborne particles that are released when an infected person speaks (CDC, 2020; WHO, 2020). It has the potential to remain airborne in an enclosed space, which includes early childhood classrooms, for several hours (Spitzer, 2020). Face masks are thought to impair facial recognition and face identification, as well as impair both verbal and non-verbal communication and block emotional signaling between teachers and learners (Spitzer, 2020). Jack and colleagues (2009) assert that looking at the eyes alone is not enough to infer emotions.

The face plays a prominent role when it comes to communication. According to Spitzer (2020), the face provides an avenue for the communication of emotions. The mouth area of the face transmits information that is crucial for sending the message of a positive emotion such as smiling. Spitzer (2020) further asserts that facial features, such as the color of the eyes, size, and form of the nose and contour of the mouth, and their configuration do not only facilitate the identification of faces but also help with social communication and the inference of the emotions they express. Spitzer (2020) argues that because the face mask covers the bottom half of the face, it is hard to recognize the emotion being expressed by the wearer (i.e., sociability, happiness, and amusement). They further assert that the wearing of face masks impairs positive social interactions, the ability to empathize with others, and the ability to understand others (Spitzer, 2020).

Though these are known, the nature of how COVID-19 spreads preempts the need to use face masks in the context of the classroom environment to keep the teacher and children safe. Anecdotal evidence from teachers who wear masks in their early care settings points to the fact that teachers feel they are unable to fully communicate their emotions to the children in their care with just their eyes. These feelings of inadequacy have been reported anecdotally to influence the level and quality of interaction between the caregivers and children, leaving them questioning whether the children can notice emotional cues they express with their faces while wearing a mask.

Teacher Stress

Research has identified teaching as a high-stress occupation (Grayson & Alvarez, 2008). Known as one of the most stressful occupations in the U.S, teaching can lead to higher levels of stress compared to other careers. Elevated levels of stress are known to affect the health

and well-being of teachers, as well as their level of engagement with the children in their care (Greenberg et al., 2016). Increased workload, insufficient time, and large class sizes have been known to contribute to teacher stress in early year settings.

Lingaard and colleagues (2009) refer to disasters as sources of non-normative stress. They describe non-normative stress as stress that is unexpected and emerging without caution. They further explain that this non-normative stress often requires immediate adjustment, leaving no time to prepare adequately and often occurring to a person without previous experience of how to manage stress in such situations. The COVID-19 pandemic can be considered as non-normative stress because it hit the world by surprise and required immediate adjustment.

When teachers are stressed, it negatively impacts them and the children in their care (Greenberg et al., 2016). Research suggests that the four main sources of teacher stress are school organization (i.e., how the school is set up), job demands, availability of work resources, and the teacher's socio-emotional competence (Greenberg et al., 2016). Teachers do not only facilitate the learning of the children in their care, but they are also important agents of socialization, which plays a key role in helping children reach their fullest potential (Greenberg et al., 2016). Research suggests that when teachers cannot manage their stress, they may engage in negative teacher-child interactions. This influences the quality of their instruction and, therefore, influences the achievement and wellbeing of children in their care (Curbow et al., 2000; Greenberg et al., 2016; Zhai et al., 2011).

Teacher well-being is important as it has the potential to create a far-reaching ripple effect. Teachers affect child outcomes, and this, in turn, affects the outcomes of families. Many factors that contribute to teacher stress are known, however, we do not know the extent to

which the COVID –19 pandemic has impacted the stress level of early educators and how this, if at all, is influencing their ability to facilitate socio-emotional development.

Disasters and Early Childhood Education

Every year, the lives of millions of children are affected by various forms of disasters including disease outbreaks, fires, genocide, conflicts, terrorism, and hurricanes (Masten & Osofsky, 2010). History makes us aware of several health disasters that have affected children in multiple ways. Key among them in recent times being the cholera outbreak in Haiti in 2010 and the Ebola virus outbreak in West Africa in 2014. Both disasters were highly communicable diseases that affected a lot of people, including thousands of children, in diverse ways. Doogharin (2009) explains that disasters are known to lead to two kinds of effects. First, the emotional consequence of losing family members and friends. Macksoud (2000) explains that these consequences are often dependent on the meaning the individual attaches to the event. Second, the “loss of protective functions,” such as the threat to the fulfillment of basic needs and loss of homes and schools (permanently or temporarily), affects physical and socio-emotional development (Doogharin, 2009).

Over the past century, the world has encountered five deadly virus pandemics (Dunne, 2005) with COVID-19 being the sixth. In the past decade, the increase in disasters and the impending threat of a flu pandemic prompted researchers to pay attention to the potential effects of disasters on children, youth, and families (Masten & Osofsky, 2010). Masten and Osofsky (2010) and Szente (2015) emphasize that with the burgeoning of diverse types of disasters, it is important for researchers to focus on what happens to children and families in the aftermath of disasters to facilitate the development of proper interventions. Flu pandemics have been known to lead to the closure of schools because of the assumption that infectious diseases spread

quickly in school settings. Available research suggests that school closures have been a major determinant in how deadly viruses, particularly flu viruses, spread and hit the world (Rao, 2006).

A situation akin to the COVID-19 pandemic is the SARS (severe acute respiratory syndrome) epidemic that hit Asia and some parts of Europe and North America in 2003. The epidemic required the use of similar measures as are used in the mitigation of the spread of COVID-19; namely, frequent handwashing, mask wearing, and maintaining physical distance between people. Closing of schools was an additional strategy implemented to stall the spread of the virus to give public health experts time to design and consider mitigation strategies in parts of the world that were hardest hit. Schools were closed because upper respiratory infections (URI) are known to be common in early education settings (National Institute of Child Health and Human Development, 2005) with evidence suggesting that when schools are closed URIs spread less, a measure that was used during the COVID-19 outbreak across the globe (Esposito & Principi, 2020).

It is known that the SARS epidemic led to several changes in routines in early care and education settings. The most prominent being checking temperatures as children entered the school premises, as well as an emphasis on frequent handwashing throughout the school day. Rao (2006) reports that during the SARS epidemic, some schools reduced the number of contact hours for children, making the school day shorter and limiting exposure to other children. Rao (2006) also revealed that some schools did away with opportunities for free play and decreased their class sizes. Children were also asked to face the wall when eating so droplets did not spread across the room. Other measures employed during SARS included requiring children to walk through disinfectant baths before entering the school grounds, taking off shoes while in the

classroom, periodic temperature checks, constant disinfection of surfaces, and requiring children to wash their hands up to five times in three hours.

When schools reopened in Hong Kong after the SARS epidemic, changes were made to the school environment. Teachers wore aprons and masks. They engaged in physical distancing and handwashing, and the sharing of items among children was prohibited (Rao, 2006). The education curriculum for children between the ages of 3-6 was modified to include sections that were specific to SARS mitigation including mask wearing and proper handwashing. Additionally, classroom activities were modified. Circle time and storytelling for the whole classroom were no longer practiced, rather, the focus was turned more toward small group activities.

Rao (2006) also described how schools limited social interaction by canceling field trips and outdoor play or by limiting children to small groups. Educators provided individual children with toy packets specific to each child to prevent sharing and thus reduce the likelihood of transmission via fomites (i.e., disease transmission through touch with a surface or object). Researchers found that in instances where providing toys to individual children was not possible, toys were sterilized immediately after use (Rao, 2006). Concerning the effects of these modifications, researchers found that wearing face masks prevented the viewing of facial expressions, as well as presented discomfort while talking. The influence of these modifications impacted children's behavior and the behavior of the teachers in those settings. Not only were social interactions curbed but the use of face masks also impeded the ability to view and interpret facial expressions. Rao's (2006) findings of the changes and concerns surrounding mask usage in the preschool classroom are in line with anecdotal evidence around the changes

the COVID-19 pandemic brought to classroom practices in the U.S. and concerns surrounding mask use.

Research reveals that there are several useful ways to support children during and after a disaster (Szente, 2016) including the use of developmentally appropriate classroom activities, as well as providing social support through play-related activities and child-centered care.

However, Masten and Osofsky (2010) posit that in the aftermath of a disaster, a major way of helping children get back on track is to normalize routines. These authors emphasize that teachers play a primary role in achieving this, as the classroom environment is often a safe space for children after a disaster.

Szente (2015) stresses that it is important to train teachers on how to work with children during and after disasters occur, because the unexpected nature of disasters gives rise to the possibility of teachers not having specific training on effectively working with children in such situations. Szente (2015) further explains that training teachers on how to understand disaster situations and the various ways children respond and adjust to these experiences will help teachers support the children in their care more appropriately.

