

Challenging behaviors in infant and toddler non-parental care: An exploration of caregiver
beliefs and response strategies

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Abstract

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The number of children under the age of three spending time in non-parental care has increased over the last three decades. In order to promote optimal development, children and their caregivers must develop secure and nurturing relationships. The current body of literature suggests that challenging behaviors can disrupt these relationships. This study builds upon this literature by focusing on the experiences of children under the age of three and their caregivers in both child care centers (CCC) and family child care homes (FCC).

The current study analyzes survey data from 272 infant and toddler child care providers in Washington state, CCC = 79, FCC = 193. Survey items focus on experiences with, and knowledge of, challenging behaviors (aggressive, disruptive, and challenging behaviors of infancy). They also ask about caregiver expertise, job stress and program characteristics.

Qualitative responses were coded using a combination of inductive and deductive coding categories. A priori codes were selected from the literature on challenging behaviors and supportive responses suggested by the Center on the Social Emotional Foundations for Early Learning (CSEFEL).

The current study uses multiple linear regression to determine the influence of predictor variables (e.g. provider expertise, stress, and program characteristics) on caregiver responses to challenging behaviors. The caregiver Strategy Support Score (SSS) is a measure of strategies used by caregivers when children demonstrate challenging behaviors and serves as the outcome variable. An exploratory, supplementary logistic regression model is also run to further investigate the impact of these variables on responses to challenging behavior; the use of timeout serves as the outcome variable for this model. Descriptive data related to frequency of behaviors, the meaning that caregivers attribute to behaviors, and the rate of expulsion are discussed. Differences between FCC and CCC experiences are explored.

The results of the current study indicate that aggressive behaviors are commonly experienced and identified as difficult to work with by infant and toddler caregivers. There appear, however, to be differences in the ways that FCC and CCC providers experience these behaviors. Caregivers use a mix of CSEFEL and other strategies when presented with challenging behaviors. Working with families appears to be infrequent, particularly in response to aggressive behaviors. Children under the age of three appear to be expelled at lower rates than their older peers. Access to training, level of caregiver education, and class size appear to have the most robust influences on SSS.

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DEDICATION

For Abran, who told me I could.

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Chapter I: Introduction

An informal Google search of the phrase ‘terrible twos’ leads one to a striking number of Web sites with names like Childzilla.com and to articles entitled “Handling the Terrible Twos, Threes, Fours” (Onderko, 2011). The reputations of very young children, it seems, precede them even before they are born. The general wisdom on the topic of challenging behaviors in infancy and toddlerhood, from colic to aggression, seems to tell caregivers to ‘hang in there’ and wait for the child to outgrow the troubling behavior. It is true that typically developing infants will eventually stop crying through the night and toddlers will develop empathy with time, but a ‘wait it out’ approach fails to acknowledge the impact that these behaviors can have on the caregiver-child relationship.

The caregiver-child relationship is particularly important for very young children because these relationships provide the context through which the foundation of their learning and development is constructed. Parents, or the primary caregivers, are critical providers of this secure relationship. A growing number of children, however, also develop important relationships with non-parental caregivers in either child care centers (CCC) or in family child care homes (FCC) (Shonkoff & Phillips, 2000). The current body of literature, which includes survey responses from child care professionals about challenging behaviors and evidence of an unexpectedly high rate of child care expulsion (when compared to K-12 expulsions), suggests that challenging behaviors in group settings may have an impact on the caregiver-child relationship and may in turn impact child outcomes. However, much of the current research on challenging behaviors in group settings reports on children birth to five together. There remains strikingly little research that is specific to infant and toddler child care. In addition, there is little in the literature that looks specifically at FCC programs, which is an important distinction for

infants and toddlers who tend to be enrolled in these types of programs at higher rates than their older peers (U.S. Census Bureau, 2010). In addition, FCCs and CCCs have unique differences that may influence the impact that behaviors on the caregiver-child relationship.

With attendance in child care for this age demographic on the rise, and child care quality improvement investment policies reaching an all-time high, understanding which challenging infant and toddler behaviors are most likely to be seen in group settings, the meaning caregivers attribute to the behaviors, and how caregivers respond is both critical and timely. The purpose of this study is to fill the current gaps in the literature about challenging behaviors in infant and toddler child care environments. Specifically, it analyzes survey data from 272 infant and toddler caregivers in Washington state.

Descriptive statistics are used to explore the rate of behaviors experienced by the sample and caregiver responses to them. Differences in the experience of challenging behaviors by each type of care (FCC and CCC) are also explored. Multiple linear regression is used to look at the relationship between caregiver expertise, job stress, and programmatic aspects as they relate to in-class responses to these behaviors. Results of this study provide additional information about infant and toddler programs in Washington state.

This dissertation begins with a review of the literature on challenging behaviors including common topologies in infancy and toddlerhood, the possible impact on the caregiver-child relationship in child care settings and strategies for working with challenging behaviors, including expulsion. The review of the literature also includes the differences between family child care programs and center-based care. Next, specific research questions and hypotheses are proposed, followed by methods, statistical analyses and results. This dissertation will conclude

with a discussion of the findings and their implications in the context of the literature, limitations to the study, and directions for future research.

Chapter II: Review of the Literature

This chapter is divided into four sections. The first section is a review of challenging behaviors in infancy and toddlerhood, including a broad description and common topologies of behavior for this age group. The next is a discussion of these behaviors in child care settings including recommended strategies for addressing behaviors. The third section is a review of existing literature on child care expulsion. The final section is a review of the literature exploring the similarities and differences between family child care and child care centers.

Infant and Toddler Challenging Behaviors

Challenging behaviors are often considered developmentally appropriate during the infant and toddler years. Typically developing children use a number of behaviors to supplement a limited repertoire of communicative responses to new experiences, changes in the environment, frustrations, and needs. When presented with challenging behaviors effective caregivers are able to provide comfort and support while modeling more appropriate modes of communication. For most children these behaviors dissipate as they gain new skills (Kaiser & Rasminsy, 2007).

There are times, however, when challenging behaviors are so persistent, intense and pervasive that without proper intervention they damage the caregiver-child relationship and get in the way of optimal development (Powell, Dunlap & Fox, 2006; Smith & Fox, 2003). Infants and toddlers are highly dependent upon their caregivers to provide not only food, safety, and other basic needs, but to also provide the context within which they learn to regulate emotions, develop a positive sense of self and others, and establish the foundations for growth across all developmental domains (Shonkoff & Phillips, 2000). When faced with challenging behaviors, caregivers can become overwhelmed and lose their sense of confidence and wellbeing (Early Head Start, 2009; Joseph & Strain, 2003 as cited in Joseph & Sandall, n.d). When this occurs,

caregivers are less likely to provide the sensitive caregiving that is necessary for healthy development.

Challenging behaviors can develop as the result of inherent biological factors, or as responses to external ecological factors; often they are a combination of both. As reviewed by Scarborough, Hebbeler, Spiker, and Simeonsson (2007), patterns of behavior are the result of transactional relationships between the child and environment. Biological factors inherent in the child (e.g. temperament) influence the caregiver and caregiving environment around him or her, which in turn influences the behaviors of the child. Through ever evolving relationships very young children and their caregivers develop interactions that promote specific patterns of behavior.

The transactional nature of behavior suggests that the same behaviors may have different consequences for the caregiver-child relationship depending on the caregiving environment in which they occur. Consider biting, which is an aggressive act common to infants and toddlers. Biting may have a more negative impact on caregiver-child relationships for a toddler who is enrolled in full-time child care than it would for a toddler who spends very little time with same-age peers and therefore has fewer opportunities to engage in the behavior. Likewise, different caregivers may experience the same behavior differently and provide responses at varying rates of effectiveness. What is challenging for one caregiver may not be challenging to another.

Topologies of challenging behaviors. Common topologies of challenging behaviors in very early childhood can be categorized into three domains: disruptive behaviors, withdrawal behaviors, and difficult behaviors of infancy. These behaviors have been documented as problematic for parents in the literature (see details below) and present in such ways that may be especially difficult for caregivers in settings with multiple children. The following is not a

discussion of disorders or diagnosis, but rather of behaviors that may negatively impact the child-caregiver relationship.

Disruptive behaviors. Wakschlag and Danis (2009) include acts of aggression, noncompliance, and temper tantrums in their review of disruptive behaviors. These behaviors are quite common in young toddlers, with roughly 75% of all children exhibiting some form of aggression and tantrums by the time they are two years old (Potegal & Davidson, 2003; Tremblay et al. 1999).

Aggression. In very young children aggression is difficult to define because, as many have pointed out, it is often difficult to determine intent to harm at this age (e.g. Hay, 2005; Tremblay, 2000). The behaviors themselves are, however, easy to recognize and take numerous forms, including taking items away from others and attacking, by hitting, kicking, biting, or other means of assault (Hay, Castle & Davies, 2000). These behaviors are typically used to convey anger and frustration (Tremblay, 2003). They may also be used in rough and tumble play during which children learn to regulate behaviors with peers (Peterson & Flanders, 2005). Aggressive behaviors are typical, yet while many children under age three are sometimes aggressive, only between 3% and 6% are identified by caregivers as using aggressive behaviors often, suggesting that frequent occurrence of such behavior may not be normative and that pro-social and neutral interactions are the predominant behaviors in this age group (Wakschlag & Danis, 2009).

While low to moderate amounts of aggressive behaviors are considered typical for infants and toddlers, children must learn to regulate these behaviors early. Tremblay et al (1999) refer to “childhood limited” and “life-course persistent” aggression to differentiate between normative aggression in early childhood and the development of persistent, chronic aggression. Data from the National Institute of Child Health and Human Development Study of Early Child Care and

Youth Development (NICHD SECYD) provides compelling evidence of the predictive abilities of early persistent aggression (Campbell, Spieker, Burchinal, Poe & the NICHD Early Child Care Research Network, 2006). Throughout this longitudinal study a sample of 1,364 children were followed from birth through age 12. Maternal reports of aggression, teacher reports of behavior, communicative and academic skills, and child observations were among the data collected. Of the sample, 1,195, or more than 87% of the children, scored at least a two out of six on a measure of mother reports of aggressive behavior. The authors' analysis identified five trajectory groups based on mothers' reports of aggression from children two to nine years of age. Children in the 'very low aggression' group began with a low aggression score at 24 months and were no longer using any acts of aggression by five years of age. Children in the 'low-stable aggression' group also had low aggression scores at 24 months (though they were slightly higher than those in the very low group) and maintained their low scores through age nine. Children in the 'moderate-decreasing' group began with moderate scores but stopped using aggressive behaviors by the age of nine. The moderate-stable group began with moderate scores, and, while there was a slight drop by age nine, they maintained a score in the moderate range. Finally, children in the 'high-stable aggression' group began with scores almost two points above their peers at 24 months and remained high at age nine. Between the ages of nine and 12 years the high-stable aggressive children underperformed their peers in measures of academic achievement and social skills, were more likely to demonstrate both externalizing and internalizing behaviors, reported higher levels of loneliness and depression, had lower quality friendships, engaged in more bullying and risky behavior, and were observed to participate less in the classroom and have fewer friendly interactions.

The results of this study are important for three reasons. First, they provide further evidence that the majority of young children (24 months) use aggressive behaviors. Second, they demonstrate that while a majority of children outgrow these behaviors, some do not. Finally, and perhaps most importantly, they provide further support for the need for intervention with those children who present high levels of aggressive behaviors at young ages because these early behaviors are highly predictive of negative trajectory through childhood.

Noncompliance. Noncompliance can take the form of saying no, disobeying rules, and ignoring caregivers (Wakschlag & Danis, 2009). Crockenberg and Litman (1990) refer to these behaviors as acts of self-assertion and in doing so suggest that noncompliance is not only normative, it is an important developmental milestone. Kuczynski, Kochanska, Radke-Yarrow and Girnius-Brown (1987) promote the importance of some noncompliant behaviors, suggesting that nonproblematic levels of noncompliance provide children the opportunity to learn socially acceptable modes of expressing autonomy. In fact, in a sample of 51 mother-child dyads, very high levels of frequent compliance in two-year-old boys has been correlated to higher rates of internalizing behaviors at five years old (Kuczynski & Kochanska, 1990).

As with aggression, young children must learn socially acceptable ways of asserting autonomy. An inability to do so may be a sign of clinical disorders, such as oppositional defiance disorder (Wakschlag & Danis, 2009). In their review of the literature on the topic, Kalb and Loeber (2003) report a correlation between high levels of noncompliance and aggression and serious antisocial behaviors throughout childhood and into adolescence.

Like all behaviors, noncompliance occurs in the context of transactional relationships. Kalb and Loeb (2003) found that across the literature caregiver behaviors heavily influence noncompliance in children through the use of appropriate or inappropriate expectations, control

techniques and inconsistent responses. Likewise, child behaviors influence parent actions. Schmitt (1987) included noncompliance in his review of seven child behaviors that are most likely to incur abuse in high-risk families.

Temper tantrums. Temper tantrums present as a range of behaviors including yelling, screaming, breath holding, head banging, and destruction of property. Parents often report that tantrums are related to anger, frustration, and bids for attention (Einon & Potegal, 1994). A collection of 335 parental narratives of temper tantrums by children between the ages of 18 and 60 months suggests that these outbursts are typically driven by feelings of anger and distress, including sadness, and typically peak between 30 and 36 months (Potegal & Davidson, 2003). Further analysis of these data revealed that 75% of tantrums lasted less than five minutes, with most falling between 30 seconds and one minute (Potegal, Kosorok & Davidson, 2003). Lieberman (1993) describes these actions as developmentally appropriate responses from children who are learning simultaneously that they have personal wishes and that these wishes may not always be met.

While typical, prolonged and frequent tantrums can negatively impact caregiver-child relationships. Parents often become so overwhelmed by temper tantrums that they take unhelpful measures that are intended to keep the peace but may inadvertently create more problems. For some, this means giving in to the demands of the child. For others this might mean the use of more authoritarian styles, including inappropriate strictness and abuse (Papousek & von Hofacker, 2008). These behaviors are often discussed in the literature as bursts of aggression, noncompliance, and signals of difficult temperament (e.g. Keenan, Shaw, Delliquadri, Giovannelli & Walsh, 1998) and are therefore associated with some of the risks previously discussed in this section. Loss of temper, for example is a defining feature of

oppositional defiant disorder (Wakchlag & Danis, 2009) and negative or difficult personalities are associated with higher levels of abuse in high-risk families (Schmitt, 1987).

Withdrawal behaviors. For the purposes of this dissertation, withdrawal behaviors include high levels of inhibition, sadness, separation anxiety and extreme clinginess. These behaviors are discussed below.

Behavioral inhibition. Behavioral inhibition refers to a child's reaction to new or unfamiliar objects, situations and people (including child care providers). Inhibition presents as fear, shyness, and an inability to warm up to, or build relationships with peers and caregivers. In their review of inhibition, Fox, Henderson, Marshall, Nichols and Ghera (2005) propose intrinsic and extrinsic foundations of inhibition. Children with high levels of inhibition tend to have increased activity in the amygdala, however studies of correlations to heart rate and cortisol levels have produced mixed results. A limited body of research also suggests that caregiver characteristics play a role in inhibition though the results are also mixed (Fox, Henderson, Marshall, Nichols & Ghera, 2005). Some studies suggest that parental over control is linked to shyness and anxiety (Wood, McLeod, Signman, Hwang & Chu, 2003) and that sensitive parenting can promote self-worth and reduce inhibitions (Belsky, Fish & Isabella, 1991). On the other hand, distress-prone infants may benefit from firm parenting and limit setting (Park, Belsky, Putnam & Crnic, 1997). Fox and colleagues (2005) posit that sensitive and responsive caregivers can read their children's cues and follow development, offering either strict control or independent caregiving when appropriate.

Without intervention, inhibition is considered a stable behavioral index, beginning with fear of novelty in infancy, toddler inhibition, social reticence in later childhood and eventually, continued shyness, fewer positive emotions, and nonassertive behaviors in adulthood (Fox,

Henderson, Marshall, Nichols & Ghera, 2005). Likewise, longitudinal studies have found moderate continuity from uninhibited behaviors in toddlerhood to easy social interactions in childhood (Kagan et al 1988). Caregivers and environments may moderate this continuity (Fox, Henderson, Marshall, Nichols & Ghera, 2005).

Separation anxiety and extreme clinginess. Separation anxiety and extreme clinginess can occur in the context of both the parent-child and caregiver-child relationships. A child who is presenting these behaviors will make demands of the adult's time and attention, often requiring that he or she be physically close, subsequently crying or throwing temper tantrums when the adult leaves the room (Papousek & von Hofacker, 2009).

Extreme separation anxiety can be an indicator of an insecure attachment relationship and a need for more security and regulatory support. Additional triggers may include hospitalization, moving, introduction to child care, loss of an attachment figure, and other sudden changes to the caregiving environment (Papousek & von Hofacker, 2009).

These behaviors can overwhelm and exhaust the adult who, after so many difficult encounters, may learn to avoid any type of separation. Giving in to the child's demands may promote feelings of frustration and insecurity in the caregiver, which may negatively impact the caregiver-child relationship (Papousek & von Hofacker, 2009).

Extreme sadness. Also called depression and sustained withdrawal, extreme sadness in very young children keeps them from enjoying or showing interest in play or interactions. Signs of low affect are coupled with outwardly sad expressions and behaviors. Severe and sustained withdrawal behaviors are key symptoms of depression, and are also red flags for attachment disorders, pain, anxiety, posttraumatic stress, and autism spectrum disorders (Guedeney, 2007).

These behaviors have also been associated with recent loss, maternal depression and failure to thrive (Guedeney, 2007, Luby, 2009).

Depression and extreme sadness require an emotional sophistication that has only been recognized as possible in very young children in recent decades (Luby, 2009). Symptoms and diagnostic criteria are, however, listed in the Diagnostic Classification of Mental Health and Developmental Disorders in Infancy and Early Childhood-Revised (DC:0-3R; Zero to three, 2005). The DC:0-3R (2005) states that very young children presenting these behaviors can have difficulty concentrating and sustaining attention, may feel worthless and guilty, and may allude to themes of death, suicide and self-harm.

Difficult behaviors of infancy. Reviews of infant mental health typically include colic, sleep and feeding disorders (including failure to thrive) among other topologies of infant psychopathology (e.g. Papousek, Schieche & Wurmser, 2008; Zeanah, 2009). As child care providers are not primary caregivers they likely experience these issues differently from parents. These behaviors are, however, worthy of discussion because of their impact on caregivers, the caregiver-child relationship and the disruptions they are likely to cause in a group setting. The following sections cover excessive crying or colic, problems with sleep, eating, and toileting.

Excessive crying or colic. These behaviors often peak at around three months of age in typically developing children. The label of excessive crying is assigned in alignment to the ‘rule of threes’ which includes crying for more than three hours a day, for more than three days a week, and for more than three weeks for those infants who are otherwise typically developing. Continuous behaviors past the age of three months are thought of as persistent excessive crying (Ziegler, de Chuquinsengo & Papousek, 2008).

There are a number of possible causes for excessive crying including acute illnesses (e.g. ear infections), gastrointestinal disorders (e.g. lactose intolerance), and temperament. Data from the Munich Interdisciplinary Research and Intervention Program for Fussy Babies demonstrates the transactional nature of this particular challenging behavior (Ziegler, de Chuquinsengo & Papousek, 2008). The data suggest that parents whose children are excessive criers may also experience depression, lack of resources, and other psychosocial risks. It is likely that these stressors impact the caregiver's abilities to respond to his or her infant in ways that help to decrease crying and may even promote more crying. Whatever the causality, excessive crying can exhaust caregivers. In 1987, Schmitt reported colic was the most common behavior leading to serious physical abuse and death in high-risk families. While there is more support for parents of children with colic today, crying is considered a common precipitant in cases of Shaken Baby Syndrome (Barr, Trent & Cross, 2006). Even in non-abusive situations, the stress of colic can create serious damage to the caregiver-child relationship, which can lead to later social and emotional disorders (Kim, 2011).

Sleep difficulties. Sleep behaviors are typically discussed in the literature as nighttime problems (e.g. Owens & Burnham, 2005; Schieche, Rupprecht & Papousek, 2008). Child care providers do not experience or interact with these behaviors, but the topic warrants discussion here because of the role of naptime in group care settings. Caregivers, particularly family child care providers and those working without assistants often depend on nap time as an opportunity for breaks or planning, or both. A child's inability to align his or her naptime with the others in the group may be perceived as a disruption to the caregiver.

Sleep difficulties are common in typically developing children. The ability to fall asleep on one's own is related to self-regulation, a skill that very young children are still developing

(Schieche, Rupprecht & Papousek, 2008). Very young children may have a difficult time adjusting to their own sleep schedule, making group naps even more difficult (Parlakian & Lerner, n.d.). Sleep problems may occur in the context of other disorders, including mental retardation, Autism Spectrum disorders, attention deficit hyperactivity disorder (ADHD), and medical conditions such as chronic gastrointestinal issues (Owens & Burnham, 2005). Infant temperament can also play a role in sleep regulation, including such dimensions as “fussiness/difficulty, unpredictability, hyperactivity, inconsolability, unadaptability and persistence” (Schieche, Rupprecht & Papousek, 2008, p. 132).

Toileting difficulties. Potty training relies on a significant number of emotional, cognitive, verbal and motor skills from body awareness, to the ability to create and follow through on a plan, and to social and self awareness (American Academy of Pediatrics, 2011a, 2011b & 2011c). Toileting difficulties, including a propensity to soil oneself, refusal to potty train, and withholding behaviors, may signify that the child is still developing these skills and is not yet ready to potty train. Other possible causes for toileting difficulties may be social and environmental, such as inconsistent potty routines and a desire to exert control (American Academy of Pediatrics, 2010 & 2011d). Physical issues, such as weak bladder muscles (American Academy of Pediatrics, 2011e), or driven by emotional concerns including fear and anxiety may also be drivers (American Academy of Pediatrics, 2010).

In a group setting, children who soil or wet themselves often either during potty training, or while still in diapers, may be perceived as challenging to caregivers as cleaning up places a high demand on the caregiver’s time.

Eating difficulties. These are typically discussed in the literature as disorders that put children in danger of failing to thrive and not receiving enough of the nutrients that they need

(Benoit, 2008). As with sleep disorders, eating disorders are typically beyond the scope of the child care provider. Toddlers appetites change as they develop, and refusing to eat is quite common (American Association of Pediatrics, 2012). Refusal to eat, however, may be perceived as challenging to caregivers as it is sometimes perceived as noncompliance and can create a power struggle (Schmitt, 1987). A concerned caregiver who is unable to successfully feed a child may also worry about his or her wellbeing and this experience may be challenging for the caregiver.

Summary of behaviors. Challenging behaviors are the result of children in the first three years of life exploring ways to communicate needs or emotions. Their frequency, type, and intensity may be related to biological, developmental, or contextual factors. In small doses many of these behaviors are part of typical development, though in the best of circumstances, children learn new, more productive methods of communication as they develop. Challenging behaviors can pose a threat to the development of nurturing and secure relationships between children and their caregivers.

