

THE STATE OF TRAUMA-INFORMED CARE IN THE PRESCHOOL

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## ABSTRACT

This study aimed to provide a foundational knowledge base from which to begin bridging the gap between research on trauma-informed, relationship-based therapeutic interventions in early childhood preschool classrooms and the practice of such classroom-based interventions. Specifically, this study identified several specific predictors (e.g., funding) and barriers (e.g., lack of knowledge and training in assessment instruments and referral options) to gaining trauma-informed knowledge and engaging in trauma-informed practices in preschool classrooms. Individuals in leadership roles at preschools were sampled anonymously with regard to their current trauma-informed knowledge and program practices. Participants included 98 preschool leaders from Florida, 36 preschool leaders from Maryland, and 34 preschool leaders from Wyoming. Descriptive statistics were calculated for the variables of interest. ANCOVA with bootstrapping was conducted to determine whether there were significant differences between programs based on their state and funding source. There was no effect of state. In contrast, funding source predicted trauma-informed knowledge and practices, with federal/state funding being related to higher levels of knowledge and trauma-informed practices. Additionally, multiple regression analyses with bootstrapping were examined to determine significant predictors of preschool leaders' trauma-informed knowledge and practices. Similarly, results indicated that programs differed significantly in trauma-informed knowledge and screening practices based on their source of funding, with federal/state funding again predicting more trauma-informed knowledge and practices. Researchers may be able to benefit from the unique information found in this study as a launching point to inform program development and

disseminate community- and nation-wide models of trauma-informed care in preschool classrooms. Implications for future studies are discussed.

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## CHAPTER ONE: INTRODUCTION

Young children spend much of their day in preschool settings and under the supervision of their educational providers, suggesting the important role that these providers play. Throughout their day, young children's needs change rapidly as they explore their world, absorbing and storing experiences that build the foundation for how they relate to others. Once parents leave their young children in the care of educational providers in preschool settings, these providers serve as the safe base from which young children launch, the safe haven to which young children are welcomed to return, and the figure who meets young children's needs above and beyond those of physical and academic necessities. During their time in the preschool classroom, young children require support in their exploration, help with difficult tasks, protection from potential dangers, comfort in times of emotional struggle, and another's delight in simply being themselves (Cassidy et al., 2017; Cooper, Hoffman, & Powell, 2009; Powell, Cooper, Hoffman, & Marvin, 2013; Woodhouse, Powell, Cooper, Hoffman, & Cassidy, 2018). Attuned providers who understand that their role as caregiver complements their role as educator are able to meet these needs in the preschool classroom. Thus, relationships between preschool providers and young children, as supplemental relationships to those of parents and young children, allow young children to gain an additional context for relating securely to their world and those in it.

But what if a young child enters the preschool classroom without a previously established lens through which adults are viewed as safe caregivers? What happens to a young child in the preschool classroom whose world outside is not safe at all? Few preschool curricula consider the impact that adverse experiences outside of the classroom have on young children's ability to



benefit from safe relationships with adult caregivers and to learn in traditional preschool classrooms. These experiences may be comprised of repeated adverse events at home, such as witnessing domestic violence, being a victim of physical, emotional, or sexual maltreatment, neglect, or general household dysfunction. Although not considered often, young children under the age of 5-years suffer considerable exposure to domestic violence and direct maltreatment (U.S. Department of Health & Human Services, 2018). Traumatic situations such as these “damage the child’s developmentally appropriate expectation that the parents will be reliably available as protectors” (Lieberman, Ghosh Ippen, & Van Horn, 2015, p. 7). In other words, such experiences alter young children’s working model (i.e., their internal concept of the world and attachment figures based on interpersonal interactions; Bowlby, 1969), whether the caregivers are parents, guardians, or educational providers.

In fact, attachment theorists would suggest that young children rely on their working model to predict their caregivers’ responses (Bowlby, 1969). With a working model of attachment figures as dangerous and unreliable, young children cannot be reasonably expected to enter their preschool classroom and function similarly to peers who have had the fortune of experiencing a secure attachment with loving, nurturing, safe, and consistent primary caregivers. Rather than viewing the classroom teacher as a safe and trustworthy authority figure and caregiver from whom to learn, young children who have witnessed or endured ongoing maltreatment instead may regard the teacher in the same way that they regard their feared caregiver, with “mistrust, apprehension, hypervigilance, and anger” (Lieberman et al., 2015, p. 8). This behavioral response in young children is particularly prevalent during the crucial preschool years given young children’s developmentally charged tendency to observe and

imitate their caregivers' behavior (Lieberman et al., 2015), thereby increasing the risk of social-emotional developmental difficulties in young children (Granqvist et al., 2017).

Specifically, research showed that young children who experience high family stress and negative parenting are prone to maladjustment upon entering the preschool classroom (Campbell, Shaw, & Gillion, 2000; Pinquart, 2017). For these young children, difficulty adjusting to a typical preschool classroom is due, in part, to these young children's inability to regulate negative emotions and express emotions in a socially acceptable manner. This difficulty can be attributed largely to their lack of physical and emotional security in their attachment relationships (Lieberman et al., 2015). Further, the experience of trauma at home can alter greatly young children's perceptions of safety and danger. For example, children who are traumatized may become exceedingly overwhelmed in emotional and behavioral domains in response to neutral stimuli in their preschool classroom and may perceive constant threat while their peers perceive a safe, ordinary environment. As a result, overt behavior difficulties may be masking a traumatic stress response, particularly if the trauma occurred at a developmental stage during which the young child was unable to form a coherent narrative of the event(s) (Lieberman et al., 2015).

Unfortunately, there is a disconnection between observing problematic behaviors in the preschool classroom and identifying adverse events in the home as causes of these behaviors.

High quality academics in preschools cannot alone overcome the challenges that young children from high-risk backgrounds face at home. Thus, it is imperative to understand and address the underlying causes of young children's emotional and behavioral difficulties, particularly in the context of understanding any problems that they may have adjusting to their preschool classroom and teacher. Specifically, preschool directors, teachers, and staff must possess (1) the knowledge

to view young children’s problematic behavior from a trauma-informed perspective and (2) the skills to provide appropriate care in the preschool classroom for young children who are exposed to adverse experiences at home and who are struggling with familial hardships. Trauma exposure and its impact, resilience in the face of adversity, and the current state of affairs related to trauma-informed care in preschools will be discussed in sequence in an effort to lay out the importance of examining how trauma-informed today’s preschools actually are.

### Trauma Exposure in Young Children in Preschool Classrooms

Approximately 12.5% of individuals are exposed to a significant number of adverse experiences in childhood, including abuse (e.g., physical, emotional, sexual), neglect (e.g., physical and emotional), and general household challenges (e.g., witnessing violence; living with household members who misuse substances, have a mental illness, or have been imprisoned; Centers for Disease Control, 2016; Felitti et al., 1998). Further, an estimated 3.5 million children in the United States were referred to state and local Child Protective Services due to maltreatment or neglect, with roughly 17% of these children having founded cases of maltreatment. Approximately 74.8% of these children were referred for neglect, 18.2% for physical abuse, 8.5% for sexual abuse, and 6.9% for other types of maltreatment, including lack of supervision and household dysfunction (e.g., parents’ substance misuse). Each maltreatment type reported above should be considered individually, as children who experienced multiple types of maltreatment were accounted for within each maltreatment type in this report (U.S. Department of Health & Human Services, 2018). Young children were overrepresented in these estimates, with 28.5% of the children described above being under 3-years of age and with 18.2% being between 3- to 5-years of age. The majority of the noted cases involved instances within the home or family unit, with 77.6% of perpetrators being parents, 6.2% being other

relatives, and nearly 4% having another type of relationship to the identified child (e.g., foster sibling or nonrelative; U.S. Department of Health & Human Services, 2018).

Fortunately, it appears that rates of children's exposure to violence and maltreatment have declined over the past several decades. For example, child welfare agencies have reported a steady decrease from 1990 to 2016, with physical abuse reports decreasing by 53%, sexual abuse reports decreasing by 65%, and neglect reports decreasing by 12%. In the short term from 2015 to 2016, however, sexual abuse rates were essentially unchanged, and, alarmingly, physical abuse rose 5% according to the latest national data (Finkelhor, Saito, & Jones, 2018).

Shockingly, traumatic events in early childhood still are under-identified considerably despite the disproportionately large number of young children who are exposed to adverse experiences in their homes (Crusto et al., 2010; Scheeringa, Zeanah, Myers, & Putnam, 2005; Vanderzee, Pemberton, Connors-Burrow, & Kramer, 2016). Research conducted with families from low socioeconomic backgrounds who were seeking mental health or developmental services for their young children (who had a mean age of 4.4-years) showed that these young children were referred mostly because of social, emotional, and/or behavioral concerns (~43%) and that only a minority of these young children (13%) were referred due to adverse experiences in their homes (e.g., exposure to violence and abuse). Following a screening of young children's exposure to traumatic events and resulting trauma symptoms via parent report, however, researchers found that these young children's exposure to potentially traumatic events was actually quite prevalent. In fact, 48% of these young children had experienced five or more traumatic events (Crusto et al., 2010). Further, nearly 25% of these young children were experiencing clinically significant symptoms related to trauma, with many of these young children exhibiting anger, aggression, and depression (Crusto et al., 2010). Yet, more recent

research suggested that young children still were less likely to be referred for counseling to address symptoms related to their traumatic stress (Vanderzee et al., 2016).

Thus, exposure to adverse events is common in young children from high-risk backgrounds. Nonetheless, these young children are being noticed for their emotional and behavioral difficulties, even though the underlying cause of their dysregulation is likely due to their (unidentified) trauma exposure. Given the lifelong physical, emotional, and psychological impact of ongoing maltreatment and other trauma on young children, a topic that will be discussed in the next section, standards of practice must shift. Specifically, any provider who comes into contact with young children in preschool classrooms should be trauma-informed and should screen routinely the young children in their charge for a broad range of potential exposures to traumatic experiences and for specific victimization (Finkelhor et al., 2018).

#### Difficulties Related to Trauma Exposure

Many individuals wrongly assume that young children are not affected by exposure to trauma, believing that these young children are too young to understand and/or remember traumatic events (National Scientific Council on the Developing Child, 2010; Osofsky, 1995; Osofsky & Lieberman, 2011). Research showed, however, that young children who were exposed to violence as infants and toddlers, in fact, do exhibit clear markers of post-traumatic symptoms and disorders (Osofsky, Cohen, & Drell, 1995; Scheeringa, Zeanah, Myers, & Putnam, 2003; Zeanah, 1994). Traumatic experiences in young children frequently involve a combination of complex sensory, physiological, emotional, and cognitive experiences that may result in a variety of emotional and behavioral outcomes. For example, during traumatic stress, young children may exhibit physiological alarm prior to or simultaneously with a display of extremely negative emotions ranging from terror to helplessness or even shame. Cognitively,

young children may exhibit rapid changes in alertness and attention as well as confusion and misappraisals about the traumatic event(s), others' intent, and their own responsibility and efficacy. Further, young children may experience intense worry and fear for their own and others' wellbeing in the aftermath of a traumatic event (Mongillo, Briggs-Gowan, Ford, & Carter, 2009; Pears & Fisher, 2005; Pynoos, Steinberg, & Piacentini, 1999; Scheeringa et al., 2003).

Entering the preschool classroom with these myriad physiological, emotional, and behavioral responses is extraordinarily difficult. At this developmental stage, young children still rely on the protection of trusted caregivers to help them regulate their responses. Further, self-regulation is an unfair expectation for young children who have been traumatized. When young children have not had the luxury of trusting reliable protectors, young children may begin to act self-protectively and to even take the protection of others upon themselves (Pynoos et al., 1999).

Although some young children may be impressively resilient and able to effectively manage their own adjustment and recovery (Pynoos et al., 1999), many others suffer from lifelong impact, the markers of which begin as early as the trauma itself. Often, symptoms are so prominent and impairing in young children that a clinical diagnosis of Post-Traumatic Stress Disorder (PTSD) is warranted. Such a diagnosis would be important to consider, particularly as longitudinal studies, such as the Great Smoky Mountain Study, showed that childhood mental health disorders predicted adverse outcomes related to physical and mental health, legal circumstances (e.g., felony charges, imprisonment), financial situation (e.g., being fired multiple times), and lack of social support in adulthood (Costello, Copeland, & Angold, 2016). Nonetheless, effective treatments are being developed specifically for preschool-age children

suffering from PTSD (Salloum, Scheeringa, Cohen, & Storch, 2014; Scheeringa, Amaya-Jackson, & Cohen, 2010), suggesting that identification and subsequent intervention to derail later poor adult outcomes would be important.

Even so, given the considerable lifetime impact of childhood mental health disorders, developmental considerations must be made when determining whether young children are experiencing symptoms of PTSD so as to ensure that affected children are not missed. These symptoms can include intrusive and unwanted thoughts, social withdrawal, alterations in mood, and extreme temper tantrums (Scheeringa, 2016). Of course, preschool providers, whether they are center directors or classroom teachers, may be versed in developmental considerations when caring for and educating young children. But are the same considerations afforded to those young children whose trauma has been undetected? In other words, even the most knowledgeable providers' responses may not necessarily be appropriate if trauma is not considered. Young children's manifestations of trauma can resemble other internalizing or externalizing behavior problems, suggesting that overlooking the source of such behavior problems is not unlikely (Danese & Baldwin, 2017; Ghosh Ippen, Harris, Van Horn, & Lieberman, 2011; Terr, 1991).

Characteristics commonly exhibited by young children who have been exposed to trauma include "thought suppression, sleep problems, exaggerated startle responses, developmental regressions, fears of the mundane, deliberate avoidances, panic, irritability, and hypervigilance" (Terr, 1991, p. 12). Four characteristics stand out and may be recognized by a watchful eye in the preschool classroom. First, young children who have experienced trauma often re-experience their memories, either through re-visualization or re-perception. These memories can be vivid and intrusive, even for young children whose experiences happened during infancy or

toddlerhood (Terr, 1988), and may occur when young children simply are resting or are between tasks in the preschool classroom. Next, repetitiveness in play and in general behaviors often is seen in young children who have experienced trauma. Notably, repetitiveness can occur even in young children who experienced trauma before the age of 12-months. Despite not possessing a verbal narrative of the event, young children possess the capacity to re-experience the physical sensations that accompanied their trauma (Terr, 1988), and behavioral reenactments of the event can become so frequent that they become viewed as personality traits (Terr, 1991). Further, trauma-specific fears related to extreme shock and stress can be common in young children who have experienced trauma as a result of the event. Fears can be related to experiences that occurred prior to the traumatic event and to the trauma itself. Additionally, young children who have experienced trauma may show fear of typical concerns, particularly of the dark and being alone (Terr, 1990). These fears and associated avoidance can be observed in the preschool classroom, once the preschool teacher is aware of noteworthy behaviors.

Finally, both single events and ongoing traumas can affect young children's attitudes about people, life, and the future. Whereas young children with typical childhood experiences may feel that their future is limitless, young children who have been traumatized may exhibit a more limited stance, expressing beliefs of mistrust toward others or a generally limited regard for the future. This limited stance is due partly to behavioral reenactment and partly to the belief that trauma will be followed by more trauma (Terr, 1991). Thus, providers in the preschool classroom should be able to identify several signs of early childhood trauma when trauma-informed care is the standard of practice (Blodgett, 2012).

Nonetheless, exposure to trauma also can alter young children's entire developmental trajectory, affecting perceptions, feelings, thoughts, and behaviors (Groh, Fearon, Van



IJzendoorn, Bakermans-Kranenburg, & Roisman, 2017; Lieberman et al., 2015; Pynoos, Steinberg, & Goenjian, 1996). Even after young children are no longer witnessing violence and are out of harm's way, the physical and sensory perceptions that were experienced during the danger are not forgotten (Meiser-Stedman, Smith, Yule, Glucksman, & Dalgleish, 2017). Seemingly innocuous events in the preschool classroom that do not faze typically developing children can be drastic reminders of trauma for young children who have been traumatized, setting in motion physiological, emotional, and behavioral responses related to the previously experienced trauma (Holmes, Levy, Smith, Pinne, & Neese, 2015; Pynoos et al., 1999; Sapolsky, 1994). Following traumatic stress, young children's attention in the preschool classroom may become selectively skewed toward trauma-related information or fears, impacting their ability to sustain attention to classroom tasks (Yule et al., 1992). Additionally, the experience of trauma often results in sleep disturbances, which means that young children's daytime learning and memory consolidation can be impacted drastically (Danese & Baldwin, 2017; Pynoos et al., 1987; Sciaraffa, Zeanah, & Zeanah, 2018). Further, the expression of intense negative emotion hinders the development of emotion regulation and increases young children's difficulty relating to peers and adults in an appropriate manner (Pynoos et al., 1999; Sciaraffa et al., 2018). Sadly, these responses are unavoidable when "the body keeps the score," meaning that emotional memories last a lifetime and reminders of the traumatic event can revert young children to their original traumatic response, despite a lack of immediate danger (van der Kolk, 1994, p. 253; van der Kolk, 2014).

Further, one of the most damaging aspects of experiencing trauma in early childhood is the loss of a secure base (van der Kolk, 1987), without which young children have no model to form secure relationships with any adult caregiver (Cassidy et al., 2017). This lack of a secure

base can pose great difficulty to the preschool provider-young child relationship. Losing a secure base during infancy, toddlerhood, and the preschool years activates responses in everyday situations to danger that does not exist. Normative developmental and behavioral patterns become disrupted when the safety and reliability of a secure base is lost (Cassidy et al., 2017; Lieberman & Zeanah, 1995). In fact, seminal works on early childhood trauma showed that young children who have been exposed to trauma have difficulty establishing relationships, can regress in developmental milestones, and exhibit internalizing and externalizing behavior problems, such as affect dysregulation, aggression, noncompliance, and post-traumatic stress (Davidson, 1978; Eth & Pynoos, 1985; Gaensbauer, 1994; Lieberman et al., 2015; Parson, 1995; Terr, 1981). Additionally, young children who have witnessed domestic violence or endured ongoing maltreatment may blame themselves or perform self-protecting behaviors if they cannot rely on a secure base to keep them safe (Lieberman & Zeanah, 1995). Danese and Baldwin's (2017) recent review of the literature in this field suggested that these difficulties were well-documented over the past three decades. Clearly, all of these responses pose a great burden on young children who are transitioning into a preschool classroom where they are expected to form prosocial relationships with their providers and peers.