Summary

The COVID-19 pandemic hit the world unexpectedly. Though this is not the first pandemic to strike the world, the unexpectedness of the pandemic, coupled with how the disease spread and the changes to which the world had to adapt, influenced education (Pfattheicher et al., 2020). Research helps us understand the influence teacher-child relationships have on the socio-emotional development of children and how important the development of socio-emotional skills in the early years is to later-life outcomes (NSCDC, 2004; Jones, et al., 2017; Domitrovich et al., 2017). Additionally, research helps us understand how disasters and stressful situations influence

teachers' abilities to be fully present and effective in classroom situations (Thompson, 2018). However, what we do not know is how teachers facilitated the socio-emotional development of children in their care during the height of the pandemic. During the COVID-19 pandemic and the extent to which stress, safety precautions and professional development affected the socio-emotional development practices teachers undertook.

Current Study

The aim of this study is to understand how early educators facilitated the socio-emotional development of the children in their care since the beginning of the COVID-19 pandemic. The study seeks to understand how professional development, stress, and comfort with safety precautions influenced how early educators facilitated socio-emotional development during the COVID-19 pandemic. This study will utilize survey methodology to examine how early educators facilitated the socio-emotional development in children ages 0-5 and how teacher stress and professional development influenced this activity in their school setting.

Research Questions

The survey will seek to gather information to answer the following research question:

RQ: To what extent did stress, professional development (PD), safety practices (SP), and quarantining (Q#) affect teachers' socio-emotional development practices in the early care and education setting?

Hypothesis

H₁: Stress, professional development, safety practices, and whether or not a class was quarantined affected teachers' socio-emotional development practices in the early care and education setting (as shown in Figure 2).

Figure 2.
Conceptual Model



Chapter 3 - Methods

Procedure

The researcher created a survey based on previous literature and an existing perceived stress scale. The final survey in Qualtrics was pilot tested by graduate students to ensure quality and functionality. The researcher had a series of meetings with leaders of early childhood care and education professional organizations. Kansas Childcare Training Opportunities (KCCTO); Childcare Aware of America, and Candelen agreed to share the link to the survey via their mailing list. To reach a broader prospective respondent pool, the National Association for the Education of Young Children (NAEYC) request to disseminate research form was completed. After their approval, the survey link was posted on *hello!* (NAEYC, n.d.) NAEYC's platform for interest groups and open discussion. Additionally, emails were sent to officers of NAEYC state affiliates and the early childhood development arm of some state Cooperative Extension offices for onward distribution via their mailing lists. The NAEYC affiliate organizations in Illinois, Missouri, Delaware, and Massachusetts confirmed distribution of the survey via their mailing lists. University of Nebraska - Lincoln Extension confirmed distribution of the survey to their contacts. Additionally, a faculty member at a University in California helped distribute the survey to her early childhood education contacts in California. After the survey links were sent out, those who gave consent and were eligible to participate then completed the survey's questions on demographics, perceived stress, professional development, comfort with safety practices, as well as quarantine status. Participants were entered into a drawing and were eligible to win one of twenty \$50 gift cards after completing the survey. An attention check was integrated into the survey to ensure quality data, for example, respondents were asked what five plus three equals to make sure they were paying attention. Participants' responses were rejected

if they did not accurately answer the attention check. Participants were not required to answer every question, and less than 5 percent of the total responses were missing. Missing data were accounted for using multiple imputations (20 imputations).

Sample

The sample consisted of 460 participants who met the following inclusion criteria: (a) identified as an early childhood educator, (b) is a resident in the United States, and (c) provides early care and education to children between 0 and 5. Participants were recruited via the listservs of leading early childhood care and education organizations and responses were collected using the online data collection tool Qualtrics.

Most of the respondents were lead teachers (61.1%), with the others serving as assistant teachers (38.9%). Most of the respondents were from Kansas (26.5%) with the rest of the respondents spread across the USA (73.5%). A majority of respondents identified as female (72.4%). The remainder identified as male (27%) or non-binary and other (.6%). Additionally, 52.1% of the respondents reported residing in urban areas with the others in rural areas (26%), and suburban areas (21.9%), respectively. A majority of the respondents were aged between 26-32 (36.6%) the rest of the respondents fell within the following age ranges: 33-38 (24.9%), above age 45 (16.8%), age 18-25 (12.7%), and 39-45 (9.1%). The sample identified predominantly as White (84.1%); 7.8% as Hispanic or Latino; 3.5% as Black/African American, .70 % as Asian, 2.4% as American Indian or Alaskan native, .9 % Native Hawaiian .4 % Middle Eastern or North African and .2% as some other racial/ethnic background.

Regarding the level of education of respondents, most of the respondents did not have an associate's degree (53.3%) while the others had an associate's degree or better (46.7%).

Regarding certification, 73.7% of the respondents had at least one certificate (either a state

certification or a Child Development Associate (CDA), with the remaining 26.3% reporting not having a certificate. A majority of the respondents (36.5%) had practiced for 3-5 years; 25.9% had practiced for more than 10 years, while the others (18.9%) had practiced for 0-2 years and 18.7% had practiced for 6-10 years, respectively. In relation to accreditation, 65.89% of the respondents were working in institutions accredited by the National Association for the Education of Young Children (NAEYC), while the remaining 34.11% belonged to institutions that were not accredited by the NAEYC. A majority of the respondents (63%) reported that they teach children between the ages of 2-5, the other respondents (21.7%) teach children aged 0-2, while 15.2% teach both age groups. A majority (38.7%) of the respondents had between 8-14 children in their care, 32.6% of the respondents had between 1 and 7 children in their care, while the remaining 28.7% had more than 17 children in their care. In relation to where respondents work, 66% provide care in early learning centers, 25.7% work in family/group childcare homes, 5.9% work in Head Start programs including Migrant Head Start, and 2.4% work in other childcare facilities. A majority (75.9%) of the respondents worked in a full-day program, while 22.4% worked in a half-day program. The remaining respondents (1.7%) worked in other programs including Mother's Day out programs. A slight majority of the respondents (51.4%) reported that they do not belong to a professional organization, with the remaining 48.9% belonging to a professional organization. Of the 460 respondents, 225 belonged to a professional organization, of which 40.9% reported that their professional organization provided training and guidance on how to work with children during the pandemic. The remaining (4.1%) did not receive training and guidance or were unsure (3.9%) of whether their professional organizations provided such guidance.

Measures

Teacher Perceived Stress

Teachers reported their levels of perceived stress using the 10-Item Perceived Stress Scale (Cohen, et al.,1994). Items were measured using a five-point Likert scale: (0) *never* (1) *Almost never* (2) *Sometimes* (3) *Fairly Often* (4) *Very Often*. Sample items include “*How often are you upset because of something that happened unexpectedly?*” and “*How often do you feel confident about your ability to handle your personal problems?*” The measure demonstrated adequate internal reliability for the sample ($\alpha = .76$, $M = 1.86$, $SD = 5.53$).

Professional Development

Professional development was measured using four individual questions from the survey. Participants reported the range of hours (None, 1-5 hours, 6-10 hours, 11-15 hours, more than 15 hours) of both general professional development (PDGen) and socio-emotional development (SEPD) focused training they had attended since the beginning of the pandemic from their professional organizations, as well as the facilities they work in. To determine the hours of general professional development a teacher had accessed the equation *PDGen-SEPD* was used.

The questions were (1) *How many professional development sessions organized by your professional organization on how to work with children during the pandemic have you attended since the beginning of the COVID-19 pandemic?* (2) *Since the beginning of the COVID-19 pandemic, how many of the sessions organized by your professional organization that you attended were targeted at how you can facilitate the socio-emotional development of children in your care?* Similar questions were asked related to the hours of professional development provided by their facilities. (See Appendix A for specific questions).

Comfort with Safety Practices

Comfort with safety practices was measured using four items created by the researcher because of the lack of previously used measures that measure classroom safety practices during pandemics such as COVID-19. Teachers were presented with the question stem: *“This section asks questions about safety precautions. Safety precautions are referred to as those activities that you do that are aimed at keeping both you and the children in your care safe. Since the beginning of the COVID-19 pandemic ...”* (see Appendix A for full list). This list of questions was created based on the safety precautions associated with COVID-19. For each question, respondents were asked to mark one of the following responses: *strongly disagree, disagree, neither agree nor disagree, agree,* and *strongly agree*. A reliability test was conducted for the four items. One item was deleted because the scale had a higher Alpha value without it. The measure demonstrated adequate internal reliability for the sample ($\alpha = .71$, $M = 11.35$, $SD = 2.28$).