Challenging Behaviors in Child Care Settings

In 2005, more than 51% of the population of children under three years old in the United States were enrolled in non-parental care. Of these children, 16% were cared for in a home by a nonrelative, and 20% were in center-based care (Child Trends Data Bank, n.d.). Even as so many young children are in child care, there is a paucity of research about the types of infant or toddler challenging behaviors most commonly experienced in child care settings and caregiver responses. This may be because early problems of behavior and emotion regulation are often viewed as transitory and have historically received little attention for their impact on the child or caregiver (Wurmser & Papousek, 2008). In addition, the rate of maturation at this age is so rapid

and language such as ‘the terrible twos’ is so common that conventional wisdom often promotes a ‘wait it out’ approach to challenging behaviors (Briggs-Gowan, Carter, Bosson-Heenan, Guyer & Horwitz, 2006).

As discussed above, there is evidence to suggest that many of these behaviors are not always transient, but may persist over time (Briggs-Gowan, Carter, Bosson-Heenan, Guyer & Horwitz, 2006; Mathiesen & Sanson, 2000). For some children, these behaviors are associated with developmental disabilities, such as Autism Spectrum Disorder (Fostad, Rojan & Matson, 2012) and are predictive of poor outcomes later (Campbell, et al., 2006). This suggests that rather than waiting for maturation, early intervention is necessary. Early care and education programs are unique opportunities to identify these behaviors and provide effective interventions (Powell, Dunlap & Fox, 2006), yet the limited research on this topic inhibits this process.

There is also evidence linking early exposure to child care and disruptive behaviors. One study of 1,201 children in the UK found an association between the amount of exposure to child care centers before two years of age and an increase in tantrums after 30 months of age to school entry (Eryigit-Madzwamuse & Barnes, 2012). This association remained significant even when controlling for child and family characteristics. Similar results were found in analysis of the NICHD SECCYD data, however, quality was a significant moderator of the emergence of externalizing behaviors (McCartney et al., 2010). More research on challenging behaviors in the early years is needed in order to understand this impact as more young children enter into non-parental care.

Further, child care providers and program directors report that challenging behaviors impact their wellbeing, and negatively impact their job satisfaction (Hunter & Hemmeter, 2009; Joseph & Strain, 2003 as cited in Joseph & Sandall, n.d). It is possible this contributes to the

rates of depression for professionals in this field, which have been found to be higher than the general population (Fish, 2005; Hamre & Pianta, 2004). Better understanding challenging behaviors of infants and toddlers in the context of child care settings may provide more insight about the needs of providers for this age group.

Perhaps most importantly, filling in the gap in the literature about challenging behaviors in infant and toddler child care is important for promoting the development of nurturing relationships between children and caregivers. The ability of children to develop and maintain secondary attachment relationships with their child care providers has been well documented in the literature (see Howes & Spieker, 2008 for a review of this literature). These relationships, however, may be threatened by the presence of challenging behaviors. Parent research suggests that when parents have a poor sense of wellbeing, or are depressed, they are less likely to have secure relationships (Pettersson, & Albers, 2001; Creasey & Jarvis, 1994; Teti, Gelfand, Messinger & Isabella, 1995). Likewise, parents of children who present challenging behaviors as a result of developmental disabilities have been found to have impaired relationships via limited mutually satisfying interactions and successful turn taking exchanges (Berger & Cunningham, 1983; Floyd & Phillippe, 1993). When these relationships are hindered, so too is the developmental progress of the children presenting challenging behaviors.

Recommended strategies for addressing challenging behaviors in child care settings.

As challenging behaviors occur within the context of relationships, the literature supports response strategies that promote healthy, nurturing relationships (Hunter & Hemmeter, (2009). There are a variety of approaches for working with each type of challenging behavior. This dissertation will use criteria provided by the Center on the Social and Emotional Foundations for Early Learning (CSEFEL) for effective responses. The first set of criteria come from the

CSEFEL Pyramid Model for promoting social emotional competence in infants and young children (Fox, Dunlap, Hemmeter, Joseph & Strain, 2003; CSEFEL & Technical Assistance Center on Social Emotional Intervention for Young Children, n.d.). This model suggests multiple levels of support for young children. The first is universal support for all children, including systematic policies and procedures that promote an effective workforce; nurturing, responsive relationships among adults and children; and high quality environments and preventative practices. The model then suggests a secondary level of targeted social and emotional teaching strategies to provide children with the skills needed to prevent further challenging behaviors. Finally, a tertiary level promotes intensive individualized interventions and the creation of behavior support plans for children who need them.

The second set of criteria come from other CSEFEL training materials and provide details for addressing challenging behaviors in the moment. These require that the caregiver acknowledge the child's distress, offer comfort, provide the child with words to communicate, be attuned to the child's individualized needs, help the child achieve the understood intention, and consider developmentally appropriate practices (CSEFEL, n.d.). In addition, working with families can help caregivers to learn more about the behavior, develop appropriate responses, and increase continuity between child care and home (Powell, Dunlap, Fox, 2006).

The use of CSEFEL related strategies has been seen to vary in programs supporting very young children. Branson and Demchak (2010) observed and interviewed teachers in four toddler classrooms and found a mix of universal and secondary supports. The teachers employed the use of supportive conversations, appropriate responses to behaviors, relationships with families, staff collaboration and labeling emotions. The teachers failed, however, to use preventative strategies

(e.g. clear rules and expectations) or to consistently and explicitly teach social skills and emotional competencies.

Strategies that fail to support infants and toddlers. There are, of course, numerous strategies used by caregivers that are not aligned with CSEFEL suggestions. For the purpose of this dissertation, three criteria are used to define ineffective strategies for working with challenging behavior. Because the literature has demonstrated the importance of secure relationships, the first criterion is that the strategy fails to acknowledge the role of the caregiver-child relationship in promoting healthy development. The second is that the strategy fails to acknowledge the child's developmental stage and abilities. The third criterion is that the strategy fails to change the behavior and as a result the behavior may continue and further damage the caregiver-child relationship.

The first category of responses that fit the criteria for ineffective strategies includes those that place expectations on very young children that fail to recognize their developmental states and thus do not support the prevention of the behavior in the future. This includes asking children to 'be nice,' 'say sorry,' or reasoning with the child and asking them to 'share,' without providing context or supporting the new behavior. It has been pointed out that, without additional support, these strategies do not teach social emotional skills or competencies (Parlakian & Lerner, 2009). In addition, these types of conversations may have the unintended effect of giving children attention for their negative behaviors, which may promote the use of the behavior by the child in the future (Webster-Stratton, 1999).

The second type of strategies that fit these criteria fall under punitive responses (e.g. timeout). While an effective break from a stressful situation may help to calm a child, this must happen in the context of guidance from a supportive caregiver (Kaiser & Rasminksy, 2007).

Without intentional guidance, timeouts fail to teach children about their behaviors and may even cause them to miss out on learning opportunities or responsibilities (Bredekamp, 2011).

Punishments that separate children from the class may also damage relationships among children and between children and caregivers.

Considering these criteria, perhaps the most ineffective strategy is that of expulsion. Rather than acknowledging the importance of the caregiver-child relationship or promoting a secure and nurturing environment, expulsion severs the relationship entirely. Further, expulsion fails to provide intervention opportunities for children to learn more appropriate means of communication or changes to behavior. Finally, expulsion related to challenging behaviors can place stress on families and parental employment (Shearn & Todd, 2000). On the whole, expulsion suggests that the caregiver failed to use more effective strategies that may have changed the behavior prior to the point that the behavior was deemed so challenging that the caregiver removed the child from the program.

Expulsion is defined as the “complete and permanent removal of a child from an entire educational system ... without the benefit of alternative services.” (Gilliam & Shahar, 2006 p. 1). An important aspect of this definition is the exclusion of children whose child care provider and family have worked together to find a program more suitable to the needs of the child or planned a transition to new child care arrangements. Expulsion without a transition plan is a response to a child’s behavior and not to a child’s needs.

At present there is no literature that looks specifically at the use of unsupportive strategies when working with challenging behaviors. There is, however, a small body of work that examines expulsion specifically. The following sections synthesize these findings. The

discussion is grouped by child characteristics, caregiver characteristics, and programmatic factors related to expulsion.

Factors Related to Expulsion

The current literature suggests that the rate of expulsion in child care is significantly higher than that found in the national K-12 system. In 2003, data were presented from a survey study of 1,075 child care providers in Colorado. The study is the only one that surveyed both family child care providers and caregivers working in centers who served children from birth to six years old. They found a rate of 10 in 1,000 expulsions per year (Joseph & Strain, 2003 as cited in Joseph & Sandall, n.d.). In 2005, national rates of expulsion were collected as part of the National Prekindergarten Study, which surveyed 3,898 classrooms in 52 state-funded prekindergarten systems in 40 states (Gilliam, 2005). After weighting the state data to represent the relative size of each state system it was determined that 10.4% of prekindergarten teachers had expelled a child from their program and 6.67 children per 1,000, had been expelled. This rate was 3.2 times the national rate of K-12 expulsions of 2.09 per 1,000 according to the Elementary and Secondary School Survey. In 2006, Gilliam and Shahar looked at preschool and child care expulsion in a random selection of 119 programs in Massachusetts. In this study, 39% of respondents reported expelling and preschool expulsion rates were 27.42 per 1,000 enrolled preschoolers, which was 34 times the K-12 rate in Massachusetts and more than 13 times the national rate of K-12 expulsion. A doctoral dissertation, Hampton (2008) surveyed 230 child care directors in Washington state and found that 29.6% of them had expelled in the last 12 months. There are, however, some complications making these numbers difficult to interpret. The author asked providers to report the decision to disenroll a child in the last 12 months.

Additional questions asked providers to report why they had disenrolled children and provided answers such as, “one or more children engaged in behavior considered inappropriate by the child care program,” and “one ore more families failed to make monthly payments.” This line of questioning makes it very difficult to determine the percentage of children who were expelled due to challenging behaviors. In addition, some of the caregivers surveyed reported having transitioned some of the children whom they had expelled into more suitable programs. It is unclear how many of these children were given the benefit of these services and how many were expelled, suggesting that the real expulsion rate found in this study may be lower than reported. Finally, the most recent study asked parents about their experiences with expulsion (Joseph & Cevalasco, 2011). Of the 1,678 parents surveyed, 28 children had been expelled, which represented a rate of 16.68 per 1,000. These numbers are particularly meaningful because asking parents decreased the likelihood that a child would be counted twice which was an unknown in the studies that surveyed caregivers.

Child characteristics.

Age. Two studies discussed expulsion in relationship to specific age groups. Gilliam (2005) found that at a rate of 11.57 per 1,000, five and six year olds were the age group most likely to be expelled. Four year olds were about half as likely at 5.85 per 1,000 with both two and three year olds each about half as likely to be expelled, at 2.75 and 3.96 per 1,000 respectively.

Hampton (2008) found that 14.1% of all children who had been disenrolled over a 12 month period were five years old, 22.8% were four years old, 17.4% were three years old, and 12.1% were two years old. Children who were less than a year, one-year, and six- through eleven-years old each made up less than 5% of the total population of children expelled. Again,

it is unclear how many of these children were expelled due to challenging behaviors as opposed to other factors and which of them were transitioned into a more appropriate setting.

To date only the Hampton (2008) study reported numbers of children who were expelled under the age of three.

Race. Gilliam and Shahar (2006) did not find a significant relationship between the racial composition of a classroom and the likelihood that a teacher had expelled in the last 12 months. The two studies that collected data on the expelled children, however, found that African American children were most likely to be expelled. Nationally, African Americans were expelled at a rate of 10.04 per 1,000 which was twice the rate of both Caucasian (5.77) and Latino (4.2) children, and five times the rate of Asian American children (1.82) (Gilliam, 2005).

In the Hampton (2008) study 156 or 55% of the children who were expelled were identified as Caucasian, while 35 or 12.8% were identified as Black/African American. As the author points out, however, these numbers do not tell the whole story. Black/African Americans accounted for only 3.5% of the total population of Washington state at the time of the study. This suggests that a higher percentage of African Americans in child care were being expelled compared to their Caucasian peers.

Sex. All of the studies suggest that boys are expelled at rates higher than girls. Nationally, Gilliam (2005) reported that boys were more than four times as likely to be expelled than girls (10.46 and 2.26 per 1,000 respectively). Hampton (2008) reported that boys were about twice as likely to be expelled (53% and 25.5% respectively) with the remainder unknown of the children expelled in a 12-month period. Joseph and Cevalco (2011) reported that 68% of the children expelled were boys and 32% were girls.

Specific child behaviors. Joseph and Strain (2003) asked providers about the behaviors that resulted in expulsion and found hurting self or others, being disrespectful or defiant, and the use of inappropriate language or yelling to be the most common.

Hampton (2008) asked providers to identify inappropriate behaviors and 69.7% of the behaviors linked to disenrollment were categorized as “physical acts” that included hitting, biting, hurting, excessive aggression, extreme violence, kicking, pinching and throwing objects. Additional behaviors, each accounting for less than 5% of the behaviors identified, included foul language, anger, tantrums, damage to property, disrespect, disruptive behaviors, inability to concentrate, refusing to listen, and verbal aggression.

Caregiver characteristics.

Caregiver education and pedagogical beliefs. Gilliam and Shahar (2006) did not find any significant relationships between levels of teacher education (high school through Masters degree or higher) or pedagogical beliefs and practices and expulsion. Hampton (2008) reported that the average level of education for staff from programs that had expelled was similar to the total population. No studies reported on caregiver experience, or specific professional development opportunities, or knowledge of behaviors or effective strategies in relationship to expulsion.

Caregiver stress and depression. Gilliam and Shahar (2006) included the Child Care Worker Job Stress Inventory (Curboy, Spratt, Ungaretti, McDonnell & Breckler, 2000) in their survey. This tool measures caregiver feelings about job control, job demands, and job resources. Using bivariate analysis, they found a negative relationship between job resources and expulsion, which is to say that as job resources increased, the likelihood that a caregiver had expelled a

child decreased. Increases in job stress and demands, on the other hand, were related to increases in the likelihood that a caregiver had expelled a child.

Gilliam and Shahar (2006) also used the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) as a measure of the frequency of caregiver symptoms of depression. In a bivariate analysis they found a positive relationship between depression and expulsion. In a hierarchical logistic regression, however, the authors found that depression did not contribute significantly to expulsion in the presence of job demands and stress. This suggests that external factors are important moderators of whether or not a provider will expel a child.

Joseph and Strain (2003, as cited in Joseph & Sandall, n.d.) reported that over half of the program directors expressed concern that challenging behaviors, including those related to expulsion, negatively impacted staff wellbeing.

Program characteristics.

Program funding type and setting. Gilliam and Shahar (2006) found that in Massachusetts 50% of the caregivers who had expelled were working in for-profit child care programs, 39.62% were in nonprofit agencies, and 11.11% were in schools (public or private) and Head Start programs. In a study that looked only at programs receiving state funding, Gilliam (2005) found the following rates by program type: schools (9.19%), Head Starts (11.71), for-profit programs (14.55%). This study found that the highest percentage of caregivers who had expelled were working in faith-affiliated programs (18.06%).

NAEYC accreditation. The National Association for the Education of Young Children (NAEYC) offers programs the opportunity to go through a rigorous accreditation process. Accreditation is generally considered to mean that a program is of high quality with a well-trained teaching staff. Interestingly, Hampton (2008) found that NAEYC accredited programs

had higher rates of expulsions than non-accredited program. However, the differences were not significant.

Additional Program Characteristics. Two additional program characteristics mentioned in the studies include group size and access to mental health consultation. Gilliam and Shahar (2006) found a positive correlation between group size and the likelihood that a caregiver had expelled a child, but did not find a significant relationship between ratio and expulsion. Gilliam (2005) reported a negative relationship between access to a mental health consultant and expulsion. Caregivers with no access to mental health specialists were most likely to expel, those who had on-call access to either a psychologist or social worker were less likely, and those who had an on-site professional or had regular visits were least likely to expel children.

Unexplored program characteristics. The current body of literature does not explore some structural characteristics that may influence expulsion. These include the presence of a waitlist, and specific components of professional development including on-site coaching and peer reflective groups. These factors may impact expulsion, as discussed below.

Waitlists. As in most service industries, the economy and other financial factors influence child care programs. In order to remain open, programs must maintain a certain level of enrollment. This was demonstrated in 2009 when the National Association of Child Care Resource & Referral Agencies (NACCRA) reported that a large number of programs closed in response to an increase in families who were unable to pay for care and a decrease in families looking for full-time enrollment (NACCRA, 2009). On the other hand, when there are fewer child care enrollment slots than there are families looking for care, or when programs have good

reputations, the need for enrollment is eased by a presence of a waitlist composed of families who are waiting to enroll their children.

The presence or lack of a waitlist may impact the rate of expulsion. When programs do not have a waitlist they may be more reliant on each individual child in order to stay open. Rather than using expulsion these programs may be more likely to look for other strategies of coping with challenging behaviors. Programs that have waitlists may be more likely to expel because they will not feel the economic impact of such a decision and can replace the child with one that may not present as many challenging behaviors. On the other hand, the presence of a waitlist may signify high quality and may therefore be related to more supportive responses to challenging behaviors.

Professional development. While access to mental health specialists was found to decrease the likelihood that a teacher would expel, there are other components of professional development and support that have not been explored. On-site coaching, and peer reflective groups have become popular components of quality improvement initiatives. In Washington state, for example the Quality Rating and Improvement System awards points for provider participation in peer reflective groups and all programs that reach a specific standard of quality get access to a coach (Washington State Department of Early Learning, n.d.). Policymakers and stakeholders would benefit from knowing if these types of professional development are effective in preventing expulsion and increasing caregiver knowledge and effective strategies for challenging behaviors.

Differences between FCC and CCC Programs

While FCC and CCC programs are both licensed to care for young children, the literature suggests that there are important differences. These differences may be of particular importance

to infants and toddlers who, according to the US Census Bureau (2010) are more likely to be cared for in FCC programs than CCC programs, though this trend reverses as ages increase toward kindergarten. This section details the differences in structural and process characteristics. Structure refers to easily measurable characteristics such as teacher education, the provision of learning materials, and teacher-child ratios while process refers to the experience that children have in the classroom according to interactions with people and materials.

Perhaps the most evident of the differences between FCC and CCC are structural. FCC programs are run out of a provider's home, children are typically cared for in mixed age groups with fewer caregivers and smaller group sizes, while CCCs, tend to be larger with classrooms differentiated by age with two or more caregivers for each classroom (Dowsett et al. 2008). Recent research suggests that CCC providers tend to have higher levels of education and more early childhood specific training (Birgas et al. 2010; Dowsett et al., 2008; Fuller et al. 2004; NICHD ECCRN, 2004). There are also structural differences in the learning environments. Historically, CCC programs have tended to provide more toys and stimulating environments while FCC programs provide a more homelike setting (Eheart & Leavitt, 1989; Pence & Goelman, 1987). More recently data from the NICHD Study of Early Child Care and Youth Development suggested that children in FCC programs were watching more television than those in center care (Dowsett, 2008).

Differences in process quality are less well defined. Fuller et al. (2004) looked at programs in multiple cities and found inconsistent differences according to both the Arnett Social Interaction Scale (Arnett, 1989) and Early Childhood Environment Rating Scale (ECERS; Harms, Clifford & Cryer, 1997) and Family Day Care Environment Rating Scale (FDCERS; Harms, Clifford & Cryer, 1997). Returning again to the NICHD SECCYD study, Dowsett et al.

(2008) found differences in quality across age groups. At age two, there were no significant differences in cognitive stimulation or interactions with peers. FCC environments provided significantly more language stimulation, and fewer negative interactions with adults. At age three, CCC programs were providing significantly more cognitive stimulation while FCC programs continued to provide more language stimulation.

Summary

Challenging behaviors in the infant and toddler years are not uncommon. Behaviors that are disruptive, those that are related to withdrawal, and those that are related to difficulties in infancy have the potential to negatively impact the caregiver-child relationship. For some children, in the absence of early intervention, these behaviors may result in negative outcomes later in childhood. The literature recommends some strategies for working with these behaviors, however little is known about caregivers use of these strategies in infant and toddler settings. The high rates of expulsion from child care and preschool for three and five year olds does suggest that ineffective strategies are being used. Finally, there is evidence to suggest that the care children receive in FCC programs may be different from what CCC programs provide.

Current Study

Statement of the problem. The number of children under the age of three spending time in non-parental care has increased dramatically in the last three decades (Shonkoff & Phillips, 2000). In order to promote optimal development, children and their caregivers must develop secure and nurturing relationships (Shonkoff & Phillips, 2000). Surveys of child care providers and unexpectedly high rates of preschool expulsion suggest that challenging behaviors can disrupt these relationships (e.g. Joseph & Strain, 2003 as cited in Joseph & Sandall, n.d.; Gilliam, 2005). There is, however, a lack of research isolating those caregivers who work specifically

with infants and toddlers from those working with three to five year olds. In addition, while there is literature that looks at the differences in structural and process characteristics of FCC and CCC settings, there is no research looking explicitly at the differences in how they experience infant and toddler challenging behaviors. Considering the unique needs and behaviors presented by children under age three, further investigation is necessary.

Purpose of the Study. This study has two purposes. The first is to investigate the types of challenging behaviors that are of most concern in infant and toddler programs and caregiver responses to, and beliefs about, these behaviors. The second is to examine the relationship between program and provider characteristics including child care type, caregiver expertise, job stress, and structural qualities as they relate to in-class responses to these behaviors, and expulsion. This study builds upon on existing literature about factors related to challenging behaviors and preschool expulsion. It adds to the current body of knowledge by focusing on the experiences of children under the age of three and their caregivers.

Specifically, this study will address the following research questions, with hypotheses informed by the literature reviewed above:

Research question #1. Which challenging behaviors are the most difficult for infant and toddler caregivers to work with?

Hypothesis #1. It is hypothesized that disruptive behaviors, including acts of aggression, noncompliance, and tantrums, will be the rated as the most difficult for caregivers to work with.

Research question #2. What meaning do infant and toddler caregivers attribute to the challenging behaviors that they experience?

Hypotheses #2. It is hypothesized that many caregivers will attribute a variety of meanings to the behaviors, some will be substantiated by the literature, and others will not.

Research question #3. What strategies do infant and toddler caregivers employ in response to challenging behaviors?

Hypothesis #3. It is hypothesized that caregivers will be less likely to use strategies identified by CSEFEL and the Pyramid model than other, less supportive strategies.

Research question #4. How common is expulsion for children under three years old?

Hypothesis #4. It is hypothesized that caregivers are expelling children under three years old at rates comparable to those rates found in child care expulsion literature regarding three to six year olds.

Research question #5. How are correlates of caregiver expertise, including experience, education, and professional development related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #5a. It is hypothesized that correlates of caregiver expertise, including experience, education, and professional development will explain at least part of the variance in the likelihood that a teacher will use supportive strategies when working with challenging behaviors.