Trauma experienced in early childhood can leave a lasting, lifelong impact in its wake. In particular, individuals who experienced childhood maltreatment were at heightened risk for mental health problems in adulthood (e.g., depressive symptoms, post-traumatic stress symptoms) and dissatisfaction with adult relationships. Moreover, adults who experienced other types of adverse childhood experiences in addition to or other than maltreatment (e.g., witnessing domestic violence; living with household members who misused substances, had a mental illness, were suicidal, or engaged in criminal behavior and were imprisoned) were at increased

risk for other health disorders in adulthood (e.g., substance misuse, alcoholism, suicide attempts, obesity, sexually transmitted infections, heart disease, cancer, lung disease, liver disease; Felitti et al., 1998). In general, childhood exposure to household dysfunction can lead to significantly heightened risk for several leading causes of death in adults (Felitti et al., 1998). Recent research corroborated similar findings with regard to the relationship between adverse childhood experiences and adult health problems, including substance misuse, depression, and suicide attempts (Merrick et al., 2017). Additionally, research showed that detrimental physical and mental health outcomes started becoming apparent by elementary (Blodgett, 2012) and middle school (Flaherty et al., 2009). Further, it is likely that parents of traumatized young children were exposed to adverse experiences while they were growing up themselves and are now part of a continuing intergenerational pattern of maltreatment (Bartlett, Kotake, Fauth, & Easterbrooks, 2017; Belsky, 1993; Fontana, 1973; Narayan et al., 2017; Steele, 1976; Wall-Wieler, Brownell, Singal, Nickel, & Roos, 2018). Thus, trauma-informed care and early intervention in the preschool classroom would be an important endeavor for remediating some of the impact from early childhood trauma experiences.

### Buffering the Impact of Early Childhood Trauma

Although finding the path forward to remediating the impact of early childhood trauma may not be so easy, research findings provide several clues as to how providers might start down such a path. For example, resilient children have been found to show a variety of common characteristics, including good coping skills, an appropriate level of autonomy, the ability to ask for help, and an easier temperament (Werner, 1995). Among these and other traits that aid in young children's adjustment and recovery, another type of protective factor usually exists in resilient children. Those children who were able to establish "a close bond with at least one

competent and emotionally stable person who is attuned to [their] needs” generally exhibited resilience, despite ongoing exposure to adverse experiences in their homes (Werner, 1995, p. 83). This particular protective factor is rooted in the basic sense of trust that at least one other human being may be able to nurture young children while promoting stability and subsequent resilience (Werner, 1995). More recently, research findings suggested similar outcomes, with early relationships (i.e., support from a caregiver or within the school environment) predicting positive trajectories (Meng, Fleury, Xiang, Li, & D’Arcy, 2018; Oshri, Topple, & Carlson, 2017). Prior to entering preschool, young children should be learning to trust themselves and their caregivers. In turn, caregivers should be meeting young children’s physical, emotional, and safety needs. Caregivers also can promote resilience in their young children by providing unconditional love and comfort, enforcing boundaries, modeling confident and optimistic behavior, offering encouragement in appropriate autonomy and praise for accomplishments, and preparing for potentially unpleasant situations in a developmentally appropriate manner (Grotberg, 1995, 2009). Thus, close relationships regulate the brain’s stress response, promote healthy development for young children, and facilitate healing in young children who have experienced trauma (Danese & Baldwin, 2017; Ludy-Dobson & Perry, 2010; Mortensen & Barnett, 2016; Murray, Rosanbalm, & Christopoulos, 2016; Sciaraffa et al., 2018).

On the other hand, young children who have been traumatized but who do not have a positive relationship with at least one caregiver experience much greater difficulty handling the stress of trauma and are more likely to suffer from ongoing problems related to trauma. Moreover, continued lack of positive relationships may prevent recovery from the effects of traumatic events (Ludy-Dobson & Perry, 2010). Thus, close relationships have the power to protect and repair the effects of trauma, suggesting that “social connectedness is a protective

factor against many forms of child maltreatment” (Ludy-Dobson & Perry, 2010, p. 37). Further, recent studies continued to determine that “an important protective factor for infants and young children in high-risk situations is a secure attachment to their caregivers” (Sciaraffa et al., 2018, p. 345). Often, a family member, such as an older sibling or a grandparent, may assume the role of caregiver when a parent is not available. Regrettably, some young children do not have a single person in their lives to fill this utmost important position. In these cases, it may be the preschool provider who potentially could act as that stable figure, meeting young children’s needs, and offering a relationship to buffer the impact of adverse experiences outside of the preschool classroom (Pizzolongo & Hunter, 2011; Sciaraffa et al., 2018). Consequently, the state of trauma-informed knowledge in the preschool will be discussed in the next section.

### Trauma-Informed Care in the Preschool

Despite the existing body of literature detailing the detrimental effects of trauma and maltreatment on children’s development, it does not appear that *most* mental health, child welfare, judicial system, or child-placing agencies consider the magnitude of this impact when dealing with young children who were exposed to trauma (Ludy-Dobson & Perry, 2010). Moreover, trauma-informed care in the preschool is lacking overall. In particular, society has undervalued greatly “the therapeutic impact of [a] caring teacher” (Ludy-Dobson & Perry, 2010, p. 39). Effective therapeutic relationships must be both developmentally informed and trauma sensitive (Blodgett, 2012; Ludy-Dobson & Perry, 2010). In other words, early childhood educators, if well informed, can help young children develop the protective factors needed to support resilience (Pizzolongo & Hunter, 2011), as they “are in a position to recognize and buffer the impact of ACEs” (Sciaraffa et al., 2018, p. 346).

For example, some researchers believe that positive relationships and environments can support the cognitive, social, and emotional resources needed to build the foundation for young children's coping skills and adaptability in the face of adversity. Providing responsive care builds trust in preschoolers (Pizzolongo & Hunter, 2011), an experience that they may have missed in their homes. Knowledgeable providers can help preschoolers learn to build healthy relationships and develop resilience by offering support in opportunities for young children to explore their environment while feeling protected, organizing their feelings during emotional struggles, enjoying activities one-on-one, validating young children's feelings, and delighting in young children just for being who they are.

Certainly, trauma-informed care in school across all developmental levels is an important enough matter. The topic of adolescent resiliency following adverse childhood experiences has continued to gain popularity in research (Khambati, Mahedy, Heron, & Emond, 2018) and in news coverage. This topic even has inspired the critically-acclaimed documentary *Paper Tigers*, an intimate portrayal of the lives of students attending a trauma-informed high school in Walla Walla, Washington (Pritzker, Schwartz, & Redford, 2015). Notably, research within the past decade demonstrated that, despite the identification of schools as "an ideal entry point for access to mental health services for children," most schools do not screen or provide referrals for trauma-related stress and symptoms. This lack of screening presents a paradoxical problem given that children need help dealing with and recovering from their traumatic stress in order to be successful learners (Ko et al., 2008, p. 398). Educators receive very little, if any, formal training with regard to the impact of trauma on children and how to help their students, however (Ko et al., 2008).

Fortunately, the trajectory of trauma-informed programs in the school does seem to be promising given that there are a number of federally funded initiatives (e.g., through the U. S. Department of Education) to support the development of these much needed services (Ko et al., 2008). Additionally, a variety of models exist that support the trauma-informed classroom (McInerney & McKlindon, 2014). Further, the National Child Traumatic Stress Network (2008) released a thorough but consumable *Child Trauma Toolkit for Educators*, covering topics that include trauma facts and suggestions for educators, the psychological and behavioral impact of trauma across each developmental stage from preschool to high school, helping students through their traumatic grief, and self-care tips for educators given the potential for compassion fatigue or secondary traumatic stress. Although this toolkit is a great resource for educators, it is unclear whether the material is disseminated widely, whether educators must seek this material out themselves, and whether most educators are aware that this resource exists.

Early childhood educators' awareness of trauma-informed resources and their willingness to implement them would benefit young children greatly, not only in educators' response to trauma stressors but also in their readiness to learn (Brinamen & Page, 2012; Walkley & Cox, 2013). Moreover, research showed that high-quality relationships with trauma-informed educators could have a highly therapeutic effect on young children who have been traumatized (Blodgett, 2012; Sciaraffa et al., 2018). Interestingly, the most effective approaches focused on young children's positive behavior rather than their challenging behavior. In particular, effective intervention in therapeutic classrooms mandated that young children's families would not be called and that young children would not be sent home early or expelled due to behavior problems in the classroom (Brinamen & Page, 2012).

Further, recent research provided support for the trauma-informed classroom (Blodgett, 2012) and particularly for prioritizing positive educator-student relationships (Morgan, Pendergast, Brown, & Heck, 2015). Additionally, a handful of research studies have been published recently in a special issue of *School Mental Health* with regard to the successful implementation of trauma-informed practices in schools (Dorado, Martinez, McArthur, & Leibovitz, 2016; Overstreet & Chafouleas, 2016; Perry & Daniels, 2016; Shamblin, Graham, & Bianco, 2016; Phifer & Hull, 2016). Clearly, it is becoming recognized more widely that children who have experienced adversities require a “different model of interaction with adults than what may be experienced in more conventional educational settings” (Morgan et al., 2015, p. 1040). This model could serve as a means of intervening with the “relational poverty” (Downey, 2009; Perry, 2009, p. 250) that may be experienced as a result of trauma, maltreatment, and/or neglect. This type of approach identifies the classroom teacher not only as an educator but also as a caregiver (Morgan et al., 2015).

One classroom-based program attempted to combat the impact of traumatic experiences on young children. The program, known as Head Start Trauma Smart (HSTS), was conceptualized in 2007 and implemented during the 2011-2012 school year as a collaboration between the Crittenton Children’s Center and local Head Start programs in Kansas City, Missouri. The need for such a program was identified when staff members noticed the high number of deaths that occurred across the families in the program. Thus, the staff sought support for the young children and families in their program with the goals of finding an evidence-based/evidence-informed approach to decrease the traumatic stress experienced by their young children and fostering social and emotional development within a trauma-informed culture. At the time, most trauma-informed resources targeted older children and adolescents, and effective



interventions in the preschool still were being researched. Thus, the HSTS staff created their own unique approach by integrating the three evidence-based modalities described below (Holmes et al., 2015).

First, HSTS staff implemented training based on the Attachment, Self-Regulation, and Competency framework (Blaustein & Kinniburgh, 2010), which considers attachment, self-regulation, and competency each to be important factors affected by exposure to adverse experiences in early childhood. Next, the HSTS curriculum considered the domains related to evidence-based trauma-focused cognitive-behavioral therapy, including psychoeducation, parenting skills, relaxation skills, affective modulation, cognitive coping, trauma narration and processing, in vivo mastery, parent-child sessions, and safety planning (Cohen, Mannarino, & Deblinger, 2006). Finally, HSTS staff sought consultation with early childhood mental health professionals to decrease problem behavior and promote social and emotional development. The HSTS program offered training in these domains to all those within young children's social networks, including Head Start staff in all positions as well as families, extended families, and closely familiar others. Young children who were identified to receive intensive services from HSTS showed significant changes that indicated school readiness as well as improvements in externalizing behavior problems and oppositional defiance. Further, parents reported significant improvements in both internalizing and externalizing behavior problems. Additionally, the quality of relationships in the preschool classroom (i.e., adult to adult, adult to young child, and young child to young child) that are related to emotional support, classroom organization, and instructional support improved steadily.

Overall, the results of the HSTS intervention supported the use of intensive trauma-informed practices in the preschool classroom; however, more research is needed to generalize

the results outside of an urban setting while implementing control groups and creating fidelity measures (Holmes et al., 2015). The need for trauma-informed interventions in the preschool classroom is palpable, “yet few developmentally appropriate options exist, particularly when the goal is not only to address the specific child in need but also to create an overall trauma-informed model that can help build the resiliency of the larger community” (Holmes et al., 2015, p. 1658). To create this type of model requires researchers to take a step back, however. First, researchers must determine the current state of trauma-informed knowledge and practices among preschool directors prior to attempts at creating and implementing a community-wide model. Thus, the novel purpose of the current study will be discussed next.

### The Current Study

Although researchers distinguished key features that education programs can use as a guide for creating more trauma-responsive systems (Blodgett, 2012; Perry, 2009; Sciaraffa, 2018), there are challenges in the implementation of such systems. In part, an inherent difficulty lies in attempting to change traditional approaches to difficult behaviors in the preschool classroom given the amount of time and commitment that would be needed to implement effective change. Other challenges are related to educators’ own discomfort when addressing young children’s traumatic experiences due to a lack of training and skills in this area and a limited knowledge base with which to identify young children’s traumatic histories in the first place (Walkley & Cox, 2013).

Despite very relevant challenges, this study aimed to be a unique stepping stone in the eventual bridge between research and practice in the realm of trauma-informed, relationship-based therapeutic intervention in the early childhood preschool classroom. Specifically, the aim of the current study was to sample preschool Directors, Assistant Directors, and other staff in

leadership roles with regard to their recognition of trauma exposure and symptoms among young children in their programs as well as with regard to their program's current trauma-informed practices. It was hypothesized that program leaders' knowledge about trauma exposure and its impact on young children and programs' trauma-informed practices would differ significantly between programs that were in a state that was affiliated with the World Association for Infant Mental Health (WAIMH) and that had a state Association for Infant Mental Health (AIMH) versus programs that were not in a state affiliated with WAIMH and that did not have a state AIMH. Additionally, it was expected that preschool leaders' trauma-informed knowledge and practices would differ significantly between programs that had federal and state funding and programs that had private or local funding or were family-owned.

Finally, predictors of preschool leaders' trauma-informed knowledge (e.g., knowledge about traumatic stress, its impact on young children's mental health and development, the identification of triggers and stress management techniques) and utilization of trauma-informed practices (e.g., trauma-focused assessment and intervention in the preschool) were examined. It was anticipated that being located in a state affiliated with WAIMH and that had a state AIMH, federal and state funding, and level of education would predict significantly preschool leaders' trauma-informed knowledge and practices. Additionally, it was hypothesized that awareness of trauma-related experiences and symptoms in preschool children would predict preschool leaders' trauma-informed practices.

Overall, the objective of this novel undertaking was to obtain more information that could help future efforts to increase trauma awareness in preschools as a whole, bridge the gap between research and practice, and attempt to target implementation challenges with the ultimate goal of widely disseminating and implementing appropriate trauma-informed models across preschools

as a launching point for a community-wide model. Additionally, it was hoped that the results obtained from this study could inform nationwide standards in high-risk preschools and be utilized by mental healthcare professionals who work in preschools to disseminate information to directors and classroom teachers.

## CHAPTER TWO: METHODOLOGY

### Recruitment Strategies

All data collection methods were approved by the University of Central Florida Institutional Review Board (IRB). See Appendix A for the IRB Human Subjects Research approval letter. Data were collected from individuals fulfilling leadership roles in preschools from May 2017 through June 2018. Amongst other preschool programs, Head Start and Early Head Start programs were targeted for recruitment. Head Start is a federal program whose mission is to promote school readiness and social-emotional development in young children from birth to 5-years of age. These programs are inherently different from privately funded preschool settings given that eligibility for enrollment is largely income based and related to poverty guidelines (Office of Head Start, 2018). Given that there were 957 Head Start and Early Head Start programs in Florida at the time of study inception, a conservative sample size for survey research with a population of this magnitude was 88 participants (Barlett, Kotrlik, & Higgins, 2001; Survey Monkey, 2016). Previous studies sampling Head Start and Early Head Start programs that utilized online survey methods via email request reported a 75% response rate (Martin, Wolff, Lonczak, Chambers, Cooke, & Whitney, 2014).

Initially, it was proposed that preschool leaders would be recruited widely from Orange County to obtain a representative sample of trauma-informed knowledge and practice in the local Central Florida community. Next, one county would be selected randomly (i.e., by assigning a number to each county and utilizing a random number generator to select one county within a region) from each of Florida's other major regions (i.e., North West, North East, Central East, Central West, South West, and South East). Preschool leaders then would be recruited widely

from each selected county to gain an understanding of trauma-informed knowledge as a whole in Florida, a state that is affiliated with WAIMH and that has a state AIMH.

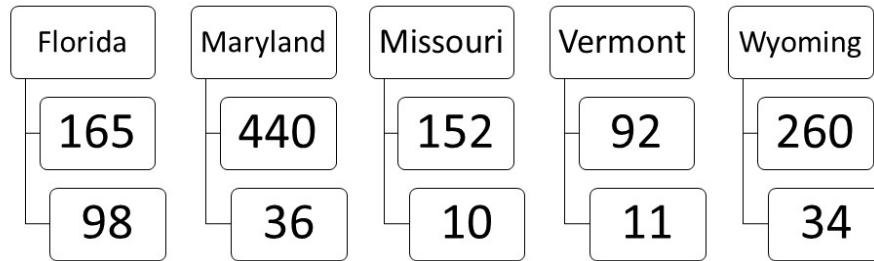
Finally, a state that was not affiliated with WAIMH (as listed by the World Association of Infant Mental Health, 2018), did not have a state AIMH (as listed by the Alliance for the Advancement of Infant Mental Health, 2018, and cross-referenced with a Google search), was in a different geographic region than Florida, and had similar educational and training requirements for preschool teachers would be selected for comparison. Thus, potential comparison states included Kentucky, Maryland, Missouri, Montana, Nevada, North Dakota, South Dakota, Vermont, and Wyoming. The comparison state was to be divided by major regions, one county from each region would be selected randomly (i.e., by assigning a number to each county and utilizing a random number generator to select one county within a region). Preschool leaders from each county then would be recruited. Some potential comparison states (i.e., Maryland, Missouri, Vermont, and Wyoming) had an ample number of sites and agencies listed on a variety of local (e.g., local Head Start websites, local Early Learning Coalition websites, online directories of preschools in the community) and national (e.g., The National Association for the Education of Young Children) sources from which to recruit participants, whereas others (i.e., Kentucky, Montana, Nevada, North Dakota, and South Dakota) did not have the same resources available from which to recruit participants. In other words, there were fewer preschools and agencies listed online than the number of participants needed. Thus, only Maryland, Missouri, Vermont, and Wyoming were considered for recruitment as a comparison state.