Quarantine Status

The quarantine status of a teacher’s class was measured by the single question, *“Since the beginning of the pandemic, has your classroom been quarantined or closed because of a suspected case of COVID-19?”*, which required a yes or no response.

Socio-emotional Development Practices

Socio-emotional development practices were measured using nine items created by the researcher because of the lack of previously used measures that measure classroom socio-emotional development practices during pandemics such as COVID-19. Respondents were presented with the question stem: *“Please rate from strongly disagree to strongly agree how these questions reflect your thought...”* (See Appendix A for full list). For each question, respondents were asked to mark one of the following responses: *strongly disagree, disagree, neither agree nor disagree, agree,* and

strongly agree. A reliability test was conducted for the nine items. The measure demonstrated adequate internal reliability for the sample ($\alpha = .79$, $M = 32.39$, $SD = 5.75$).

Demographics

Participants were asked to report their race/ethnicity, gender, state of residence, setting (rural/urban/sub-urban), and level of education. Sample questions include: “*What is your current role in the early education setting*” and “*I work in...*” A full list of items is listed in the survey instrument in Appendix A.

Control Variables

Race/ethnicity, age group of children taught, gender, role, level of education, program type and testing frequency served as controls in the model. The controls were selected based on their strong correlation with socio-emotional development practices.

Analysis Plan

SPSS version 28 was used for all analyses. First, normality of data was assessed using descriptive statistics. Bivariate correlations were examined for all variables of interest (see Table 1). Reliability testing was conducted for the researcher-developed measures. Finally, a series of hierarchical linear regressions was used to examine the relationships between teacher-perceived stress, professional development, comfort with safety practices, and whether their class was quarantined on socio-emotional development practices. Missing data in the data set were handled using multiple imputation.

Chapter 4 - Results

After demographic variables were dummy coded, Bivariate correlations were examined for correlations between key variables and the dependent variable (see Tables 6-8). White non-Hispanic was positively correlated with SEDP ($r = .221, p < .001$). Teaching either 0-2 - or 3-5-year-olds was negatively correlated with SEDP ($r = -.127, p = .007$). Being in the lead teacher role was positively correlated with SEDP ($r = .093, p = .047$). Identifying as female was also positively correlated with SEDP ($r = .134, p = .004$). Having an associate degree or higher was positively correlated with SEDP ($r = .157, p < .001$). Working in a full day program was positively correlated with SEDP ($r = .095, p = .042$). Frequent testing requirement was negatively correlated with SEDP ($r = -.157, p < .001$). Although these variables were significantly correlated, their VIF and tolerance figures were satisfactory ($VIF < 2$). A means table of all the variables included in the regression is provided in tables 1-5 below.

Table 1.*Teachers' Reports of the Number of Professional Development Hours Attended (N=460)*

Variable	No hours n (%)	1-5 hours n (%)	6-10 hours n (%)	11-15 hours n (%)	15+ hours n (%)	<i>M</i>	<i>SD</i>
Total Hours of professional development attended (ProfOrg)	282 (61.3%)	67 (14.6%)	58 (12.6%)	32 (7%)	21 (4.6%)	.79	1.18
Total Hours of socio-emotional development professional development attended (ProfOrg)	290 (63%)	74 (16.1%)	57 (12.4%)	26 (5.7%)	13 (2.8%)	.69	1.01
Total Hours of professional development attended (Facility)	152 (33%)	108 (23.5%)	99 (21.5%)	45 (9.8%)	56 (12.2%)	1.45	1.36
Total Hours of socio-emotional development professional development attended (Facility)	167 (36.3%)	142 (30.9%)	88 (19.1%)	44 (9.6%)	19 (4.1%)	1.14	1.14

Note: Hours of professional development was scaled 0-4. 0 = no hours 1 = 1-5 hrs. 2 = 6-10 hrs. 3 = 11-15 hrs. 4 = more than 15 hrs.

Table 2.*Teachers' Reports on Comfort with Safety Practices (N= 460)*

Question	Strongly Disagree n (%)	Disagree n (%)	Neither agree nor disagree n (%)	Agree n (%)	Strongly Agree n (%)	<i>M</i>	<i>SD</i>
I have been comfortable with not maintaining at least 6ft physical distance with the children in my care.	9 (2%)	49 (10.7%)	119 (25.9%)	190 (41.3%)	93 (20.2%)	3.67	.98
I have been comfortable with the types of cleaning routines we use in our classroom.	6 (1.3%)	30 (6.5%)	94 (20.4%)	189 (41.1%)	141 (30.7%)	3.93	.94
I have been comfortable cleaning the body fluids of children in my care. For example, runny nose, wiping tears, changing diapers.	7 (1.5%)	40 (8.7%)	117 (25.4%)	194 (42.2%)	102 (22.2%)	3.75	.95

Note: Comfort with safety practices was scaled 1-5. 1= *Strongly disagree* 2= *Disagree* 3= *Neither agree nor disagree* 4= *Agree* 5 = *Strongly agree*

Table 3.*Teachers' Reports on Socio-Emotional Development Practices (N= 460)*

Question	Disagree n (%)	Strongly Disagree n (%)	Neither agree nor disagree n (%)	Agree n (%)	Strongly Agree n (%)	<i>M</i>	<i>SD</i>
The pandemic has affected my ability to engage children in activities that facilitate their socio-emotional development	54.3 (11.8%)	65.3 (14.2%)	139.4 (30.3%)	152.1 (33%)	49 (10.7%)	3.16	1.16
The cleaning routines, including rules and regulations associated with COVID-19, takes away the time I have to plan experiences focused on their socio-emotional development	36 (7.8%)	74 (16.1%)	128 (27.8%)	156 (34%)	66 (14.3%)	3.31	1.14
Wearing a mask makes it difficult for me to express my emotions when I interact with children	20 (4.3%)	49 (10.7%)	108 (23.5%)	163 (35%)	120 (26.1%)	3.68	1.1
I am comfortable hugging children in my care who are visibly distressed (e.g., crying, frustrated, feeling ill)	7 (1.5%)	33 (7.2%)	92 (20.0%)	141 (30.7%)	187 (40.7%)	4.02	1.02
I am comfortable allowing children to give each other a hug as a way of expressing emotion or providing comfort.	8 (1.7%)	40 (8.7%)	114 (24.8%)	160 (34.8%)	138 (30.0%)	3.82	1.02

Note: Socio-emotional Development Practices was scaled 1-5. 1= *Strongly disagree*, 2= *Disagree* 3= *Neither agree nor disagree* 4= *Agree* 5 = *Strongly agree*

Table 4.
Teachers' Reports of Perceived Stress (N= 460)

Question	Never n (%)	Almost never n (%)	Sometimes n (%)	Fairly Often n (%)	Very Often n (%)	<i>M</i>	<i>SD</i>
How often are you upset because of something that happened unexpectedly?	24 (5.2%)	102 (22.2%)	225 (48.9%)	74 (16.1%)	35 (7.6%)	2.99	0.95
How often do you feel that you are unable to control the important things in your life?	30 (6.5%)	104 (22.6%)	182 (39.6%)	106 (23%)	38 (8.3%)	3.04	1.03
How often do you feel nervous and "stressed"?	17 (3.7%)	86 (18.7%)	195 (42.4%)	115 (25%)	47 (10.2%)	3.19	0.98
How often do you feel confident about your ability to handle your personal problems?	7 (1.5%)	70 (15.2%)	164 (35.7%)	142 (30.9%)	77 (16.7%)	3.46	0.99
How often do you feel that things are going your way?	6 (1.3%)	71 (15.4%)	188 (40.9%)	146 (31.7%)	49 (10.7%)	3.35	0.91
How often do you find that you cannot cope with all the things that you have to do?	29 (6.3%)	122 (26.5%)	183 (39.8%)	96 (20.9%)	30 (6.5%)	2.95	0.99
How often are you able to control irritations in your life?	12 (2.3%)	73 (15.9%)	180 (39.1%)	144 (31.3%)	51 (11.1%)	3.33	0.96
How often do you feel that you are on top of things?	15 (3.3%)	78 (17%)	163 (35.4%)	150 (32.6%)	54 (11.7%)	3.33	1.0
How often are you angered because of things that are outside of your control?	29 (6.3%)	116 (25.2%)	188 (40.9%)	98 (21.3%)	29 (6.3%)	2.96	0.99
How often do you feel difficulties are piling up so high that you cannot overcome them?	35 (7.6%)	120 (26.1%)	174 (37.8%)	100 (21.7%)	30 (6.5%)	2.94	1.03

Note: Perceived Stress was scaled 0-4. 0= *Never* 1=*Almost Never*, 2 = *Sometimes*, 3 = *Fairly Often*, 4 = *Very Often*

Table 5.*Means Table of Covariates used in the Regression Model*

Question	Yes	No	<i>M</i>	<i>SD</i>
Since the beginning of the pandemic, has your classroom been quarantined or closed because of a suspected case of COVID -19?	202 (43.9%)	258 (56.1%)	1.56	.50
Does your center use an SEL curriculum?	227 (49.3%)	233 (50.7%)	1,52	.71
Facility has a frequent testing requirement	291 (63.3%)	169 (36.7%)	.63	.48

Note: The variables are dummy coded. 1=yes 0=No

Table 6.