Hypothesis #5b. It is hypothesized that, when controlling for other influential factors, level of teacher education will not have an effect on the likelihood that teachers will use effective strategies.

Hypothesis #5c. It is hypothesized that when controlling for other types of professional development, peer reflective groups and on-site coaching will each have a positive effect on the likelihood that teachers will use supportive strategies.

Research question #6. How are correlates of caregiver job stress, including resources, control and demands related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #6. It is hypothesized that correlates of caregiver job stress, including resources, control and demands will be correlated and explain at least some of the variance in the likelihood that teachers will use supportive strategies.

Research Question #7. How are programmatic characteristics including class size, number of caregivers, age range of children, accreditation, and the presence of a waitlist related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #7. It is hypothesized that high ratios, large class size, a wide range in age of children, and the presence of a waitlist will be correlated with the use of supportive strategies when working with challenging behaviors.

Chapter III: Methods

This study used a cross-sectional survey designed to capture information about the experience of providers working with infants and toddlers and to explore the relationship between variables associated with challenging behaviors. This section describes the participants and survey procedures, followed by a description of variables and a plan for the analyses used in the study.

Participants and Recruitment

This study used a convenience sample. Survey respondents were recruited through regional Child Care Aware of Washington (CCA-WA) offices and the Washington State Department of Early Learning (DEL). Each of the seven CCA offices sent emails to their provider contact list with an explanation of the survey and a link for providers to follow. CCA-WA coaches working on Early Achievers (Washington's Quality Rating and Improvement System) promoted the survey at trainings and when working one-on-one with providers. DEL also sent the link and email to participants enrolled in a statewide infant and toddler consultation program. Regional offices distributed emails to providers on different days: Olympic Peninsula, October 17, 2012; Northwest, October 19, 2012; Central, October 25, 2012; Southwest and King, October 29, 2012; Eastern, October 31, 2012; and Pierce, November 1, 2012. The final respondent to submit her survey did so on December 14, 2012.

Emails were modified to address either FCC or CCC providers and included links to separate surveys, see Appendix A. In the case of CCCs, the email went to the address associated with the center and included a request that the reader forward it to infant and toddler room teachers. Contact emails informed providers that the study's purpose was to learn about their experiences working with children who present challenging behaviors so that future efforts can

be focused on the needs of providers in the field. At this time, participants were also made aware of the opportunity to enter a raffle to win a \$100 Amazon gift certificate upon survey completion. All aspects of the raffle, including request for contact information, winner selection, and announcements were conducted by SurveyMonkey.com and kept independent of survey responses.

After following the link to the survey, providers were presented with a consent page asking them to acknowledge that they were participating in a research study and informing them of the ways in which their anonymity would be protected. Participants were assured that no identifiable information would be included connected to survey responses and that all information and analyses will be reported as aggregates.

A total of 382 child care providers responded to the survey, 278 FCC and 104 CCC. A smaller subset (188 FCC, 77 CCC) answered all of the questions. Incomplete surveys were used in analysis, however, respondents that only answered demographic information and did not answer any of the questions about their experiences were completely removed from the sample ($n = 106$). Respondents under the age of 18 were left out of final analyses ($n = 1$). There were three male outliers (1 CCC, 2 FCC) in the sample who were also left out of final analyses. The final sample size was 272, CCC = 79 (29%), FCC = 193 (71%). This breakdown mirrors the population of child care providers in Washington state, which is made up of roughly 71% FCC and 29% CCC (Child Care Aware of America, 2012). Response rates for each item vary, however, and are reflected in each unique analysis.

Participants were from each of the seven regions identified by CCA-WA. Table 1 displays the breakdown of respondents from each region. The regional representation reflects the population of child care providers across the state in all but two regions. The

overrepresentation of the Olympic Peninsula region may be related to recruitment efforts as it was the first region to send out the recruitment email. The underrepresentation of Central Washington may be related to limited access to email and a possible language barrier. According to the United States Census Bureau (2011) the counties in this region contain high percentages of families who speak a language other than English at home ($M = 25.04\%$, $SD = 15.24$). In Yakima, the largest county in the region, 38.7% of families speak a language other than English, which is considerably higher than the average across the state, which is 17.8%. This region is also rural, which may limit access to the Internet. Across these counties agriculture accounts for between 4.80% and 28.2% ($M = 15.43$, $SD = 6.86$) of employment. Across Washington agriculture accounts for 2.60% of employment and in urban counties such as King it can go as low as .50%.

Table 1
Sample Size by Region

Region	Counties	Sample n= 272		Washington ^a n= 7,196	
		N	%	N	%
Olympic Peninsula	Clallam, Jefferson, Grays Harbor, Mason, Kitsap, Thurston	40	14.7	649	9.02
Northwest	Whatcom, Skagit, Snohomish, Island, San Juan	49	18.0	1,114	15.48
King County	King	84	30.9	2137	29.7
Pierce County	Pierce	27	9.9	707	9.82
Southwest	Pacific, Lewis, Cowlitz, Clark, Skamania, Klickitat, Wahkiakum	15	5.5	481	6.68
Central	Okanogan, Ferry, Chelan, Douglas, Grant, Kittitas, Yakima, Adams	17	6.3	1129	15.69
Eastern	Stevens, Pend Oreille, Lincoln, Spokane, Whitman, Franklin, Enton, Walla Walla, Columbia, Garfield, Asotin	38	14.0	979	13.6
Skipped Question		2	0.7		

Note. ^aData from Child Care Aware of America, 2012.

The final sample ranged in age from 20 to 72 ($M = 45.9$, $SD = 11.7$) with 23 respondents choosing not to answer the question. On average the sample had a lot of experience working with infants and toddlers ($M = 15.3$ years, $SD = 10.2$), preschoolers ($M = 15.07$, $SD = 10.7$) and school-aged children ($M = 11.87$, $SD = 11.0$), 18 respondents did not answer this question. Level of education ranged from not having graduated from high school ($n = 64$) to PhD ($n=3$), 20 respondents in the final sample did not respond to this question. The most common levels of education were an AA ($n = 62$, 22.8%) and 'I have not graduated from High School,' ($n = 61$, 22.4%). Table 2 reports level of education by type and Table 3 reports by region. Respondents

were also asked to describe their majors, 255 provided answers of which 68 (26.7%) reported majors that were related to early childhood education.

Table 2
Provider Education by Program Type

Highest Degree Attained	FCC n = 193		CCC n = 79	
	N	%	N	%
<i>No high school</i>	45	23.3%	16	20.3%
<i>High school/GED</i>	31	16.1%	0	0.0%
<i>CDA</i>	27	14.0%	13	16.5%
<i>AA</i>	37	19.2%	25	31.6%
<i>BA</i>	31	16.1%	13	16.5%
<i>MA</i>	2	1.0%	9	11.4%
<i>PhD</i>	2	1.0%	1	1.3%
<i>Unanswered</i>	18	9.3%	2	2.5%

Note. GED = General Equivalency Diploma; CDA = Child Development Associate; AA = Associate of Arts; BA = Bachelor of Arts; MA = Master of Arts; PhD = Doctor of Philosophy

Table 3
Provider Education by Region

Highest Degree Achieved	Olympic Peninsula n = 40		Northwest n = 49		King County n = 84		Pierce County n = 27		Southwest n = 15		Central n = 17		Eastern n = 38	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<i>No high school</i>	11	27.5	14	28.6	10	11.9	2	7.4	10	66.7	8	47.1	6	15.8
<i>High school/GED</i>	1	2.5	3	6.1	12	14.3	5	18.5	1	6.7	1	5.9	7	18.4
<i>CDA</i>	3	7.5	3	6.1	19	22.6	6	22.2	1	6.7	3	17.6	5	13.2
<i>AA</i>	11	27.5	12	24.5	16	19.0	6	22.2	3	20.0	2	11.8	12	31.6
<i>BA</i>	8	20.0	8	16.3	19	22.6	6	22.2	0	0.0	0	0.0	3	7.9
<i>MA</i>	4	10.0	2	4.1	1	1.2	1	3.7	0	0.0	1	5.9	2	5.3
<i>PhD</i>	0	0.0	2	4.1	1	1.2	0	0.0	0	0.0	0	0.0	0	0.0
<i>Skipped question</i>	2	5.0	5	10.2	6	7.1	1	3.7	0	0.0	2	11.8	3	7.9

Note. GED = General Equivalency Diploma; CDA = Child Development Associate; AA = Associate of Arts; BA = Bachelor of Arts; MA = Master of Arts; PhD = Doctor of Philosophy

Table 4 summarizes select program characteristics. Over a quarter of the sample (n = 91, 33.7%) worked in programs that did not serve children receiving child care subsidies. The majority (n = 227, 85%) worked in programs that were not accredited by the National Association for the Education of Young Children (NAEYC) or the National Association for Family Child Care (NAFCC), yet more than half (n = 155, 57.4%) had waitlists. Of the CCC programs, almost half (46.8%) identified themselves as working for for-profit agencies, 28.6% worked for not-for-profits, 10% worked for faith affiliated programs, 10% for Early Head Start or state funded Early Childhood Education and Assistance Programs (ECEAP) and 3.9% self-identified as other.

Classroom or FCC size and number of caregivers varied. The majority reported having either 5 - 8 or 9 - 12 children (37.3% and 35.1% of the total sample respectively). Another 19% percent reported having two - four children, and a smaller amount reported having 13-15 (4.5%) and 16-20 (4.1%) children. Four respondents did not answer this question. The number of caregivers in the classroom also varied. Table 4 summarizes the average number of providers and chi-squared differences between types. It appears that on average FCC respondents had fewer caregivers. Respondents were also asked about the age of the youngest and oldest children in their classrooms or FCC programs. Many of the respondents (40.1%) reported having age ranges of over five years, though this appears to vary greatly by FCC and CCC. In addition to age range, respondents were asked about the mobile abilities of the children in their programs. The majority (79.7%) of the respondents who answered the question reported that most of the children could either walk or crawl, 15% reported that half of the children were mobile and half non-mobile, and 5.3% reported that all of their children were non-mobile.

Table 4.
Program Characteristics

Characteristics	FCC n = 193		CCC n = 79	
	N	%	N	%
Percent subsidy				
0	82	42.5	9	11.4
1 to 10%	51	26.4	23	29.1
11 to 25%	20	10.4	9	11.4
26 to 50%	19	9.8	14	17.7
51 - 75%	5	2.6	7	8.9
76 - 100%	15	7.8	16	20.3
Skipped question	1	0.5	1	1.3
Percent minority				
0	32	16.6	3	3.8
1 to 24%	53	27.5	30	38.0
25 to 49%	42	21.8	9	11.4
50 to 74%	35	18.1	18	22.8
75 to 100	26	13.5	16	20.3
Skipped question	5	2.6	3	3.8
Accreditation				
Yes	19	9.8	21	26.6
No	169	87.6	58	73.4
Skipped question	5	2.6	0	0.0
Waitlist				
Yes	84	43.5	31	39.2
No	109	56.5	46	58.2
Skipped question	0	0.0	2	2.5
Average caregivers				
1 caregiver	90	46.6	13	16.5
2 caregivers	52	26.9	38	48.1
3 caregivers	27	14.0	19	24.1
More than 3 caregivers	24	12.4	9	11.4
Skipped question	0	0.0	0	0.0
Average attendance				
2 - 4 children	38	19.7	13	16.5
5 - 8 children	75	38.9	25	31.6
9 - 12 children	65	33.7	29	36.7
13 - 15 children	4	2.1	8	10.1
16 - 20 children	8	4.1	3	3.8
Skipped question	3	1.6	1	1.3
Age range				
0-6 months	4	2.1	5	6.5
7 months - 1 year	9	4.7	21	27.3
13 months - 2 years	8	4.2	28	36.4
25 months - 3 years	15	7.8	11	14.3
37 months - 4 years	27	14.1	6	7.8
49 months - 5 years	28	14.6	1	1.3
Over 5 years	78	40.6	5	6.5
Skipped question	24	12.5	2	2.6
Mobility				
Most non-mobile	4	2.1	10	12.7
Half mobile	26	13.5	14	17.7
Most mobile	158	82.3	54	68.4
Skipped Question	5	2.6	1	1.3

Respondents were asked about the type of support they had received for challenging behaviors over the last 12 months. Of the 272 responses 65 (23.9%) stated that they had received no training for challenging behaviors over the last 12 months. An additional 43 respondents stated that they had only received support through books or pamphlets on challenging behaviors. This means that nearly half of the respondents (47%) did not receive personal support in the last 12 months. The most common form of personal support was trainings, with 125 (46%) of respondents reporting that they had attended a training on challenging behaviors in the last 12 months. Sixty respondents (22%) reported having had on-site coaching and 33 (12%) reported having participated in reflective peer groups. Table 5 reports professional development broken down by regions.

There were significant associations between the type of training received and the type of program. FCC respondents were 3.65 times more likely to report that they have not received support for challenging behaviors in the last 12 months ($\chi^2(1) = 11.19, p < .001$). Perhaps not surprisingly then, CCC respondents were 2.62 times more likely to report attending trainings ($\chi^2(1) = 12.52, p < .001$) and 7.43 times more likely to have received on-site coaching ($\chi^2(1) = 45.21, p < .001$). Table 6 summarizes these differences.

Table 5
Professional Development by Region

Professional Development	Olympic Peninsula n = 40		Northwest n = 49		King County n = 84		Pierce County n = 27		Southwest n = 15		Central n = 17		Eastern n = 38	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No support	8	20.0	11	22.4	21	25.0	7	25.9	5	33.3	1	5.9	12	31.6
Books only	5	12.5	5	10.4	15	17.9	6	22.2	3	20.0	5	29.4	4	10.5
Training	21	52.5	25	51.0	36	42.9	8	29.6	6	40.0	8	47.1	18	47.4
Coaching	10	25.0	14	28.6	11	13.1	5	18.5	5	33.3	4	23.5	10	26.3
Peer reflective groups	5	12.5	5	10.2	10	11.9	4	14.8	3	20.0	1	5.9	5	13.2

Note. The numbers above do not reflect the percentage of participants who skipped the question. Percentages do not add up to %100 because respondents could participate in training, coaching and peer reflective groups.

Table 6
Professional Development by Program Type and Chi-square Results

Professional Development	FCC n = 193		CCC n = 79	
	N	%	N	%
No support***	57	29.4%	7	9.0%
Books only	39	20.1%	4	5.1%
Training***	76	39.2%	49	62.8%
Coaching***	22	11.3%	38	48.7%
Peer reflective groups	19	9.8%	14	17.9%

Note. The numbers above do not reflect the percentage of participants who skipped the question. Percentages do not add up to %100 because respondents could participate in training, coaching and peer reflective groups.

*** $p < .001$.

Measures

Two survey questionnaires were developed for use in this study, one for FCC and one for CCC providers (see Appendix A). The content of the two surveys was the same, differences between the two settings, however, necessitated separate surveys. FCCs, for example, are unique in that they serve a wide range of ages in one group as compared to CCCs, which separate

infants and very young children from older ones. Emphasis was added to FCC questions so that respondents only consider children under three in their responses.

A review of the literature on preschool expulsion, caregiver stress, and challenging behaviors informed survey items. The survey items were tested with two cognitive interviews with toddler room teachers. This process uncovered confusing language and difficult questions. A link to a pilot version of the survey was sent to a small sample of child care centers. Pilot responses were used to cut the length of the survey. Finally, statisticians and experts in the field of early childhood education reviewed the survey.

Both of the surveys included 25 questions (plus a request to acknowledge consent) and six sections comprised of a mix of multiple choice, Likert-type scale, and open-ended questions. Respondents were asked about their programs and their experiences with, and knowledge of, challenging behaviors. They were also asked questions associated with job stress, demands and control. Personal demographic information was also collected.

As Hampton (2008) has noted, child care providers may be hesitant to answer truthfully about their experiences with expelling children. In order to elicit true responses and avoid making caregivers feel badly about their experiences, item order was considered carefully. Providers were asked first to mark all of the challenging behaviors that they experience at least once a week. Next they ranked the top five behaviors that they find are the most difficult to work with. They were then asked to explain why they think the top two most difficult behaviors occur and what they do in response to the behaviors. Finally they were asked the question, "In the last 12 months, have any behaviors been so difficult that you have had to ask a child to permanently leave your classroom?" If a child has been removed the respondent is provided a matrix that allows her to provide information about the child's age at time of expulsion, the

behavior that was the most concerning and whether or not the family was helped to find alternative care.

In addition to questions about experience, a scale of job stress was adapted from Curbow et al (2000). The full version of this survey was used in Gilliam and Shahar (2006) and was adapted here for three purposes. The first was to collect descriptive information about job stress for caregivers working with infants and toddlers in Washington. This information can be helpful for policy makers and other stakeholders. The second was to find similarities and differences between infant and toddler caregivers and their preschool teaching peers. The final reason was to take Gilliam and Shahar's work further by investigating the association between knowledge of challenging behavior and use of appropriate responses in the presence of job stress.

Data Analysis Procedure

Analyses were conducted using Statistical Package for the Social Sciences (SPSS) version 19. The dependent and independent variables used to answer research questions are described below. This section concludes with a description of the analysis plan that was used for each research question.

Quantitative independent variables. The independent variables used in regression analyses included components of provider expertise, job stress, and program characteristics. Components of expertise included years of experience, education and access to professional development over the last 12 months. Years of experience with each of three age groups of children (infants and toddlers, preschoolers, and school-aged children) were treated as unique continuous variables. Two types of variables were used for level of education. The first was an ordinal variable from one to seven reflecting the highest degree attained by the respondent: no high school (1), high school or general equivalency diploma (GED) (2), Child Development

Associates (CDA) (3), Associates (AA) (4), Bachelors (BA) (5), Masters (MA) (6), Doctoral (PhD) (7). Dichotomous categorical variables were also created for each of the degrees, except for BA, MA and PhD, which were grouped together as Post CDA. An additional dichotomous variable addressed whether or not the degree was related to early childhood education (ECE). Professional development opportunities were treated as dichotomous categorical variables, including no support for challenging behaviors, books or pamphlets on challenging behaviors, participation in trainings, on-site coaching and participation in reflective groups or communities of practice.

Caregiver job stress included three Likert scales related to resources, supports, and demands adapted from the Job Stress Inventory (Curbow, Spratt, Ungarette et al., 2000). The original scales were composed of 17 items each and demonstrated high internal validity with a sample of 196 providers: job demands (Cronbach's $\alpha = .77$), job control (Cronbach's $\alpha = .88$) and job resources (Cronbach's $\alpha = .89$). For the purposes of the current study fewer items were included in order to cut down on response fatigue and satisficing (Heerwegh & Loosveldt, 2008). The survey included four job demand questions (Cronbach's $\alpha = .57$) and ten job control questions (Cronbach's $\alpha = .78$). There were also ten job resource questions, however one item "I get praise from the director for the work that I do" was left out of analyses due to a high rate of missing data associated with FCC providers who do not have directors (Cronbach's $\alpha = .88$). The mean job demands score was 2.63 ($SD = .70$), the mean job resources score was 4.53 ($SD = .57$) and job control was 3.68 ($SD = .66$).

Multiple variables made up the program characteristics. The first three were the presence of a waitlist, program accreditation, and whether or not the program accepted child care subsidies were treated as dichotomous categorical variables. A fifth variable was the age range in the

classroom or FCC program. Respondents were asked the age, in months, of both their youngest and oldest children. The youngest was subtracted from the oldest and the result created a continuous variable. Dichotomous categorical variables were also created by grouping the age range into categories according to the gap between the youngest and oldest children: 0 to 6 months, 6 months to 1 year, 13 months to 2 years, 25 months to 3 years, 37 months to 4 years, 49 months to 5 years, over 61 months. A fifth variable included in program characteristics was classroom or FCC program size. Class sizes were treated as dichotomous variables of two to four children, five to eight children, 9 to 12 children, 13 to 15 children, and 16 to 20 children. The final variable was number of caregivers in the classroom or FCC program. This was treated as an ordinal variable with categories including, 1 caregiver, 2 caregivers, 3 caregivers, and more than 3 caregivers.

Qualitative variables and coding. The survey included two qualitative questions that required coding. The first question asked respondents to think about the two most challenging behaviors that are most difficult to work with and to provide a few sentences about why they think the behaviors occur. The answers were coded using a combination method of inductive and deductive coding categories (Brenner, 2006). During this process, components of answers were coded for the presence of reasons identified in the literature on challenging behaviors discussed above. Additional codes emerged from the answers that were unrelated to the literature. See Appendix B for the coding manual. The coding process was validated through a blind double coding process. A randomly selected 10% of the answers were double coded by a PhC in School Psychology with a certification in Infant Mental Health and experience in both child care settings and child care research. Items were randomly selected using the website

<http://www.randomizer.org>. After three practice rounds with five randomly selected answers the coder coded a full 10% and achieved reliability of 84%.

Of the 253 respondents who answered this question, 24 were not included in the final analyses. There were 22 answers that were considered undecipherable. Undecipherable answers included those that simply restated the behavior, named the time of day that the behavior occurred, stated the reason that the behavior was difficult, or provided a strategy rather than the reason for the behavior. An additional two answers were not included because the respondent answered, “N/A.” The final sample included information provided from 229 respondents. The final sample produced 47 unique codes that were later organized into eight larger themes. See Appendix B for the coding manual for this question.

The second qualitative question prompted respondents to report what strategies they use when their two most difficult behaviors arise. This answer was coded and scored in two ways. The first used a combined method of inductive and deductive coding categories (Brenner, 2006). A priori codes were created from the CSEFEL literature on effective and supportive responses to challenging behaviors when working with infants and toddlers. These included components of the CSEFEL Pyramid Model for supporting social emotional competence. These practices encourage caregivers to provide nurturing and positive relationships, deliver high quality supportive environments and preventative practices, and use targeted support and teaching strategies. The pyramid also promotes the use of intensive intervention for those children in need, but this component was not used as a code as respondents did not provide enough information about specific children. Throughout this dissertation codes related to the CSEFEL Pyramid Model are called Pyramid strategies. Answers were also coded for evidence of strategies promoted in other CSEFEL training modules and these included acknowledging the

child's distress, offering comfort, providing children with words to communicate, being attuned to the child's needs, helping the child achieve the understood intention, and communicating with family. These codes are referred to as CSEFEL strategies. Two CSEFEL recommendations were not used as codes because the answers were not descriptive enough to accurately code them. These included the use of developmentally appropriate practices and supplying an effective workforce. Additional codes emerged from the responses and were grouped into thematic categories that described the caregiver's action. These included teaching techniques not necessarily identified as CSEFEL related, strategies related to denying attention for the misbehaving child, reasoning with the child and asking for action, and punitive strategies. There were a total of 34 codes and seven categories. See Table 7 below for the list of codes and Appendix B for the full coding manual. As with the first qualitative questions, the double coder practiced on two rounds of five randomly selected answers and then coded a full 10% of the data and achieved a reliability rate of 85%.

Of the 269 respondents who answered this question, seven were not used in the final analysis. These included answers that either restated the behavior instead of listing a strategy, declarations that the provider does not experience challenging behaviors, language that was too difficult to interpret, and one answer stating "I don't know." The final analysis included answers from 262 respondents.