Given that the first month of participant recruitment efforts and data collection only yielded approximately a 13% participation rate (i.e., eight out of the 64 preschool leaders contacted at that point had completed the study), data collection strategies were revised such that

counties within states were no longer randomized. Rather, potential participants were recruited as widely as possible from Florida and from other potential comparison states. Additionally, agencies affiliated with preschool sites (e.g., Nemours BrightStart! Dyslexia Initiative, state Head Start Associations, state Early Education Commissions, and state Early Learning Coalitions) were contacted with the goal of obtaining listings of preschool leaders' email addresses and/or having the study description, survey link, and investigators' contact information forwarded to preschool leaders. Sites were selected for contact if they were learning-based centers for children who ranged in age from 0- to 5-years or agencies affiliated with preschools (e.g., Nemours BrightStart! Dyslexia Initiative, state Head Start Associations, state Early Education Commissions, and Early Learning Coalitions). In total, 165 sites were contacted in Florida and produced 102 responses, 440 sites were contacted in Maryland and produced 36 responses, 152 sites were contacted in Missouri and produced 10 responses, 92 sites were contacted in Vermont and produced 11 responses, and 260 sites were contacted in Wyoming and produced 35 responses.

Two participants were disqualified from Florida because they identified themselves as teachers and were ineligible to participate. Two additional participants from Florida were disqualified because their surveys were too incomplete to provide valuable insights. Thus, there were 98 eligible participants from Florida. No participants were excluded from Maryland, allowing the 36 Maryland participants to be retained. Finally, one participant was disqualified from Wyoming because she identified herself as a teacher and was ineligible to participate; thus, there were 34 eligible participants from Wyoming. All potential sites and sources of participants were contacted a maximum of three times via telephone or email in an effort to recruit participants. Therefore, individual sites and agencies were contacted a total of 2,652 times over

the course of 13 months in an attempt to recruit participants. See Figure 1 for a visual depiction of the number of sites contacted per state and the number of eligible individuals who participated from each state.



**Figure 1.** Number of Sites Contacted Per State and Resulting Number of Participants  
Participants

Data for this study were collected from preschool leaders who included Directors, Assistant Directors, and others on site-specific leadership positions (e.g., Center Supervisor, Family Advocate, and Mental Health Manager). Only one individual from each site was asked to participate. No participants were excluded based on their age, sex, ethnicity, or other personal characteristics. Data collected from Florida yielded 98 eligible participants and met the goal sample size; however, despite significant recruitment efforts, the survey methodology produced an insufficient number of participants from a comparison state. Thus, data were under-collected, as a representative sample could not be obtained from a comparison state that was not affiliated with WAIMH and that did not have a state AIMH. Of the potential comparison states, the majority of participants were from Maryland (n=36) and Wyoming (n=34). As a result, data were examined from Florida, Maryland, and Wyoming.

First, statistical comparisons of demographic variables across states were examined to determine whether participant and program demographics were significantly different among Florida, Maryland, and Wyoming in a statistical sense. Prior to conducting analyses to compare



demographic variables, tests of normality were used to determine whether the data were distributed normally, thus determining whether parametric or nonparametric analyses were most appropriate to analyze demographic differences across states. Two tests of normality, Kolmogorov-Smirnov and Shapiro-Wilk (Field, 2013), were used to analyze the distribution of demographic variables. Both tests produced statistically significant results ( $p < .05$ ) for all variables entered, indicating that the data deviated significantly from a normal distribution. Thus, nonparametric analyses were more appropriate than parametric tests to compare demographic variables across states. Specifically, Kruskal-Wallis (Kruskal & Wallis, 1952) tests were selected given that there were three separate groups across which the data were distributed (i.e., state; Field, 2013). See Table 1 for descriptive statistics of participant demographics.

With regard to the 98 participants from Florida, 95 participants were female (96.9%), and 3 participants were male (3.1%). With regard to the 36 participants from Maryland, all 36 were female (100%). With regard to the 34 participants from Wyoming, 33 participants were female (97.1%), and 1 participant preferred not to answer (2.9%). Participants' mean age was 53.31-years ( $SD=12.41$ -years) in Florida, 55.38-years ( $SD=13.02$ -years) in Maryland, and 46.21-years ( $SD=11.63$ -years) in Wyoming. Kruskal-Wallis analyses indicated that there were no significant differences across states with regard to participants' sex,  $H(2)=2.14$ ,  $p < .34$ , or age,  $H(2)=4.26$ ,  $p < .12$ .

With regard to participant ethnicity in Florida, 64.3% were Caucasian, 7.1% were Hispanic, 27.6% were African American, and 1% preferred not to answer. Of those who participated from Maryland, 83.3% of participants were Caucasian, 11.1% were African American, 2.8% were multiracial, and 2.8% identified with another ethnicity not listed (i.e., one participant identified as being Pakistani). With regard to participants' ethnicity in Wyoming,

97.1% were Caucasian, and 2.9% were Hispanic. Kruskal-Wallis analyses revealed that there were significant differences between Florida and Wyoming with regard to participants' ethnicity  $H(2)=26.94, p<.01$ , with the participants from Florida being more ethnically diverse and the participants from Wyoming being primarily Caucasian. Kruskal-Wallis analyses indicated that there were no significant differences with regard to ethnicity between Florida and Maryland,  $H(2)=13.58, p<.17$ , or Wyoming and Maryland,  $H(2)=13.36, p<.38$ .

In Florida, 86.7% participants were Directors, 5.1% were Assistant Directors, 3.1% were Family Advocates, and 5.1% were in other leadership roles (e.g., Owner, Curriculum Coordinator, Mental Health Manager). In Maryland, 80.6% of participants were Directors, 11.1% were Assistant Directors, and 8.3% were in other leadership roles (e.g., Program Facilitator). In Wyoming, 88.2% of participants were Directors, 5.9% were Assistant Directors, and 5.9% were in other leadership roles (e.g., Owner, Center Supervisor). Kruskal-Wallis analyses indicated that there were no significant differences across states with regard to participants' positions in their programs,  $H(2)=.97, p<.62$ .

Finally, with regard to participants' level of education in Florida, 2.0% completed some high school, 7.1% received a high school diploma, 3.1% obtained vocational training, 21.4% completed some college, 13.3% obtained an Associate's Degree, 31.6% obtained a Bachelor's Degree, 19.5% obtained a Master's Degree, and 2% obtained a Doctorate Degree. In Maryland, 2.9% obtained an Associate's Degree, 19.4% obtained a Bachelor's Degree, 69.4% obtained a Master's Degree, and 8.3% obtained a Doctorate Degree. In Wyoming, 2.9% received a high school diploma, 2.9% obtained vocational training, 17.7% completed some college, 5.9% obtained an Associate's Degree, 47.1% obtained a Bachelor's Degree, and 23.5% obtained a Master's Degree. Kruskal-Wallis analyses revealed that there were significant differences across

states with regard to participants' level of education. Specifically, participants in Maryland were educated more highly than participants in Florida,  $H(2)=-56.91, p<.01$ , and participants in Wyoming,  $H(2)=46.60, p<.01$ .

### Program Demographics

See Table 2 for descriptive statistics of program demographics and Table 3 for descriptive statistics of teacher variables.

**Head Start and Early Head Start Programs.** Frequencies calculated for demographic variables in Florida suggested that 26.5% of participants were from Head Start and Early Head Start programs, whereas 73.5% of participants were not. In Maryland, a state not affiliated with WAIMH and that did not have a state AIMH, 100% of participants were not from a Head Start or Early Head Start program. In Wyoming, a second state not affiliated with WAIMH and that did not have a state AIMH, 6.1% of participants were from a Head Start or Early Head Start program, whereas 93.9% of participants were not. Kruskal-Wallis analyses revealed that there were significant differences across states with regard to whether or not participants were from Head Start or Early Head Start programs. Specifically, a significantly higher number of participants in Florida were from Head Start and Early Head Start programs than in Maryland,  $H(2)=22.021, p<.01$ , and in Wyoming,  $H(2)=16.99, p<.02$ .

**Program Funding and Enrollment.** With regard to program funding amongst participants from Florida, 47.0% were private, 25.5% of programs were funded federally, 15.3% were state funded, 10.2% were family-owned, and 2% were funded locally. With regard to student enrollment, preschools in Florida had a mean of 115.86 students ( $SD=228.29$  students) enrolled in their programs. The calculated mean was inflated given the vast spread of student enrollment ranging from three students to 1600 students enrolled.

With regard to program funding amongst participants from Maryland, 37.1% were private, 34.3% were state funded, 17.1% were funded federally, 8.6% were family owned, and 2.9% were funded locally. Preschools in Maryland had a mean of 173.72 students ( $SD=213.80$  students) enrolled in their programs. As observed in Florida, this mean was inflated given that the range of students per program varied from 12 students to 1100 students enrolled.

In Wyoming, 55.9% of participants were from private preschools, 14.7% of programs were funded federally, 14.7% were state funded, 11.8% were family owned, and 2.9% were funded locally. With regard to enrollment, preschools in Wyoming had a mean of 104.09 students ( $SD=151.21$  students) enrolled in their programs. Again, the calculated average number of students per program was inflated given that the range of students per program varied from 12 students enrolled to 567 students enrolled.

Across all states, the standard deviation was larger than the mean with regard to number of students, indicating that data points were distant from the mean (Field, 2013). Kruskal-Wallis analyses showed that programs across states did not differ significantly with regard to their source of funding  $H(2)=2.14, p<.34$ . Programs across states differed significantly with regard to the mean number of students enrolled, however, with programs in Maryland serving a higher number of students on average than programs in Florida,  $H(2)=-24.71, p<.03$ , and in Wyoming,  $H(2)=34.75, p<.02$ .

**Young Children's Household Socioeconomic Status.** With regard to preschoolers' family socioeconomic status (SES) in Florida, 20.8% of participants indicated that less than 10% of their students had Medicaid, 14.6% indicated that 11-25% of students had Medicaid, 19.8% indicated that 26-50% of students had Medicaid, 17.7% indicated that 51-75% of students had Medicaid, and 27.1% indicated that 76-100% of students had Medicaid. Additionally, 23.2% of

participants indicated that less than 10% of their students qualified for free/reduced lunch, 9.5% indicated that 11-25% of students qualified, 14.7% indicated that 26-50% of students qualified, 17.9% indicated that 51-75% of students qualified, and 34.7% indicated that 76-100% of students qualified for free/reduced lunch. Finally, the majority of participants in Florida (87.5%) indicated that less than 10% of their families were homeless. Nonetheless, 8.4% indicated that 11-25% of their families were homeless, 1.0% indicated that 51-75% of their families were homeless, and 3.1% indicated that 76-100% of their families were homeless.

In Maryland, 36.1% of participants indicated that less than 10% of their students had Medicaid, 11.1% indicated that 11-25% of students had Medicaid, 11.1% indicated that 26-50% of students had Medicaid, 25.0% indicated that 51-75% of students had Medicaid, and 16.7% indicated that 76-100% of students had Medicaid. Further, 30.6% of participants indicated that less than 10% of their students qualified for free/reduced lunch, 16.7% indicated that 11-25% of students qualified, 8.3% indicated that 26-50% of students qualified, 19.4% indicated that 51-75% of students qualified, and 25.0% indicated that 76-100% of students qualified for free/reduced lunch. Finally, similar to Florida, the majority of participants (86.1%) indicated that less than 10% of their families were homeless. Nonetheless, 11.1% indicated that 11-25% of their families were homeless, and 2.8% indicated that 26-50% of their families were homeless.

With regard to preschoolers' family SES in Wyoming, 32.4% of participants indicated that less than 10% of their students had Medicaid, 23.5% indicated that 11-25% of students had Medicaid, 23.5% indicated that 26-50% of students had Medicaid, 11.8% indicated that 51-75% of students had Medicaid, and only 8.8% indicated that 76-100% of students had Medicaid. These findings suggested that there was a lower percentage of students who had Medicaid than in Florida and Maryland. Further, it appeared that fewer students in Wyoming qualified for

free/reduced lunch than in Florida and Maryland. Specifically, 38.2% of participants indicated that less than 10% of their students qualified for free/reduced lunch, 14.7% indicated that 11-25% of students qualified, 26.5% indicated that 26-50% of students qualified, 14.7% indicated that 51-75% of students qualified, and only 5.9% indicated that 76-100% of students qualified for free/reduced lunch. Finally, similar to Florida and Maryland, the majority of participants (93.9%) indicated that less than 10% of their families were homeless. Nonetheless, 6.1% indicated that 11-25% of their families were homeless.

Kruskal-Wallis analyses revealed that programs in Florida had a significantly higher percentage of students who had Medicaid than in Wyoming,  $H(2)=23.18, p<.04$ . No significant differences were found in percentage of students who had Medicaid when comparing Florida to Maryland,  $H(2)=13.05, p<.47$ , or Wyoming to Maryland,  $H(2)=10.13, p<.37$ . Programs in Florida had a significantly higher percentage of students who qualified for free/reduced lunch than in Wyoming,  $H(2)=28.99, p<.01$ . No significant differences were found in percentage of students who qualified for free/reduced lunch when comparing Florida to Maryland,  $H(2)=11.60, p<.61$ , or Wyoming to Maryland,  $H(2)=17.39, p<.35$ . Finally, no significant differences were found across states with regard to the percentage of children who were homeless,  $H(2)=1.31, p<.52$ .

**Family Involvement with Child Welfare Agencies.** With regard to families' involvement with child welfare agencies in Florida, 43.4% of participants indicated that less than 10% of their families were identified by a local child welfare agency as requiring services, 21.6% indicated that 11-25% of families were identified, 13.4% indicated that 26-50% of families were identified, 13.4% indicated that 51-75% of were identified, and 8.2% indicated that 76-100% were identified. Additionally, 79.4% of participants indicated that less than 10% of the

children in their program were in foster care, 18.6% indicated that 11-25% of children were in foster care, and 2% indicated that 26-50% of their children were in foster care. Finally, 83.3% of participants indicated that they had made a report about a child in their program to their local child protective services agency, whereas 16.7% indicated that they had not.

With regard to families' involvement with child welfare agencies in Maryland, 54.3% of participants indicated that less than 10% of their families were identified by a local child welfare agency as requiring services, 25.7% indicated that 11-25% of families were identified, 5.7% indicated that 26-50% of families were identified, 11.4% indicated that 51-75% of were identified, and 2.9% indicated that 76-100% were identified. Additionally, in contrast to Florida, 100% of participants indicated that less than 10% of their children in their program were in foster care. Further, 86.7% of participants indicated that they had made a report about a child in their program to their local child protective services agency, whereas 13.3% indicated that they had not.

With regard to families' involvement with child welfare agencies in Wyoming, 50.0% of participants indicated that less than 10% of their families were identified by a local child welfare agency as requiring services, 20.6% indicated that 11-25% of families were identified, 20.6% indicated that 26-50% of families were identified, and 8.8% indicated that 51-75% of were identified. Additionally, 84.8% of participants indicated that less than 10% of their children in their program were in foster care, whereas 15.2% indicated that 11-25% of the children in their program were in foster care. Finally, 72.0% of participants indicated that they had made a report about a child in their program to their local child protective services agency, whereas 28.0% indicated that they had not.

Kruskal-Wallis analyses revealed that there were no significant differences across states

with regard to the percentage of families involved with child welfare agencies,  $H(2)=2.63, p<.27$ . In contrast, a significantly higher percentage of children from programs in Florida were in foster care than from programs in Maryland,  $H(2)=17.06, p<.01$ . No significant differences were found in percentage of children who were in foster care when comparing Florida to Wyoming,  $H(2)=4.71, p<.44$ , or Maryland to Wyoming,  $H(2)=12.35, p<.26$ . Finally, no significant differences existed across states with regard to the percentage of participants who had made a report to their local child protective services agency,  $H(2)=2.21, p<.33$ .

**Teacher Education.** To gauge preschool teachers' level of education, participants were asked to report the highest level of education obtained by the majority of their teachers. In Florida, 16.6% of participants indicated that the majority of their teachers had a high school diploma, 11.5% indicated that their teachers had vocational training, 19.8% indicated that their teachers completed some college, 20.8% indicated that their teachers had an Associate's Degree, 29.2% indicated that their teachers had a Bachelor's Degree, and 2.1% indicated that their teachers had a Master's Degree.

In Maryland, 2.8% indicated that their teachers had vocational training, 2.8% indicated that their teachers completed some college, 13.9% indicated that their teachers had an Associate's Degree, 36.1% indicated that their teachers had a Bachelor's Degree, and 44.4% indicated that their teachers had a Master's Degree.

Finally, in Wyoming, 11.9% of participants indicated that their teachers had a high school diploma, 2.9% indicated that their teachers had vocational training, 23.5% indicated that their teachers completed some college, 8.8% indicated that their teachers had an Associate's Degree, 50.0% indicated that their teachers had a Bachelor's Degree, and only 2.9% indicated that their teachers had a Master's Degree.



Kruskal-Wallis analyses indicated that there were significant differences in teachers' highest level of education across states, with teachers in Maryland obtaining higher degrees than teacher in Florida,  $H(2)=-57.34, p<.01$ , and in Wyoming,  $H(2)=41.33, p<.01$ .