Correlation table for relationship between Teachers' Socio-emotional Development Practices During COVID-19 Pandemic and General Demographic Variables (N = 460)

Variables	1	2	3	4	5	6	7
1 White Non-Hispanic							
2 Lead Teacher	.052						
3 Female	.008	.004					
4 Teach one age group	-.059	-.140**	-.099*				
5 Urban	.018	-.083	-.126**	.114*			
6 Kansas	.043	.217**	.293**	-.266**	-.252**		
7 6+ years' experience	.094*	.340**	.218**	-.253**	-.117*	.183**	
8 SEDP	.211**	.093*	.134**	-.127**	-.045	.077	.099**

Note: All variables except SEDP are dummy coded. Non-Hispanic White=1 Non-White=0; Lead Teacher=1 Assistant Teacher=0; Female=1 Male=0; Teach one age group=1 Teach Both age groups=0; Urban=1 Rural=0; Kansas=1 Other States=0 ; Six or more years' experience = 1 Less than six years of experience = 0.

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 7.

Correlation table for relationship between Teachers' Socio-emotional Development Practices During COVID-19 Pandemic and Practice-Related Demographic Variables (N = 460)

Variables	1	2	3	4	5	6	7
1 Below Associates Degree							
2 At least one certificate/license	.015						
3 Member of pro. organization	.045	.159**					
4 Accredited by NAEYC	.026	.382**	.142**				
5 Facility Uses SEL Curriculum	-.005	.282**	.191**	.409**			
6 Center Based Program	-.139**	.197**	.107*	.202**	.195**		
7 Full Day Program Only	-.040	-.060	.084	.011	.040	-.058	
8 SEDP	-.157**	-.060	-.076	.002	.091	.087	.095*

Note: All variables except SEDP were dummy coded. Below Associates=1 Above Associates = 0; At least one certificate/license=1 No certificate/license=0; Member of a professional organization = 1 Not a member of a professional organization=0; Accredited by NAEYC = 1 Not Accredited by NAEYC = 0 ; Facility uses an SEL Curriculum = 1 Facility does not use an SEL curriculum =0 ; Center Based program = 1 Other Program = 0 ; Full day program =1 Other Program=0

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8.

Correlation table for relationship between Teachers' Socio-emotional Development Practices During COVID-19 Pandemic and Safety-Related Demographic Variables (N = 460)

Variables	1	2	3	4	5	6
1.Close contact policy change						
2.Closed start of the pandemic	.175**					
3.Vaccination Status	.137**	.197**				
4.Facility requires frequent testing	.173**	.506**	.165**			
5.Teacher's mask wearing	.226**	.100*	.201**	.020		
6.Children's mask wearing	.166**	.217**	.103*	.282**	.532**	
7. SEDP	-.013	.000	.076	-.157**	.035	-.042

Note: All variables except SEDP were dummy coded. Closed at the beginning of the pandemic =1 Did not close at the beginning of the pandemic= 0 Close contact with children policy changed = 1 Close contact with children policy did not change = 0 ; Vaccinated = 1 Not vaccinated =0; Frequent Testing = 1 No testing requirement = 0 ; Teacher wears a mask always = 1 Teacher sometimes wears a mask = 0 ; Child always wears a mask=1 Child sometimes wears a mask=0.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9.

Summary of Hierarchical Regression Analysis for Variables Predicting Socio-emotional Development Practices of Early Educators during the COVID-19 Pandemic. (N = 460)

Variables	B	SE	β	B	SE	β
Step 1						
Non-Hispanic White (Racial Identity)	.323	.087	.174***	.238	.080	.128***
Above Associates Degree	-.067	.066	-.050	-.009	.061	-.006
Uses SEL Curriculum	.171	.075	.124*	.142	.070	.103*
Frequent testing required	.042	.083	.029	.041	.076	.029
R^2	.096***					
F	12.04					
Step 2						
Accessed PDGen by ProfOrg	-	-	-	.031	.062	.022
Accessed SEPD by ProfOrg	-	-	-	-.025	.031	-.040
Accessed PDGen by Facility	-	-	-	-.028	.038	-.032
Accessed SEPD by Facility	-	-	-	.032	.030	.054
Total Perceived Stress	-	-	-	.013	.006	.103*
Comfort with Safety Practices	-	-	-	.356	.036	.422***
Class quarantined	-	-	-	-.045	.059	-.033
R^2	.281***					
F	15.90					
ΔR^2	.185***					
ΔF	3.864					

Note: Covariates and class quarantine status are dummy coded. Non-Hispanic White=1, Non-White=0, Below Associates=1 Above Associates = 0; Facility uses an SEL Curriculum = 1 Facility does not use an SEL curriculum = 0; Frequent Testing = 1 No testing requirement = 0; Class was quarantined = 1 Class not quarantined = 0

* $p < .05$. ** $p < .01$. *** $p < .001$.

Testing the Hypothesis

The regression examined the relationship between participation in professional development (PD) (both general and socio-emotional development focused), perceived stress, comfort with safety practices and quarantine status on the socio-emotional development practices of early educators. Race, use of SEL curriculum and frequent testing (all controls) were significantly related to SEDP. Increased stress and increased comfort with safety precautions (two of the four independent variables) are significantly related to SEDP.

In step 1, which was the model with covariates, identifying as white ($\beta = .174, p < .001$) and using an SEL curriculum ($\beta = .164, p = .001$) was significantly related to an increase in SEDP. Frequent testing requirement by the facility ($\beta = -.208, p < .001$) was significantly related to a decrease in SEDP. Being educated above an associate's degree level ($\beta = .072, p = .130$) was not significantly related to SEDP. The model explained 9.6 % of the variance in SEDP, $R^2 = .096, F(4,455) = 12.040, p < .001$.

In step 2, when the variables for professional development, stress, comfort with safety practices and quarantine status were added to the model, identifying as white ($\beta = .127, p = .003$), using an SEL curriculum ($\beta = .125, p = .011$) and frequent testing requirement ($\beta = -.196, p < .001$) by the facility, remained significantly related to SEDP. Being educated above the associate's degree level ($\beta = .013, p = .764$) was not significantly related to SEDP.

General hours of professional development (PDGen) from the professional organization (ProfOrg) attended ($\beta = .024, p = .577$), hours of socio-emotional development focused professional development (SEPD) from the ProfOrg attended ($\beta = -.031, p = .516$), hours of PDGen by facility attended ($\beta = -.037, p = .389$) and hours of SEPD by facility attended ($\beta = .070, p = .150$) were not significantly related to SEDP. Perceived stress ($\beta = .114, p = .010$) and

comfort with SP ($\beta = .428, p = .000$) significantly predicted an increase in SEDP. Quarantine status ($\beta = -.019, p = .657$) was not significantly related to SEDP. The model explained 28.1 % of the variance in SEDP, ($R^2 = .281, F(16,443) = 15.904, p < .001$).

Summary of model results

Covariates entered in the model, including identifying as White Non-Hispanic, using an SEL curriculum, and frequent testing requirement by the facility, were significantly related to SEDP. Independent variables including increased stress and increased comfort with safety precautions were significantly related to SEDP.

Chapter 5 - Discussion

The purpose of this study was to gain a better understanding of the extent to which professional development (PD), both general (PDGen) and socio-emotional development-focused (SEPD), perceived stress (TPS), comfort with safety practices (SP), and class quarantine status (QS) influenced early educators' socio-emotional development practices (SEDP) in the Early Care and Education (ECE) setting during the COVID-19 pandemic.

The results of the present study support the hypothesis that teachers' SEDP (proximal processes) in the ECE setting during the COVID-19 pandemic were influenced by teachers' race, perceived levels of stress (individual characteristics) and their comfort with safety practices (microsystem level) (see Table 9). The results of this study provide supporting evidence that there is a significant relationship between teachers' perceived level of stress, their comfort with safety practices, and the socio-emotional development practices of these early educators during the COVID-19 pandemic. The results lend support to the underlying theory of this study and show how elements in the various systems influence proximal processes.