During the second phase of coding, categories of codes were awarded one to four points according to alignment to the recommendations from CSEFEL, the teaching pyramid and the criteria for unsupportive strategies outlined in Chapter II. CSEFEL and Pyramid strategies, as well as answers referring to the use of provider patience were awarded four points. Teaching strategies that were not necessarily aligned with CSEFEL or the Pyramid were awarded three

points. Reasoning with the child and asking for action, and placing attention elsewhere were awarded two points. Codes that were lacking in evidence of support were given one point, these included punitive codes (e.g. Send Home and Time Out), and instances of asking children to “be nice” without further support. Permanently removing a child due to challenging behavior was also given one point. After coding and awarded points, each respondent’s scores were added and divided by the number of codes, resulting in a Strategy Support Score (SSS) of one to four.

Table 7 summarizes the distribution of points.

Table 7
Point Distribution for Strategy Support Score

Category	Codes ^a	Points
Pyramid	Nurturing relationship with child	4
	Nurturing relationship with family	
	Prevention practices	
	Environmental	
	Observation & supervision	
	Positive encouragement	
	Schedule	
	Social-emotional learning strategies	
CSEFEL	Acknowledge	4
	Promote communication	
	Comfort	
	Attunement	
	Achieve intention of behavior	
Teaching techniques	Teach lesson	3
	Model	
	Rule repetition	
	Redirection	
	Offer choice	
	General talk	
Displace attention	Attend other child	2
	Wait behavior out	
	Separate child	
Reason with child & ask for action	Tell child she has hurt her friend	2
	Ask child to be nice	
	Tell child to say sorry	
	Ask child to give back item	
	Ask child to share or wait	
Punitive	Timeout	1
	Warn	
	Discipline	
	Send home	
	Remove object	
	Ignore	
Other	Patience	4

Note. ^aSee Appendix B for detailed explanation of codes.

Table 8
Strategy Support Score by Sample

Support Score	Sample n = 272	
	<i>N</i>	%
1 - 1.5	10	3.7
1.51 - 2	33	12.1
2.1 - 2.5	29	10.7
2.51 - 3	55	20.2
3.1 - 3.5	52	19.1
3.51 - 4	83	30.5
Skipped question	10	3.7

Dependent variables. There are multiple dependent variables used in the current study. The first was the SSS, discussed above, which was a semi-continuous variable ranging from 1-4 and is based upon respondents' answers to the question, "Think about the top two behaviors of concern, please use the boxes provided to write a few sentences about why you think they occur." There were two dichotomous dependent variables. The first was whether or not a provider had expelled a child in the last 12 months. The second was used for supplementary, exploratory logistic regression models and included whether or not a provider used timeout as a strategy.

For all dichotomous variables, dummy codes with values of 0 or 1 were assigned in order to facilitate interpretation and ease of reporting. Affirmative answers were given a value of 1 and all others were treated as reference variables. For example, in the case of expulsion those who answered yes to having had a child permanently removed from the program were coded as 1 and those that had not were coded as 0. Each type of professional development was treated as a unique dichotomous variable, on-site coaching, for example was coded 0 = no on-site coaching

in the last 12 months, 1 = yes, on-site coaching in the last 12 months. In addition, CCCs were used as the reference group, FCCs were coded 1.

Data analysis plan. Descriptive statistics and regression were used to address the research questions. The following section describes these methods as they relate to the current study. Research questions are grouped according to similar analysis methods.

Research questions #1 through #4.

- Which challenging behaviors are the most difficult for infant and toddler caregivers to work with?
- What meaning do infant and toddler caregivers attribute to the challenging behaviors that they experience?
- What strategies do infant and toddler caregivers employ in response to challenging behaviors?
- How common is expulsion for children under 3 years old?

Descriptive statistics were used to analyze these questions. Frequency counts were used to explore the difficulty with which providers ranked specific behaviors, beliefs about these behaviors, and the use of specific strategies including expulsion. Chi-square tests were used to explore differences between FCC and CCC providers. In addition, *t*-tests were used to explore the difference in average SSS scores between FCC and CCC providers.

Research questions #5 through #7.

- How are correlates of caregiver expertise, including experience, education, and professional development related to the use of supportive strategies when working with challenging behaviors?

- How are correlates of caregiver job stress, including resources, control and demands related to the use of supportive strategies when working with challenging behaviors?
- How are programmatic characteristics including class size, number of caregivers, age range, and the presence of a waitlist and accreditation related to the use of supportive strategies when working with challenging behaviors?

Linear regression was used for these questions because the outcome variable, SSS, was continuous and the predictor variables were either continuous or categorical. Exploratory univariable linear regression models were used to look at the relationship between individual variables (discussed above) and SSS. Next a series of three models were run to look individually at how predictors related to caregiver expertise, job stress and program characteristics explained variance in SSS without controlling for other variables.

A full multiple linear regression model looked at the influence of all of the variables on SSS. Reliable regression models require a certain ratio of data to variables in order to accurately detect effect sizes. There are multiple view points on this ratio, a commonly used rule suggests having between 10 and 15 cases for each variable in the model, while other authors suggest that to test the overall fit of a model requires in a minimum sample size of $50 + 8k$ where k is equal to the number of predictors (Field, 2009). The variables used in the current model were selected in order to strike a balance between scientific completeness and parsimony, the use of 21 predictors falls within all of the suggestions for predictor to sample size ratio. The categorical variables of class size and education required reference variables. A class size of 9 to 12 students and post CDA education were chosen respectively. Years of working with infants and toddlers and preschoolers were not included in the model, but years of experience with school-aged children were included. This decision was made because it was hypothesized that years of experience

working with this particular age group might influence the type of strategies a provider is most likely to use. Of the types of professional development, training, coaching, and peer reflective groups were kept in the model because these have been demonstrated to influence practice in the literature. Accepting subsidy was included in the model as a control because programs that accept subsidy often receive additional supports and because it was a component of program characteristics that was hypothesized to have a relationship with the use of supportive strategies. Multiple linear regression also requires that homoscedasticity and linearity are tenable. Examination of the model's residuals plotted against its predicted values revealed no evident heteroscedasticity or curvilinearity.

An exploratory, supplementary logistic regression model was also run to further investigate the impact of these variables on responses to challenging behavior. Timeout, a dichotomous categorical variable was chosen as the outcome variable. The predictors used in the full linear regression model were used in this model.

Chapter IV: Results

Analyses were conducted using SPSS version 19 in order to address the research questions. Preliminary analysis explored descriptive statistics related to the experience of respondents in regard to the types of challenging behaviors they experience and the strategies they employ. Chi-square tests were used to identify differences in experiences by FCC and CCC programs. Regression analysis explored the relationships between a set of predictor variables related to provider expertise, job related stress, and program characteristics and responses to challenging behaviors. Pearson correlation coefficients were analyzed, multiple linear regression was used to determine how much variability could be explained by the predictors and a supplementary logistic regression was also explored. The results of these analyses are provided below. At the end of each section results are explored in relationship to relevant research questions and hypotheses.

Preliminary Analysis

Behaviors experienced. The frequency with which respondents reported experiencing specific challenging behaviors more than one time a week are summarized in Table 9 by child care type. Disruptive behaviors occurred the most frequently. Specifically, aggressive behaviors were the most commonly reported, with 89.1% of the total sample reporting the presence of such behaviors. Taking items from others was the most common (82.1%), followed by hitting (55.1%) and biting (35.0%). Almost half of the total sample reported temper tantrums (46.4%) and slightly fewer reported noncompliance (42.0%). Of the withdrawal behaviors, separation anxiety and clinginess was most common (27.0%), followed by inhibition (18.6%) and extreme sadness (6.2%). Of the difficult behaviors of infancy, sleep difficulties (or refusing to sleep) were most common (33.2%), followed by toileting difficulties (29.9%), eating difficulties

(21.5%) and excessive crying or colic (18.6%). Some respondents (7%) reported experiencing no challenging behaviors, 0.7% reported behaviors associated with a child's abilities (specifically Autism and lack of verbal skills) and 1.1% wrote in other behaviors that did not fit into other categories (e.g. "toting things around in carry baskets," "busy hands, good small gross motor skills for this age," and "concern for deployed father/not wanting to go home").

Differences across child care type. Chi-square tests were used to identify significant differences in behaviors experienced by each type of program. Only the behaviors that were experienced by more than five FCC and more than five CCC respondents could be analyzed with chi-square tests. Of those, there were significant associations between the type of program and the experience of biting, taking items, clinginess, excessive crying, refusing to nap, and excessive diapers. With respect to biting, $\chi^2(1) = 8.32, p < .01$, this seems to represent the fact that based on the odds ratio, CCC providers were 2.19 times more likely to report biting. CCC respondents were also 2.64 times more likely to report experiencing clinginess $\chi^2(1) = 11.60, p < .001$, 2.01 times more likely to report excessive crying $\chi^2(1) = 6.25, p < .05$, 2.03 times more likely to report that children refuse to nap more than once a week $\chi^2(1) = 6.61, p < .01$ and 2.81 times more likely to report experiencing excessive diapering needs $\chi^2(1) = 7.36, p < .01$. With respect to reports of infants taking items from others, FCC caregivers were 2.17 times more likely to report this behavior $\chi^2(1) = 5.72, p < .05$.

Most difficult behaviors. The rankings of the most challenging behaviors were looked at in three ways, including the frequency with which a behavior was listed anywhere in the five most challenging behaviors, the frequency with which it was listed as first, and the frequency with which it was listed as second. Table 10 summarizes the frequency of behaviors in all three ways, broken down by provider type.

Aggressive behaviors were most commonly listed in the five most difficult behaviors with 75.1% of respondents listing item taking, 58.8% hitting, and 39.4% biting. Tantrums and noncompliance both made the list of concerning behaviors for 42.6% of respondents. Difficult behaviors of infancy were the next most commonly reported behaviors of concern. Refusing to nap was the most common to make this rank with 32.1% of respondents listing it. Refusing to eat followed with 19.9%, followed by excessive crying or colic with 17.4%, refusing to potty train at 18.1%, and excessive diapering needs at 9.7%. Withdrawal behaviors were the least frequently named behaviors, with clinginess making the list for 21.7% of respondents, shyness for 10.1%, and difficulty warming up for 9.7%.

Disruptive behaviors were also the most likely to be labeled as the number one most concerning behavior for respondents. Aggressive behaviors were listed as the number one behavior of concern with the most frequency. Specifically biting was the most common (18.8%), followed by taking items (16.6%) and hitting (12.3%). Refusing to nap (a component of difficult behaviors of infancy) and temper tantrums were both reported as the most concerning behavior at 7.2%, followed by noncompliance at 6.9%.

Finally, disruptive behaviors were also the most likely to be labeled as the second most concerning behavior. Aggression was once again the most common with taking items at 18.4%, hitting at 16.6%, and biting at 16.6%. Noncompliance was ranked second 7.9% of the time and temper tantrums at 7.2%.

Differences across types. Chi-square tests were used to identify significant differences in how behaviors of concern are ranked by each type of program. Regarding behaviors that made the list of the five most concerning behaviors there were significant associations between the type of program and the ranking of disobeying, clinginess, excessive crying or colic and refusing

to nap. FCC respondents were 1.8 times more likely to include disobeying in their five behaviors of concern $\chi^2(1) = 4.69, p < .05$. CCC respondents, on the other hand, were 1.92 times more likely to name clinginess $\chi^2(1) = 4.61, p < .05$, 1.98 times more likely to name excessive crying $\chi^2(1) = 5.08, p < .05$, and 1.91 times more likely to name refusing to nap on their top five behaviors $\chi^2(1) = 5.55, p < .05$.

For the first and second rankings there were two significant differences. There was a significant association between the type of program and ranking biting as the primary behavior of concern. CCC respondents were also 1.89 times more likely to do so $\chi^2(1) = 4.13, p < .05$. CCC respondents were also 3.03 times more likely to rank clinginess as the second behavior of concern $\chi^2(1) = 4.62, p < .05$.

Research question #1. Which challenging behaviors are the most difficult for infant and toddler caregivers to work with?

Hypothesis #1. It was hypothesized that disruptive behaviors, including acts of aggression, noncompliance, and tantrums, would be the rated as the most difficult for caregivers to work with.

The results of this exploratory analysis support the hypothesis that disruptive behavior, including acts of aggression, noncompliance, and tantrums were the most difficult for caregivers to work with. This appeared to be the case for both FCC and CCC respondents.

Table 9
Challenging Behaviors Experienced Weekly and Chi-square Differences by Type

Characteristics	Total Sample n = 272		FCC n = 193		CCC n = 79	
	N	%	N	%	N	%
Disruptive- Aggression ^a	244	89.7	177	91.7	67	84.8
Biting**	96	35.3	58	30.1	38	48.1
Hitting	151	55.5	107	55.4	44	55.7
Taking items*	225	82.7	167	86.5	58	73.4
Other aggression ^b	6	2.2	6	3.1	0	0.0
Disruptive- Noncompliance ^a	115	42.3	87	45.1	28	35.4
Disobeying	115	42.3	87	45.1	28	35.4
Refusing to share ^b	2	0.7	2	1.0	0	0.0
Disruptive- Temper tantrums ^a	127	46.7	92	47.7	35	44.3
Temper tantrums	127	46.7	92	47.7	35	44.3
Whining or lack of impulse control ^b	2	0.7	2	1.0	0	0.0
Withdrawn- Inhibition ^a	51	18.8	33	17.1	18	22.8
Shyness	37	13.6	25	13.0	12	15.2
Difficulty warming up	28	10.3	16	8.3	12	15.2
Withdrawn- Separation anxiety and clinginess ^a	74	27.2	42	21.8	32	40.5
Clinginess***	72	26.5	40	20.7	32	40.5
Anxiety ^a	2	0.7	2	1.0	0	0.0
Withdrawn - Extreme sadness	17	6.3	8	4.1	9	11.4
Infancy- Excessive crying or colic*	51	18.8	29	15.0	22	27.8
Infancy- Sleep difficulties ^a	91	33.5	56	29.0	35	44.3
Refusing to nap**	90	33.1	55	28.5	35	44.3
Tiredness ^a	1	0.4	1	0.5	0	0.0
Infancy- Toileting difficulties ^a	82	30.1	57	29.5	25	31.6
Refusing to potty train	67	24.6	47	24.4	20	25.3
Excessive diapers**	30	11.0	15	7.8	15	19.0
Infancy- Eating difficulties ^a	61	22.4	42	21.8	19	24.1
Refusing to eat	59	21.7	41	21.2	18	22.8
Other difficulties ^b	2	0.7	1	0.5	1	1.3
No behavior issues ^b	7	2.6	5	2.6	2	2.5
Other behaviors related to abilities ^b	2	0.7	2	1.0	0	0.0
Other ^a	3	1.1	2	1.0	1	1.3

Note. The frequency of categories experienced represents the number of respondents who marked any of the behaviors listed below. Respondents were able to mark as many behaviors as desired, percentages do not add up to %100.

^aDenotes number of answers that were coded for at least one of the strategies listed below.

^bDenotes behaviors that were written in by respondents

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

Table 10
Descriptive Statistics of Ratings of Difficult Behaviors

Characteristics	Ranking 1-5				Rank 1				Rank 2			
	FCC		CCC		FCC		CCC		FCC		CCC	
	n = 193		n = 79		n = 193		n = 79		n = 193		n = 79	
	N	%	N	%	N	%	N	%	N	%	N	%
Disruptive- Aggression												
Biting	70	36.3	38	48.1 *	30	15.5	21	26.6 *	11	5.7	6	7.6
Hitting	118	61.1	34	43.0	25	13.0	9	11.4	31	16.1	13	16.5
Taking Items	154	79.8	52	65.8	36	18.7	10	12.7	41	21.2	10	12.7
Other Aggression	4	2.1	0	0.0	1	0.5	0	0.0	1	0.5	0	0.0
Disruptive- Noncompliance	91	47.2 *	25	31.6	14	7.3	4	5.1	17	8.8	5	6.3
Disruptive- Temper tantrums												
Temper tantrums	89	46.1	29	36.7	17	8.8	3	3.8	14	7.3	6	7.6
Whining or lack of impulse control	2	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Withdrawn- Inhibition												
Shyness	20	10.4	6	7.6	2	1.0	0	0.0	2	1.0	0	0.0
Difficulty warming up	17	8.8	10	12.7	4	2.1	3	3.8	1	0.5	2	2.5
Withdrawn- Separation anxiety and clinginess												
Clinginess	33	17.1	24	30.4 *	7	3.6	5	6.3	6	3.1	8	10.1 *
Anxiety	1	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Withdrawn - Extreme sadness	11	5.7	7	8.9	0	0.0	0	0.0	3	1.6	0	0.0
Infancy- Excessive crying or colic	35	18.1	24	30.4 *	11	5.7	8	10.1	8	4.1	6	7.6
Infancy- Sleep difficulties												
Refusing to nap	54	28.0	33	41.8	12	6.2	8	10.1	9	4.7	5	6.3
Tiredness	1	0.5	0	0.0	1	0.5	1	1.3	0	0.0	0	0.0
Infancy- Toileting difficulties												
Refusing to potty train	34	17.6	16	20.3	5	2.6	1	1.3	4	2.1	2	2.5
Excessive diapers	16	8.3	10	12.7	0	0.0	1	1.3	4	2.1	1	1.3
Infancy- Eating difficulties												
Refusing to eat	40	20.7	13	16.5	7	3.6	3	3.8	8	4.1	4	5.1
Other difficulties	1	0.5	1	1.3	0	0.0	0	0.0	1	0.5	0	0.0
Other	1	0.5	0	0.0	1	0.5	1	1.3	0	0.0	0	0.0

Note: The ranking order was 1 = most difficult to 5 = least difficult.

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

Meaning attributed to behaviors. Respondents provided a wide variety of reasons that they attributed to challenging behaviors. Table 11 provides a complete summary of the reasons given, broken down by behavior; this is a frequency count of the number of items coded as attributing behaviors to a specific cause. Across all behaviors, categories were mentioned in the following order: Developmental Reasons (48.6%), Adult and Family Influences (19.4%), Unmet Desires (11.3%), Distress (7.6%), Environmental (6.8%), Temperament (3.1%), Illness (2.3%) and other (0.8%). Communication skills and typical development were the most popular individual codes

with 15.2% and 8.8% of the codes respectively. Taken as a group, the reasons associated with family influences made up 15.4% of the codes.

Research question #2. What meaning do infant and toddler caregivers attribute to the challenging behaviors that they experience?

Hypotheses #2. It was hypothesized that caregivers would attribute a variety of meanings to the behaviors, some would be substantiated by the literature, and others would not.

The preliminary analysis provided support for the hypothesis that caregivers would attribute a variety of meanings to the behaviors and that some would be substantiated by the literature while others would not be. It appears that many respondents identified reasons for behaviors that are commonly referred to in the literature, particularly those reasons associated with typical development. Some caregivers appear to recognize the transactional nature of behaviors and associate them with inconsistency in caregiving and the impact of family caregivers. A small group (1.3%) suggested that children are not responsible for the behaviors, but that they occur when caregivers fail to intervene. On the other hand, some respondents listed causes that are not substantiated in the literature. These include such claims as secondary attachment relationships promote challenging behaviors.

Table 11
Reasons Attributed to Behaviors

Reasons	Aggression n = 305 ^a		Noncompliance n = 48 ^a		Temper Tantrums n = 61 ^a		Inhibition n = 14 ^a		Clinginess and Anxiety n = 41 ^a		Extreme Sadness n = 2 ^a	
	N	%	N	%	N	%	N	%	N	%	N	%
Developmental Reasons ^b	208	68.2	23	47.9	30	49.2	2	14.3	4	9.8	0	0.0
Age or typical development	31	10.2	7	14.6	6	9.8	1	7.1	0	0.0	0	0.0
Social	27	8.9	3	6.3	1	1.6	1	7.1	0	0.0	0	0.0
Self-regulation	13	4.3	1	2.1	2	3.3	0	0.0	1	2.4	0	0.0
Cognitive development	11	3.6	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0
Motor development	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Teething	6	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Nonverbal	70	23.0	2	4.2	11	18.0	0	0.0	3	7.3	0	0.0
Expression of frustration, anger or jealousy	29	9.5	1	2.1	6	9.8	0	0.0	0	0.0	0	0.0
Exploration	10	3.3	4	8.3	0	0.0	0	0.0	0	0.0	0	0.0
Bid for autonomy or power	9	3.0	5	10.4	3	4.9	0	0.0	0	0.0	0	0.0
Environmental ^b	12	3.9	2	4.2	5	8.2	3	21.4	6	14.6	0	0.0
Consequence of group care or environment	5	1.6	0	0.0	1	1.6	0	0.0	1	2.4	0	0.0
Change in caregiver	1	0.3	0	0.0	2	3.3	1	7.1	5	12.2	0	0.0
New to play with children	2	0.7	1	2.1	2	3.3	2	14.3	0	0.0	0	0.0
Watching others	3	1.0	1	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Rough & tumble play	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Unmet Desire ^b	34	11.1	3	6.3	6	9.8	1	7.1	6	14.6	0	0.0
General desire	2	0.7	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0
Attention	7	2.3	2	4.2	4	6.6	1	7.1	3	7.3	0	0.0
Desire to be held	0	0.0	0	0.0	0	0.0	0	0.0	2	4.9	0	0.0
Desire for object another child has	11	3.6	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0
Mine	14	4.6	1	2.1	0	0.0	0	0.0	1	2.4	0	0.0
Adult & Family Influences ^b	31	10.2	18	37.5	10	16.4	5	35.7	15	36.6	2	100.0
Family Influences ^b	21	6.9	14	29.2	9	14.8	4	28.6	10	24.4	2	100.0
Family Stress	2	0.7	1	2.1	0	0.0	0	0.0	1	2.4	0	0.0
Family inconsistent with child care routines	3	1.0	2	4.2	3	4.9	1	7.1	4	9.8	0	0.0
Family too controlling	0	0.0	0	0.0	1	1.6	0	0.0	2	4.9	0	0.0
Family does not provide structure	7	2.3	9	18.8	3	4.9	0	0.0	1	2.4	1	50.0
Family is otherwise inappropriate	9	3.0	2	4.2	2	3.3	3	21.4	2	4.9	1	50.0
Child is breastfeeding	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Child is an only child	4	1.3	1	2.1	0	0.0	0	0.0	1	2.4	0	0.0
Caregiver fails to intervene	5	1.6	2	4.2	1	1.6	0	0.0	0	0.0	0	0.0
Insecure attachment	1	0.3	0	0.0	0	0.0	1	7.1	2	4.9	0	0.0
Expectations too high	0	0.0	1	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Attachment causing a problem	0	0.0	0	0.0	0	0.0	0	0.0	2	4.9	0	0.0
Distress ^b	15	4.9	2	4.2	5	8.2	2	14.3	9	22.0	0	0.0
General distress	4	1.3	0	0.0	0	0.0	0	0.0	1	2.4	0	0.0
Overstimulation	1	0.3	0	0.0	1	1.6	0	0.0	1	2.4	0	0.0
Foster care	1	0.3	0	0.0	1	1.6	0	0.0	1	2.4	0	0.0
Pain	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tiredness	5	1.6	0	0.0	3	4.9	0	0.0	0	0.0	0	0.0
Hunger	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Fear or anxiety	0	0.0	0	0.0	0	0.0	2	14.3	2	4.9	0	0.0
Stranger or separation anxiety	0	0.0	0	0.0	0	0.0	0	0.0	4	9.8	0	0.0
Boredom	1	0.3	2	4.2	0	0.0	0	0.0	0	0.0	0	0.0
Illness ^b	1	0.3	0	0.0	0	0.0	1	7.1	1	2.4	0	0.0
General	0	0.0	0	0.0	0	0.0	1	7.1	1	2.4	0	0.0
Disability	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Failure to thrive	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Disregression problems	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Temperament ^b	4	1.3	0	0.0	5	8.2	0	0.0	0	0.0	0	0.0
General Temperament	2	0.7	0	0.0	2	3.3	0	0.0	0	0.0	0	0.0
Stubborn, aggressive, selfish	2	0.7	0	0.0	3	4.9	0	0.0	0	0.0	0	0.0
Other physical	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Note. ^aN = The total number of reasons related to each behavior.