**Specialized Teacher Training.** Participants were asked to report whether teachers in their programs were required to get specialized training in working with students whose families were identified by a local child welfare agency or children whose families faced adverse experiences (e.g., maltreatment in the home). Additionally, participants were asked whether teachers could opt into such trainings if they so choose and whether teachers did, in fact, opt into such training. See Figure 2 for participants' endorsements in response to these questions.

Kruskal-Wallis analyses revealed that there were significant differences across states with regard to teachers being required to obtain specialized training in working with students whose families were identified by a local child welfare agency. Specifically, programs in Florida required this type of specialized training more than programs in Maryland,  $H(2)=20.13, p<.02$ , and more than programs in Wyoming,  $H(2)=14.90, p<.05$ . No significant differences were found between specialized training requirements when comparing Maryland and Wyoming,  $H(2)=-5.23, p<.56$ . On the contrary, no significant differences were noted across states with regard to teachers being required to obtain specialized training in working with students whose families faced adverse experiences,  $H(2)=5.68, p<.06$ . Similarly, there were no significant differences across states with regard to the possibility of teachers opting into such trainings,  $H(2)=.99, p<.61$ , or the percentage of teachers who chose to opt into trainings,  $H(2)=.04, p<.98$ .

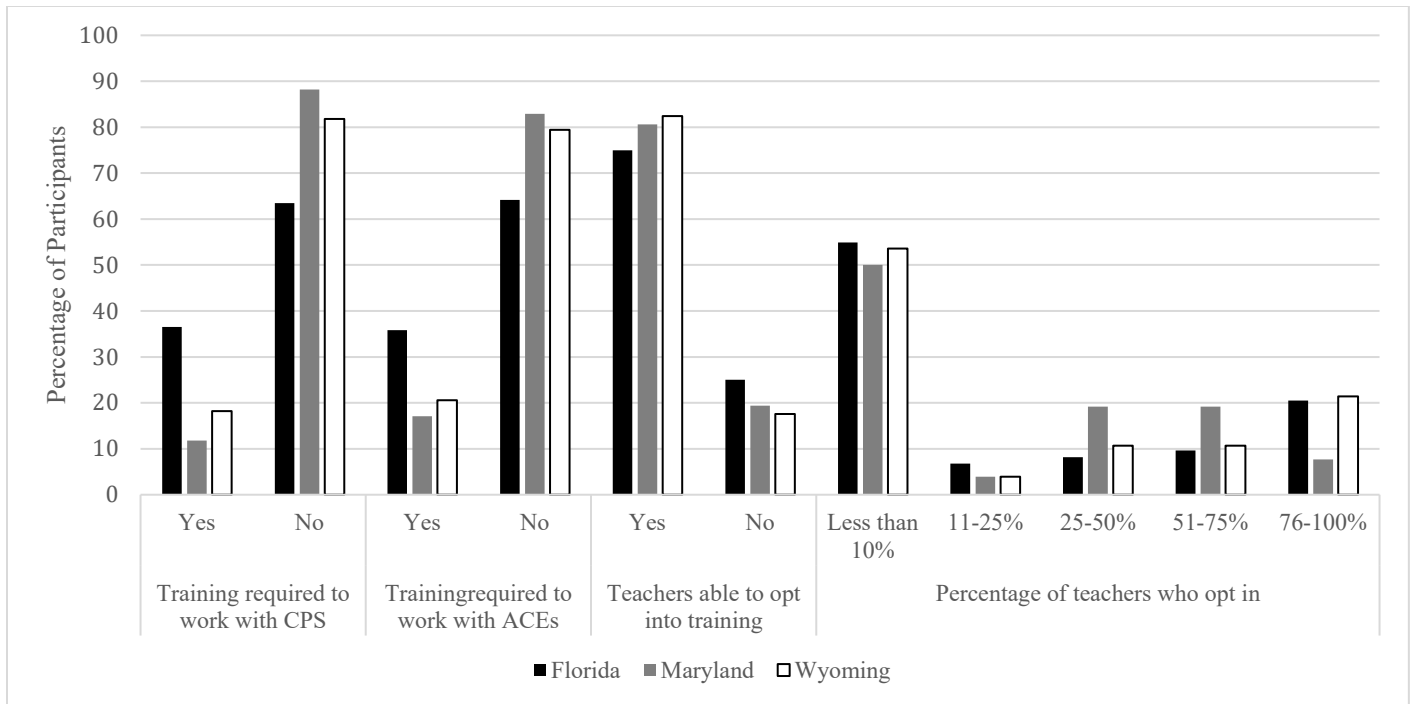


Figure 2: **Participants’ Endorsements Regarding Specialized Teacher Training**

Procedure

Following approval from the University of Central Florida IRB, the procedure described above for participant recruitment was implemented. Each Director received a brief email that explained the purpose and procedure of the study and contained a link to the online survey. See *Appendix B* for a sample of the recruitment email. Directors were able to participate in the study themselves or to forward the email to their Assistant Director or another individual in a leadership role with the understanding that only one individual may complete the survey from each site. The research questionnaires were administered via an online survey that was accessed by following a provided link. Upon accessing the survey, participants first were asked to review a consent form and indicate their agreement to participate in the study. See *Appendix C* for a sample of the consent form. Participants then were instructed to provide responses on each of

the measures described below. Finally, participants viewed a debriefing screen following their completion of the study. The debriefing screen explained the intent of the study and provided references to relevant literature should participants be interested. See *Appendix D* for a sample of the debriefing document. A physical version of this survey was available in the event that participants preferred not to complete the survey online. No participants requested a physical copy of the survey. Thus, all data were collected online.

According to the usage statistics generated by the survey host site, the entire study took participants an average of 15 minutes and 17 seconds to complete. During participation, individuals were able to contact one of the investigators via email or telephone if they had questions or comments regarding the survey. All electronic data were exported from the online data collection program and stored on a password-protected computer. No personally identifying information was required as part of the study. Finally, all data were analyzed in a group format, and no surveys were examined individually.

### Measures

**Demographics.** To begin the survey, participants completed a brief demographic questionnaire that included questions regarding their gender, ethnicity, position in their program, level of education, funding of their program, socioeconomic status of the young children served by their program, and other relevant information regarding their preschool. See *Appendix E* for a sample of the demographic questionnaire.

**Screening for Children’s Adverse Experiences.** This survey was adapted from the Substance Abuse and Mental Health Services Administration (SAMHSA) Project LAUNCH (Linking Actions for Unmet Needs in Children’s Mental Health) questionnaire (SAMHSA, 2016). This initiative is a federal grant program that aims to promote the social, emotional,

cognitive, physical, and behavioral health of young children (Goodson et al., 2014), with questions in the original survey reflecting the aforementioned domains. The questionnaire was adapted for the purposes of this study and contained thirteen items. It was used to determine whether preschools were screening young children for adverse and/or traumatic experiences and inquired about what barriers prevented these sites from screening for these experiences. For the purpose of this study, a description of preschool practices was generated from these data using descriptive statistics. Additionally, six individual items were summed as a measure of screening practices. See *Appendix F* for a sample of the *Screening for Children's Adverse Experiences Survey*.

**Young Children's Adverse Experiences at Home.** This questionnaire was adapted from the *Adverse Childhood Experiences Study*, which found that those who experienced four or more individual adverse childhood experiences (ACEs) were at significantly increased risk for negative physical, social, and emotional outcomes in adulthood (Felitti et al., 1998). In this study, the ACEs questionnaire was used to assess participants' knowledge of their young students' adverse experiences. The original ACEs questionnaire ( $\alpha=.88$ ; Murphy et al., 2014) consisted of ten questions and examined seven dimensions of exposure to adverse experiences, including psychological, physical, and sexual abuse as well as exposure to substance abuse, mental illness, domestic violence, and criminal behavior at home during childhood. The original ACEs questionnaire instructed participants to report whether they had experienced certain adverse situations while they were growing up (i.e., during the first 18 years of their life).

In this study, participants were asked to report whether any children in their program had experienced the same events as listed in the original questionnaire. One additional qualitative item was added to this questionnaire for the purposes of this study regarding the participants'

own background. Specifically, participants were asked whether or not they came from a background similar to that of the children in their program. Overall childhood exposure to adverse experiences was calculated by totaling the number of questions to which participants endorsed their students having been exposed, resulting in a Total Exposure score. For the purposes of this study, the Total Exposure score was examined. See *Appendix G* for a sample of the *Children's Adverse Experiences at Home Questionnaire*.

**Knowledge about Young Child PTSD Symptoms.** This screener was adapted from the *Young Child PTSD Screen* (Scheeringa, 2010) to examine participants' knowledge of Post-Traumatic Stress Disorder (PTSD) symptoms in the preschool classroom. The screener originally contained six items related to symptoms commonly observed in young children and one item related to the frequency with which participants noticed these symptoms within their preschool setting. The items on the original *Young Child PTSD Screen* were chosen empirically from data on 284 3- to 6-year old children who had been trauma-exposed in a National Institute of Mental Health-funded study. The chosen set of items showed 100% sensitivity, suggesting that this particular combination of six items accurately identified young children in need of treatment for PTSD (Scheeringa, 2010).

In this study, the adapted version of this questionnaire contained ten questions, considered the symptoms identified by Scheeringa (2010), and added other behaviors typically observed in many preschool-aged children. Participants were asked to select whether listed behaviors related specifically to traumatic events, were typically observed in young children, or were not typically observed in young children at all. See *Appendix H* for a sample of the *Knowledge about Young Child PTSD Symptoms Questionnaire*.

**Trauma Knowledge.** This screener was adapted from the Trauma-Informed Organizational Toolkit's *Trauma-Informed Organizational Self-Assessment* (Guarino, Soares, Konnath, Clervil, & Bassuk, 2009), which was designed for the purpose of self-evaluating program practices to better support the needs of the individuals served. In this study, the adapted version of the survey contained eleven items related to program staffs' knowledge about traumatic stress, its impact on young children's mental health and development, the identification of triggers, and stress management techniques. Items were rated on a four-point Likert-type scale with responses ranging from *Strongly Disagree* (0) to *Strongly Agree* (3) and with an option for indicating that participants believed certain items were not applicable to their role. For the purpose of this study, the Total Trauma Knowledge score (i.e., the sum of item endorsements) was examined. See *Appendix I* for a sample of the *Trauma Knowledge Screen*.

**Trauma Competencies in the Classroom.** This questionnaire was adapted from the major findings of the New Haven Competency Conference, which was based on the idea that most psychologists only have a basic understanding and virtually no formal training in trauma-informed practices (Cook & Newman, 2014). As a result, trauma-informed foundational and functioning competencies were devised that span across different categories, including knowledge about trauma as well as trauma-focused assessment, intervention, and relational systems. One to two competencies from each category were adapted to screen participants' extent of knowledge in each competency area. This questionnaire consisted of six items that were rated on a four-point Likert-type scale with response options ranging from *Strongly Disagree* (0) to *Strongly Agree* (3). For the purpose of this study, the Total Trauma Competency score (i.e., the sum of item endorsements) was examined for these data. See *Appendix J* for a sample of the *Trauma Competencies in the Classroom Questionnaire*.

### Data Analyses

Data analyses for this project were conducted using SPSS. Initially, descriptive statistics including the mean scores and standard deviations for each variable of interest were calculated, and participants' relative score for each variable was examined. Kruskal-Wallis analyses were used to determine whether participants' mean scores on variables of interest were significantly different across states. This collective information allowed for a thorough characterization of the programs from which information was collected. A descriptive approach to the information collected in this study provided a foundation for describing the level of trauma-informed knowledge and practice in the preschools sampled, particularly in Florida, our home state.

First, tests of normality were conducted to determine whether the data were normally distributed. Kolmogorov-Smirnov and Shapiro-Wilk tests (Field, 2013) were used to analyze the distribution of all variables of interest. Both tests produced statistically significant results ( $p < .05$ ) for all independent and dependent variables, indicating that the data deviated significantly from a normal distribution. Thus, Kruskal-Wallis comparisons of participant and program demographic variables across states revealed that several demographic variables were significantly different in a statistical sense from one another and could be considered as covariates in hypothesis testing (Field, 2013). Potential covariates included participants' ethnicity, participants' highest level of education, the highest level of education obtained by the majority of teachers in a program, the percentage of participants from Head Start/Early Head Start programs, the number of students enrolled in programs, the percentage of students who had Medicaid, the percentage of students who qualified for free/reduced lunch, the percentage of students in foster care, and the percentage of programs that required teachers to get specialized training in working with students whose families were involved with child welfare agencies.

To account for potential confounding variables, ANCOVA should be utilized if the assumptions of ANCOVA are met (Field, 2013), especially given that traditional nonparametric tests do not account for covariates (Field, 2013). Although the assumption of normality was violated for the variables of interest in this study, ANCOVA is still considered a robust test if *either* the assumption of normality *or* the assumption of homogeneity of variance is violated (Olejnik & Algina, 1984). Thus, the assumption of homogeneity of variance/homoscedasticity in the independent and dependent variables of interest was examined using Levene's test (Field, 2013; Levene, 1960). Levene's test revealed statistically non-significant results ( $p > .05$ ) for all variables entered, indicating that the variances were roughly equal, and the assumption was accepted.

Moreover, recent literature suggested that ANCOVA, particularly with the use of bootstrapping (Efron, 1979; Efron & Tibshirani, 1994), is robust even if the assumption of normality is violated (Field, 2013; Sadooghi-Alvandi & Jafari, 2013). Similarly, a bootstrap analysis (Efron, 1979; Field, 2013; Sainani, 2012) is recommended for regression models when the assumption of normality is violated (Field, 2013), particularly given that bootstrapping, "like other nonparametric approaches, does not make any assumptions about the distribution of the sample" (Ong, 2014, p. 2). The version of SPSS used to conduct data analyses in this study, V24.0, supported the use of bootstrap techniques (IBM Corporation, 2016).

Therefore, the first hypothesis that program leaders' trauma-informed knowledge and practices differed significantly by state (i.e., between programs that were in a state that was affiliated with WAIMH and that had a state AIMH versus programs that were not affiliated with WAIMH and did not have a state AIMH) was examined using ANCOVA with bootstrapping. Similarly, ANCOVA with bootstrapping was conducted to assess the second hypothesis that



preschool leaders' trauma-informed knowledge and practices differed significantly based on funding source.

Next, multiple linear regression with bootstrapping was used to address the third hypothesis that the state in which the program was located, program funding, and preschool leaders' level of education predicted significantly participants' trauma-informed knowledge and practices. Thus, program location, funding, and education served as predictor variables, and the total scores of the *Trauma Knowledge Screen*, *Screening for Children's Adverse Experiences Survey*, and *Trauma Competencies in the Classroom Questionnaire* served as outcome variables. Finally, multiple linear regression with bootstrapping was used to address the fourth hypothesis that awareness of trauma-related experiences and symptoms in preschool children would predict significantly preschool leaders' trauma-informed practices. The total scores of the *Children's Adverse Experiences at Home Questionnaire* and the *Knowledge about Young Child PTSD Symptoms Questionnaire* served as predictor variables, whereas the total scores of the *Screening for Children's Adverse Experiences Survey* and *Trauma Competencies in the Classroom Questionnaire* served as outcome variables.

## CHAPTER THREE: RESULTS

### Preliminary Analyses

**Descriptive Statistics.** To better understand and interpret the results of this study, descriptive statistics (i.e., means and standard deviations, frequencies of item endorsements) were examined for each variable of interest.

### Trauma-Informed Knowledge

See Table 4 for descriptive statistics of trauma-informed knowledge. To gain an understanding of preschool leaders' current level of trauma-informed knowledge, participants rated their staff's knowledge regarding the impact of trauma on young children's mental health and development, their ability to identify triggers, and their ability to implement stress management techniques for young children, amongst other relevant items, via the *Trauma Knowledge Screen*. Of a maximum of 11 endorsements, participants in Florida indicated that their teachers were knowledgeable about an average of 6.6 items ( $SD=3.98$ ). Participants from Maryland ( $M=7.15$ ,  $SD=3.80$ ) indicated their teachers were knowledgeable on approximately one item more than those in Florida, whereas participants from Wyoming ( $M=5.61$ ,  $SD=4.12$ ) rated their teachers as being knowledgeable on approximately one item less than those in Florida. Kruskal-Wallis analyses indicated that there were no significant differences across states with regard to mean scores on the *Trauma Knowledge Screen*,  $H(2)=2.01$ ,  $p<.37$ .

Next, the *Young Children's Adverse Experiences at Home Questionnaire* required participants to indicate whether, as a whole, any of the preschoolers in their programs experienced a variety of difficulties in their homes, including physical, emotional, and sexual abuse, neglect, and other household dysfunction (e.g., witnessing domestic violence or living

with a family member who abused substances or went to prison). Participants in Florida ( $M=5.95$ ,  $SD=3.32$ ), Maryland ( $M=6.97$ ,  $SD=3.15$ ), and Wyoming ( $M=6.71$ ,  $SD=3.67$ ) all endorsed a belief that at least one student in their program experienced a significant number of ACEs. Given that four or more adverse childhood experiences (ACEs) place individuals at significantly higher risk of detrimental outcomes related to their physical and mental health (Felitti et al., 1998), the frequency of participants endorsing that the young children in their programs already experienced four or more ACEs was examined. Analyses revealed that 72.0% of participants in Florida, 80.0% of participants in Maryland, and 70.8% of participants in Wyoming indicated that they believed a child in their program was exposed to four or more ACEs at the time of this study, with total scores ranging from 0 to 10 in Florida and from 1 to 10 in both Maryland and Wyoming.