This section presents key findings of this study; the relationships that increased stress and increased comfort with safety practices have with socio-emotional development practices. Additionally, the relationship between race, the use of an SEL curriculum and frequent testing requirements on socio-emotional development practices are discussed because of their significant relationships with socio-emotional development practices when added to the model as controls. Lastly, research, policy, and practice implications along with the strengths and limitations of the present study will be shared.

First, except for maintaining six-foot physical distance and mask wearing, most other COVID-19 mitigation strategies were not unfamiliar to the early care and education profession.

At the beginning of the pandemic, early educators wanted assurance of the means to keep them safe so they could keep working with children as the world sought a more permanent solution to the crises presented by the pandemic. The result of the significant relationship between early educators' feelings of safety, measured by their comfort performing activities that were likely to expose them to COVID-19 (e.g., close contact, wiping bodily fluids of children in their care) and increased socio-emotional development practices (see Table 9) raises interest for two main reasons. In spite of a majority of the respondents having vaccinations (83.3%) and agreeing that they were comfortable with safety practices (65.5%), neither vaccination status, nor adherence to mask wearing practices (40.5% always wore a mask and 27.3% of the children in their care always wore a mask) were significantly correlated with socio-emotional development practices as shown in Table 8, although at the time of data collection, vaccination and mask wearing were known safety practices directly related to the mitigation of the spread of COVID-19, as well as providing an assurance of reduced risk of becoming severely ill from COVID-19 (Coffin & Rubin, 2021). This non-correlated relationship indicates that other factors beyond vaccination status and protection (through mask wearing) influenced the relationship between comfort with safety practices and socio-emotional development practices.

The ever-changing nature of COVID-19, especially the difference in variants and their related transmission rates and symptoms, combined with misinformation on children's ability to transmit the virus likely influenced levels of comfort. A teacher's level of comfort may have aligned with their understanding of the risk and information they had related to the susceptibility of children to COVID-19 and their role as transmitters of the virus. Some researchers have argued that children are known to be less susceptible to the virus (Lee et al., 2020), this perception possibly influenced practice. However, this argument may be countered by the

contention that children are not less susceptible to COVID-19 (Coffin & Rubin, 2021), rather, the low infection rates seen at the beginning of the pandemic occurred because schools closed and thus children were not serving as vectors for disease transmission. Depending on which perspective aligns with that of the early educator (i.e., whether they believed children were vectors of the virus or that children were less susceptible to the virus), their level of comfort with safety practices may have been influenced.

Most of the activities facilitating optimum socio-emotional development in the early years could seem risky in COVID-19 times, however, an alternative explanation would point to the relationship between increased testing frequency and comfort with safety practices. In this sample, though a majority (63.3%) worked in facilities that required frequent testing (i.e., required to test a minimum of once a week), which can be seen as a safety precaution, socio-emotional development practices significantly decreased when teachers engaged in frequent testing. This can be explained through health and well-being support and cost-benefit analysis lenses simultaneously. Early educators are known to be low-income earners (often below the poverty line), who have less access to health care benefits such as health insurance (US Department of Health and Human Services, 2015), as well as paid time off to care for themselves and their families (Bureau of labor statistics, 2019). Taking these factors into consideration, contracting COVID-19 might result in an expensive hospital stay for these early educators, particularly if they had to cover all or some of the bills related to COVID-19 treatment themselves. The risk could drive early educators to decrease their SEDP because a positive test could result in loss of income and extra unexpected costs, which they could not feasibly afford. This self-protection, though important, likely translates to classroom practices, in this case socio-

emotional development practices, but due to the limitations of this study inferring the causal link requires future research to elucidate these processes.

The most compelling explanation for the significant relationship between increased comfort with safety practices and increased socio-emotional development practices is that the spread of COVID-19 depends on personal safety. Scant research exists on the influence of teachers' feelings of safety on their practice in the early years because of the emphasis on how to facilitate socio-emotional development by making children feel safe in the classroom (e.g., Berson & Baggerly, 2009; Côté-Lussier & Fitzpatrick, 2016). The context in which these early educators practiced likely contributed to their comfort with safety practices, but this hypothesis requires further investigation because of the limitations this cross-sectional design. Additionally, determining a causal link also requires more research to understand the directionality of these processes.

The second key finding of this study is that increased levels of stress were significantly related to increased levels of socio-emotional development practices, which was unexpected, as based on extensive literature on stress, one would expect the reverse, namely increased stress positively correlated with decreased socio-emotional development practices. However, in the classroom, several factors are known to influence teacher-child interactions (Ho, et al., 2012; Skaalvik & Skaalvik, 2007), including teachers' stress levels (i.e., psychological and job-related, level of education and exposure to professional development (e.g., Choi & Dobbs-Oates, 2016; Zinsser et al., 2013). However, in this sample, level of education did not influence classroom practices, and rather than low stress levels increasing teacher-child interactions, increase in stress positively influenced teacher-child interactions. Socio-emotional learning practices in early years classrooms are known to be influenced by teachers' psychological well-being (measured in this

study as perceived stress) (Buettner, et al., 2016; Jennings & Greenberg, 2009). Research by Buettner and colleagues (2016) further suggests that teacher's responsiveness toward children in their care is influenced by their psychological load, which includes stress. In this study, increased stress positively correlated with socio-emotional development practices. Through the lens of Bronfenbrenner and Morris's (2006) PPCT Model, the stress experienced by the early educators may fall within any of the systems of the teachers' ecological space, particularly considering the prevailing contextual factors such as time. Considering that a large portion of respondents (78.9%) reported experiencing a moderate level of perceived stress (as indicated by their responses to the perceived stress scale), the relationship between increased stress and increased socio-emotional development practices requires attention.

Understanding the relationship between stress and increased socio-emotional development practices begins by considering the context of the chronosystem during data collection, when uncertainty and confusion about the virus and its mode of transmission had eased to a degree, but despite the fact uncertainty and confusion about the disease had waned, incidence and prevalence of the virus were still present. During this time teachers began to experience an additional layer of generalized stress associated with the pandemic that likely affected their classroom practices, yet there are more specific stressors known to influence teachers and their classroom practices (Ferguson et al., 2012; Skaalvik & Skaalvik, 2015). The general stress derived from living during a pandemic was not entirely job-related, but rather a combination of psychological and job-related stress. A combination known to negatively affect teacher practices (Greenberg et al., 2016).

Another finding that warrants attention is the statistically significant relationship between the use of a socio-emotional learning curriculum and increased socio-emotional

development practices of teachers. SEL curricula are structured to facilitate the socio-emotional development of children in areas such as managing emotions and forming healthy relationships (Durlak & Weissberg, 2011). Early care and education professionals are teachers, and they are the ones implementing these curricula (Humphries et al., 2018). It is possible that contents of pre-pandemic SEL curricula influenced practice during the pandemic because of specific attention to socio-emotional development in their context. Future research should investigate to what extent the teachers' pre-pandemic SEL curriculum training and experience equipped them with resources to perform socio-emotional development practices in the context of COVID-19.

Professional development was not significantly related to socio-emotional development practices, which seems reasonable in this study because there are several factors influencing the translation of knowledge gained during professional development into classroom practice (Sheridan, et al., 2009). Even if direct professional development-to-in-classroom translation had occurred, only a little over 50% of the respondents reported they had received ample training on how to facilitate the socio-emotional development of children in their care. Developing a clear understanding the extent to which the remaining proportion of them possessed the necessary skills for SEDP would likely inform future practice and policy. Like Hamre and colleagues (2017) posit we do not know how much professional development is enough. However, we do know that several factors such as duration, and intensity (Garet et al., 2001; Landry et al., 2010) and specialization of the content (Sheridan , et al., 2009) of targeted professional development when paired with coaching (Gupta & Daniels , 2012) has the potential to substantially impact classroom practice. To be able to fully understand the impact of specialized training on how to work effectively with children during crises such as COVID-19, it is imperative for there to be concerted research, policy and practice efforts. Practitioners, researchers, and policymakers need

to consider the development of strategies and programs that allow for the provision of adequate, specialized training to early educators in times of crises.

The relationship between identifying as white (individual characteristic) and increased socio-emotional development practices was statistically significant (see Table 9). An analysis of access to and participation in ample education on how to facilitate the socio-emotional development of children revealed that only 32.2% of early educators of color, compared to 54.14% of white early educators, received ample education on how to facilitate the socio-emotional development of children in their care. Though both level of education and professional development were not significantly related to socio-emotional development practices, the possibility exists that white early educators were exposed to informal sources of professional development. These may not have been accessible to early educators of color because of the known barriers (such as lack of access to high quality education, and low remuneration which has the potential to influence their network and ability to access high-quality professional development respectively) they experience in the early care and education field (CSCCE, 2021; Foundation for Child Development, 2021; Urban Institute, 2021).