^bDenotes number of codes related to at least one of the reasons listed below.

Table 11, continued
Reasons Attributed to Behaviors

Reasons	Excessive Crying or n = 50 ^a		Sleep Refusal n = 48 ^a		Toileting Difficulties n = 15 ^a		Eating Difficulties n = 33 ^a		Total Reasons n = 617 ^a	
	N	%	N	%	N	%	N	%	N	%
Developmental Reasons ^b	7	14.0	10	20.8	6	40.0	10	30.3	300	48.6
Age or typical development	1	2.0	3	6.3	3	20.0	2	6.1	54	8.8
Social	0	0.0	1	2.1	0	0.0	0	0.0	33	5.3
Self-regulation	1	2.0	0	0.0	0	0.0	0	0.0	18	2.9
Cognitive development	0	0.0	0	0.0	0	0.0	0	0.0	12	1.9
Motor development	1	2.0	0	0.0	0	0.0	0	0.0	3	0.5
Teething	2	4.0	1	2.1	0	0.0	2	6.1	11	1.8
Nonverbal	2	4.0	3	6.3	2	13.3	1	3.0	94	15.2
Expression of frustration, anger or jealousy	0	0.0	0	0.0	0	0.0	0	0.0	36	5.8
Exploration	0	0.0	1	2.1	0	0.0	1	3.0	16	2.6
Bid for autonomy or power	0	0.0	1	2.1	1	6.7	4	12.1	23	3.7
Environmental ^b	5	10.0	7	14.6	0	0.0	2	6.1	42	6.8
Consequence of group care or environment	1	2.0	4	8.3	0	0.0	0	0.0	12	1.9
Change in caregiver	4	8.0	3	6.3	0	0.0	2	6.1	18	2.9
New to play with children	0	0.0	0	0.0	0	0.0	0	0.0	7	1.1
Watching others	0	0.0	0	0.0	0	0.0	0	0.0	4	0.6
Rough & tumble play	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
Unmet Desire ^b	15	30.0	2	4.2	2	13.3	1	3.0	70	11.3
General desire	1	2.0	0	0.0	0	0.0	0	0.0	4	0.6
Attention	6	12.0	0	0.0	1	6.7	0	0.0	24	3.9
Desire to be held	7	14.0	2	4.2	0	0.0	0	0.0	11	1.8
Desire for object another child has	0	0.0	0	0.0	1	6.7	0	0.0	13	2.1
Mine	1	2.0	0	0.0	0	0.0	1	3.0	18	2.9
Adult & Family Influences ^b	12	24.0	18	37.5	2	13.3	7	21.2	120	19.4
Family Influences ^b	8	16.0	17	35.4	2	13.3	7	21.2	95	15.4
Family Stress	0	0.0	0	0.0	0	0.0	1	3.0	5	0.8
Family inconsistent with child care routines	6	12.0	5	10.4	1	6.7	1	3.0	26	4.2
Family too controlling	2	4.0	2	4.2	0	0.0	0	0.0	7	1.1
Family does not provide structure	0	0.0	8	16.7	0	0.0	0	0.0	29	4.7
Family is otherwise inappropriate	1	2.0	2	4.2	1	6.7	5	15.2	28	4.5
Child is breastfeeding	2	4.0	0	0.0	0	0.0	0	0.0	2	0.3
Child is an only child	1	2.0	1	2.1	0	0.0	0	0.0	8	1.3
Caregiver fails to intervene	0	0.0	0	0.0	0	0.0	0	0.0	8	1.3
Insecure attachment	0	0.0	0	0.0	0	0.0	0	0.0	4	0.6
Expectations too high	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
Attachment causing a problem	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3
Distress ^b	5	10.0	5	10.4	2	13.3	2	6.1	47	7.6
General distress	0	0.0	0	0.0	0	0.0	1	3.0	6	1.0
Overstimulation	0	0.0	1	2.1	0	0.0	0	0.0	4	0.6
Foster care	0	0.0	0	0.0	0	0.0	0	0.0	3	0.5
Pain	1	2.0	0	0.0	0	0.0	0	0.0	3	0.5
Tiredness	2	4.0	3	6.3	0	0.0	0	0.0	13	2.1
Hunger	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
Fear or anxiety	1	2.0	1	2.1	2	13.3	1	3.0	9	1.5
Stranger or separation anxiety	1	2.0	0	0.0	0	0.0	0	0.0	5	0.8
Boredom	0	0.0	0	0.0	0	0.0	0	0.0	3	0.5
Illness ^b	4	8.0	0	0.0	3	20.0	4	12.1	14	2.3
General	3	6.0	0	0.0	1	6.7	1	3.0	7	1.1
Disability	0	0.0	0	0.0	2	13.3	1	3.0	4	0.6
Failure to thrive	0	0.0	0	0.0	0	0.0	2	6.1	2	0.3
Disregression problems	1	2.0	0	0.0	0	0.0	0	0.0	1	0.2
Temperament ^b	0	0.0	3	6.3	0	0.0	7	21.2	19	3.1
General Temperament	0	0.0	3	6.3	0	0.0	3	9.1	10	1.6
Stubborn, aggressive, selfish	0	0.0	0	0.0	0	0.0	4	12.1	9	1.5
Other physical	2	4.0	3	6.3	0	0.0	0	0.0	5	0.8

Note. ^aN = The total number of reasons related to each behavior.

^bDenotes number of codes related to at least one of the reasons listed below.

Strategies for challenging behaviors. Respondents were asked about the strategies they employ when faced with their two principle challenging behaviors of concern. A total of 272 respondents listed strategies for at least one behavior, as discussed in Chapter III these were open ended answers and could contain multiple strategies. Table 12 below summarizes the strategies used for specific behaviors, this table presents the frequency and percentage of the total number of coded items per behavior.

Respondents employed a variety of strategies. Across all of the categories and behaviors teaching techniques were the most common, 23.3% of the codes referenced one or more of these strategies. Pyramid and CSEFEL strategies were second and third most common with 20.0% and 16.7% percent of answers referencing these categories respectively. The most common individual strategies were redirection (11.7%), timeout (7.4%), comfort (5.7%), and helping the child to achieve the understood intention (5.7%).

Trends in the use of strategies differed across behaviors. When working with withdrawal behaviors and difficult behaviors of infancy strategies related to caregiver attention, reasoning with children and asking for action, and punitive responses were uncommon compared to Pyramid, CSEFEL and teaching strategies. When working with disruptive behaviors, on the other hand, there was a greater mix of strategies. When faced with noncompliance, timeout (a punitive strategy) was the most common (17.7%). In fact, it was more than five times as common as the most common Pyramid or CSEFEL related strategies. Timeout was also the most common strategy used when faced with aggressive behaviors and tantrums (9.2% and 7.7% respectively). Multiple Pyramid and CSEFEL strategies were not referenced at all when working with noncompliance (using the environment to prevent the behavior, social-emotional learning strategies, acknowledging the child's emotions, offering comfort, and being attuned to the child's

needs) and temper tantrums (promoting nurturing relationships with the child or family, using routines and schedules as preventative strategies).

Finally, it is also of interest to note the apparent mismatch between the belief that challenging behaviors are caused by something that the family has done and working with families as a strategy to remediate the behavior. Of the 81 providers who noted that family was the cause of challenging behaviors, only 14 (17.28%) noted that they work with the family. Of the 130 providers who noted that the behaviors are driven by either lack of communication skills or expressions of emotions driven by lack of verbal skills, 78 (60%) reported attempts to provide children with language and communication skills when presented with behaviors.

Research question #3. What strategies do infant and toddler caregivers employ in response to challenging behaviors?

Hypothesis #3. It was hypothesized that caregivers would be less likely to use strategies identified by CSEFEL and the Pyramid Model than other, less supportive strategies.

There is mixed evidence to support the hypothesis that providers are less likely to use CSEFEL and Pyramid strategies than others. While there is evidence that CSEFEL and Pyramid strategies were being used with some regularity, the use of specific practices is not consistent. Fewer than five percent of the responses, for example, provided evidence of the use of positive encouragement, social-emotional learning strategies, acknowledging children's emotions, or being attuned to the child's needs. The irregularities in the use of effective practices are most pronounced when looking at disruptive behaviors. These behaviors were more likely to draw a timeout as a response than many of the CSEFEL and Pyramid strategies.

Table 12
Strategies Employed by Behavior

Strategy	Aggression		Noncompliance		Temper Tantrums		Inhibition		Clinginess and Anxiety		Extreme Sadness	
	n = 415 ^a		n = 62 ^a		n = 65 ^a		n = 22 ^a		n = 49 ^a		n = 5 ^a	
	N	%	N	%	N	%	N	%	N	%	N	%
I Don't Know	2	0.8	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0
Patience	3	1.3	2	3.2	0	0.0	1	4.5	1	2.0	0	0.0
Pyramid ^b	58	24.4	7	11.3	10	15.4	8	36.4	13	26.5	1	20.0
Promote nurturing and responsive relationships ^b	12	5.0	3	4.8	0	0.0	5	22.7	10	20.4	1	20.0
Relationship with child	4	1.7	1	1.6	0	0.0	3	13.6	9	18.4	1	20.0
Relationship with family	8	3.4	2	3.2	0	0.0	2	9.1	1	2.0	0	0.0
Preventative strategies ^b	42	17.6	4	6.5	7	10.8	3	13.6	4	8.2	0	0.0
Environmental	9	3.8	0	0.0	2	3.1	0	0.0	1	2.0	0	0.0
Observations and close supervision	29	12.2	2	3.2	3	4.6	0	0.0	1	2.0	0	0.0
Positive encouragement	5	2.1	2	3.2	2	3.1	2	9.1	2	4.1	0	0.0
Schedules and routines	3	1.3	2	3.2	0	0.0	1	4.5	1	2.0	0	0.0
Social-emotional Learning Strategies	8	3.4	0	0.0	1	1.5	2	9.1	0	0.0	0	0.0
CSEFEL ^b	64	26.9	3	4.8	10	15.4	3	13.6	14	28.6	1	20.0
Acknowledge	9	3.8	0	0.0	5	7.7	2	9.1	0	0.0	1	20.0
Comfort	4	1.7	0	0.0	4	6.2	1	4.5	12	24.5	0	0.0
Communicate	31	13.0	2	3.2	2	3.1	1	4.5	1	2.0	0	0.0
Attune to child's need	7	2.9	0	0.0	2	3.1	1	4.5	2	4.1	0	0.0
Help child achieve understood intention	26	10.9	1	1.6	1	1.5	1	4.5	2	4.1	1	20.0
Teaching techniques ^b	117	49.2	18	29.0	19	29.2	4	18.2	3	6.1	1	20.0
Teach lesson	25	10.5	6	9.7	1	1.5	0	0.0	4	8.2	1	20.0
Model behavior	16	6.7	2	3.2	0	0.0	0	0.0	0	0.0	0	0.0
Rule repetition	16	6.7	9	14.5	2	3.1	0	0.0	0	0.0	0	0.0
Redirect	63	26.5	8	12.9	12	18.5	1	4.5	4	8.2	0	0.0
Offer choice	5	2.1	2	3.2	0	0.0	0	0.0	0	0.0	0	0.0
General talk	23	9.7	1	1.6	5	7.7	3	13.6	1	2.0	0	0.0
Caregiver attention strategies ^b	24	10.1	4	6.5	8	12.3	0	0.0	2	4.1	1	20.0
Attend other children	14	5.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Waitout behavior	3	1.3	1	1.6	6	9.2	0	0.0	1	2.0	0	0.0
Separate child	11	4.6	3	4.8	3	4.6	0	0.0	1	2.0	1	20.0
Reason with child and ask for action ^b	43	18.1	1	1.6	2	3.1	0	0.0	0	0.0	0	0.0
Tell child behavior hurts	16	6.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ask child to be nice	2	0.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ask child to give back item	9	3.8	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0
Tell child to say sorry	4	1.7	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Ask child to share or wait	17	7.1	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0
Punitive responses ^b	41	17.2	13	21.0	11	16.9	1	4.5	3	6.1	0	0.0
Timeout	38	16.0	11	17.7	5	7.7	0	0.0	1	2.0	0	0.0
Warning	3	1.3	1	1.6	1	1.5	0	0.0	1	2.0	0	0.0
Discipline or consequence	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Ignore	0	0.0	1	1.6	6	9.2	0	0.0	1	2.0	0	0.0
Send child home	0	0.0	0	0.0	0	0.0	1	4.5	1	2.0	0	0.0
Remove object	2	0.8	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0

Note. ^aN = The total number of strategies provided by respondents related to each behavior.

^bDenotes number of codes related to at least one of the strategies listed below.

Table 12, continued
Strategies Employed by Behavior

Strategy	Excessive Crying or Colic		Sleep Refusal		Toileting Difficulties		Eating Difficulties		Other		Total Strategy	
	n = 57 ^a		n = 51 ^a		n = 19 ^a		n = 35		n = 5 ^a		n = 785 ^a	
	N	%	N	%	N	%	N	%	N	%	N	%
I Don't Know	1	1.8	1	2.0	1	5.3	0	0.0	0	0.0	6	0.8
Patience	2	3.5	3	5.9	0	0.0	0	0.0	0	0.0	12	1.5
Pyramid ^b	15	26.3	18	35.3	10	52.6	17	48.6	1	20.0	157	20.0
Promote nurturing and responsive relationships ^b	10	17.5	5	9.8	2	10.5	8	22.9	0	0.0	56	7.1
Relationship with child	6	10.5	2	3.9	0	0.0	1	2.9	0	0.0	27	3.4
Relationship with family	4	7.0	2	3.9	2	10.5	7	20.0	0	0.0	28	3.6
Preventative strategies ^b	6	10.5	17	33.3	6	31.6	10	28.6	0	0.0	99	12.6
Environmental	4	7.0	9	17.6	0	0.0	0	0.0	0	0.0	25	3.2
Observations and close supervision	0	0.0	0	0.0	1	5.3	2	5.7	0	0.0	38	4.8
Positive encouragement	0	0.0	0	0.0	3	15.8	3	8.6	0	0.0	19	2.4
Schedules and routines	2	3.5	8	15.7	3	15.8	5	14.3	0	0.0	25	3.2
Social-emotional Learning Strategies	0	0.0	0	0.0	5	26.3	1	2.9	1	20.0	18	2.3
CSEFEL ^b	17	29.8	14	27.5	0	0.0	4	11.4	1	20.0	131	16.7
Acknowledge	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	17	2.2
Comfort	14	24.6	9	17.6	0	0.0	1	2.9	0	0.0	45	5.7
Communicate	1	1.8	0	0.0	0	0.0	0	0.0	1	20.0	39	5.0
Attune to child's need	4	7.0	3	5.9	0	0.0	1	2.9	0	0.0	20	2.5
Help child achieve understood intention	7	12.3	3	5.9	0	0.0	3	8.6	0	0.0	45	5.7
Teaching techniques ^b	5	8.8	3	5.9	3	15.8	9	25.7	1	20.0	183	23.3
Teach lesson	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	38	4.8
Model behavior	1	1.8	0	0.0	0	0.0	2	5.7	0	0.0	21	2.7
Rule repetition	1	1.8	1	2.0	0	0.0	0	0.0	1	20.0	30	3.8
Redirect	3	5.3	0	0.0	2	10.5	0	0.0	0	0.0	93	11.8
Offer choice	1	1.8	0	0.0	0	0.0	7	20.0	0	0.0	15	1.9
General talk	0	0.0	1	2.0	1	5.3	1	2.9	1	20.0	37	4.7
Caregiver attention strategies ^b	4	7.0	3	5.9	1	5.3	0	0.0	0	0.0	47	6.0
Attend other children	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	1.8
Waitout behavior	4	7.0	2	3.9	1	5.3	0	0.0	0	0.0	18	2.3
Separate child	0	0.0	2	3.9	0	0.0	0	0.0	0	0.0	21	2.7
Reason with child and ask for action ^b	1	1.8	1	2.0	0	0.0	0	0.0	0	0.0	48	6.1
Tell child behavior hurts	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	16	2.0
Ask child to be nice	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3
Ask child to give back item	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10	1.3
Tell child to say sorry	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	6	0.8
Ask child to share or wait	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0	19	2.4
Punitive responses ^b	1	1.8	3	5.9	0	0.0	1	2.9	1	20.0	75	9.6
Timeout	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	56	7.1
Warning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	0.8
Discipline or consequence	0	0.0	1	2.0	0	0.0	0	0.0	1	20.0	3	0.4
Ignore	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0	9	1.1
Send child home	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0	3	0.4
Remove object	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.4

Note. *N = The total number of strategies provided by respondents related to each behavior.

^bDenotes number of codes related to at least one of the strategies listed below.

Strategy Support Score (SSS). As discussed in Chapter III, strategies were also given a numerical value (1-4) and respondents were assigned scores according to their use of highly supportive CSEFEL or Pyramid strategies, or the lack thereof. The average SSS was 3.1 ($SD = .77$). More than half of the respondents were categorized as very supportive with overall scores of 3.1 and higher. See Table 13 for more details.

Table 13
Strategy Support Score by Caregiver Type

Support Score	Sample n = 262		FCC n = 184		CCC n = 78	
	N	%	N	%	N	%
1 - 1.5	10	3.8	9	4.9	1	1.3
1.51 - 2	33	12.6	27	14.7	6	7.7
2.1 - 2.5	29	11.1	23	12.5	6	7.7
2.51 - 3	55	21.0	41	22.3	14	17.9
3.1 - 3.5	52	19.8	38	20.7	14	17.9
3.51 - 4	77	29.4	46	25.0	37	47.4

On average, CCC providers had higher SSS ($M = 3.38$, $SD = .65$) than their FCC counterparts ($M = 2.99$, $SD = .78$). The difference was significant $t(260) = 3.85$, $p < .001$, $d = .74$. According to Cohen (1988) an effect size between 0.5 and 0.7 is a modest effect, 0.8 and above suggests a large effect.

Expulsion. Respondents were asked a series of questions related to expulsion. First, they were asked if any behaviors had been so difficult over the last 12 months that they had to ask a child to permanently leave the classroom. Those who answered “yes” were asked for information about assistance the provider may have supplied to help families find a new program, the age of any child expelled, and the behavior that triggered the expulsion.

Of the 270 responses, 16 (5.9%) answered that they had asked a child to permanently leave their program in the last 12 months in response to challenging behaviors. Two respondents reported having asked two children to leave the program in the last 12 months. Of the 18 children who had been removed from their programs, respondents reported working with 11 families, while six families were not provided with assistance and one respondent left the question blank. This leaves six children who fit the definition of expulsion as described in the review of expulsion in Chapter II. Of the providers who expelled, six were CCC providers and ten were FCC.

Table 14 and Table 15 below summarize characteristics of children removed from their programs. Columns include all children removed and those whose families did not receive assistance. Table 14 presents the reported age range of those children removed ($n = 18$) and Table 15 presents the behaviors that caused the respondent to remove the child ($n = 17$) one provider did not provide an answer. Across the entire sample, 31-36 months was the most common age for children to be removed (27.8%), followed by 10 -12 months (22.2%). Biting was cited as the most common reason for removing the child from the program (29.4%), followed by excessive crying, whining, difficult to console (17.6%).

Table 14
Age of Children Removed from Child Care due to Challenging Behavior

Child Age	All n = 18		No Assistance n = 6	
	<i>N</i>	%	<i>N</i>	%
7 - 9 months	2	11.1	0	0.0
10 - 12 months	4	22.2	2	33.3
13 - 18 months	2	11.1	0	0.0
19 - 24 months	2	11.1	2	33.3
25 - 30 months	3	16.7	0	0.0
31 - 36 months	5	27.8	2	33.3

Note. No Assistance refers to the group of children whose families did not receive assistance in finding a new program.

Table 15
Behaviors Associated with Removal from Child Care

Child Age	All n = 17		No Assistance n = 6	
	<i>N</i>	%	<i>N</i>	%
Biting	5	29.4	2	33.3
Aggression (other than biting)	1	5.9	0	0.0
Defiance	1	5.9	0	0.0
Hurting Self	1	5.9	1	16.7
Excessive crying, whining, difficult to console	3	17.6		16.7
Clinginess	2	11.8	1	16.7
Excessive demands	2	11.8	1	16.7
Excessive attention seeking	1	5.9	0	0.0
Other	1	5.9	1	16.7

Note. No Assistance refers to the group of children whose families did not receive assistance in finding a new childcare program.

Research question #4. How common is expulsion for children under three years old?

Hypothesis #4. It was hypothesized that caregivers are expelling children under three years old at rates comparable to those rates found in child care expulsion literature regarding three to six year olds.

This rate of expulsion is lower than that found in the child care and preschool literature. In their study of providers in Massachusetts, Gilliam and Shahar (2006) found that 39.8% had expelled children over a 12-month period. Gilliam (2005) reported 10.4% of providers in a national sample of pre-Kindergarten programs had expelled. Hampton (2008) found that in her sample of Washington state providers 69.4% of NAEYC-accredited programs and 42.19% of non-accredited programs had disenrolled a child in the last 12 months (recall from Chapter II that disenrollment may be different from expulsion due to challenging behavior). The current findings may, however, be aligned with Hampton's findings that of the 149 children who had been expelled in the last 12 months, only 4.1% were under the age of two and 12.1% were between two and three years of age.

Regression Analysis

The ability of a child care provider to respond to challenging behaviors in a supportive way may be impacted by a multitude of variables related to provider expertise, job related stress, and program characteristics. These relationships were explored and discussed in the following sections. Pearson correlation coefficients were analyzed to identify linear relationships among the variables and determine the strength and directionality. Next, multiple linear regression was explored to determine how much variability in SSS could be explained by the variables and to investigate the association between covariates and SSS. Finally, supplementary logistic regressions are explored to further investigate the relationship between specific variables and the strategies employed by providers when working with challenging behaviors.