It is important to note, however, the distinction between direct maltreatment (e.g., physical, sexual, and emotional abuse or neglect) and general household dysfunction (e.g., living with a family member with a mental illness or a family member who has gone to prison). When examining participants' endorsements across maltreatment variables, participants in Florida endorsed an average of 2.56 ACEs, participants in Maryland endorsed an average of 3.11 ACEs, and participants in Wyoming endorsed an average of 3.13 ACEs across all of the young children in their program. There were five questions total with regard to maltreatment and participants' scores ranged from 0 to 5 in their endorsements. Similarly, participants in Florida, Maryland, and Wyoming endorsed an average of 3.51, 3.87, and 3.61 experiences with regard to household dysfunction, respectively, across all of the young children in their program. Of a total of five questions with regard to household dysfunction, scores ranged from 0 to 5 in the endorsements. Kruskal-Wallis analyses indicated that there were no significant differences across states with

regard to mean scores on the *Young Children's Adverse Experiences at Home Questionnaire*,  $H(2)=3.44, p<.18$ .

Finally, participants were asked to distinguish between PTSD symptoms and typical behavior in young children via the *Knowledge about Young Child PTSD Symptoms Questionnaire*. Out of a maximum of 10 behaviors, participants in Florida were able to correctly distinguish approximately half of the behaviors presented ( $M=5.92, SD=1.69$ ). Participants from Maryland ( $M=6.35, SD=1.38$ ) and Wyoming ( $M=6.30, SD=1.42$ ) were able to correctly distinguish approximately one more behavior than those from Florida. Kruskal-Wallis analyses suggested that there were no significant differences across states with regard to mean scores on the *Knowledge about Young Child PTSD Symptoms Questionnaire*,  $H(2)=1.72, p<.42$ .

#### Trauma-Informed Practices

See Table 5 for descriptive statistics of trauma-informed practices. To determine preschool programs' current screening practices, participants indicated whether their sites were screening young children for adverse and/or traumatic experiences via the *Screening for Children's Adverse Experiences Survey*. Thus, six individual items were summed as a measure of screening practices. In Florida, participants indicated that their programs were performing an average of 2.81 practices ( $SD=2.32$ ). First, 70.9% of preschool leaders indicated that their programs were *not* required to conduct screenings for ACEs/trauma in their children, whereas 29.1% indicated that screenings were required. Next, 70.5% of participants indicated that their programs *did not* routinely screen children for ACEs/trauma, whereas 29.5% indicated screening routinely.

Further, the third through sixth questions asked participants whether their program screened for ACEs or trauma in children in certain situations. Specifically, if a parent/caregiver

raised a concern, 50.7% of participants indicated that they *Almost Always* screened in that circumstance, 16.4% indicated that they *Sometimes* screened in that circumstance, and 32.9% indicated that they *Rarely* screened in that circumstance. Additionally, if an agency staff member raised a concern, 53.4% indicated that they *Almost Always* screened, 15.1% indicated that they *Sometimes* screened, and 31.5% indicated that they *Rarely* screened. Further, if another provider (e.g., healthcare or other childcare agency) referred a child, 54.9% indicated that they *Almost Always* screened, 9.9% indicated that they *Sometimes* screened, and 35.2% indicated that they *Rarely* screened. Finally, when asked whether programs actually screened children if they were required, 36.6% indicated that they *Almost Always* screened in that circumstance, 12.7% indicated that they *Sometimes* screened in that circumstance, and 50.7% indicated that they *Rarely* screened in that circumstance.

In Maryland, participants indicated that their programs were performing an average of 2.55 practices ( $SD=2.10$ ). First, 83.9% of preschool leaders indicated that their programs were *not* required to conduct screenings for ACEs/trauma in their children, whereas 16.1% indicated that screenings were required. Next, 77.4% of participants indicated that their programs *did not* routinely screen children for ACEs/trauma, whereas 22.6% indicated screening routinely.

Further, the third through sixth questions asked participants whether their program screened for ACEs or trauma in children in certain situations. Specifically, if a parent/caregiver raised a concern, 53.3% of participants indicated that they *Almost Always* screened in that circumstance, 13.3% indicated that they *Sometimes* screened in that circumstance, and 33.4% indicated that they *Rarely* screened in that circumstance. Additionally, if an agency staff member raised a concern, 40% indicated that they *Almost Always* screened, 23.3% indicated that they *Sometimes* screened, and 36.7% indicated that they *Rarely* screened. Further, if another provider

(e.g., healthcare or other childcare agency) referred a child, 44.8% indicated that they *Almost Always* screened, 20.7% indicated that they *Sometimes* screened, and 34.5% indicated that they *Rarely* screened. Finally, when asked whether programs actually screened children if they were required, 17.9% indicated that they *Almost Always* screened in that circumstance, 14.2% indicated that they *Sometimes* screened in that circumstance, and 67.9% indicated that they *Rarely* screened in that circumstance.

In Wyoming, participants endorsed a similar number of screening practices relative to those in Florida and Maryland ( $M=2.40$ ,  $SD=2.36$ ). First, 84.6% of preschool leaders indicated that their programs were *not* required to conduct screenings for ACEs/trauma in their children, whereas 15.4% indicated that screenings were required. Next, 76.0% of participants indicated that their programs *did not* routinely screen children for ACEs/trauma, whereas 24.0% indicated screening routinely.

Further, the third through sixth questions asked participants whether their program screened for ACEs or trauma in children in certain situations. Specifically, if a parent/caregiver raised a concern, 38.1% of participants indicated that they *Almost Always* screened in that circumstance, 23.8% indicated that they *Sometimes* screened in that circumstance, and 38.1% indicated that they *Rarely* screened in that circumstance. Additionally, if an agency staff member raised a concern, 47.6% indicated that they *Almost Always* screened, 19.1% indicated that they *Sometimes* screened, and 33.3% indicated that they *Rarely* screened. Further, if another provider (e.g., healthcare or other childcare agency) referred a child, 52.4% indicated that they *Almost Always* screened, 9.5% indicated that they *Sometimes* screened, and 38.1% indicated that they *Rarely* screened. Lastly, when asked whether programs actually screened children if they were required, 33.3% indicated that they *Almost Always* screened in that circumstance, 14.3%

indicated that they *Sometimes* screened in that circumstance, and 52.4% indicated that they *Rarely* screened in that circumstance. Kruskal-Wallis analyses indicated that there were no significant differences across states with regard to their screening practices based on the *Screening for Children's Adverse Experiences Survey*,  $H(2)=.61, p<.74$ .

Finally, with regard to programs' current practices, participants were asked to endorse their own trauma-informed competencies on six items regarding trauma-focused assessment, intervention, and relational systems via the *Trauma Competencies in the Classroom Questionnaire*. Participants from Florida ( $M=5.37, SD=1.05$ ), Maryland ( $M=5.00, SD=1.47$ ), and Wyoming ( $M=5.09, SD=1.54$ ) rated themselves as being highly competent in these domains. Kruskal-Wallis analyses indicated that there were no significant differences across states with regard to participants' ratings of their trauma-informed competencies,  $H(2)=1.15, p<.56$ .

### Qualitative Results

See Table 6 for qualitative results. Of particular interest in this study, qualitative results provided specific detail about preschool leaders' opinions of screening for ACEs in their preschool students. Specifically, when preschool leaders were asked whether they believed that screenings for ACEs would be valuable in their program, the majority of all participants indicated that screenings for ACEs would be valuable in their preschool programs. Kruskal-Wallis analyses revealed that there were no significant differences across states with regard to participants' opinions on the value of screenings in their programs,  $H(2)=1.14, p<.56$ .

Additionally, participants were asked to indicate whether they would conduct screenings in their programs if given adequate training and tools. Again, the vast majority of all participants indicated that they would conduct screenings if provided with training and screening measures. Kruskal-Wallis analyses revealed that there were no significant differences across states with

regard to participants' willingness to conduct screenings in their programs if given adequate training and tools,  $H(2)=.58, p<.75$ .

Finally, barriers common to not screening were assessed. Across states, the most commonly endorsed barriers to conducting screenings for ACEs were (1) lack of training, (2) unfamiliarity with screening instruments, and (3) lack of knowledge about referral options for positive screeners, Kruskal-Wallis analyses revealed that there were no significant differences across states with regard to participants' endorsements with regard to lack of training,  $H(2)=3.78, p<.15$ , unfamiliarity with screening instruments,  $H(2)=1.73, p<.42$ , and lack of knowledge about referral options for positive screeners,  $H(2)=2.90, p<.24$ . See Figure 3 for additional information regarding qualitative results.

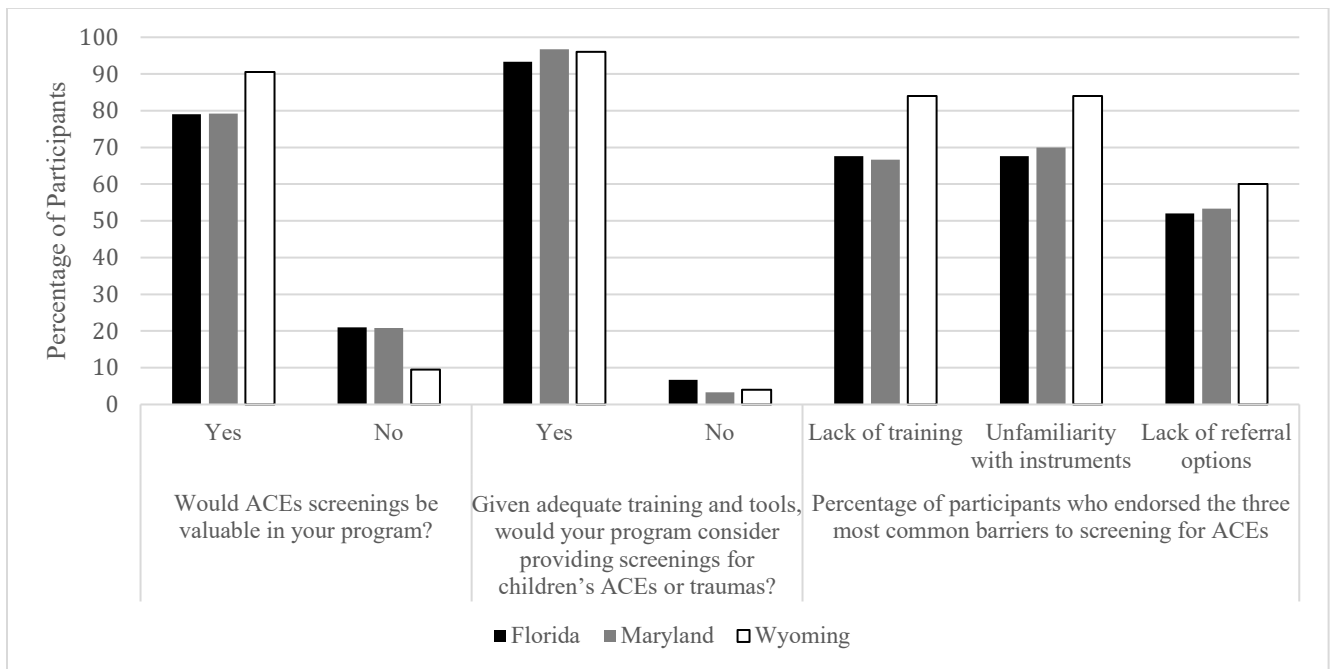


Figure 3: Qualitative Results



### ANCOVA with Bootstrapping

See Table 7 for ANCOVA with bootstrapping results. First, the assumption of independence for independent variables and covariates was examined to determine whether potential covariates could be used in analyses. In other words, the covariates must be roughly equal across the groups of the independent variable (Field, 2013). *F*-tests with bootstrapping were examined to determine whether this assumption was met for several potential covariates including participant' ethnicity, participants' highest level of education, the number of students enrolled in a program, whether participants were from Head Start/Early Head Start programs, the percentage of students who had Medicaid, the percentage of students who qualified for free/reduced lunch, and the percentage of students who were in foster care. A non-statistically significant result ( $p > .05$ ) indicated that the assumption was met and that a variable could be entered as a covariate (Field, 2013). With state as the independent variable, only the number of students enrolled in a program ( $p > .05$ ) met this assumption. With funding source as the independent variable, only participants' highest level of education ( $p > .05$ ) and percentage of students who were in foster care ( $p > .05$ ) met the assumption of independence for the independent variable and the covariate.

Thus, to address the first hypothesis, ANCOVA with bootstrapping examined whether preschool leaders' trauma-informed knowledge and practices differed significantly between programs that were in a state that was affiliated with WAIMH and that had a state AIMH versus programs that were not in a state affiliated with WAIMH and that did not have a state AIMH. There was no effect of state on preschool leaders' trauma-informed knowledge as measured by the *Trauma Knowledge Screen*,  $F(2,98) = .81, p < .45, \text{partial } \eta^2 = .02$ . This finding remained true after adding the number of students enrolled in programs to the model as a covariate,

$F(2,97)=.68, p<.51, \text{partial } \eta^2=.01$ . Exploratory analyses examined whether grouping all participants from states that were not affiliated with WAIMH and that did not have a state AIMH resulted in a significant effect given the higher level of power associated with a larger sample size. Still, there was no effect of state on participants' trauma-informed knowledge,  $F(1,99)=.01, p<.93, \text{partial } \eta^2=.73$ , or when adding the number of students as a covariate,  $F(1,98)=.02, p<.89, \text{partial } \eta^2=.01$ .

Similarly, there was no effect of state on preschool leaders' trauma-informed screening practices as measured by the *Screening for Children's Adverse Experiences Survey*,  $F(2,131)=.36, p<.70, \text{partial } \eta^2=.01$ . This finding remained true after adding the number of students enrolled in programs to the model as a covariate,  $F(2,130)=.63, p<.53, \text{partial } \eta^2=.01$ . Additionally, exploratory analyses examined whether there was a significant effect when all participants from states that were not affiliated with WAIMH and that did not have a state AIMH were examined together. There continued to be no effect of state on participants' trauma-informed screening practices,  $F(1,132)=.67, p<.42, \text{partial } \eta^2=.01$ , or when adding the number of students as a covariate,  $F(1,131)=1.27, p<.27, \text{partial } \eta^2=.01$ . Lastly, with regard to the first hypothesis, there was no effect of state on preschool leaders' trauma competencies in the classroom as measured by the *Trauma Competencies in the Classroom Questionnaire*,  $F(2,114)=1.00, p<.37, \text{partial } \eta^2=.02$ . This finding remained true after adding the number of students enrolled in programs to the model as a covariate,  $F(2,113)=.99, p<.38, \text{partial } \eta^2=.02$ . Finally, exploratory analyses were conducted to determine whether there was a significant effect of state on trauma-informed classroom competencies if participants from states that were not affiliated with WAIMH and that did not have a state AIMH were analyzed together. There was

still no effect of state on participants' trauma-informed classroom competencies,  $F(1,115)=1.95$ ,  $p<.17$ , partial  $\eta^2=.02$ . This finding remained true when adding the number of students as a covariate,  $F(1,114)=1.93$ ,  $p<.17$ , partial  $\eta^2=.02$ . Given that there was no effect of state on the variables of interest, the remainder of the analyses were conducted without splitting participants based on their location.

Next, ANCOVA with bootstrapping examined whether program leaders' knowledge about trauma exposure and its impact on young children (based on the *Trauma Knowledge Screen*) and programs' trauma-informed practices (based on questions from the *Screening for Children's Adverse Experiences Survey* and the *Trauma Competencies in the Classroom* questionnaires) differed significantly based on source of funding. In these analyses, the type of funding that programs received was dichotomized such that federal and state funding comprised one category of funding and all other types of funding (i.e., private, local, family-owned) comprised a second category.

This dichotomization of funding was employed given the rationale that programs receiving federal or state funding may incur more stringent requirements (e.g., with regard to trauma-informed trainings or practices) that must be met in order to maintain their sources of funding (Office of Head Start, 2018). On the other hand, programs that are private, locally-funded, or family-owned may not be accountable to any particular requirements of this nature. A review of literature supported the notion that funding sources affiliated with governmental agencies have a particular interest in programs' trauma-informed knowledge and practices as much of the data on this topic were derived from federally funded sources (Centers for Disease Control, 2016; U.S. Department of Health & Human Services, 2018) and tools for educators were provided by federally funded agencies (National Child Traumatic Stress Network, 2008).

Moreover, research showed that interventions were implemented successfully with disadvantaged groups in federally funded programs (Cassidy et al., 2018; Holmes et al., 2015). Ultimately, underserved children who experience heightened stress in their homes and communities are likely to remain the focus of future funding, research, and intervention, particularly in the state of Florida per Florida Statute 125.901 (The Children's Trust, 2018). As such, the current study split participants by funding source to conduct analyses in a manner that would be relevant to the interests of agencies who may serve as future funding sources to continue research and intervention in this field.

Thus, source of funding served as the independent variable and Total Trauma Knowledge (*Trauma Knowledge Screen*), Total Screening Practices (*Screening for Children's Adverse Experiences Survey*) and Total Trauma Competencies (*Trauma Competencies in the Classroom*) served as individual dependent variables. There was a significant effect of funding source on preschool leaders' knowledge about trauma exposure as measured by the *Trauma Knowledge Screen*,  $F(1,99)=9.94$ ,  $p<.01$ , partial  $\eta^2=.09$ . The significant effect remained true after controlling for participants' education and percentage of students in a program who were in foster care,  $F(3,94)=7.56$ ,  $p<.01$ , partial  $\eta^2=.07$ . Planned comparisons revealed that having federal/state funding, as opposed to being a private school or locally funded, was related to significantly increased trauma-informed knowledge,  $p<.01$ , 95% CI [.62, 3.58].

Next, there was a significant effect of funding source on preschool leaders' trauma-informed screening practices as measured by the *Screening for Children's Adverse Experiences Survey*,  $F(1,132)=10.19$ ,  $p<.01$ , partial  $\eta^2=.07$ . The significant effect remained true after controlling for participants' education and percentage of students in a program who were in foster care,  $F(3,127)=9.25$ ,  $p<.01$ , partial  $\eta^2=.07$ . Planned comparisons revealed that having

federal/state funding, as opposed to being a private school or locally funded, was related to significantly increased trauma-informed screening practices,  $p < .01$ , 95% CI [.43, 1.96].