In this sample, only 32.2% (N=35) of educators of color worked in facilities that used a SEL curriculum as compared to the 54.1% (N=242) of white early educators worked in facilities that used an SEL curriculum. This glaring disparity may have contributed to the observed decrease in socio-emotional development practices among educators of color. Moreover, systemic pressures on women of color during the pandemic, including known disparities in income (Whitebook et al., 2018; Center for the Study of Childcare Employment (CSCCE), 2020) and access to healthcare benefits between educators of color (CSCCE, 2021), could correlate to disparate effects on the socio-emotional practices of teachers of color.

Study implications

This study provides preliminary evidence of the factors related to socio-emotional development practices in the classroom during the COVID-19 pandemic. Implications for research, policy, and practice are provided below. In considering these, it is important to recognize that the children of today will grow into the families of tomorrow. Children whose critical periods of development fall between the beginning of 2020 until the end of the pandemic will grow up in a cohort affected by a global crisis. Thus, the results of this study call attention to the factors that are potentially influencing the developmental trajectory of these future families.

Research

Much research literature on child safety exists, yet limited work on teacher safety, beyond psychological well-being (e.g., Kim et al., 2021), finds representation in extant studies. As the present study suggests, increased comfort with safety practices relates to socio-emotional development practices. Research exploring the process and the specific safety practices and motivations that drive teachers to be comfortable would benefit economic and public health research. Thus, extending the current research by examining the specific elements related to safety practices possibly influencing teachers' socio-emotional development practices will be beneficial to the development of policies and programs meant to improve practice in the early years space, should the world face a pandemic similar to COVID-19. Additionally, future research is needed to assess whether comfort with safety practices resulted from existing mandates and/or COVID infection rates in the location of these educators and if that could provide a more nuanced explanation for the results. A final direction for future research is to examine possible macrosystem effects on comfort with safety practices and the extent to which

cultural elements like news media, social media, and public health messaging influence this factor.

The long-term effects of COVID mitigation practices and policies on socio-emotional development of this cohort of children from both the teacher practice and child outcome perspectives requires further investigation. Socio-emotional outcomes for children, such as shared problem solving, and development of empathy likely depend on teachers' expressions of socio-emotional markers and their skill in deciphering facial information from children. Investigating the extent to which *teacher* mask wearing affected their own socio-emotional development practices should prove informative. For example, children learning to interact with a teacher could be impeded in responding appropriately due to the limited communication information the teacher may provide due to their wearing a mask, which could then adversely affect their ability to engage in constructive SEL practices. In this case, the teacher's mask wearing is a primary influence on the child, but the secondary effect of trying to understand a masked child trying to convey information degraded by her own mask wearing presents challenges. Due to the likely adverse effects of mask wearing, social distancing, and other mitigation strategies on children's social emotional development, these studies require prioritization.

Increased job-related stress influences practice in the preschool classroom (Pianta & Hamre, 2009) and leads to burnout (Greenberg et al., 2016). However, we do not know if this holds true during the COVID-19 pandemic, because the perceived stress scale (PSS) used in this study is a general measure of stress (Cohen et al., 1983) and allows not for the teasing out of specific sources of stress that impacted early educator socio-emotional development practices. Stress is multidimensional. Dealing with teacher stress requires intentional focus across multiple

facets, including the teachers themselves, people in authority (administrators and policy makers), and families (Prilleltensky , et al., 2016). Thus, future research should look specifically at job-related stress and how it influenced early educator socio-emotional development practices during the COVID-19 pandemic. This will help determine the relationships among job-related stress, psychological stress and socio-emotional development practices in the early years' classroom.

Further, understanding the source of stress will help develop strategies to mitigate the negative effects of stress based on their source, whether psychological or job-related. Recent research has shown that interventions focused on specific types of stress, namely teachers' psychological (Hatton-Bowers, et al., 2019) and job-related stress (Lang, et al., 2018), influence teacher support of children in the classroom. Thus, knowledge on how different kinds of stress influence practice should help determine a more informed approach to assisting teachers in responding to crises in the future to both assist them and by proxy, the children in their care.

Racial disparities exist in the early years space (CSCCE,2021). These disparities unfortunately do not only impact early educators, but also the children in their care. The impact of racial disparities has a rippling effect across generations (Winship, et al.,2022), impacting the families and teachers of tomorrow. The findings of the current study revealed racial disparities in educators' use of socio-emotional development practices. As a society, the need exists to focus on bridging the gap of existing racial disparities in early childhood teacher training, education, and remuneration to ensure equitable access to education for all children while also providing equitable space for all teachers to thrive. Additional steps should be taken to understand the specific factors that influenced their classroom practice as related to the variables measured in this study.

Another area of research that warrants exploration is the relationship between the use of SEL curricula and socio-emotional development practices. In order to make research-informed policies and recommendations on the universal use of SEL curricula in early years classrooms during crises, it will be necessary to explore SEL curricula to understand how they contributed to socio-emotional development practices during the COVID-19 pandemic.

Practice

Several practice-related implications of this study exist. The possible impact of COVID-19 on socio-emotional development of young children during the pandemic calls for special attention. Grindal and colleagues (2021) found that teachers engaged in socio-emotional development practices with children during the COVID-19 pandemic. However, the scope and format of practices had changed, which may be the case for this sample. Therefore, a need exists for intentional focus on socio-emotional development in this cohort if the benefits of optimum socio-emotional development of today's children is to emerge in the future. That only 50.8% of the respondents agreed that they had had ample education on how to facilitate socio-emotional development of children in their care during the pandemic and only 47.8% felt their professional development needs were met through the professional development sessions, they had attended during the COVID-19 pandemic drives this recommendation because of the relationship between teacher practices and child socio-emotional development outcomes. Lastly, although there are existing family support programs, family scientists specializing in program development should develop targeted programs that emphasize the specific socio-emotional development practices early educators may have modified in order to supplement the socio-emotional development practices their teachers provide in school. Providing holistic child-in-culture-in-context support

for this cohort of children seems the best route for providing them with the best chance at meeting their individual socio-emotional developmental potential.

Policy

The COVID-19 crisis had a significant effect on socio-emotional development supports available to families raising young children (Spinelli et al., 2020). Policymakers should establish policies that equip parents and primary caregivers to embrace the importance of socio-emotional development across domains (i.e., home, school). Micro-level policies should incentivize caregivers to help parents to actively engage in socio-emotional development practices at home and assist in ameliorating the deficits in exposure to quality socio-emotional development experiences.

Mitigating the effects of COVID-19 on child outcomes requires joint effort from schools and families. This begins by focusing on the early care and education workforce's needs. Consideration of the safety of the early educators needs to be paramount. Having a united voice on safeguarding the health and safety of early educators ensures equitable access to socio-emotional development practices in the early years, as safety drives practice in this setting. Thus, parents should advocate for measures and policies that help keep teachers safe, since this has shown to be related to increased socio-emotional development practices.

Next, investment in communication strategies to guide adults working with children to provide protective factors and reduce the risk of sub-optimal socio-emotional development of children requires significant attention. This is because clarity of procedures to operate safely emerged as critically important and may have influenced practices in the early years setting.

Again, COVID-19 is not the last pandemic the world will see, and the world needs to prepare for the future. Having an established framework in place as a pandemic preparedness strategy would seem beneficial.

Study Limitations

There are at least four potential limitations of this study. A first limitation is related to the ever-changing nature of COVID-19, and the differences in how states were affected by COVID-19. Additionally, the intensity and duration of stay-at-home orders, as well as community spread rates across different states and communities, provide a myriad of factors that could have affected the results of this study. However, it seems safe to assume that the waxing and waning nature of COVID-19 potentially influenced the results. Likewise at the time of data collection, every state in the United States had experienced its own peak, each of which occurred at a different time.

The second limitation is that this is a cross-sectional study, which means that causal inference remains indeterminant. A qualitative study (through interviews or observation), or mixed methods approach in the future could inform a more in-depth understanding of the factors influencing SEDP in early childhood care and education settings, as well as other contextual factors like classroom interaction that cannot be accurately measured via surveys. Longitudinal data will likely provide the most robust understanding of the factors studied here.

Additionally, the professional development questions asked in this study focused on sessions provided by the educators' facilities and professional organizations of which they were members. Considering that there are several sources of both formal and informal professional development, there is the possibility that respondents received professional development from sources not asked about in this study. The knowledge gained from these sources may have

influenced the socio-emotional development practices. In the future, an examination of other sources of professional development may prove beneficial.