Table 16 summarizes the Person correlation coefficients. Both SSS and the act of expelling a child due to challenging behavior are included. In some cases coefficients with similar values have different p-values, this may be related to either differences in the number of responses related to each variable or differences in variable type. Number of caregivers, for example was significantly related to coaching ($r = .20, p < .05$) which was a dichotomous variable; it was also significantly related to reports of job demands ($r = -.20, p < .01$), which was a Likert-type scale. It appears that there is a significant positive relationship between permanently removing a child because of challenging behaviors and access to coaching over the last 12 months ($r = .13, p < .05$).

The correlations among SSS and other variables provide internal validity for the use of SSS as an outcome variable as they appear to behave in ways that align with the literature. Significant positive correlations include education past a CDA ($r = .23, p < .001$), and a degree related to early childhood education (ECE) ($r = .23, p < .001$), access to training in the last 12 months ($r = .25, p < .001$), coaching ($r = .14, p < .05$), the presence of additional caregivers ($r = .13, p < .05$) and having a classroom categorized as small (between two and four children) ($r = .12, p < .05$). Significant negative correlations include type, which suggests that FCC providers (dummy coded as 1) score lower on SSS than CCC providers ($r = -.22, p < .001$), the absence of a high school diploma or equivalent ($r = -.13, p < .001$), the absence of any post secondary education ($r = -.27, p < .05$), years of experience working with school-age children ($r = -.13, p < .001$), the feeling of having control in the workplace ($r = -.13, p < .05$), a wide range of ages in the program or classroom ($r = -.22, p < .001$).

Multicollinearity does not appear to be a problem, though there are interesting correlations among the predictor variables. Coaching, for example, appears to have a significant

negative relationship with feelings of control ($r = -.22, p < .001$) and a positive significant relationship with the feeling of having a demanding job ($r = .19, p < .01$). See Table 17 for details on the remaining correlations.

Table 16
Variable Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
1. Permanently remove	--																										
2. SSS	-.19 **	--																									
3. Child care type	-.05	-.22 ***	--																								
4.No high school	.04	-.13 *	.05	--																							
5. High school/ GED only	.05	-.27 ***	.25 ***	-.21 **	--																						
6. CDA	-.02	.09	-.02	-.25 ***	-.16 **	--																					
7. Post CDA	-.05	.23 ***	-.20 ***	-.54 ***	.36 ***	-.41 ***	--																				
8. ECE related degree	.02	.23 ***	-.20 ***	-.40 ***	-.30 ***	.51 ***	.17 ***	--																			
9. Experience I & T	-.03	-.11	.37 ***	.07	.04	-.03	-.07	-.01	--																		
10. Experience P	-.02	-.12	.35 ***	.10	.01	.03	-.12	.02	.88 ***	--																	
11. Experience S-A	-.03	-.23 ***	.34 ***	.07	.14 *	-.01	-.15 *	-.08	.72 ***	.75 ***	--																
12. No support	-.03	-.09	.21 **	.12	.07	.04	-.18 **	-.01	.10	.07	.08	--															
13. Books & pamphlets	.04	-.02	-.05	-.05	-.06	-.08	.14 *	.02	-.05	-.06	-.12	-.61 ***	--														
14. Training	-.04	.25 ***	-.22 ***	-.16 **	-.09	-.02	.21 **	.06	-.08	-.12	-.15 *	-.52 ***	.33 ***	--													
15. Coaching	.13 *	.14 *	-.41 ***	-.05	-.09	.02	.08	.12	.22 ***	-.17 **	-.12	-.30 ***	.06	.09	--												
16. Peer reflective group	.00	.06	-.11	-.14 *	-.07	-.01	.17 **	.09	.15 *	.07	.12	-.21 **	.26 ***	.25 ***	.05	--											
17. Job demands	.03	.02	-.13 *	-.02	-.15 *	.07	.07	.12	-.12	-.12	-.06	-.11	.13 *	.13 *	.19 **	.04	--										
18. Job resources	.01	-.05	.14 *	.06	.00	.01	-.05	-.02	.20 **	.15 *	.15 *	.01	-.07	.10	-.16 **	.08	-.15 *	--									
19. Job control	-.01	-.13 *	.43 ***	.02	.15 *	-.07	-.07	-.11	.29 ***	.31 ***	.21 **	.08	.10	-.08	-.22 ***	.01	-.45 ***	.33 ***	--								
20. Accreditation	-.02	.08	-.21 **	.01	-.11	.07	.01	.10	-.16 *	-.20 **	-.16 *	-.06	.06	.14 *	.10	.01	.04	.04	-.08	--							
21. Waitlist	-.01	.00	-.03	-.06	-.10	.01	.11	.07	-.01	-.04	-.05	-.15 *	.02	.08	.12 *	.02	.03	.05	.09	.10	--						
22. Age range	.05	-.22 ***	.52 ***	.11	.08	-.01	-.14 *	-.10	.29 ***	.32 ***	.02	.09	-.02	-.20 **	-.11	-.06	.04	.05	.13 *	-.03	-.10	--					
23. Number of caregivers	-.03	.13 *	-.17 **	-.27 ***	-.10	.17 **	.17 **	.28 ***	-.03	-.06	.03	-.13 *	.12	.15 *	.20 *	.04	.20 **	-.04	-.13 *	.10	.25 ***	-.07	--				
24. 2 - 4 children	-.04	.12 *	.04	.10	.03	-.05	-.07	-.11	-.12	-.11	-.10	.10	-.08	-.06	-.17 **	-.10	-.13 *	-.04	-.01	-.02	-.14 *	-.18 **	-.38 ***	--			
25. 5 - 8 children	-.03	-.05	.07	.09	-.07	-.07	.02	-.04	.10	.11	.07	.02	.00	.01	-.13 *	-.03	-.06	.01	.08	-.06	-.04	.09	-.35 ***	-.37 ***	--		
26. 9 - 12 children	.08	-.10	-.03	-.09	.08	.03	.00	.07	.06	.06	-.04	-.09	.07	.03	.14 *	.10	.11	.02	.01	.06	.10	.05	.43 ***	-.36 ***	-.57 ***	--	
27. More than 12 children	-.02	.08	-.13 *	-.14 *	-.07	.14 *	.06	.11	-.10	-.13 *	.07	-.02	-.01	.02	.22 ***	.01	.10	.01	-.15 *	.02	.09 *	.01	.40 ***	-.15 *	-.24 ***	-.23 ***	--

Note: SSS = Support Strategy Score; GED = General Equivalency Degree; CDA = Child Development Associate; AA = Associates of Arts; BA = Bachelor of Arts; I & T = Infants and Toddler; P = Preschool; S-A = School-age; C of P = Communities of Practice

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

Linear regression. Table 17 and Table 18 summarize the descriptive statistics and results of univariate regression models. This preliminary analysis provides additional information about the relationship between each predictor and SSS. Table 17 includes continuous variables and Table 18 includes categorical variables.

There appear to be small but significant relationships between SSS and some of the continuous predictor variables. Each additional unit increase in experience working with school-aged children, for example, was associated with a decrease in SSS of .02 (-.018, .001) this was statistically significant with p -value 0.001. Similarly, each monthly increase in the gap between the youngest and oldest children in the classroom or FCC program was associated with a decrease in SSS of .004 (-.006, -.002) and this was statistically significant with p -value of 0.001. Unit increases in the five-point Likert-scale of job control was associated with a decrease in SSS as well ($b = -.16$, $p < .05$).

Table 17
Univariate Regression for SSS with Continuous Variables

Variables	Mean	SD	Range	b	Confidence Intervals
Experience I & T	15.28	10.21	0,45	-0.01	(-.018, .001)
Experience P	15.07	10.65	0,45	-0.01	(-.018, .000)
Experience S-A	11.87	11	0,45	-0.02***	(-.024, -.007)
Job control	3.68	0.66	2.1, 5	-0.16*	(-.302, -.013)
Job resources	4.53	0.57	1, 5	-0.06	(-.229, .102)
Job demands	2.62	0.7	1, 5	0.02	(-.120, .154)
Age range in months	50.19	41.52	2, 153	-0.01***	(-.006, -.002)

Note. I & T = Infants and toddlers; P = Preschool, S-A = School-age.

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

There were also statistically significant relationships between multiple categorical variables and SSS. The average SSS for FCC providers was 2.96 ($p < .001$) which was less than the sample average. Not having a high school diploma, and having only a high school diploma or GED appear to have negative associations with SSS (with average scores of 2.91, and 2.25 respectively). Some variables appear to have statistically significant positive associations with SSS. These include having a degree related to ECE (average SSS = 3.3), access to training for challenging behaviors (average SSS = 3.27), coaching (average SSS = 3.26), and small class sizes of between two and four children (average SSS = 3.29) and the presence of three caregivers (average SSS = 3.30). Interestingly, the addition of more than four caregivers does not appear to have a significant relationship, this may, however, be related to the fact that only 12% of the sample reported having this many caregivers.

Table 18
Univariate Regression for SSS with Categorical Variables

Variables	N	%	Average SSS	<i>p</i>
All respondents	262	100	3.07	
Type (FCC)	193	71	2.96	0.000
Education				
No high school	61	24	2.91	0.038
High School/GED only	31	12	2.52	0.000
CDA	40	16	3.25	0.158
Post CDA	62	25	3.27	0.000
Major in ECE or similar	101	40	3.30	0.000
Professional development				
No support	65	24	2.94	0.156
Books & pamphlets	145	53	2.98	0.813
Training	123	46	3.27	0.000
Coaching	59	22	3.26	0.025
Peer reflective group	33	12	3.19	0.317
Accreditation	40	15	3.24	0.214
Waitlist	155	57	3.06	0.948
Accepts subsidy	229	84	3.08	0.270
Class size				
2 - 4 children	51	19	3.29	0.048
5 - 8 children	100	37	3.01	0.471
9 - 12 children	94	35	2.96	0.108
Total caregivers				
1 caregiver	103	38	2.96	0.076
2 caregivers	90	33	3.05	0.743
3 caregivers	46	17	3.3	0.030
More than 3 caregivers	33	12	3.14	0.554

Note. I & T = Infants and toddlers; P = Preschool, S-A = School-age; ECE = Early Childhood Education

A series of multivariate regression models looked at the impact of components of caregiver expertise, job stress, and program characteristics individually before a full model was run that looked at the influence of all of these variables together. Caregiver type was included in each of the models as a control.

When controlling for other aspects of caregiver expertise it appears that coaching, and an ECE related major, do not have significant effects on SSS. Training ($r = .26, p < .05$), the absence of secondary education ($r = -.51, p < .001$) and experience with school-age children ($r =$

-2, $p < .05$), however continue to have effects on SSS (post CDA education was the reference group for education. Table 19 summarizes the results of this analysis.

Table 19

Multiple Linear Regression for SSS with Caregiver Expertise

	<i>Standard Regression</i>					
	R^2_{total}	R^2_{Adj}	F_{total}	b	(SE)	t p
SSS	.19	.15	4.13(13,227)***			
Intercept				3.23	(0.17)	18.59 0.00
Type				0.01	(0.12)	-0.11 0.91
No high school				-0.21	(0.13)	-1.56 0.12
High school/GED				-0.51	(0.17)	-3.05 0.00
CDA				-0.05	(0.15)	-0.35 0.73
Major ECE or related				0.16	(0.13)	1.22 0.23
No training or support				-0.13	(0.13)	-0.99 0.32
Books and pamphlets				-0.20	(0.11)	-1.85 0.97
Training				0.26	(0.11)	2.40 0.02
Coaching				0.10	(0.13)	0.75 0.46
Peer reflective group				-0.04	(0.15)	-0.27 0.79
Experience I & T				0.01	(0.01)	0.66 0.51
Experience P				0.00	(0.01)	0.12 0.91
Experience S-A				-0.02	(0.01)	-2.32 0.02

Note. GED = General Equivalency Degree; CDA = Child Development Associates; ECE = Early Childhood Education; I & T = Infant & Toddler P = preschool; S-A = School-age

Table 20 summarizes the multivariate logistic regression model including correlates of job stress. While the full model appears to have a significant effect on SSS, $R^2 = .22$, $F(4, 257) = 3.21$, $p < .05$, $R^2_{\text{adjusted}} = .03$, only caregiver type had a unique effect on SSS ($b = -.32$, $p < .01$).

Table 20
Multiple Linear Regression for SSS with Job Stress

	<i>Standard Regression</i>						
	R^2_{total}	R^2_{Adj}	F_{total}	b	(SE)	t	p
SSS	.22	.03	3.21(4,257)*				
Intercept				3.76	(0.53)	7.09	0.00
Type				-0.32	(0.12)	-2.73	0.01
Job demands				-0.04	(0.08)	-0.58	0.56
Job resources				-0.01	(0.09)	-0.15	0.88
Job control				-0.08	(0.09)	-0.85	0.40

Table 21 summarizes the multivariate logistic regression model including components of program characteristics. Together the predictors accounted for a significant amount of variance in SSS, $R^2 = .35$, $F(10, 243) = 3.14$, $p < .01$, $R^2_{\text{adjusted}} = .08$. Only the presence of a small class size of between 2 and 4 children ($b = .57$, $p < .01$) and the presence of a slightly larger class size ($b = .28$, $p < .05$) appeared to have unique effects on SSS.

Table 21
Multiple Linear Regression for SSS with Program Characteristics

	<i>Standard Regression</i>						
	R^2_{total}	R^2_{Adj}	F_{total}	b	(SE)	t	p
SSS	.12	.08	3.14(10,243)**				
Intercept				3.02	(0.24)	12.49	0.00
Type				-0.15	(0.13)	-1.21	0.23
Accreditation				-0.01	(0.14)	-0.07	0.95
Accepts subsidy				0.18	(0.14)	1.28	0.20
1 caregiver				-0.35	(0.21)	-1.65	0.10
2 caregivers				-0.09	(0.18)	-0.51	0.61
3 caregivers				0.18	(0.19)	0.92	0.36
Age range in months				0.00	(0.00)	-1.16	0.25
2 - 4 children				0.57	(0.17)	3.32	0.00
5 - 9 children				0.28	(0.13)	2.10	0.04
More than 12 children				0.29	(0.19)	1.55	0.12

A multivariate regression model looked at the impact of each of the variables on SSS while controlling for all other predictors. Together the predictors accounted for a significant amount of variance in SSS, $R^2 = .21$, $F(21, 225) = 2.58$, $p < .01$, $R^2_{\text{adjusted}} = .13$. A small class size appeared to have an effect on SSS with a positive gain of .49 points (.14, .85) when controlling for the other variables and this was statistically significant with a p -value of .007. Having graduated from high school but no post secondary education also appears to have a negative effect on SSS with a loss of .49 points (-.83, -.15) when controlling for the other variables and this was statistically significant with a p -value of .005.

Table 22

Multiple Linear Regression for SSS with All Predictor Variables

	<i>Standard Regression</i>						
	R^2_{total}	R^2_{Adj}	F_{total}	b	(SE)	t	p
SSS	.19	.11	2.53(19,225)**				
Intercept				3.40	(0.59)	5.81	0.00
Type				0.07	(0.15)	0.46	0.65
No high school				-0.15	(0.14)	-1.10	0.26
High school/GED				-0.43	(0.17)	-2.53	0.01
CDA				-0.05	(0.15)	-0.34	0.74
Major ECE or related				0.18	(0.13)	1.40	0.16
Training				0.19	(0.10)	1.87	0.06
Coaching				0.17	(0.13)	1.35	0.18
Peer reflective group				0.03	(0.15)	0.20	0.84
Experience S-A				0.00	(0.01)	-0.44	0.66
Job demands				-0.14	(0.08)	-1.74	0.08
Job resources				-0.02	(0.08)	-0.23	0.82
Job control				-0.08	(0.09)	-0.91	0.35
Accreditation				-0.05	(0.14)	-0.33	0.75
Accepts subsidy				0.09	(0.14)	0.62	0.53
Number of caregivers				0.09	(0.07)	1.36	0.18
Age range in months				0.00	(0.00)	-0.88	0.38
2 - 4 children				0.43	(0.17)	2.51	0.01
5 - 9 children				0.17	(0.14)	1.23	0.22
More than 12 children				0.15	(0.18)	0.82	0.41

Note: GED = General Equivalency Degree; CDA = Child Development Associates; ECE = Early Childhood Education; S-A = School-age

Exploratory logistic regression. An exploratory supplementary logistic regression model was used to further investigate the impact of these variables on caregiver reactions to challenging behaviors. A logical place to start would have been with expulsion as the outcome variable, but there were too few cases ($n = 16$) to accurately capture significant relationships. The supplementary model explored the relationship between the variables discussed above and providers use of timeout with infants and toddlers when working with challenging behaviors. Table 23 summarizes this model. A test of the full model with all of the predictors was significant, $\chi^2(21) = 43.22, p < .01$. This indicates that the set of predictors reliably distinguishes those respondents who use timeout from those who do not. The approximate proportion of total variance in using timeout accounted for by the set of predictors was .30 using Nagelkerke's formula.

As with SSS, small class size appears to have a small effect on the use of timeout. When controlling for all of the other variables there is a negative relationship between classes of between two and four children and the use of timeout, $OR = .04 (.008, .296) p < .01$. This trend appears to hold for slightly larger classrooms with five to nine children $OR = .08 (.024, .437) p < .01$. This indicates that, controlling for all other variables, providers working with small classes (fewer than nine children) are less likely to put children in timeout when they present challenging behaviors than those who work with more children.

Two variables appear to influence the use of timeout in ways that they do not appear to influence SSS. When controlling for the other variables, coaching has a negative effect on the use of timeout, $OR = .16 (.039, .651) p < .05$ indicating that providers who receive coaching are less likely to use this strategy than those who do not. Having not graduated from high school, on the other hand, appears to have a positive effect on the use of timeout, $OR = 5.23 (1.57, 17.41), p$

< .01 indicating that the odds of using timeout are roughly five times higher for those providers who have not graduated from high school.

Table 23
Multiple Logistic Regression for Timeout

	<i>B</i>	<i>(SE)</i>	<i>OR</i>
Constant	-1.20	2.49	0.302
Type (FCC)	-0.53	0.77	0.588
No high school	1.65 **	0.61	5.23
High school/GED	0.77	0.75	2.354
CDA	1.29	0.74	3.525
Major ECE or related	-0.64	0.71	0.527
Training	-0.45	0.48	0.636
Coaching	-1.84 *	0.72	0.159
Peer reflective group	0.00	0.70	0.998
Experience S-A	0.04	0.02	1.04
Job demands	0.27	0.36	1.312
Job resources	-0.51	0.42	0.598
Job control	0.25	0.40	1.284
Accreditation	0.18	0.68	1.192
Accepts subsidy	0.03	0.63	1.028
One caregiver	2.26	1.23	9.591
Two caregivers	1.20	0.87	3.32
Three caregivers	0.28	0.92	1.328
Age range in months	0.00	0.01	1.001
2 - 4 children	-3.29 **	1.13	0.037
5 - 9 children	-2.52 **	0.92	0.081
More than 12 children	0.30	0.85	1.347

Note. GED = General Equivalency Degree; CDA = Child Development Associates; ECE = Early Childhood Education; S-A = School-age

Research question #5. How are components of caregiver expertise, including experience, education, and professional development related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #5a. It was hypothesized that components of caregiver expertise, including experience, education, and professional development would explain at least part of the variance in the likelihood that a teacher will use supportive strategies when working with challenging behaviors.

The regression models provided evidence in support of this hypothesis. As a group, the predictors associated with caregiver expertise explained part of the variance in SSS, $R^2 = .19$, $F(13, 227) = 4.13$, $p < .001$, $R^2_{\text{adjusted}} = .15$. Specifically, experience with school-age children, and the absence of any secondary education had negative effects on SSS and access to training had a positive effect on SSS when controlling for the other components of caregiver expertise. When controlling for program characteristics and job stress, however, experience with school-age children did not appear to have a significant effect on SSS. None of these specific variables appeared to influence the use of timeout. Access to coaching and failure to complete high school did, however, have significant relationships with the use of timeout.

Hypothesis #5b. It was hypothesized that, when controlling for other influential factors, level of teacher education will not have an effect on the likelihood that teachers will use effective strategies.

The regression models provided evidence in support of the null hypotheses. When controlling for other influential factors related to expertise, job related stress, and program characteristics provider education appeared to have an impact on both SSS and the use of timeout. Specifically, when controlling for these other influences providers who graduated from high school but did not pursue further education averaged almost half a point (out of four possible points) on SSS. And those who did not graduate from high school had a likelihood of five times the odds of using timeout when controlling for other influences. Higher levels of

education, however, did not appear to have statistically significant relationships with the response to challenging behaviors.

Hypothesis #5c. It was hypothesized that when controlling for other types of professional development, peer reflective groups and on-site coaching will each have a positive effect on the likelihood that teachers will use supportive strategies.

The regression models provided mixed evidence in support of the null hypothesis. Participation in peer reflective groups did not appear to have a significant correlation with SSS or expulsion. Coaching did have positive correlations to SSS ($r = .14, p < .05$) and expulsion ($r = .13, p < .05$) and univariate regression suggested that it explained some of the variance in SSS scores ($b = .19, p < .05$). When controlling for other influential factors, however, it did not appear to have a significant effect on SSS. When controlling for the same variables, however, it did appear to have a unique negative impact on the use of timeout, suggesting that providers are less likely to use this strategy with infants and toddlers when they receive coaching.

Research question #6. How are correlates of caregiver job stress, including resources, control and demands related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #6. It is hypothesized that correlates of caregiver job stress, including resources, supports and demands will be correlated and explain at least some of the variance in the likelihood that teachers will use supportive strategies.

The regression models provided evidence in support of the null hypothesis. When controlling for caregiver type (FCC or CCC) but not caregiver expertise or program characteristics, the set of predictors appeared to explain some of the variance in SSS, $R^2 = .22$, $F(4, 257) = 3.21, p < .05$, $R^2_{\text{adjusted}} = .03$, however only caregiver type had a unique effect on SSS

($b = -.32, p < .01$). Neither job resources or demands appeared to have a significant correlation to SSS or expulsion. They did not appear to explain any of the variance in SSS scores in univariate regression models and when controlling for other influential factors, did not appear to have a unique impact on SSS or the use of timeout. It is, however important to interpret these results cautiously because of the small variation in job resources scores ($M = 4.53, SD = .57$ and 88.8% scored a 4 or higher).

Job control did appear to be significantly negatively correlated to SSS ($r = -.13$) and univariate regression analysis suggested that it explained some of the variance in SSS ($b = -.016, p < .05$). When controlling for other influential factors (program type, program characteristics, provider expertise and other correlates of job stress), job control did not have a unique significant effect on SSS or the use of timeout. With a p-value of 0.051 it should be noted that job control had a nearly significant influence on SSS.

Research question #7. How are programmatic characteristics including class size, number of caregivers, age range, accreditation, and the presence of a waitlist related to the use of supportive strategies when working with challenging behaviors?