Lastly, there was no effect of funding source on preschool leaders' trauma competencies in the classroom as measured by the *Trauma Competencies in the Classroom Questionnaire*,  $F(1,115) = .30$ ,  $p < .58$ , partial  $\eta^2 = .01$ . This finding remained true after adding participants' education and percentage of students in a program who were in foster care to the model as covariates,  $F(3,110) = .32$ ,  $p < .57$ , partial  $\eta^2 = .01$ .

#### Multiple Regression Analyses with Bootstrapping

See Table 8 for regression analyses. Multicollinearity among the predictor variables was assessed to determine whether a strong correlation existed among two or more predictors in order to assess whether regression analyses may be biased (Bowerman & O'Connell, 1990; Field, 2013). Analyses of multicollinearity demonstrated that none of the variables exhibited multicollinearity (Bowerman & O'Connell, 1990; Field, 2013). Specifically, all Variance Inflation Factors (VIF) were less than 2, and all tolerance levels were above 0.2 (Field, 2013; Menard, 1995). Next, the assumption of independence of errors of the predictor and outcome variables was assessed using the Durbin-Watson test (Durbin & Watson, 1951). Analyses suggested that this assumption was met, as all Durbin-Watson statistics were between 1 and 3 (Field, 2013). Thus, it was possible to obtain unique estimates of regression coefficients with minimal threat to model estimates (Field, 2013).

To address the third hypothesis that program's location, program funding, and preschool leaders' level of education predicted significantly participants' trauma-informed knowledge (*Trauma Knowledge Screen*) and practices (*Screening for Children's Adverse Experiences*

*Survey and Trauma Competencies in the Classroom Questionnaire*), location, program funding, and preschool leaders' level of education served as predictor variables. The total scores of the *Trauma Knowledge Screen*, *Screening for Children's Adverse Experiences Survey*, and *Trauma Competencies in the Classroom Questionnaire* served as outcome variables. Although previous analyses revealed that there was no effect of state on the outcome variables of interest, programs' location still was included in these analyses as a control variable.

With regard to participants' trauma-informed knowledge (based on the *Trauma Knowledge Screen*), the overall model was significant,  $F(3, 97)=3.35, p<.03, R^2=.09$ . Only source of funding served as a significant individual predictor in the equation,  $p<.01, 95\% \text{ CI } [.81, 3.81]$ . Neither participants' state ( $p<.64$ ) nor education ( $p<.90$ ) added predictive value. Planned comparisons revealed that federal/state funding predicted higher levels of trauma-informed knowledge than private or local funding,  $p<.01, 95\% \text{ CI } [.83, 3.74]$ .

Next, with regard to participants' trauma-informed screening practices (based on the *Screening for Children's Adverse Experiences Survey*), the overall model was significant,  $F(3, 130)=3.55, p<.02, R^2=.08$ . Only source of funding served as a significant individual predictor in the equation ( $p<.01, 95\% \text{ CI } [.43, 1.89]$ ). Neither participants' state ( $p<.48$ ) nor education ( $p<.76$ ) added predictive value. Planned comparisons revealed that federal/state funding predicted higher levels of trauma-informed screening practices than private or local funding,  $p<.01, 95\% \text{ CI } [.47, 1.99]$ .

Lastly, with regard to the third hypothesis, the overall equation was non-significant,  $F(3, 113)=.54, p<.66, R^2=.01$ , indicating that state ( $p<.29$ ), funding source ( $p<.68$ ), and participants' education ( $p<.80$ ) all failed to predict participants' trauma competencies in the classroom (based on the *Trauma Competencies in the Classroom Questionnaire*).

Finally, to address the fourth hypothesis that awareness of trauma-related experiences (based on the *Children's Adverse Experiences at Home Questionnaire*) and symptoms (based on the *Knowledge about Young Child PTSD Symptoms Questionnaire*) in preschool children would predict significantly preschool leaders' trauma-informed practices (based on the *Screening for Children's Adverse Experiences Survey* and *Trauma Competencies in the Classroom Questionnaire*), the total scores of the *Children's Adverse Experiences at Home Questionnaire* and the *Knowledge about Young Child PTSD Symptoms Questionnaire* served as predictor variables, and the total scores of the *Screening for Children's Adverse Experiences Survey* and *Trauma Competencies in the Classroom Questionnaire* served as outcome variables. Previous analyses revealed that there was no effect of state on the outcome variables of interest and that state was not a significant predictor in the aforementioned regression analyses. Thus, state is not considered further here.

With regard to participants' trauma-informed screening practices (based on the *Screening for Children's Adverse Experiences Survey*), the overall equation was non-significant,  $F(2, 108)=2.63, p<.08, R^2=.05$ , indicating that awareness of trauma-related experiences ( $p<.12$ ) and symptoms ( $p<.06$ ) failed to predict participants' trauma-informed screening practices, though awareness of trauma-related symptoms neared significance in the equation. Finally, with regard to participants' trauma competencies in the classroom (*Trauma Competencies in the Classroom Questionnaire*), the overall equation was non-significant,  $F(2, 100)=.63, p<.54, R^2=.01$ , indicating that awareness of trauma-related experiences ( $p<.99$ ) and symptoms ( $p<.27$ ) failed to predict participants' trauma competencies in the classroom.

## CHAPTER FOUR: DISCUSSION

This study aimed to provide a foundational knowledge base from which to begin bridging the gap between research on trauma-informed, relationship-based therapeutic interventions in the early childhood preschool classroom and the practice of such classroom-based interventions. Specifically, this study sought to identify specific predictors and barriers to gaining trauma-informed knowledge and engaging in trauma-informed practices in preschool classrooms. To do so, individuals in leadership roles at preschools were sampled anonymously with regard to their recognition of trauma exposure and symptoms among young children in their programs. Additionally, their knowledge about the impact of trauma on young children's development and mental health as well as their program's current trauma-informed practices were examined. Thus, this study contributed uniquely to existing literature on this topic by providing the foundation from which pilot models may be developed and implemented to target deficits in preschool programs' trauma-informed knowledge and practice.

Support for the necessity of this specific focus in preschools has been detailed in previous literature regarding young children's exposure to adverse experiences and the impact of such difficulties. Specifically, preschool-aged children suffer considerable exposure to direct maltreatment and other household dysfunction (U.S. Department of Health & Human Services, 2018). Traumatic situations such as these may alter young children's working model (i.e., an internal concept of the world and attachment figures based on interpersonal interactions; Bowlby, 1969) toward caregivers, which may include educational providers (Lieberman, Ghosh Ippen, & Van Horn, 2015). Additionally, children who were impacted by adverse experiences may exhibit significant difficulty in the preschool classroom (Campbell et al., 2000; Pinquart,



2017), possibly due to their learned lack of security in their attachment relationships. In particular, behaviors that are perceived by teachers and school staff as simply being difficult may actually be symptoms of a traumatic stress response (Lieberman et al., 2015).

Further, given that many young children spend much of their day in preschool classrooms, the school environment may lend itself to be an important port of entry for interventions buffering the impact of early childhood trauma. One well-known protective factor that was identified in resilient children despite suffering chronic and ongoing maltreatment was a close relationship with at least one competent and emotionally stable person (Werner, 1995). Recent research suggested that this attachment figure could very well be an individual within the school environment (Meng, Fleury, Xiang, Li, & D'Arcy, 2018; Oshri, Topple, & Carlson, 2017). In other words, simply experiencing a close, safe relationship with a reliable adult caregiver may protect a child's emotional wellbeing and buffer the effects of experiencing adversities. Often, an older family member acts in that capacity; however, some children do not have anyone in their lives to assume that role. Thus, a classroom teacher in a preschool setting has the potential to be that figure who offers a stable and safe relationship to a young child, helping them buffer the long-term impact of adverse experiences by being attuned to the young child's emotional needs. Given the established research regarding the prevalence and impact of adverse experiences in young children and the known factors that contribute to their resiliency, there was a clear need to determine a starting point for preschool leaders' current knowledge and practices so that a relevant classroom-based intervention model could be conceptualized.

Initially, it was important to determine whether variables of interest (e.g., participant and program demographics, level of trauma-informed knowledge and practices) differed significantly among programs in this study based on the state in which they are located so that these variables

could be considered as covariates in data analyses. Using nonparametric Kruskal-Wallis analyses, significant differences were found among states with regard to several variables including participants' ethnicity and level of education, number of participants from Head Start/Early Head Start programs, mean number of students enrolled in their programs, percentage of students who had Medicaid and who qualified for free/reduced lunch, percentage of children who were in foster care, teachers' highest level of education, and requirements for specialized teacher training. All of the variables found to be significantly different across states were considered as covariates in hypothesis testing, as they may have potentially influenced significant findings. Analysis of the assumptions of ANCOVA determined which of these variables, specifically, were able to be considered as covariates.

Next, variables related to participants' trauma-informed knowledge and practices were examined. With regard to trauma-informed knowledge based on the *Trauma Knowledge Screen*, participants across states endorsed slightly more than half of the items on this measure, indicating that their teachers possessed foundational knowledge about traumatic-stress triggers and stress management techniques for young children. Quite notably, participants' endorsements on the *Young Children's Adverse Experiences at Home Questionnaire* across sites resulted in scores that were consistent with significant scores on the original ACEs questionnaire (Total Exposure Score  $\geq 4$ ; Felitti et al., 1998). It is important to note, however, that participants were asked to endorse whether *any* children in their program had experienced these difficulties. Thus, these results may not reflect the experiences of the majority of the children in each program. In comparison with national epidemiological data, trends showed that young children do, in fact, experience higher rates of maltreatment than older children. Specifically, in 2016, children aged birth to 3-years had a maltreatment rate of 15 per 1,000 children and children 4- to 7-years-old

had a maltreatment rate of 10 per 1,000 children, with rates continuing to decrease as children got older through the age of 17-years (U.S. Department of Health & Human Services, 2018). The current study's finding corroborated the notion of other researchers who suggested that there is a clear need for more extensive, trauma-informed systems for young children (Vanderzee et al., 2016). Moreover, these results suggested that providers are attuned to the hardships that their students experience.

Further, participants were asked to distinguish between PTSD symptoms and typical behaviors in young children via the *Knowledge about Young Child PTSD Symptoms Questionnaire*. Across states, participants were able to identify correctly approximately half of the behaviors presented, suggesting that early childhood educators may benefit from additional training on this topic. In particular, trauma-related symptoms may be confused easily for behavioral difficulties or simply regarded as behaviors that are typical for young children to display. As a result, further training may allow for further differentiation of these symptoms by early childhood educators.

With regard to trauma-informed practices across programs based on the *Screening for Children's Adverse Experiences Survey*, participants indicated that they performed fewer than half of the screening practices presented, endorsing only an average of two out of six items. The majority of participants in all states sampled noted that they were not required to conduct screenings for young children's ACEs/trauma and, thus, did not conduct these screenings. Nonetheless, participants across states rated themselves as highly competent with regard to trauma-focused assessment and intervention based on the *Trauma Competencies in the Classroom Questionnaire*, rating themselves as being competent in an average of five out of six listed domains. There were no significant differences among states with regard to mean scores on

the *Trauma Knowledge Screen*, *Young Children's Adverse Experiences at Home Questionnaire*, or the *Knowledge about Young Child PTSD Symptoms Questionnaire*. Similarly, there were no significant differences across states with regard to their screening practices on the *Screening for Children's Adverse Experiences Survey* or the *Trauma Competencies in the Classroom Questionnaire*.

Qualitative results were particularly interesting in this study, as they revealed specific details about participants' opinions of screening for ACEs in their preschools. Despite the finding that most programs were not conducting screenings, the majority of participants across states indicated that screenings would be valuable in their programs, and statistical comparisons revealed that there were no significant differences across states in this opinion. Further, the majority of participants across states indicated that they would conduct screenings in their programs if they were given adequate training and tools, and analyses revealed that there were no significant differences among states in this response. Barriers common to not screening were examined as a guiding mechanism for determining problems that needed to be targeted when implementing screenings in preschools. Among all locations, the most commonly endorsed barriers to screening were lack of training on screening methods, unfamiliarity with screening instruments, and lack of knowledge about referral options for positive screeners. Analyses revealed no significant differences across states with regard to barriers. Overall, past studies found similar results suggesting that educators were uncomfortable discussing children's traumatic experiences due to a lack of training and skills in this area and a limited knowledge base with which to identify young children's traumatic histories in the first place (Walkley & Cox, 2013).

Finally, more quantitative hypotheses were examined. Specifically, it was hypothesized that preschool leaders' trauma-informed knowledge and practices differed significantly between programs that were in a state that was affiliated with WAIMH and that had a state AIMH versus programs that were not in a state affiliated with WAIMH and that did not have a state AIMH. Results failed to support this hypothesis, indicating that there was no effect of state on participants' trauma-informed knowledge, practices, or trauma competencies in the classroom. This finding continued to remain true when conducting exploratory analyses to determine whether there may be an effect of state on variables of interest when all participants from states that were not WAIMH-affiliated and that did not have a state AIMH were analyzed together. Thus, the remainder of the analyses were conducted without accounting for participants' state.

The second hypothesis sought to determine whether preschool leaders' knowledge about trauma exposure and its impact on young children and programs' trauma-informed practices differed significantly among programs due to specific factors. In particular, it was hypothesized that knowledge and practices differed significantly between programs that had federal and state funding versus programs that had private or local funding or were family-owned. Results partially supported this hypothesis and revealed that there were, in fact, significant differences between programs based on source of funding. Specifically, being federally- or state-funded significantly increased participants' trauma-informed knowledge and screening practices. On the other hand, trauma-informed classroom competencies did not differ among programs based on source of funding.

Further, the last two hypotheses sought to determine specific predictors of preschool leaders' trauma-informed knowledge and practices in the classroom. It was hypothesized that being located in a state affiliated with WAIMH and that had a state AIMH, federal and state

funding, and level of education would predict significantly preschool leaders' trauma-informed knowledge and practices. Previous analyses determined that there was no effect of state on any outcome variables of interest. Instead, results revealed that only source of funding predicted significantly participants' knowledge and screening practices, with federal and state funding predicting higher levels of trauma-informed knowledge and more screening practices.

Participants' state and level of education did not add predictive value when examining their knowledge and screening practices. Additionally, none of the variables examined predicted significantly participants' trauma competencies in the classroom. Finally, it was hypothesized that awareness of trauma-related experiences and awareness of PTSD symptoms in preschool children would predict preschool leaders' trauma-informed practices. However, neither variable examined predicted screening practices or trauma competencies in the classroom.

### Limitations

The limitations of the present study must be considered when interpreting the presented findings. First, caution always must be exhibited when interpreting the results of survey studies that rely solely on self-report measures. For example, participants may not have felt comfortable sharing information about their program practices or the students' families enrolled in their programs despite the assurance of anonymity. Other researchers noted similar challenges related to educators' discomfort when addressing young children's traumatic experiences (Walkley & Cox, 2013). Additionally, when relying on self-report measures, there is a risk that participants may not possess appropriate insight to respond as accurately as possible. Moreover, this study lacked adequate power with regard to sample size, and data were not distributed normally across variables. Generally, in these instances, there is a possibility that Type II errors would occur, and existing effects would be rejected as the result of a sample size that was too small to find an

effect that genuinely existed. Newer statistical methods addressed these limitations by bootstrapping the analyses (Efron, 1979; Efron & Tibshirani, 1994; Field, 2013; Ong, 2014; Sadooghi-Alvandi & Jafari, 2013; Sainani, 2012).

Interestingly, participants from Florida were more willing to complete the study than participants from all other states contacted. This willingness may have been due to individual level of comfort and trust when reading an email solicitation to participate in a study. In other words, participants from Florida may have been more familiar with the University of Central Florida and perhaps even with the researchers themselves, whereas participants from other states were not. Given the sensitive nature of the study, recognizing the university as part of their community may have created a sense of comfort for participants from Florida that did not exist for individuals in other states. Additionally, it is possible that being in a state with an association for infant mental health was conducive to higher rates of participation. In particular, the Florida Association for Infant Mental Health is well-known for distributing resources pertinent to trauma-informed care in the community. As such, a potential contributing factor to higher participation rates in Florida may have to do with more exposure overall to infant mental health-related resources.

It also is worth considering the level of impact that the Caylee Anthony Caregiver Responsibility Act of 2011, or, simply, Caylee's Law, may have had on participants' opinions of this subject matter as a whole. Caylee's Law mandated that penalties be imposed on a caregiver or legal guardian who fails to report a missing child for more than 24 hours or the death of a child for more than one hour (United States Congress, 2011). Although Florida has passed this law, it was a proposed piece of legislation in Maryland and was neither passed nor considered in Wyoming (Office of Legislative Research, 2012). Given the general impact of such a high-

profile case in Florida and the subsequent passing of Caylee's Law, it may be possible that participants in Florida were more attuned and sensitive to young children's experiences with maltreatment, thus making them more likely to participate in the study.

Finally, a variety of Head Start programs exist, including traditional Head Start, Early Head Start, and programs that serve homeless children specifically. Although Head Start eligibility is based largely on income, local programs may vary widely based on needs of other family members. In general, local funders who receive federal funds for distribution to Head Start programs may vary greatly with regard to the requirements that are enforced on funded sites. In other words, funding for Head Start programs throughout a state may be distributed with different requirements across the United States. Therefore, it may be difficult to make comparisons and draw conclusions about Head Start programs as a whole nationwide.

### Implications

Despite the limitations, the overall objective of this study was met, and information was obtained that may help develop future efforts to increase trauma awareness and target implementation challenges. To address the limitations, future studies may prefer to abandon the aspect of anonymity and instead work directly with preschool programs through focus groups and community-based participatory research (CBPR; Delafield et al., 2016) to target best methods for training and intervention, especially given that the majority of preschool leaders in this study indicated that screenings would be valuable in their programs and that they would screen if given adequate training and tools. Specifically, a CBPR model would allow researchers to gain meaningful community participation by emphasizing a full and equal partnership with early childhood educators. Further, such an approach would allow researchers to overcome



traditional challenges of community-based research with disadvantaged populations by using a collaborative process of capacity building (Delafield et al., 2016).