Lastly, the likelihood of respondents participating in the study could have been reduced because of research fatigue. Respondents may have been inundated with surveys, particularly because of the novelty of COVID-19 and thus decided not to participate in the study. While the number of responses to this survey were adequate for these analyses, a larger and more diverse sample would add generalizability to the larger population of early care and education professionals.

Regardless of these limitations, the study has the following strengths: it had a good response rate with at least one response from each state in the United States of America with a reasonable sample size. This study provides real-time and context-specific data having the potential to influence several factors of a child's lifespan.

Conclusion

Although the causal linkages of the factors considered in the current results must be established by future research, the present study provides support for the relationship between stress, comfort with safety practices, and socio-emotional development practices. This study revealed that early educators continued to facilitate the socio-emotional development of children in their care at a critical point in human history. This is despite the uncertainty they were experiencing due to the pandemic. This study should be seen as an important first step toward understanding the factors influencing socio-emotional development practices in the early years during the middle of the COVID-19 pandemic. These results represent the first direct consideration of the relationship between professional development, perceived stress, comfort with safety practices, and quarantine status on the socio-emotional development practices of

teachers in the early years. Although we cannot draw causal inferences from this study, the results of this study provide support pointing to the promise of concerted efforts to raise socio-emotionally competent adults by investing in early childhood educators' successes. This study contributes to a growing body of evidence on the factors influencing practice in the early years space during a pandemic such as COVID-19.

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Appendix A - Data Collection Instrument

(If person chooses do not agree on the consent, route to the end of the survey, the thank you page.)

The purpose of this section is to collect general information about you including demographic information about yourself.

You have received this survey because you currently care for one or more children as a childcare provider.

1. What is your current role in the Early Childhood Classroom?
 - a. Lead teacher
 - b. Assistant Teacher
 - c. Other (Please state)
2. In which state are you located (List of states appear as a drop-down menu)
3. What is your gender?
 - a. Male
 - b. Female
 - c. Non-Binary
 - d. Prefer not to say
 - e. Other- please specify.
4. “Which categories describes you? Select all boxes that apply.”
 - a. “White”
 - b. “Hispanic, Latino, or Spanish origin,”
 - c. “Black or African Am.,”
 - d. “Asian,”
 - e. “American Indian or Alaska Native”
 - f. “Middle Eastern or North African”
 - g. “Native Hawaiian or Other Pacific Islander”
 - h. “Some other race, ethnicity, or origin.”
5. I work in a:
 - a. Rural Area

- b. Urban Area
 - c. Sub-urban Area
6. I am in the following age range:
- a. 18-25
 - b. 26-32
 - c. 33-38
 - d. 39-45
 - e. Above 45
7. What is your highest education completed?
- a. Less than High School
 - b. Some High School
 - c. High school diploma or equivalency (GED)
 - d. Some college
 - e. Associate Degree (2-year degree)
 - f. Bachelor's Degree
 - g. Some Masters courses
 - h. Master's Degree
 - i. Some Ph.D. courses
 - j. Doctorate or professional (Ph.D. MD, JD, DDS etc.)
8. Do you have a Child Development Associate (CDA) certification or state certification to teach young children?
- a. State Certification only
 - b. CDA certificate only
 - c. Both CDA and state certification
 - d. Neither State Certification nor CDA
 - e. Do not know.
 - f. Not Applicable
9. How many total years have you been teaching?
- a. 0-2
 - b. 3-5
 - c. 5-10

d. More than 10 years

10. My institution is accredited by the National Association for the Education of Young Children (NAEYC)

a. Yes

b. No

c. Not sure

11. I teach children aged (check all that apply):

a. 0-1

b. 1-2

c. 3-5

d. Older than 5

(Taken out of the study to the thank you page if they choose d)

12. How many children are in your care?

a. 1-7

b. 8-14

c. More than 14

13. I work at a:

a. Family Child Care

b. Early Learning Center (in a public school)

c. Early Learning Center (in a private institution)

d. Lab School (Early Care Center in a University used for research)

e. Head Start (includes Early Head Start and Migrant and Seasonal Head Start)

f. Other Care Facility

14. I work in a

a. Full-day program

b. Half-day program

c. Other (for example, Mother's Day out etc.)

15. Did your facility close during the initial stages of the pandemic?

a. Yes

b. No

(Route to question 17 if they answer no)

16. How long was your facility closed at the initial stages of the pandemic?

- a. One week
- b. Two weeks
- c. Three weeks
- d. One month
- e. Other (Please State)

17. During the COVID-19 pandemic, did your classroom have to be quarantined or closed because of a suspected case of COVID-19?

- a. Yes
- b. No

(Route to question 19 if they answer no)

18. Please specify the number of times your classroom closed or quarantined because of a suspected case of COVID-19?

19. I apply evidence-based practices aimed at facilitating socio-emotional development in my work with children.

- a. Strongly disagree
- b. Disagree
- c. Neither Agree nor Disagree
- d. Agree
- e. Strongly agree

20. My practice of evidence-based practices aimed at facilitating socio-emotional development in your work with children has been affected by COVID-19

- a. Strongly disagree
- b. Disagree
- c. Neither Agree nor Disagree
- d. Agree
- e. Strongly agree

21. Does your center use a Social Emotional Learning (SEL) Curriculum?

- a. Yes
- b. No

c. I don't know

(routed to question 21 if they select no)

22. What is the name of the Social Emotional Learning (SEL) curriculum you use?

- a. AIs Pals
- b. Incredible Years: Dina Dinosaur Classroom Curriculum.
- c. Preschool PATHS:
- d. Second Step
- e. Social Skills in Pictures, Stories, and Songs
- f. Preschool I Can Problem Solve
- g. Other please specify

Professional development questions.

This section asks you questions related to the kind of professional development you have had access to. Professional development may be in the form of workshops, seminars, or in-service training that you have attended that were aimed at giving you knowledge about specific topics.

23. Do you belong to a professional organization?

- a. Yes
- b. No

(Route to question 25 if they answer no)

24. Name of professional organization you belong to (Please state)

25. My professional organization provided training and guidance on how to work with children during the pandemic?

- a. Yes
- b. No
- c. Not sure

(For no and not sure answers, route to question 26)

26. How many professional development sessions organized by your professional organization on how to work with children during the pandemic have you attended since March 2020?

- a. None
- b. 1-5 hours
- c. 6-10 hours

- d. 11-15 hours
- e. More than 15 hours

(Route to question 25 if they choose none)

27. How many of the sessions organized by your professional organization that you attended were targeted at how you can facilitate the socio-emotional development of children in your care?

- a. None
- b. 1-5 hours
- c. 6-10 hours
- d. 10-15 hours
- e. More than 15 hours

28. The facility I work with provided training and guidance on how to work with children during the pandemic?

- a. Yes
- b. No
- c. Not sure

(If they select no or not sure, route to question 33)

29. Since March 2020, how many hours of professional development organized by your facility have you attended?

- a. None
- b. 1-5
- c. 6-10
- d. 11-15
- e. More than 15

30. How many hours were targeted at how you can facilitate the socio-emotional development of children in your care?

- a. None
- b. 1-5
- c. 6-10
- d. 10-15
- e. More than 15

31. In general, the professional development sessions I have attended since March 2020 have met my needs as a professional during this period.
- Strongly disagree.
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree.
 - I have not attended any sessions
32. Since March 2020, I have had ample education about how to facilitate socio-emotional development during the pandemic.
- Strongly disagree.
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree.
33. Please describe any additional training needs you have related to working with children. During pandemics.
34. Have you changed your classroom practices as a result of the professional development sessions you attended during the COVID-19 pandemic?
- Yes
 - No
 - Uncertain
35. What is 5+3
- 8
 - 4
 - 2

Safety Precautions

This section asks questions about safety precautions. Safety precautions are referred to as those activities that you do that are aimed at keeping both you and the children in your care safe.