Hypothesis #7. It was hypothesized that number of caregivers, large class sizes, a wide range in age, accreditation, and the presence of a waitlist would be correlated with the use of supportive strategies when working with challenging behaviors.

The regression analysis provided mixed evidence in support of this hypothesis. A regression model with the full set of predictors (without controlling for job stress or caregiver expertise) was significant, $R^2 = .35, F(10, 243) = 3.14, p < .01, R^2_{\text{adjusted}} = .08$. Only the presence of a small class size of between two and four children ($b = .57, p < .01$) and the presence of a slightly larger class size ($b = .28, p < .05$) appeared to have unique effects on SSS. Accreditation and the

presence of a waitlist did not appear to have a significant correlation with SSS or expulsion.

Number of caregivers did appear to have a significant correlation with SSS ($r = .13, p < .05$), but this effect does not remain when controlling for other influences.

When controlling for caregiver expertise and job related stress only very small classrooms of two to four children appeared to have a significant effect on SSS ($b = .49, p < .05$). In regard to the use of timeout, both very small classes and classes of five to nine children appeared to decrease the use of timeout.

Chapter V: Discussion

This study asked seven questions about challenging behaviors in infant and toddler child care programs. The purpose of the questions was to investigate the relationship between program and provider characteristics and responses to behaviors. This chapter begins with a summary of the findings from this study and their implications. Next is a discussion of the limitations. Finally, it ends with a discussion of future directions for research.

Summary of Findings

Research Question #1. Which challenging behaviors are the most difficult for infant and toddler caregivers to work with?

The overwhelming majority of respondents reported that aggressive behaviors were the most difficult to work with. This appears to be in alignment with the literature on child care and preschool expulsion which suggests that aggressive behaviors are most commonly associated with expulsion (Hampton, 2008; Joseph & Strain, 2003 as cited in Joseph & Sandall, n.d.).

Chi-square analysis revealed some differences in the ways that FCC and CCC providers ranked the difficulty of specific behaviors. FCC providers were significantly more likely to rate noncompliance in the top five most difficult behaviors. Among the behaviors that CCC providers were significantly more likely to list were biting, clinginess, excessive crying or colic, and refusing to nap. The differences in program structure previously found in the literature may explain some of the differences in how FCC and CCC providers experience challenging behaviors. With fewer children, mixed age groups, and a more home-like environment (Dowsett, 2008) a clingy or crying child may cause fewer disruptions for an FCC provider. Similarly naptime in an FCC program may be more flexible than in a CCC where teachers often need all of the children to sleep at the same time.

It is interesting to note that while 18% of the sample reported experiencing inhibitive behaviors at least once a week only four FCC caregivers, and no CCC caregivers, ranked these behaviors as being the first or second most difficult to work with. Similarly, none of the 17 caregivers who reported experiencing extreme sadness at least once a week rated it as the most difficult behavior to work with. This may suggest that caregivers feel skilled and capable when presented with these behaviors, or it may suggest that aggressive behaviors are simply more overwhelming than withdrawn behaviors. Whatever the case, it is important to note because children who are presenting these behaviors require intervention (DC:0-3R, 2005; Fox, Henderson, Marshall, Nichols & Ghera, 2005). The weekly occurrence suggests that caregivers may need more training and support to manage these behaviors. The difficulty of managing aggressive behaviors may be distracting providers from supporting children who are presenting withdrawal symptoms.

Research Question #2. What meaning do infant and toddler caregivers attribute to the challenging behaviors that they experience?

Descriptive statistics suggested that providers offered a wide range of causes for challenging behaviors. Many of the reasons that they provided align with the literature on challenging behaviors discussed in Chapter II. The most popular categories of reasons were ‘developmental’ (developing verbal skills was particularly popular) and family influences (e.g. family does not provide enough structure or is otherwise inappropriate). While the data collected here cannot confirm the respondents’ claims, this information is helpful for policymakers and stakeholders. Child care providers are in a unique position to work with, and support, families. Rather than blaming families for challenging behaviors they could partner with these families to ensure that

children receive the support they need. In order to do this successfully, however, infant and toddler caregivers may need additional trainings and support.

Research Question #3. What strategies do infant and toddler caregivers employ in response to challenging behaviors?

Respondents reported the use of a variety of strategies when working with challenging behaviors. They appeared to use CSEFEL and Pyramid strategies, but the analysis suggested that they did not use each of the strategies regularly. Fewer than five percent of the respondents provided evidence of the use of positive encouragement, social-emotional learning strategies, acknowledging children's emotions, or being attuned to the child's needs. Responses appeared to be allocated differently according to the type of behavior. Disruptive behaviors, for example, were more likely to draw a timeout as a response rather than one of the CSEFEL or Pyramid strategies.

Perhaps the most interesting findings related to this question is that only 17.28% of the caregivers who felt that behaviors were related to family influences reported partnering with families as a strategy to improve the behavior. This underlines the need for more support for infant and toddler caregivers so that they can more effectively partner with families.

CCC providers scored higher on SSS than FCC providers. The difference was statistically significant with a Cohen's d of .74. This finding must be read with caution. When controlling for other variables child care type did not have a unique effect on SSS or the likelihood of using timeout and there did not appear to be a correlation between child care type and expulsion. In this sample CCC providers were significantly more likely to receive coaching and training. This is an important finding for parents who are looking for quality child care. It

may be helpful for parents to ask prospective settings about the type of support and training that caregivers receive.

Research Question #4. How common is expulsion for children under three years old?

The results of the analysis related to this research question found that a total of 16 respondents (5.9%) had permanently removed a child in the last 12 months because of challenging behaviors and that 11 of these caregivers reported working with families to help them find a more suitable program. This rate of expulsion was lower than has been found in the literature on child care and preschool expulsion (Gilliam, 2005; Gilliam & Shahar, 2006) and aligned with Hampton (2008) who found that children under three were expelled in fewer numbers than their older peers.

Disruptive behaviors, particularly biting, other acts of aggression, defiance, and hurting oneself accounted for almost half (47%) of the behaviors related to expulsion. This aligns with Joseph and Strain (2003) who found that hurting self or others, disrespect and defiance, and inappropriate language were the most common expelled behaviors and Hampton (2008) who reported that 69.7% of behaviors were related to physical acts (e.g. biting, hurting, etc). Unlike previous findings, the remaining 50% of children appeared to be expelled because of withdrawal behaviors and difficult behaviors of infancy. Specifically, 29.5% of children were expelled due to excessive clinginess, demands and attention seeking while 17% of children were expelled for excessive crying.

Only one study in the literature included expulsion rates for children under three years old. Hampton (2008) reported that, of the 24 children under age three who were expelled, 4.71% were under a year of age, 23.81% were between one and two, and 75% were between two and three years old. These rates do not align with the current study which found 33.3% of children

were 12 months or younger, 22.2% were between 13 and 24 months, and 44.5% were between 25 and 36 months.

The lower rates of expulsion found in this sample suggest that infants and toddlers may be less at risk of expulsion than three to five year old children. This is particularly interesting in light of the high percentages of providers who reported experiencing aggression on a weekly basis and the majority who noted these behaviors as being the most difficult with which to work. There are multiple possible explanations for this discrepancy. First, respondents were asked to report experiences over the last 12 months, a time period marked by economic troubles. Caregivers may be less likely to expel children during these times. Second, the findings may suggest that, when it comes to expulsion, the ‘wait it out’ approach to challenging behaviors is a protective factor for infants and toddlers. It is possible that caregivers experience these behaviors as a part of the “terrible two’s” and are therefore more accepting of them. The higher rate of unsupportive strategies, such as timeout, for children presenting aggressive behaviors, however, suggests that even if very young children are not being expelled these behaviors may still be impacting the caregiver-child relationship.

A smaller rate of expulsion in this sample is encouraging, but not cause for celebration. Infants’ and toddlers’ need for the development of healthy secondary attachment relationships makes this population particularly vulnerable. It is particularly concerning that half of the children were expelled because of withdrawn behaviors and difficult behaviors of infancy. Excessive crying, clinginess and a demand for attention suggest difficulties within the caregiver-child relationship. It is also important to remember that expulsion can be highly disruptive for families and may put pressure on the primary attachment relationship. Those children who were expelled because of aggressive behaviors are also at considerable risk. Recall from the review of

the literature that children who demonstrate high rates of aggression at 24 months may experience stable aggressive behaviors through age nine and are at risk of underperforming in measures of academic achievement and social skills (Campbell et al., 2006).

Research Question #5. How are correlates of caregiver expertise, including experience, education, and professional development related to the use of supportive strategies when working with challenging behaviors?

Characteristics of caregiver expertise appeared to have significant relationships with caregivers' responses to challenging behaviors. When controlling for aspects of caregiver expertise, years of experience with school-age children and the absence of any secondary education appeared to have statistically significant negative relationships with SSS. Access to training appeared to be related to increases in scores. When controlling for caregiver stress, and program characteristics, however, experience with school-age children was no longer significant. With regard to the use of timeout, absence of a high school diploma appeared to increase the use of this strategy while access to coaching appeared to decrease the use. Interestingly, coaching had a significant positive correlation with expulsion, which suggested that coaching may increase the likelihood that a provider will expel, but further investigation was limited by the small percentage of respondents who expelled.

The relationship between years of experience with school-age children and responses to behaviors presented by infants and toddlers has not been explored previously in the literature. While the effect size was small and in fact not present when controlling for caregiver stress and program characteristics, this finding may still be important. Right now there are no specific prerequisite trainings for licensed infant and toddler caregivers. This is problematic because, as

this finding suggests, providers may not realize that very young children have unique needs and may use strategies that are more appropriate for older children.

The impact of provider education on the use of supportive strategies and timeout was surprising. This finding is in contradiction with Gilliam and Shahar (2006) and Hampton (2008) findings. The literature on the influence of secondary education on child care quality care has been mixed and often suggests that at best education is a base upon which training must be applied (e.g. Bowman, 2011; Pianta, 2011). The unique effects of the absence of secondary education on the use of supportive strategies suggests that there may be a minimum level of education that is necessary in order for professional development to make a difference in the use of supportive strategies. When interpreting this finding it is important to consider covariates associated with low levels of education and their implications.

The impact of professional development on the use of supportive strategies was also surprising. The positive correlation between coaching and expulsion, paired with the relationship between coaching and decreased use of timeout is particularly interesting. Coaches, unlike trainers, have the opportunity to be on-site with providers and tend to develop relationships with providers over extended periods of time. During the course of this relationship coaches may witness challenging behaviors and may feel that the provider is not equipped to provide adequate resources for the child and thus may encourage the provider to remove the child. In this situation the assumption may be that removal of the child is best for all involved. If the child is then placed into a program that can support his or her behaviors the change may indeed be an improvement.

It is also interesting to consider that access to trainings on challenging behavior appeared to increase SSS scores while coaching did not. This is a surprising finding because the literature

has suggested that coaching is more likely to change provider practice than trainings alone (e.g. Campbell & Milbourne, 2005; Neuman & Cunningham, 2009). This discrepancy is likely related to the type of coaching that the coaches in this sample provided. Once on-site coaches can work on numerous topics (e.g. program environment, health and safety, curricula, etc). It is possible that the use of supportive strategies for challenging behaviors is not covered by many coaches, whereas trainings on the topic may deliver very specific information that providers can use in their programs.

Research Question #6. How are correlates of caregiver job stress, including resources, control and demands related to the use of supportive strategies when working with challenging behaviors?

Correlates of job stress, including job demands, resources, and control, did not have statistically significant relationships with responses to challenging behaviors. This is inconsistent with Gilliam and Shahar (2006) who found that increases in job resources was linked to a decrease in expulsion and that increases in job stress and demands increased the likelihood that a provider had expelled a child. Scores on the individual job stress scales may explain this discrepancy. Gilliam and Shahar (2006) only reported Cronbach's alpha for the subscales and not the scores, so it is difficult to compare. The sample in the current study did, however, score higher on reports of job resources and control and lower on job demands than the sample in the Curbow et al. (2000) study that validated the scale.

The lowest score on the five-point Likert-type scale for job resources and demands was titled "very little" and the highest was "very much." The mean job resources score was 4.53 ($SD = .57$) and 26.8% of the sample reported a perfect score of 5 and 88.8% had a score of 4 or higher. This suggests that the respondents felt they had a lot of control over their work and the

scores may not have provided enough variation to adequately capture effects. While there appeared to be more variability in job control ($M = 3.68$, $SD = .66$) and job demand ($M = 2.62$, $SD = .70$), than in job resources, the average scores on both of these scales suggests that these issues are not particularly salient for this sample. Limitations in sampling, discussed below, may have impacted these scores.

Research Question #7. How are programmatic characteristics including class size, number of caregivers, age range between children, accreditation, and the presence of a waitlist related to the use of supportive strategies when working with challenging behaviors?

Small class sizes appeared to have a robust significant relationship with caregiver responses to challenging behaviors. When controlling for other program characteristics, caregiver characteristics, and stress, caregivers with very small classes (of between two and four children) appeared to use more supportive strategies, and were less likely to use timeout, than those caring for more children. This finding aligns with Gilliam and Shahar (2006) who found that increases in class size predicted increases in the likelihood of expulsion.

It is important to note that other structural program characteristics did not appear to have significant relationships with the use of supportive strategies when controlling for other factors. While univariate analysis suggested that increases in age range accounted for a very small percent of the variance in SSS scores, this effect went away when controlling for other program characteristics. This particular variable has not previously been explored in the literature. It is important because a wide age range is one of the most common differences between FCC and CCC programs (Dowsett, 2008). When making decisions about child care parents and stakeholders may be interested in knowing that caring for multiple age groups at one time does

not appear to significantly impact the ways in which a provider might respond to a young child with challenging behaviors.

Programs with three caregivers appeared to have significantly higher SSS scores than others, but this was only significant at the univariate level. This appears to align with Gilliam and Shahar's (2006) finding that classroom ratios did not correlate with the likelihood that a teacher had expelled. This finding is particularly interesting when considering that class size does have a significant relationship with caregiver responses to challenging behavior. These findings may be related to the fact that more children present more opportunities for challenging behaviors to occur which may exhaust providers and influence their ability to provide supportive responses. It is also important to consider the transactional nature of challenging behaviors. No matter what the ratio of caregivers to children, if there are more children and adults in the room, there are more relationships to influence behaviors.

Finally, accreditation and the presence of a waitlist did not appear to have relationships with the use of supportive strategies. This is interesting because both of these characteristics are typically thought of as identifiers of high quality care. These findings may add to the Hampton (2008) finding that accredited programs had higher rates of expulsion than non-accredited programs (though the differences were not statistically significant). They are also important because they suggest that when looking for high quality child care parents should not necessarily be swayed by the presence of a waitlist or accreditation.

Limitations

There are important limitations to this dissertation. These limitations are related to sampling and survey items.

There may be important members of the population who were not included in this sample. The survey was distributed online, in English, through regional CCA offices to FCC owners and CCC directors. Each of these components raises issues. Not all child care professionals have email accounts that they check regularly and some may not be familiar enough with the Internet to comfortably navigate to the survey site. Similarly, child care providers who are not proficient in English did not have the opportunity to complete the survey. Finally, while the regional CCA offices are typically known and respected, it is unlikely that they have up-to-date email addresses for all providers or that all providers will be likely to read their emails. Finally, in the case of CCCs emails were sent to center directors who were asked to forward on to classroom teachers. This additional step may have been a barrier to participation. In sum, while rates of participation in each region mirrored the population of providers in the regions the analysis may not be generalizable to the entire population.

While item order and language were carefully considered to encourage honest and accurate answers, caution must be taken when interpreting all self-report surveys. It is possible that respondents felt compelled to provide the ‘right’ answers instead of providing an accurate answer. The desire to provide the ‘right’ answer may have been impacted by the introduction letter that emphasized the importance of caregiving for infants and toddlers. Answers provided may not accurately reflect the behaviors of providers in the classroom.

The survey items themselves also introduced limitations to the analysis. Providers were only asked to provide reasons and strategies related to the two most difficult challenging behaviors. The majority of providers experienced disruptive behaviors as the most difficult and so there was less data related to beliefs and strategies around withdrawal behaviors and difficult behaviors of infancy. While asking about additional information would have increased the

chances of satisficing, which is defined as the failure to think thoroughly about answers (Heerwegh & Loosveldt, 2008), this lack of information is a limitation to the analysis.

Future Research

This study adds to the literature about non-parental care for infants and toddlers and acts as an impetus for future research. Specifically it is a call for more research about the ways that caregivers interact with very young children who present challenging behaviors and the support that caregivers receive.

One finding of the current study is that many providers reported that families are responsible for challenging behaviors, but very few providers reported partnering with families as a strategy for improving behavior. Future research should explore this discrepancy. What keeps caregivers from partnering with parents and how can this trend be reversed?

The influence of small class sizes on supportive strategies appeared to be a robust finding of this study. Given economic realities, however, it is not one that may be easily translated into practice. Future research should explore the ways that characteristics of smaller classrooms can be translated into those serving more children. How, for example, can individual, nurturing relationships encourage more supportive behaviors? In other words, can low ratios impact the ability of caregivers to provide supportive environments?

Future research should explore the efficacy of training and coaching to support infant and toddler care. The current study suggested that trainings significantly increased the use of supportive strategies and previous literature has demonstrated the efficacy of coaching on improving practice. Research should now consider the ways that coaching can work to be a more effective intervention for this specific area of practice. In light of the finding that half of the expelled children were removed as a result of excessive crying, demands, and attention

seeking, it appears that some caregivers may need more assistance in meeting the needs of very young children.

Appendix A: Data Collection Instruments

Recruitment Letters

Dear Family Child Care provider,

Thank you for consideration of the Infant and Toddler Caregiver survey. Your responses will inform policy makers in Washington state, and provide you with an opportunity to enter to win a \$100 Amazon.com gift certificate!

As you know, the first three years of life lay the foundation for all of the developmental domains, which makes your job incredibly important. At the same time, these years are marked by rapid changes, which can make your job incredibly difficult. First words, first steps, and limitless hugs are all too often matched by bites, inconsolable crying, and difficulty at naptime. There can be no doubt; your job requires a variety of skills and supports.

As Washington state continues to develop and implement early learning policies and support systems it is important that Family Child Care providers who work with infants and toddlers have their unique perspective heard. The Family Child Care Infant and Toddler survey has been developed to get a better understanding the of the challenges that you are facing in the classroom, the strategies you use, the supports you receive, and what types of supports would be the most helpful to your work.

This is an anonymous survey. None of your answers will ever be linked back to you or your program.

Upon completion of the survey you will be invited to enter into an online raffle to win a gift card worth \$100 to Amazon.com. In order to enter the raffle you will be asked for some personal information so that prizes can be awarded, this information will be managed by SurveyMonkey, an online survey manager. The information you provide will never be shared, linked to survey answers, or seen by anyone involved with the research.

To take the survey, please click on the link below. The whole survey will take about 20 minutes to complete.

Follow this link to the survey: https://www.surveymonkey.com/s/FCC_IT

I appreciate your time,
Carrie Brennan
Graduate Student, University of Washington

Dear Program Director,

The Infant and Toddler Caregiver survey is an opportunity for lead teachers in infant and toddler rooms to share their experiences working with very young children. Their answers will inform policies that impact child care programs across the state. They will also be given the opportunity to enter a \$100 gift card to Amazon.com!

Your assistance in forwarding the letter and survey link below is greatly appreciated.

I appreciate your time,
Carrie Brennan
Graduate Student, University of Washington

Dear infant and toddler room teachers,

Thank you for consideration of the Infant and Toddler Caregiver survey. Your responses will inform policy makers in Washington state, and provide you with an opportunity to enter to win a \$100 Amazon.com gift certificate.

As you know, the first three years of life lay the foundation for all of the developmental domains, which makes your job incredibly important. At the same time, these years are marked by rapid changes, which can make your job incredibly difficult. First words, first steps, and limitless hugs are all too often matched by bites, inconsolable crying, and difficulty at naptime. There can be no doubt; your job requires a variety of skills and supports.

As Washington state continues to develop and implement early learning policies and support systems it is important that infant and toddler room caregivers have their unique perspective heard. The Infant and Toddler Caregiver survey has been developed to get a better understanding of the challenges that you are facing in the classroom, the strategies you use, the supports you receive, and what types of supports would be the most helpful to your work.

This is an anonymous survey. None of your answers will ever be linked back to you or your place of employment.

Upon completion of the survey you will be invited to enter into an online raffle to win a gift card worth \$100 to Amazon.com. In order to enter the raffle you will be asked for some personal information so that prizes can be awarded, this information will be managed by SurveyMonkey, an online survey manager. The information you provide will never be shared, linked to survey answers, or seen by anyone involved with the research. Drawings will take place every week, the earlier you complete the survey the more chances you will have to win!

To take the survey, please click on the link below. The whole survey will take about 20 minutes to complete.

Follow this link to the survey

I appreciate your time,
Carrie Brennan
Graduate Student, University of Washington

Survey Instruments

Child Care Center: Infant and Toddler Care**Survey Consent Form**

Thank you for taking the time to complete the Infant and Toddler Caregiver survey.

***1. By answering 'yes' below you acknowledge that you are participating in a research study. This is an anonymous study. No identifiable information will be connected to survey responses at anytime and all information collected will be reported as aggregates. After completing the survey you will have the opportunity to enter to win a \$100 gift certificate to Amazon.com. In order to enter SurveyMonkey will ask you for contact information, this information is only collected by SurveyMonkey and will not be connected to survey questions.**

☐ Yes

☐ No

2. In what part of Washington State is your program?

☐ Olympic Peninsula (Clallam, Jefferson, Grays Harbor, Mason, Kitsap, Thurston Counties)

☐ Northwest (Whatcom, Skagit, Snohomish Counties)

☐ King County

☐ Tacoma or Pierce Counties

☐ Southwest (Pacific, Lewis, Cowlitz, Clark, Skamania, Klickitat Counties)

☐ Central (Okanogan, Ferry, Chelan, Douglas, Grant, Kittitas, Yakima counties)

☐ Eastern Washington (Stevens, Pend Oreille, Lincoln, Spokane, Whitman, Franklin, Benoit, Walla Walla, Columbia, Garfield, Asotin counties)

***3. What age (in months) was the youngest child in your classroom over the last 12 months?**

4. What age (in months) was the oldest child in your classroom in the last 12 months?

Child Care Center: Infant and Toddler Care

5. What was the average daily attendance in your classroom over the last year?

- ☐ 2 - 4 Children
 ☐ 13 - 15 Children
☐ 5 - 8 Children
 ☐ 16 - 20 Children
☐ 9 - 12 Children

6. On average, how many caregivers were in your classroom on a typical day over the last 12 months?

- ☐ 1
☐ 2
☐ 3
☐ more than 3

7. What percentage of children in your classroom receive a childcare subsidy?

- ☐ No children receive subsidy
☐ 1 - 10%
☐ 11 - 25%
☐ 26 - 50%
☐ 51 - 75%
☐ 76 - 100%

8. Taking into account all of the children in your classroom over the last 12 months, enter the estimated percentage of children from each racial background. The percentages should add up to %100.