Overall, the crux of this study is that the majority of the participants, who were from three different geographical regions of the country, made it clear that they need services to address young children's ACEs in their programs. In particular, participants overwhelmingly believed that screening for ACEs would be valuable to the children and families in their programs. Training providers to simply screen for ACEs cannot be the solution, however. The majority of participants indicated they do not conduct screenings because they do not know how to address positive screeners. Specifically, participants indicated that they lack knowledge about referral options in their communities and that their communities may not have the resources necessary to provide appropriate intervention to these young children. Understandably, preschool providers may be reluctant to delve into such issues when they are unsure how to address properly students' difficult experiences. The current study determined that sustainable, community-wide systems must be created and implemented in a collaborative manner between researchers, mental health providers, and early childhood educators, with the ultimate goal of providing the training and resources that educators have asked for specifically in this study.

One ambitious system described by Vanderzee and colleagues (2016) that may meet these needs in communities is Child Advocacy Centers for young children who were trauma-exposed. Child Advocacy Centers are organizations that are accredited by the National Children's Alliance and that utilize multidisciplinary teams to investigate and provide therapeutic intervention to children who have experienced trauma in their homes and communities (Smith, Witte, & Fricker-Elhai, 20016). In an ideal situation, all communities would have access to functioning Child Advocacy Centers, and preschool providers could easily

refer children who are experiencing ACEs to these centers for help. Unfortunately, this is quite a lofty goal for many communities; the demand is much greater than the supply of competent service providers and the financial resources to create such centers often do not exist.

Another potentially more plausible avenue is to help preschool staff and classroom teachers become more trauma-informed (i.e., use specific knowledge about traumatic stress and symptom expression to modify relationships with young children and improve their developmental trajectory) and trauma-focused (i.e., implement a specific mechanism to address trauma symptoms; Blodgett, 2012). In other words, it may be conceivable and reasonable to develop classroom-based training and intervention models to provide early childhood educators with the tools and strategies necessary to help their young children meaningfully and without burden to the teachers themselves. Past research implicated classroom-based models as a viable solution, particularly as literature over the past two decades showed that a critical protective factor for trauma-exposed children was the support of at least one caregiver (Brofenbrenner, 2005; Meng et al., 2018; Oshri et al., 2017; Pizzolongo & Hunter, 2011; Werner, 1995). Recently, others have suggested that this attachment to a nurturing caregiver is a “core protective system” (Sciaraffa et al., p. 346, 2018), and early childhood educators could be that vital individual.

The goal of such models is for teachers to build their capacity to become the experts and to gain sustainable skills for supporting young children’s social-emotional development, managing difficult behaviors, and buffering the effects of adverse experiences that young children may experience in their homes and communities. The goal of capacity-building is vital, particularly given that there realistically may be no profit for mental health providers alone to deliver these types of services across a community and only a few providers or organizations

would be unable to serve all those in need. One plausible model is the Georgetown University Center for Child and Human Development Early Childhood Mental Health Consultation (ECMHC) Framework, a classroom-based model of capacity building that fosters collaborative relationships between mental health providers and early childhood educators or childcare providers (Hunter, Davis, Perry, & Jones, 2016). Through the ECMHC Framework, interventions aim to provide preschool administration and teachers with the tools needed to address challenging behaviors in the classroom and promote resiliency among young children.

A further example of classroom-based intervention can be modeled from Head Start Trauma Smart (HSTS), which, among other services, provided training to help classroom teachers recognize traumatic symptoms in their young children and to integrate simple tools into young children's lives to help them with emotional regulation. An additional aspect of HSTS that may be enormously beneficial to early childhood educators who are willing to receive such training and implement these tactics in their classrooms is the peer-based mentoring component. Peer-based mentoring encouraged preschool staff to support one another throughout the HSTS endeavor (Holmes et al., 2015). Researchers may want to consider this component in future classroom-based models, as it may help early childhood educators support each other to buffer against the negative effects of their job stress, particularly when serving children who have been exposed to adverse experiences.

Another attainable and sustainable classroom-based intervention model may be adapted from *Circle of Security-Parenting* (COS-P), an attachment-based parenting intervention that helps caregivers understand young children's needs, shift their perceptions of young children's behavior, interpret young children's behavior more accurately, and become young children's secure base and safe haven (Hoffman et al., 2006). Research suggested that early childhood

educators responded well to the content and delivery method of COS-P and that their perceived self-efficacy and competence in managing young children's challenging behaviors and supporting their social-emotional development improved significantly (Gray, 2015). Delivering COS-P to educators and staff in the preschool may be a promising direction for future research aimed at supporting resiliency in young children.

Ultimately, researchers may be able to benefit from the unique information found in this study as a launching point to inform program development and disseminate community- and nation-wide models of trauma-informed care in the preschool classroom, particularly with regard to standards in high-risk preschools. Given that the current study found programs with federal or state funding to possess higher levels of trauma-informed knowledge and engage in more trauma-informed practices, it may be that funding agencies themselves must be targeted to implement trainings and classroom-based models to ensure implementation of trauma-informed programs. For example, Head Start is federally funded by the Administration of Children and Families within the Department of Health and Human Services. As such, federal-level policy changes may be needed to make impactful changes on all children across the nation. To do so, future studies are necessary to design and test models of training that (1) increase educators' awareness of traumatic stress responses in young children, (2) increase educators' comfort with managing these traumatic stress responses in the classroom, and (3) address educators' difficulties with their own adverse experiences during childhood, as this would be a necessary component for those who may be triggered by discussing this sensitive subject matter. Subsequently, classroom-based intervention models can be piloted that train educators to become the close bond young children need to increase their resiliency and buffer the impact of chronic adversities.

APPENDIX A: IRB HUMAN SUBJECTS RESEARCH APPROVAL LETTER



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: UCF Institutional Review Board #1  
FWA00000351, IRB00001138

To: Kimberly D Renk and Co-PI Ellen Kolomeyer

Date: April 20, 2017

Dear Researcher:

On 04/20/2017, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: The State of Trauma-Informed Care in the Preschool  
Investigator: Kimberly D Renk  
IRB Number: SBE-17-13029  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Renea C Carver".

Signature applied by Renea C Carver on 04/20/2017 08:56:48 AM EDT

## APPENDIX B: RECRUITMENT EMAIL

Subject line: Calling all preschool Directors: we need your help!

Hello! We are researchers from the University of Central Florida and we learned from past research that young children (especially preschoolers) suffer a significant number of hardships in their homes and neighborhoods. We also know that these experiences make it very difficult for a little one to come to school, get along with their teachers and peers, and do what is asked of them. So, we are running a new study to figure out how to make life easier at school for you, your teachers, and your students. We hope that the information we gather will be valuable to enhancing community- and nation-wide models aimed at improving trauma-informed care in the preschool classroom.

We understand that you are busy and we appreciate all that you do, but there is no way we can figure this out without your help! If you are willing to help, please click the link below to take a completely anonymous, 15- to 20-minute survey. We can only accept one entry per preschool; however, if you are too busy to complete the survey, please feel free to pass it on to your Assistant Director or other staff member in a leadership position at your school.

Thank you so much for helping us make improvements in the lives of our earliest learners!

<https://www.surveymonkey.com/r/JYLLX55>

We will not examine any of your responses individually; instead, your responses will be examined as a group with other preschool Directors' responses from around the state. The Institutional Review Board at the University of Central Florida has approved this project. If you have any questions or would like to receive the survey as a paper copy in the mail with a stamped return envelope, please contact us [Kimberly.Renk@ucf.edu](mailto:Kimberly.Renk@ucf.edu) (Kimberly Renk, Ph.D.) or [ekolomeyer@knights.ucf.edu](mailto:ekolomeyer@knights.ucf.edu) (Ellen Kolomeyer, M.S.) or at (407) 823-2218.



## APPENDIX C: CONSENT FORM



## *The State of Trauma-Informed Care in the Preschool*

### **Informed Consent**

**Principal Investigator:** Ellen Kolomeyer, M.S.

**Faculty Supervisor:** Kimberly Renk, Ph.D.

**Investigational Site:** University of Central Florida, Department of Psychology

**Introduction:** Researchers at the University of Central Florida (UCF) study many topics. To do this, we need the help of people who agree to take part in a research study. You are being invited to take part in a research study. You must be over 18-years of age and in a leadership position at a preschool to be included in this study.

The persons doing this research include Ellen Kolomeyer, M.S., a graduate student in the Clinical Psychology Ph.D. Program at the University of Central Florida, as well as her faculty supervisor, Kimberly Renk, Ph.D., an Associate Professor of Psychology at UCF.

#### **What you should know about a research study:**

- Someone will explain this research study to you.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

**Purpose of the research study:** The purpose of this research study is to examine preschool director's knowledge of and practices in trauma-informed care in the preschool classroom. In fact, an estimated 3.4 million children in the United States were referred to state and local Child Protective Services due to maltreatment or neglect. However, traumatic events in early childhood still are underidentified considerably despite the disproportionately large number of young children who are exposed to adverse experiences in their homes and exposure to adverse events is common in young children from high-risk backgrounds. To create a trauma-informed model in the preschool classroom, researchers must determine the current state of trauma-informed knowledge and practices among preschool directors prior to attempts at creating and implementing a community-wide model.

**What you will be asked to do in the study:** As part of this study, you will be asked to complete six brief questionnaires that will take approximately 15- to 20-minutes of your time. Alternatively, you will be able to complete a hard copy (upon request) if you are unable to access the study online. Your responses as part of this study will be used to examine trauma-informed knowledge and practice among preschool directors.

**Location:** Research for this project will be conducted in one of two methods. You may choose to fill out the questionnaires either on a secure online survey site (in a location of your choice) or by having the packet of questionnaires mailed to you via postal mail. If you complete the hard copy of questionnaires, you will be returning these questionnaires to the principal investigators immediately upon completion via a provided, postage-paid envelope.

**Time Required:** We expect that you will participate in this research study for approximately 15- to 20-minutes.

**Risks:** Although there are no anticipated risks that accompany your participation in this research study, it should be noted that some of the questionnaires that you will complete may bring up negative or unpleasant experiences that you are aware of your students experiencing, or from your childhood. Should you have a negative emotional reaction to any of the material presented, please notify the investigators, particularly the faculty investigator (Kimberly Renk, Ph.D.), listed on this form.

**Benefits:** Information gathered from this study will be useful for obtaining more information that will be helpful in future efforts to increase trauma awareness in the preschool as a whole, bridge the gap between research and practice, and attempt to target implementation challenges with the ultimate goal of widely disseminating and implementing appropriate trauma-informed models across preschools as a launching point for a community-wide model. Additionally, the results obtained from this study also may inform nationwide standards in high-risk preschools and by mental healthcare professionals who work in preschools to disseminate information to directors and classroom teachers. The direct benefit that individuals may experience is the benefit of more intimate knowledge of the research process and of their own knowledge of practiced in trauma-informed care in their preschool programs.

**Confidentiality:** We will limit your personal data collected in this study to individuals who have a need to review this information. The personal data collected only includes basic demographic information. No names or identifying information will be collected. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of UCF. You can be assured that we will not be able to link your identity to your responses, however, as we will not be asking you for your name as part of this consent process. Upon completion of the online surveys, your responses will be linked with an identification number only. The principal investigators will then transfer your survey responses from the secure online server to an SPSS database that only the investigators will be able to access via a password protected computer. Your online survey responses then will be deleted from the secure online server. Thus, your responses will be entirely anonymous. If you elect to complete a paper packet, your completed packet will be stored in a locked filing cabinet in a locked psychology

laboratory in the Psychology Building at the University of Central Florida. Only research team members will handle your surveys. The completed packets will be entered into a database using a research identification number only and will include no identifying information.

**Study contact for questions about the study or to report a problem:** If you have questions, concerns, or complaints or think the research has hurt you, talk to Kimberly Renk, Ph.D., Faculty Investigator, Department of Psychology, at 407-823-2218 or by email at [Kimberly.Renk@ucf.edu](mailto:Kimberly.Renk@ucf.edu).

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

**Withdrawing from the study:** There are no adverse consequences for choosing to withdraw from your participation in the study. The individual in charge of the research study or the sponsor can remove you from the research study without your approval if you are not 18-years of age or older.

**If you agree to participate in this research study, please click to continue below.**

## APPENDIX D: DEBRIEFING DOCUMENT

PROJECT:  
**The State of Trauma-Informed Care in the Preschool**

INVESTIGATORS:  
**Ellen Kolomeyer, M.S., and Kimberly Renk, Ph.D.**

Thank you for participating in this research project. This project is being conducted so that we may garner a foundation for a more extensive examination of trauma-informed knowledge and care in preschools in the United States and for identifying where critical services could be placed in an effort to better serve young children who may have had adverse childhood experiences in their earliest years. In your packet, you completed several questionnaires inquiring about your knowledge of and practices in trauma-informed care in the preschool classroom. The responses to these questionnaires will be used to explore the current state of trauma-informed knowledge and practices among preschool directors in an attempt to create and implement a community-wide model in the future.

This research may also be helpful in enhancing your familiarity with the research process and your own knowledge of practiced in trauma-informed care in your preschool program. We hope that the information collected as part of this study will contribute information that is valuable to enhancing community- and nation-wide models aimed at improving trauma-informed care in the preschool classroom. If you would like more information about trauma-informed care in the preschool and young children's exposure to adverse experiences, please refer to the following sources:

The National Child Traumatic Stress Network. (2008). *Child trauma toolkit for educators*. Retrieved from <https://wmich.edu/sites/default/files/attachments/u57/2013/child-trauma-toolkit.pdf>.

Centers for Disease Control. (2014). *Child maltreatment*. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/childmaltreatment-facts-at-a-glance.pdf>.

If you have any further questions about this research study, please contact Kimberly Renk, Ph.D., by phone (407-823-2218) or e-mail (Kimberly.Renk@ucf.edu). If you feel that you would benefit from talking with a counselor about your own experiences or your current functioning, please contact the Young Children and Families Research Clinic Service in the UCF Psychology Clinic at (407) 257-2978. If you would like to receive a summary of the results of this study upon its completion (approximately Fall 2017), please provide your email address or mailing address to Kimberly.Renk@ucf.edu.

## APPENDIX E: DEMOGRAPHIC QUESTIONNAIRE

What is the zip code in which your program is located?

Your gender:

- Male
- Female
- Other
- Prefer not to answer

Your age: \_\_\_\_\_

Your ethnicity:

- Caucasian
- Latino(a)
- African American
- Asian American
- Native American
- Multiracial
- Other

Please select your position in this program:

- Director
- Assistant Director
- Health and Safety Coordinator
- Family Advocate
- Other (please specify): \_\_\_\_\_

Please select your highest level of education:

- Less than high school
- Some high school
- High school diploma
- Vocational training
- Some college
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctorate

Please select the option that best describes your program:

- Federally funded
- State funded
- Locally funded
- Private
- Family owned

Is your program a Head Start program?



Yes  
No

Is your program supported by research funding/grants?

Yes  
No

Approximately how many students are enrolled in your program? \_\_\_\_\_

Approximately how many teachers are employed by your program? \_\_\_\_\_

Approximately what percentage of the children in your program has Medicaid?

Less than 10%  
11-25%  
26-50%  
51-75%  
76-100%

Approximately what percentage of the children in your program is eligible to receive free or reduced-price meals?

Less than 10%  
11-25%  
26-50%  
51-75%  
76-100%

Approximately what percentage of the families in your program is homeless?

Less than 10%  
11-25%  
26-50%  
51-75%  
76-100%

Approximately what percentage of the families in your program has been identified by a local child welfare agency as needing services?

Less than 10%  
11-25%  
26-50%  
51-75%  
76-100%

Approximately what percentage of the children in your program is in foster care?

Less than 10%

11-25%

26-50%

51-75%

76-100%

To which of the following services, if any, does your program refer families when children are affected by adverse circumstances within the home? Select all that apply.

Mental health

Medical

Child welfare agency

Home visiting

Other (please specify): \_\_\_\_\_

None

What services, if any, are being offered in the school for children whose families have been identified by a child welfare agency as needing services? \_\_\_\_\_; None

What services are being offered in the school for parents whose families have been identified by the child welfare system? \_\_\_\_\_; None

What services, if any, are being offered in the school for foster parents of children whose families have been identified by the child welfare system? \_\_\_\_\_; None

What percentage of the children in your program has required disciplinary action?

Less than 10%

11-25%

26-50%

51-75%

76-100%

What percentage of children has been expelled from your program?

Less than 10%

11-25%

26-50%

51-75%

76-100%

Are classroom teachers in your program required to get specialized training in working with students whose families have been identified by a local child welfare agency?

Yes

No

Are classroom teachers in your program required to get specialized training in working with children whose families have faced adverse experiences (e.g., maltreatment within the home, homelessness, identification by a local child welfare agency as needing services)?

Yes

No

Can teachers opt to get specialized training in working with children and families who have been identified by a local child welfare agency as needing services?

Yes

No

If yes, what percentage opts in?

Less than 10%	51-75%
11-25%	76-100%
26-50%	

What is the highest degree that most of your teachers hold?

Less than high school

Some high school

High school diploma

Vocational training

Some college

Associate's degree

Bachelor's degree

Master's degree

Doctorate

APPENDIX F: SCREENING FOR CHILDREN'S ADVERSE EXPERIENCES SURVEY

Adapted from the Substance Abuse and Mental Health Services Administration (SAMHSA) Project LAUNCH (Linking Actions for Unmet Needs in Children’s Health; SAMHSA, 2016)

Is your program required to conduct screenings for adverse experiences or trauma for the children you serve?

- Yes
- No

Does your program routinely screen children for adverse experiences or traumas?

- Yes
- No

If no, do you think that such screenings would be valuable in your program?

- Yes
- No

In what circumstances does your program use a screening method for adverse experiences or trauma with a child?