36. My care facility's policy on providing close contact comfort to children has changed

- a. Yes
 - b. No
 - c. Not sure
37. During the COVID-19 pandemic, I used the following safety precautions as a way of preparing to engage with children in my care. I wear: (Check all that apply)
- a. Transparent Face mask
 - b. Non-Transparent
 - c. Face shield
 - d. Goggles
 - e. Gloves
 - f. Change of shoes (other than the ones I wear from home)
 - g. Change of clothes (specific clothes I wear only when working with children)
 - h. None of the above
 - i. Other (Please describe)
38. During the COVID-19 pandemic, how frequently did your facility require staff in your role to test for COVID-19?
- a. Once every week
 - b. Once every two weeks
 - c. Once every month
 - d. Not until I show symptoms.
 - e. Other please specify.
 - f. There is no testing requirement
 - g. Not sure
39. During the COVID-19 pandemic, did you wear a mask while interacting with children in your care?
- a. all the time
 - b. Only when indoors
 - c. Only when outdoors
 - d. Sometimes indoors sometimes outdoors
 - e. There are 30 days in January.
 - f. True

- g. False
40. During the COVID-19 pandemic were the children in your care required to wear a mask.
- a. All the time
 - b. Only when indoors
 - c. Only when outdoors
 - d. Never
41. . During the COVID-19 pandemic, my level of worry about catching COVID-19 influenced how I interacted with children in my care.
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree.
42. During the COVID-19 pandemic, I felt comfortable not maintaining at least 6ft physical distance with the children in my care.
- a. Strongly disagree.
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree.
43. During the COVID-19 pandemic, I feel confident about the types of cleaning routines we use in our classroom.
- a. Strongly disagree.
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree.
44. During the COVID-19 pandemic, I felt confident cleaning the body fluids of children in my care. For example, runny nose, wiping tears, changing diapers.
- a. Strongly disagree.
 - b. Disagree

- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree

Classroom practices related to Socio-emotional Development

This section asks questions about the activities you undertake in your class that are directed towards facilitating the socio-emotional development of children in your care. Please rate from strongly agree to strongly disagree on how these questions reflect your thought.

- 45. During the COVID-19 pandemic, the pandemic affected my ability to engage children in activities that facilitate their socio-emotional development.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
- 46. During the COVID-19 pandemic, the cleaning routines, including rules and regulations associated with COVID-19, took away the time I had to plan experiences focused on their socio-emotional development
 - a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
- 47. Wearing a mask makes it difficult for me to express my emotions when I interact with children.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
- 48. During the COVID-19 pandemic, I felt comfortable hugging children in my care who were visibly distressed (e.g., crying, frustrated, feeling ill)

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree.

49. During the COVID-19 pandemic, I felt comfortable allowing children to give each other a hug as a way of expressing emotion or providing comfort

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree.

50. During the COVID-19 pandemic, I successfully facilitated the development of socio-emotional skills

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree.

51. During the COVID-19 pandemic, I planned activities that allow children to have close peer interaction

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree.

52. During the COVID-19 pandemic, I was comfortable modeling activities to children even if it means passing the same material between students without sanitizing it

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree

- d. Disagree
- e. Strongly disagree.

53. During the COVID-19 pandemic, I increased my attention on facilitating Socio-emotional Development of children in my care because of the pandemic

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree.

54. During the COVID-19 pandemic During the COVID-19 pandemic I practiced the following activities aimed at facilitating socio-emotional development

- a. Read aloud in large groups
- b. Sharing toys and items
- c. Encouraging hugging
- d. Encouraging turn taking
- e. Talked about emotions
- f. Encouraged children to talk about how they feel
- g. Other

Measure perceived stress retrospectively and currently.

This section asks about your stress levels during the corona virus pandemic Please reflect on your feelings during the COVID-19 Pandemic. In each case, please indicate your response by checking the circle representing HOW OFTEN you felt or thought a certain way.

(Question: some of the selections have to be reverse coded, should I reverse the selections, or I should wait till I have the responses and then reverse them on my own)

55. Before March 2020 how often were you upset because of something that happened unexpectedly.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

56. During the COVID-19 pandemic how often did you get upset because of something that happened unexpectedly.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

57. Before March 2020, how often did you feel that you were unable to control the important things in your life?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

58. During the COVID-19 pandemic, how often did you feel that you were unable to control the important things in your life?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

59. Before March 2020, how often have you felt nervous and “stressed”?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

60. During the COVID-19 pandemic, how often did you felt nervous and “stressed”?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes

- d. 3- Fairly often
- e. 4- Very often

61. Before March 2020, how often did you feel confident about your ability to handle your personal problems.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

62. During the COVID-19 pandemic, how often did you feel confident about your ability to handle your personal problems?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

63. Before March 2020, how often did you feel that things were going your way?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

64. During the COVID-19 pandemic, how often did you feel that things were going your way?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

65. Before March 2020, how often did you find that you could not cope

with all the things that you had to do.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

66. During the COVID-19 pandemic, how often did you find that you could not cope with all the things that you had to do.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

67. Before March 2020, how often were you able to control irritations in your life?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

68. During the COVID-19 pandemic, how often were you able to control irritations in your life?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

69. Before March 2020, how often have you felt that you were on top of things?

- a. 0- Never
- b. 1- Almost Never

- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

70. During the COVID-19 pandemic, how often did you feel that you were on top of things

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

71. Before March 2020, how often were you angered because of things that were outside of your control?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

72. During the COVID-19 pandemic, how often were you angered because of things that were outside of your control?

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

73. Before March 2020, how often did you feel difficulties were piling up so high that you could not overcome them.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

74. During the COVID-19 pandemic, how often did you feel difficulties were piling up

so high that you could not overcome them.

- a. 0- Never
- b. 1- Almost Never
- c. 2- Sometimes
- d. 3- Fairly often
- e. 4- Very often

75. We acknowledge that people find it uncomfortable to share their vaccination status. If you are comfortable with sharing your COVID-19 vaccination status, please respond to these questions

76. Did your vaccination status influence how you worked with children

- a. Yes
- b. No
- c. Not certain

77. Have you been vaccinated against COVID 19?

- a. yes
- b. no
- c. prefers not to answer

(If yes, please provide the month and year

Thank you for participating in this study. Your response can help inform us on how childcare providers are facilitating the socio-emotional development of the children in their care. Please click next if you want to be entered into the drawing to win one of twenty \$50 Amazon gift cards. You will be led to a different form where you will provide your first name and email address. If your response is flagged as suspicious, your data will be removed from the database, and you will not be entered into the drawing.

If you have any questions, please reach out to adklutse@ksu.edu.

(Route people who successfully complete the survey to another link where they provide first name and email address).

Appendix B - Informed Consent

You are being invited to participate in a research study titled “*Post COVID-19 Families: How Teachers in Early Childhood Settings Are Facilitating Socio-Emotional Development*”. This study is being done by *Adelaide Delali Klutse* from Kansas State University. You were selected to participate in this study because you are an early childhood educator resident in the United States of America, and you provide care to children between the ages of 0-5 in an Early Education Setting.

Why are we doing this research?

The purpose of this study is to find out how early childhood educators are helping children develop their socio-emotional domain and whether stress is affecting how the early caregivers perform practices that help with developing the socio-emotional skills of children in the early years.

Who can participate in this research study?

You can participate in this study if you currently provide early childhood care and education to children between the ages of 0-5 in an early care education setting and are resident in the United States of America. You should have been working prior to March, 2020.

What will I be asked to do and how much time will it take?

If you agree to take part in this study, you will be asked to complete an online survey/questionnaire. This survey/questionnaire will ask about your demographics, your stress levels prior to the pandemic and during the pandemic as well as the practices you are engaging in to facilitate socio-emotional development in the children in your care. It will take you approximately *20-25* minutes to complete.

Will being in this research study help me in any way?

You may not directly benefit from this research; however, we hope that your participation in the study may help us understand the diverse ways by which early educators are facilitating socio-emotional development of children in their care during the pandemic.

What are my risks of being in this research study?

We believe there are minimal risks associated with this research study; however, a risk of breach of confidentiality always exists when using online platforms and we have taken the steps to minimize this risk as outlined in a section below.

How will my personal information be protected?

To the best of our ability your answers in this study will remain confidential. The data collected will be completely anonymous. We will minimize any risks by deleting all identifiable information collected through the Qualtrics platform upon downloading of the data file. Additionally, the de-identified data will be stored on a password secured laptop.

Will I be given any money or other compensation for being in this research study?

You will be entered into a drawing to win one of twenty \$50 Amazon gift cards after completing and submitting the survey.

What Happens if I say yes but change my mind later?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

Who can I talk to if I have questions?

If you have questions about this project or if you have a research-related problem, you may contact **Bradford Wiles at bwiles@ksu.edu or , *Adelaide Klutse at adklutse@ksu.edu* If you have any questions concerning your rights as a research subject, you may contact the Kansas State University Institutional Review Board (IRB) at 785-532-3224 or comply@ksu.edu**

By clicking “I agree” below you are indicating that you are at least 18 years old, have read this consent form and agree to participate in this research study. You are free to skip any question that you choose.

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