	Always/Almost Always	Sometimes	Rarely/Never
If parent/caregiver has a concern			
If an agency staff member has a concern			
When the child is referred by a community provider (healthcare, childcare, etc.)			
As a requirement for every child my program serves			

Please write in any other circumstances in which your program may screen a child for adverse experiences \_\_\_\_\_

How often does your program typically screen children for adverse experiences or traumas?

Please select one.

- None
- One time
- Once every 6 months
- Once every year
- Regularly scheduled intervals prescribed by screening instrument
- Other (please specify): \_\_\_\_\_

How strongly would you agree or disagree that the following factors contribute to **NOT** providing screening services for children’s adverse experiences or traumas within your program?

	Strongly Agree	Agree	Disagree	Strongly Disagree
--	----------------	-------	----------	-------------------

Belief that screening is not an appropriate role for your program				
Lack of training in assessing these types of problems				
Unfamiliarity with appropriate screening instruments				
Time limitations				
Language barriers				
Lack of staff to perform screening				
Lack of knowledge about referral options for positive screens				
Lack of available services to refer families with concerns				
Lack of confidence in ability to screen				
Lack of confidence in validity of instruments				
Lack of or inadequate compensation for conducting screening				

Other (please specify): \_\_\_\_\_

Given adequate training and tools, would your program consider providing screenings for children's adverse experiences or traumas?

Yes

No

What is the most important thing for us to know about any screenings your program provides?

\_\_\_\_\_

Do you have other comments/feedback to share about children's adverse experiences or traumas in your program or in your county general? \_\_\_\_\_

Has your program ever made a report to your local Child Protective Services/Department of Children and Family Services agency?

Yes

No

Are you aware of the steps to take if you were to report child abuse?

Yes

No

Are you a mandatory reporter of child abuse?

Yes  
No

APPENDIX G: YOUNG CHILDREN'S ADVERSE EXPERIENCES AT HOME  
QUESTIONNAIRE



Adapted from Adverse Childhood Experiences Questionnaire (Felitti et al., 1998)

Please answer the following questions to the best of your knowledge.

Have any children in your program experienced parents or other adults in the household hurting them emotionally, humiliating them, or making them afraid that they might be physically hurt?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Have any children in your program experienced parents or other adults in the household often physically hurting them?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Have any children in your program ever experienced an adult or person at least 5 years older than them ever being sexually inappropriate or sexually abusing them in any way?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Have any children in your program experienced being neglected by their family or their family being unsupportive of one another?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree

Agree  
Strongly Agree

Did a child in your program often didn't have enough to eat, had to wear dirty clothes, and had no one to protect them?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Are there any children in your program whose parents were ever separated or divorced?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Have any children in your program ever witnessed domestic violence?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Do any children in your program live with anyone who was/is a problem drinker or alcoholic or who used/uses street drugs?

Yes  
No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree  
Disagree  
Agree  
Strongly Agree

Do any children in your program live with a household member who is depressed or mentally ill or a household member who has attempted suicide?

Yes

No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree

Disagree

Agree

Strongly Agree

Do any children in your program live with a household member who has gone to prison?

Yes

No

If yes, have these issues caused difficulties for the child(ren) in your program?

Strongly Disagree

Disagree

Agree

Strongly Agree

Do you come from a background similar to that of the children in your program?

Yes

No

APPENDIX H: KNOWLEDGE ABOUT YOUNG CHILD PTSD SYMPTOMS

Adapted from Young Child PTSD Screen (Scheeringa, 2010)

Below is a list of behaviors. Please indicate whether each behavior occurs in young children who have experienced trauma or if it is typical of all young children.

- Argues sometimes
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Brings up memories of difficult events
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Has trouble falling or staying asleep during naptime
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Says they have nightmares at home
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Becomes upset when something reminds them of certain events
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Has extreme temper tantrums or anger outbursts
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Cries sometimes
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
- Jumps because of loud noise
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.

- Play seems repetitive and overly focused on a specific situation
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.
  
- Is easily startled or upset by little things
  - Occurs when young children have experienced trauma.
  - Occurs in all young children.
  - Not typical of young children.

APPENDIX I: TRAUMA KNOWLEDGE SCREEN

Adapted from Trauma Informed Organizational Toolkit (Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, and the Daniels Fund, the National Child Traumatic Stress Network, and the W.K. Kellogg Foundation, 2009)

Do staff in your program receive training and education on the following topics?

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable to My Role
What traumatic stress is.					
How traumatic stress affects the brain and body.					
The relationship between children's mental health and trauma.					
The relationship between caregivers' substance use and their children's trauma.					
The relationship between homelessness and trauma.					
How trauma affects a child's development.					
How trauma affects a child's attachment to his/her caregivers.					
How to help children identify triggers (i.e., reminders of dangerous or frightening things that have happened in the past).					
How to help children manage their feelings (e.g., rage, sadness, terror, etc.).					
De-escalation strategies (i.e., ways to help people to calm down before reaching the point of crisis).					
How to develop safety and crisis prevention plans.					



## APPENDIX J: TRAUMA COMPETENCIES IN THE CLASSROOM

Adapted from The New Haven Competency Group (Cook & Newman, 2014)

Choose the extent to which you agree or disagree with each of the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understand how trauma impacts a child's sense of safety and trust.				
I am able to recognize trauma symptoms in a child.				
I am willing to ask a child about trauma exposure.				
I am able to discuss trauma-related topics nonjudgmentally and nonpunitively with empathy, respect, and dignity.				
I am able to collaborate with children's families and other care systems to promote safety, trust, and openness to address trauma-related topics.				
I understand how different organizations and providers in my community can help children and families in my program affected by adverse experiences or traumas, and I can refer children and families to the right places.				

## APPENDIX K: TABLES

Table 1. Descriptive Statistics of Participant Demographics

Variable	Florida (n=98)	Maryland (n=36)	Wyoming (n=34)
<i>Gender</i>			
Female	96.9%	100%	97.1%
Male	3.1%	0%	2.9%
<i>Age</i>			
<i>M</i>	53.31	55.38	46.21
<i>(SD)</i>	(12.41)	(13.02)	(11.63)
<i>Ethnicity*</i>			
Caucasian	64.3%	83.3%	97.1%
Latino(a)	7.1%	0%	2.9%
African American	27.6%	11.1%	0%
Asian American	0%	0%	0%
Native American	0%	0%	0%
Multiracial	0%	2.8%	0%
Other	0%	2.8%	0%
Prefer not to Answer	1.0%	0%	0%
<i>Position in Program</i>			
Director	86.7%	80.6%	88.2%
Assistant Director	5.1%	11.1%	5.9%
Family Advocate	3.1%	0%	0%
Other	5.1%	8.3%	5.9%
<i>Highest Level of Education*</i>			
Less than High School	0%	0%	0%
Some High School	2.0%	0%	0%
High School Diploma	7.1%	0%	2.9%
Vocational Training	3.1%	0%	2.9%
Some College	21.4%	0%	17.7%
Associate's Degree	13.3%	2.9%	5.9%
Bachelor's Degree	31.6%	19.4%	47.1%
Master's Degree	19.5%	69.4%	23.5%
Doctorate	2.0%	8.3%	0%

*Note.* Variables denoted by an asterisk differed significantly when compared between states based on Kruskal-Wallis analyses ( $p < .05$ ). Participants in FL were significantly more ethnically diverse than participants in WY. Participants in MD were educated more highly than participants in FL and WY.

**Table 2. Descriptive Statistics of Program Demographics**

Variable	Florida (n=98)	Maryland (n=36)	Wyoming (n=34)
<i>Head Start/Early Head Start (HS/EHS)*</i>			
Yes	26.5%	0%	6.1%
No	73.5%	100%	93.9%
<i>Program Funding</i>			
Federal	25.5%	17.1%	14.7%
State	15.3%	34.3%	14.7%
Local	2.0%	2.9%	2.9%
Private	47.0%	37.1%	55.9%
Family-owned	10.2%	8.6%	11.8%
<i>Enrollment*</i>			
<i>M</i>	115.86	173.72	104.09
<i>(SD)</i>	(228.29)	(213.80)	(151.21)
<i>Percentage of Families with Medicaid*</i>			
Less than 10%	20.8%	36.1%	32.4%
11-25%	14.6%	11.1%	23.5%
26-50%	19.8%	11.1%	23.5%
51-75%	17.7%	25.0%	11.8%
76-100%	27.1%	16.7%	8.8%
<i>Percentage of Children with Free/Reduced Lunch*</i>			
Less than 10%	23.2%	30.6%	38.2%
11-25%	9.5%	16.7%	14.7%
26-50%	14.7%	8.3%	26.5%
51-75%	17.9%	19.4%	14.7%
76-100%	34.7%	25.0%	5.9%
<i>Percentage of Homeless Families</i>			
Less than 10%	87.5%	86.1%	93.9%
11-25%	8.4%	11.1%	6.1%
26-50%	0%	2.8%	0%
51-75%	1.0%	0%	0%
76-100%	3.1%	0%	0%
<i>Percentage of Families Identified by CPS</i>			
Less than 10%	43.4%	54.3%	50.0%
11-25%	21.6%	25.7%	20.6%
26-50%	13.4%	5.7%	20.6%
51-75%	13.4%	11.4%	8.8%
76-100%	8.2%	2.9%	0%
<i>Percentage of Children in Foster Care*</i>			
Less than 10%	79.4%	100%	84.8%
11-25%	18.6%	0%	15.2%
26-50%	2.0%	0%	0%
51-75%	0%	0%	0%
76-100%	0%	0%	0%
<i>Made a Call to Local CPS about Child in Program</i>			
Yes	83.3%	86.7%	72.0%
No	16.7%	13.3%	28.0%

*Note.* Variables denoted by an asterisk differed significantly when compared between states based on Kruskal-Wallis analyses ( $p > .05$ ). A significantly higher percentage of participants in FL were from HS/EHS programs than in MD and WY. Programs in MD served a significantly higher number of students than programs in FL and WY. Programs in FL had a significantly higher percentage of students with Medicaid and students who qualified for free/reduced lunch than in WY. A significantly higher percentage of children in FL were in foster care than in MD.

Table 3. Descriptive Statistics of Teacher Variables

Variable	Florida (n=98)	Maryland (n=36)	Wyoming (n=34)
<i>Highest Degree Obtained by Teachers*</i>			
Less than High School	0%	0%	0%
Some High School	0%	0%	0%
High School Diploma	16.6%	0%	11.9%
Vocational Training	11.5%	2.8%	2.9%
Some College	19.8%	2.8%	23.5%
Associate's Degree	20.8%	13.9%	8.8%
Bachelor's Degree	29.2%	36.1%	50.0%
Master's Degree	2.1%	44.4%	2.9%
Doctorate	0%	0%	0%
<i>Training Required to Work with Children Whose Families were Identified by CPS*</i>			
Yes	36.5%	11.8%	18.2%
No	63.5%	88.2%	81.8%
<i>Training Required to Work with Children Who were Affected by ACEs</i>			
Yes	35.8%	17.1%	20.6%
No	64.2%	82.9%	79.4%
<i>Teachers Able to Opt into Specialized Training</i>			
Yes	75.0%	80.6%	82.4%
No	25.0%	19.4%	17.6%
<i>Percentage of Teachers Who Opt into Specialized Training</i>			
Less than 10%	54.9%	50.0%	53.6%
11-25%	6.8%	3.9%	3.6%
26-50%	8.2%	19.2%	10.7%
51-75%	9.6%	19.2%	10.7%
76-100%	20.5%	7.7%	21.4%

*Note.* Variables denoted by an asterisk differed significantly when compared between states based on Kruskal-Wallis analyses ( $p < .05$ ). Teachers in MD obtained higher degrees than teachers in FL and in WY. Programs in FL required specialized training in working with students whose families were identified by a local child welfare agency more than programs in MD and in WY.

Table 4. Descriptive Statistics of Trauma-Informed Knowledge

Variable (Available Range)	Florida (n=98) <i>M (SD)</i> Actual Range	Maryland (n=36) <i>M (SD)</i> Actual Range	Wyoming (n=34) <i>M (SD)</i> Actual Range
<i>Trauma Knowledge Screen (0-11)</i>	6.60 (3.98) 0-11	7.15 (3.80) 0-11	5.61 (4.12) 0-11
<i>Young Children's Adverse Experiences at Home Questionnaire (0-10)</i>	5.95 (3.32) 0-10	6.97 (3.15) 1-10	6.71 (3.67) 1-10
<i>Knowledge About Young Child PTSD Symptoms (0-10)</i>	5.92 (1.69) 2-10	6.35 (1.38) 4-9	6.30 (1.42) 3-8

*Note.* Kruskal-Wallis analyses revealed that there were no significant differences ( $p>.05$ ) across states with regard to participants' endorsements on the *Trauma Knowledge Screen*, the *Young Children's Adverse Experiences at Home Questionnaire*, or *Knowledge about Young Child*

**Table 5. Descriptive Statistics of Trauma-Informed Practices**

<b>Variable (Available Range)</b>	<b>Florida (n=98) <i>M (SD)</i> Actual Range</b>	<b>Maryland (n=36) <i>M (SD)</i> Actual Range</b>	<b>Wyoming (n=34) <i>M (SD)</i> Actual Range</b>
<i>Screening for Children’s Adverse Experiences Survey (0-6)</i>	2.81 (2.32) 0-6	2.55 (2.10) 0-6	2.40 (2.36) 0-6
<i>Trauma Competencies in the Classroom Questionnaire (0-6)</i>	5.37 (1.05) 1-6	5.00 (1.47) 1-6	5.09 (1.54) 0-6

*Note.* Kruskal-Wallis analyses revealed that there were no significant differences ( $p > .05$ ) across states with regard to participants’ endorsements on the *Screening for Children’s Adverse Experiences Survey* or the *Trauma Competencies in the Classroom Questionnaire*.



Table 6. **Qualitative Results Based on the Screening for Children’s Adverse Experiences Survey**

Variable	Florida (n=98)	Maryland (n=36)	Wyoming (n=34)
<i>Do you think ACEs screenings would be valuable in your program?</i>			
Yes	79.0%	79.2%	90.5%
No	21.0%	20.8%	9.5%
<i>Given adequate training and tools, would your program consider providing screenings for children’s ACEs or traumas?</i>			
Yes	93.3%	96.7%	96.0%
No	6.7%	3.3%	4.0%
<i>Percentage of participants who endorsed the three most common barriers to screening for ACEs</i>			
Lack of training in assessing these types of problems	67.6%	66.7%	84.0%
Unfamiliarity with appropriate screening instruments	67.6%	70.0%	84.0%
Lack of knowledge about referral options for positive screens	52.0%	53.3%	60.0%

*Note.* Kruskal-Wallis analyses revealed that there were no significant differences ( $p>.05$ ) across states with regard to participants’ qualitative endorsements.

Table 7. Analysis of Covariance with Bootstrapping

Source	df	F	$\eta^2$	Lower, Upper 95% CI
Trauma-informed knowledge ( <i>Trauma Knowledge Screen</i> )				
Number of students	1	1.38	.01	
State	2	.68	.01	
Error	97			
Trauma-informed screening practices ( <i>Screening for Children's Adverse Experiences Survey</i> )				
Number of students	1	5.30	.04	
State	2	.63	.01	
Error	130			
Trauma-informed competencies ( <i>Trauma Competencies in the Classroom Questionnaire</i> )				
Number of students	1	.01	.01	
State	2	.99	.02	
Error	113			
Trauma-informed knowledge ( <i>Trauma Knowledge Screen</i> )				
Participants' education	1	.06	.01	
Percentage of students in foster care	1	3.67	.04	
Funding	1	7.56	.07	.62, 3.58**
Error	94			
Trauma-informed screening practices ( <i>Screening for Children's Adverse Experiences Survey</i> )				
Participants' education	1	.09	.01	
Percentage of students in foster care	1	.66	.01	
Funding	1	9.25	.07	.43, 1.96**
Error	127			
Trauma-informed competencies ( <i>Trauma Competencies in the Classroom Questionnaire</i> )				
Participants' education	1	.12	.01	
Percentage of students in foster care	1	3.15	.03	
Funding	1	.32	.01	
Error	110			

Note. \*\*Significant effect of independent variable on outcome variable ( $p < .01$ ). 95% CI was able to be calculated for bootstrapped pairwise comparisons only.

Table 8. Multiple Regression Analysis with Bootstrapping

Variable	B	SE B	$\beta$	Lower, Upper 95% CI
Trauma-informed knowledge ( <i>Trauma Knowledge Screen</i> ). $F(3,97)=3.35, p<.02, R^2=.09$				
Funding	2.36	.76	.30	.81, 3.81*
Participants' education	.03	.25	.01	-.37, .59
State	-.27	.54	-.05	-1.32, .79
Trauma-informed screening practices ( <i>Screening for Children's Adverse Experiences Survey</i> ). $F(3, 130)=3.55, p<.02, R^2=.08$				
Funding	1.20	.38	.26	.43, 1.89*
Participants' education	.04	.13	.02	-.20, .33
State	-.19	.26	-.07	-.73, .30
Trauma-informed competencies ( <i>Trauma Competencies in the Classroom Questionnaire</i> ). $F(3, 113)=.54, p<.66, R^2=.01$				
Funding	.10	.22	.04	-.35, .52
Participants' education	.02	.08	.03	-.12, .19
State	-.18	.16	-.11	-.49, .12
Trauma-informed screening practices ( <i>Screening for Children's Adverse Experiences Survey</i> ). $F(2, 108)=2.63, p<.08, R^2=.05$				
Awareness of trauma-related experiences	.10	.06	.15	-.02, .24
Awareness of trauma-related symptoms	-.26	.13	-.18	-.51, .02
Trauma-informed competencies ( <i>Trauma Competencies in the Classroom Questionnaire</i> ). $F(2, 100)=.63, p<.54, R^2=.01$				
Awareness of trauma-related experiences	.01	.04	.01	-.08, .08
Awareness of trauma-related symptoms	-.09	.07	-.11	-.24, .06

Note. \*Significant effect of independent variable on outcome variable ( $p<.05$ ).

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