American Indian/Alaska Native	
Asian	
Black	
Hispanic	
Pacific Islander	
Multiple Races	
White	

Child Care Center: Infant and Toddler Care

9. Of the choices below, which best describes your child care center?

- ☐ For profit child care
- ☐ Not for profit child care
- ☐ Faith Affiliated
- ☐ Early Head Start or ECEAP

Other (please specify)

10. Is your program NAEYC Accredited?

- ☐ Yes
- ☐ No

11. Over the past year, has your classroom had a wait list?

- ☐ Yes
- ☐ No

Experiences in the Classroom

Questions in this section of the survey will focus on your experiences in your classroom over the last 12 months.

12. How would you categorize your classroom over the last 12 months?

- ☐ Mainly infants, children are under 12 months
- ☐ Mainly young toddlers, children are between 1-2 years
- ☐ Mainly older toddlers, children are between 2-3 years
- ☐ Wide range of ages, children are between 12 months and 3 years

13. Now think about children's abilities, how would you characterize your classroom over the last 12 months?

- ☐ Most children are non-mobile (can't crawl or walk)
- ☐ Most children can crawl or walk
- ☐ About half of the children are non-mobile and half are mobile

Child Care Center: Infant and Toddler Care

***14. Over the last 12 months in your program, which of the following infant and toddler behaviors have you experienced regularly (about once a week or more)? Please mark all that apply.**

- | | |
|---|--|
| ☐ Biting | ☐ Excessive crying/Colic |
| ☐ Hitting/kicking | ☐ Refusing potty training |
| ☐ Taking items from others | ☐ Difficulty warming up/unable to form a relationship |
| ☐ Disobeying | ☐ Excessive clinginess |
| ☐ Inability to nap | ☐ Sad/unhappy/depressed behaviors |
| ☐ Tantrums | ☐ Refusing to eat |
| ☐ Excessive shyness | ☐ Excessive diapering needs |

Other (please specify)

***15. Thinking about all the behaviors you just marked, which behaviors have been the most difficult to work with? (rank the top 5 with 1 being the most difficult).**

Biting	
Hitting/kicking	
Taking items from others	
Disobeying	
Inability to nap	
Tantrums	
Excessive shyness	
Excessive crying/Colic	
Refusing potty training	
Difficulty warming up/unable to form a relationship	
Excessive clinginess	
Sad/unhappy/depressed behaviors	
Refusing to eat	
Excessive diapering needs	
Other	

Child Care Center: Infant and Toddler Care

16. Think about the top two behaviors of concern, please use the boxes provided to write a few sentences about why you think they occur.

Behavior #1

Behavior #2

***17. What strategies do you use when the top two challenging behaviors arise?**

Strategy 1

Strategy 2

***18. In the last 12 months, have any behaviors been so difficult that you have had to ask a child to permanently leave your classroom?**

☐ Yes

☐ No

19. If you answered yes to question above please fill in the table below

	Child's age when he or she was asked to leave	Behavior that was of most concern for the child	Did you assist the family in finding another program?
Child 1			
Child 2			
Child 3			
Child 4			
Child 5			

Job Support and Resources

The following questions ask you to think about the resources and support that you have access to in your program.

20. Over the last 12 months have you received any onsite coaching? In other words, has anyone come to your classroom to observe, provide feedback, troubleshoot problems or model effective strategies?

☐ I have not received any support for challenging behaviors

☐ I have received onsite coaching- Someone has come to my program to observe, provide feedback, and/or model effective strategies

☐ I have participated in trainings

☐ I have read books or pamphlets on challenging behavior

☐ I have participated in reflective groups or communities of practice

Child Care Center: Infant and Toddler Care

21. How often do the following things happen at work?

	rarely/never				most of the time
Parents blame their children's bad behavior on me	☐	☐	☐	☐	☐
Children have behavior problems that are hard to deal with	☐	☐	☐	☐	☐
I feel I should be paid more for the work that I do	☐	☐	☐	☐	☐
All of the children need attention at the same time	☐	☐	☐	☐	☐
My family is proud of the work that I do	☐	☐	☐	☐	☐
I am proud of the work that I do	☐	☐	☐	☐	☐
I know the children are happy with me	☐	☐	☐	☐	☐
I feel like I become close to the children	☐	☐	☐	☐	☐
I have one-on-one time with the children	☐	☐	☐	☐	☐
I get praise from the parents for the work that I do	☐	☐	☐	☐	☐
I get praise from the program director for the work that I do	☐	☐	☐	☐	☐
I feel respected for the work that I do	☐	☐	☐	☐	☐
I see that my work is making a difference with a child	☐	☐	☐	☐	☐
I feel like I am teaching the children the skills they need for school	☐	☐	☐	☐	☐

22. How much control do you have over what the following things at work?

	Very Little				Very Much
The types of activities that you do	☐	☐	☐	☐	☐
Getting the the children to do what you want	☐	☐	☐	☐	☐
The availability of supplies that you need	☐	☐	☐	☐	☐
Getting parents to be consistent with you in how to work with the child	☐	☐	☐	☐	☐
Getting parents to work with you on a behavior problem	☐	☐	☐	☐	☐
Getting parents to follow the rules and policies	☐	☐	☐	☐	☐
How much you are paid	☐	☐	☐	☐	☐
The number of children you care for	☐	☐	☐	☐	☐
How easy it would be for you to change jobs	☐	☐	☐	☐	☐
Taking time by yourself during the work day	☐	☐	☐	☐	☐

Experience

These last few questions will ask you a bit about yourself.

Child Care Center: Infant and Toddler Care

23. How many years of experience do you have of working with the following age groups

Infants and toddlers in early care and education settings	
Preschoolers in early care and education settings	
School aged children in elementary schools or after-school care settings	

24. What level of education have you attained? (Please check all that apply)

- ☐ I have not graduated from high school
- ☐ High school/GED
- ☐ CDA
- ☐ AA
- ☐ BA
- ☐ MA
- ☐ PhD

Please describe the majors that your degree(s) are in

25. How old are you?

26. What is your sex?

- ☐ Male
- ☐ Female

Family Child Care: Infant and Toddler Care

Survey Consent Page

Thank you for taking the time to complete the Infant and Toddler Caregiver survey.

1. By answering 'yes' below you acknowledge that you are participating in a research study. This is an anonymous study. No identifiable information will be connected to survey responses at anytime and all information collected will be reported as aggregates. After completing the survey you will have the opportunity to enter to win a \$100 gift certificate to Amazon.com. In order to enter SurveyMonkey will ask you for contact information, this information is only collected by SurveyMonkey and will not be connected to survey questions.

- ☐ Yes
☐ No

***2. This survey is only for providers who have worked with children under the age of three. Have you worked with children under the age of three over the last 12 months?**

- ☐ Yes
☐ No.

3. Please mark the Washington state region in which your program is located.

- ☐ Olympic Peninsula (Clallam, Jefferson, Grays Harbor, Mason, Knap, Thurston Counties)
☐ Northwest (Whatcom, Skagit, Snohomish Counties)
☐ King County
☐ Tacoma or Pierce Counties
☐ Southwest (Pacific, Lewis, Cowlitz, Clark, Skamania, Klickitat Counties)
☐ Central (Okanogan, Ferry, Chelan, Douglas, Grant, Kittitas, Yakima counties)
☐ Eastern Washington (Stevens, Pend Oreille, Lincoln, Spokane, Whitman, Franklin, Benoit, Walla Walla, Columbia, Garfield, Asotin counties)

Family Child Care: Infant and Toddler Care

***4. What age (in months) was the youngest child in your program over the last 12 months?**

5. What age was the oldest child in your program in the last 12 months?

6. What was the average daily attendance in your program over the last year?

- | | |
|---------------------------------------|--|
| ☐ 2 - 4 Children | ☐ 13 - 15 Children |
| ☐ 5 - 8 Children | ☐ 16 - 20 Children |
| ☐ 9 - 12 Children | |

7. On average, how many caregivers were in your program on a typical day over the last 12 months?

- ☐ 1
☐ 2
☐ 3
☐ 4
☐ more than 4

8. What percentage of children in your program receive a childcare subsidy?

- ☐ No children receive subsidy
☐ 1 - 10%
☐ 11 - 25%
☐ 26 - 50%
☐ 51 - 75%
☐ 76 - 100%

Family Child Care: Infant and Toddler Care

9. Taking into account all of the children in your program over the last 12 months, enter the estimated percentage of children from each racial background. The total percentages should add up to 100%

American Indian/Alaska Native	
Asian	
Black	
Hispanic	
Pacific Islander	
Multiple Races	
White	

10. Is your program NAFCC Accredited?

- ☐ Yes
☐ No

11. Over the past year, has your program had a wait list?

- ☐ Yes
☐ No

Experiences in the Classroom

Questions in this section of the survey will focus on your experiences in your program over the last 12 months.

12. Taking into account all of the children in your program over the last 12 months, enter the estimated percentage of children from each age group. The total percentages should add up to 100%

Infants under 12 months	
Young toddlers between 13 and 24 months	
Older toddlers between 25 and 36 months	
Preschoolers between 3 and 5 years	
School aged children	

Family Child Care: Infant and Toddler Care

13. Now think about the abilities of the infants and toddlers in your care, how would you characterize them over the last 12 months?

- ☐ Most children are non-mobile (can't crawl or walk)
- ☐ Most children can crawl or walk
- ☐ About half of the children are non-mobile and half are mobile

14. Over the last 12 months in your program, which of the following infant and toddler behaviors have you experienced regularly (about once a week or more)? Mark all that apply, please write in others that are not provided. Please only consider children under the age of three.

- | | |
|---|--|
| ☐ Biting | ☐ Excessive crying/Colic |
| ☐ Hitting/kicking | ☐ Refusing potty training |
| ☐ Taking items from others | ☐ Difficulty warming up/unable to form a relationship |
| ☐ Disobeying | ☐ Excessive clinginess |
| ☐ Inability to nap | ☐ Sad/unhappy/depressed behaviors |
| ☐ Tantrums | ☐ Refusing to eat |
| ☐ Excessive shyness | ☐ Excessive diapering needs |

Other (please specify)

Family Child Care: Infant and Toddler Care

***15. Thinking about all the behaviors you just marked, which behaviors have been the most difficult to work with? (rank the top 5 with 1 being the most difficult).**

Biting	
Hitting/kicking	
Taking items from others	
Disobeying	
Inability to nap	
Tantrums	
Excessive shyness	
Excessive crying/Colic	
Refusing potty training	
Difficulty warming up/unable to form a relationship	
Excessive clinginess	
Sad/unhappy/depressed behaviors	
Refusing to eat	
Excessive diapering needs	
Other	

16. Think about the top two behaviors of concern, please use the boxes provided to write a few sentences about why you think they occur.

Behavior #1	
Behavior #2	

***17. What strategies do you use when the top two challenging behaviors arise?**

Strategy 1	
Strategy 2	

***18. In the last 12 months, have any behaviors been so difficult that you have had to ask a child to permanently leave your program?**

- ☐ Yes
☐ No

Family Child Care: Infant and Toddler Care

19. If you answered yes to question above please fill in the table below

	Child's age when he or she was asked to leave	Behavior that was of most concern for the child	Did you assist the family in finding another program?
Child 1			
Child 2			
Child 3			
Child 4			
Child 5			

Job Support and Resources

The following questions ask you to think about the resources and support that you have access to in your program.

**20. Over the last 12 months have you received any support for challenging behaviors?
(mark all that apply)**

- ☐ I have not received any support for challenging behaviors
- ☐ I have received onsite coaching- Someone has come to my program to observe, provide feedback, and/or model effective strategies
- ☐ I have participated in trainings
- ☐ I have read books or pamphlets on challenging behavior
- ☐ I have participated in reflective groups or communities of practice

Family Child Care: Infant and Toddler Care

21. How often do the following things happen at work?

	rarely/never				most of the time
Parents blame their children's bad behavior on me	☐	☐	☐	☐	☐
Children have behavior problems that are hard to deal with	☐	☐	☐	☐	☐
I feel I should be paid more for the work that I do	☐	☐	☐	☐	☐
All of the children need attention at the same time	☐	☐	☐	☐	☐
My family is proud of the work that I do	☐	☐	☐	☐	☐
I am proud of the work that I do	☐	☐	☐	☐	☐
I know the children are happy with me	☐	☐	☐	☐	☐
I feel like I become close to the children	☐	☐	☐	☐	☐
I have one-on-one time with the children	☐	☐	☐	☐	☐
I get praise from the parents for the work that I do	☐	☐	☐	☐	☐
I get praise from the program director for the work that I do	☐	☐	☐	☐	☐
I feel respected for the work that I do	☐	☐	☐	☐	☐
I see that my work is making a difference with a child	☐	☐	☐	☐	☐
I feel like I am teaching the children the skills they need for school	☐	☐	☐	☐	☐

22. How much control do you have over what the following things at work?

	Very Little				Very Much
The types of activities that you do	☐	☐	☐	☐	☐
Getting the the children to do what you want	☐	☐	☐	☐	☐
The availability of supplies that you need	☐	☐	☐	☐	☐
Getting parents to be consistent with you in how to work with the child	☐	☐	☐	☐	☐
Getting parents to work with you on a behavior problem	☐	☐	☐	☐	☐
Getting parents to follow the rules and policies	☐	☐	☐	☐	☐
How much you are paid	☐	☐	☐	☐	☐
The number of children you care for	☐	☐	☐	☐	☐
How easy it would be for you to change jobs	☐	☐	☐	☐	☐
Taking time by yourself during the work day	☐	☐	☐	☐	☐

Experience

These last few questions will ask you a bit about yourself.

Family Child Care: Infant and Toddler Care

23. How many years of experience do you have of working with the following age groups

Infants and toddlers in early care and education settings

Preschoolers in early care and education settings

School aged children in elementary schools or after-school care settings

24. What level of education have you attained? (Please check all that apply)

☐ I have not graduated from high school

☐ High school/GED

☐ CDA

☐ AA

☐ BA

☐ MA

☐ PhD

Please describe the majors that your degree(s) are in

25. How old are you?

26. What is your sex?

☐ Male

☐ Female

Appendix B: Coding Manuals

Reasons attributed to behaviors

1. **Uncodable:** This code is used when a response does not provide a reason for the behavior. They may note the time of day that behavior occurs or why the behavior is concerning, but not why they believe the behavior occurs, they may also simply repeat the behavior. This code is also used if the age that the respondent refers to is 3 or older.
2. **Don't Know:** This code is used when the answer states that the provider does not know why a behavior occurs
3. **Development:** This code is used when answers refer to “typical development” or “age” (e.g. 2-years old) or “development in general” as a reason for challenging behaviors (the codes below are used for more specific developmental features).
 - 3.1 **Social:** This code is used when an answer refers to a child learning a social skill such as learning to share or cooperate, and learning to get along with others. This code is also used if an answer notes that a child does not have empathy or doesn't realize that other children have feelings. If a child can not understand a concept it is coded for cognitive development.
 - 3.2 **Self-regulation:** This code is used when answers refer to a child's developing ability to manage his/her emotions and self-control
 - 3.3 **Cognitive development:** This code is used when an answer refers to a child not being able to understand a concept.
 - 3.4 **Motor development**
 - 3.5 **Teething**
 - 3.6 **Communication or Verbal Development:** This code is used when answers refer to a child's inability to communicate (the codes before are used when specific emotions are being communicated).
 - 3.6.1 **Frustration, Anger, Jealousy:** This code is used when an answer refers to a child expressing or communicating frustration, anger or jealousy through a challenging behavior
 - 3.7 **Explore:** Curious about environment, curious about cause and effect, limit testing, exploration of self
 - 3.8 **Autonomy or Power:** This code is used when an answer refers to a child's attempt to express autonomy and independence. This includes references to an attempt to gain control and power and to protect or defend their own space.
4. **Environmental**
 - 4.1 **Consequence of group care or environment:** This code is used when the answer states that the behavior is a consequence of being in a mixed age group, or group care in general. It may also be used if the environment is playing a role in the behavior, such as a room that is not quiet enough for napping.
 - 4.2 **Caregiver Change:** Specifically used when a respondent says that the child is not used to being with caregivers other than family.
 - 4.3 **New at Play/Care:** this code is used when the answer states that the child has never learned to play with children
 - 4.4 **Watching others:** including TV, video, etc.

- 4.5 Rough and Tumble Play:** This code is used when an answer states that the child's behavior is associated with rough and tumble play that is typical of this age group.
5. **Unmet Desire**
- 5.1 **General desire:** This code is used when an answer states that the child is using a particular behavior because he did not get his way (specific desire codes are below)
- 5.2 **Attention:** This code is used when the answer refers to a child's desire for attention and use of the behavior to get attention.
- 5.3 **Desire to be held:** This code is used when an answer refers to a child's desire to be held and that the behavior is a result of this desire.
- 5.4 **Want Other:** This code is used when an answers states that a child specifically wants what another child has.
- 5.5 **Mine:** This code is used when an answer states that behaviors occur because some children want everything, or believe that they should have everything they want.
6. **Adult Influences & Family Influences:**
- 6.1.1 Family influence
- 6.1.2 **Family Stress/Maternal Depression**
- 6.1.3 **Family is inconsistent with child care routines**
- 6.1.4 **Family is too controlling:** This is also coded for families who intervene too much/hold all the time/etc as identified in the answers.
- 6.1.5 **Family does not provide enough structure.** This includes being inconsistent with discipline
- 6.1.6 **Family otherwise acting inappropriately:** This code is used when there is something in the answer that suggests that the parent is not just too controlling, or demonstrating too little control, but is doing something else that the provider doesn't like (e.g. not offering healthy food, not paying enough attention, etc).
- 6.2 **Child is breastfeeding**
- 6.3 **Only child:** This code is used when an answer state that the behavior is caused by the fact that the child is an only child.
- 6.4 **Caregiver fails to intervene:** This code is used when the caregiver takes responsibility for the behavior, stating that the behavior occurs because she is unable to intervene quickly enough or to provide enough of something that the children want.
- 6.5 **Insecure attachment**
- 6.6 **Expectations are too high**
- 6.7 **Attachment Problem:** This code is used when an answer blames challenging behaviors on the fact that a child has attached to the caregiver, and thus want too much attention.
7. **Distress:** The codes below are used when answers refer to stress that a child might be under
- 7.1 **General Distress**
- 7.2 **Overstimulation**
- 7.3 **Foster Care:** This code includes foster care placement.
- 7.4 **Pain**
- 7.5 **Tired**
- 7.6 **Hunger**
- 7.7 **Fear**

- 7.8 **Stranger or Separation Anxiety**
- 7.9 **Anxiety:** This refers to general anxiety
- 7.10 **Bored**
- 8. **Illnesses**
 - 8.1 **Failure to Thrive**
 - 8.2 **Disabilities**
 - 8.3 **Digestive problems**
- 9. **Temperament:** including fussy, needy, dislike of activity, food, people
 - 9.1 **Stubborn or Aggressive**
 - 9.2 **Selfish**
- 10. **Other Physical:** high startle response, need exercise, need sleep while other activity is happening
 - 10.1 **Born with**

Strategy Codes

- 1. CSEFEL Pyramid Codes 4 points
 - 1.1 Nurturing & Positive Relationships
 - 1.1.1 **Caregiver-child:** This code is used when there is evidence that providers attempt to build relationships with children who are presenting challenging behaviors.
 - This may include showing affection, reassuring the child, building trust.
 - It also includes joining with children in routines and activities.
 - 1.1.2 **Caregiver-family:** This code is used when there is evidence that the provider communicates with the family about a challenging behavior.
 - 1.2 Prevention Practices: These codes are used when there is evidence that the provider uses techniques to prevent a behavior from occurring.
 - 1.2.1 **Environmental:** This includes changes to the environment that serve to support the child, including rules for play areas and sleeping areas (including the use of music). It also includes engaging a child in another area of the room to calm a challenging behavior (note this does not include time out) in this case the child has to be engaged, not simply removed from a situation (see remove child).
 - 1.2.2 **Observation and Supervision:** This may include careful observation of a child who is presenting difficult behaviors in order to learn more about why they are occurring. It may also include careful supervision and attentiveness in anticipation of a behavior.
 - 1.2.3 **Positive Encouragement:** This includes attention and support for positive behaviors. This includes rewarding the child for making the 'right choice' and asking children to try something new (e.g. food and potty).

- 1.2.4 **Schedule:** This code is used when there is evidence that a provider keeps a consistent routine to help a child regulate a behavior. It is also used when a provider adjusts her schedule to fit the needs of the child.
- 1.3 **Social-emotional learning strategies:** These codes are used for the mention of specific tools that teach prosocial skills. These codes may be used for the mention of stories, simple games, pictures, and dramatic play that help to teach children new skills. In order to receive this code the answer must mention the use of a specific strategy or medium (e.g. charts, books, pictures, playing games) for teaching skills or for eating food and going potty.
- 2 Other specific CSEFEL support strategies 4 points
- 2.1 **Acknowledge:** This code is used when there is evidence that the provider acknowledges the feelings of the child who is presenting a challenging behavior. This is not used when the provider acknowledges the feelings of other children.
- 2.2 **Comfort:** This code includes providing comfort to a child when he or she is presenting a challenging behavior. This may include providing comfort at nap time.
- 2.3 **Communicate:** This code is used when there is evidence that the provider gives the child words to describe how he or she is feeling or encourages the use of words. This is also used when the provider encourages the child who is presenting a challenging behavior to use words instead. This code is used when there is evidence that the provider mentions talking with the child about the words that he or she can use, not when the provider explains that she teaches a lesson or when the answer denotes general talking. For example:
- “I remind him to say ‘please’” and “nonverbal communication, expressing feelings” and “teach words” and “ask child to explain what happened” would be coded with this label
 - “I explain why we don’t bite” is labeled with ‘teach lesson.’
 - “Talk to baby” is coded with ‘general talk’
- 2.4 **Attune to child’s needs:** This code is used when there is evidence that a provider works to understand the individual child’s needs. This includes evidence that a provider attempts to get to know a child’s likes and dislikes.
- 2.5 **Help child achieve understood intention:** This code is used when a provider helps the child to achieve the understood intention of the behavior. This includes getting more of a desired toy or changing the food that is being offered to something the child may like more. This code is also used when there is evidence that the provider works to help the child fall asleep.
- 3 Other Teaching Techniques : These codes are used for teaching techniques that do not fit the CSEFEL definitions listed above. In some cases they may fit but there is not enough information to be conclusive. 3 points
- 3.1 **Teach Lesson:** This code is used when there is evidence that the provider teaches a lesson to the child but does not mention the use of a specific strategy.
- 3.2 **Model:** This code is used when there is evidence that the provider models the correct behavior, or demonstrates behavior.
- 3.3 **Rule Repetition:** This code is used when there is evidence that the provider reminds the child of a rule (e.g. we don’t bite).

- 3.4 **Redirect**: This code is used when the provider states that she redirects or distracts the child.
- 3.5 **Offer Choice**: This code is used when there is evidence that the provider gives the child a choice about what to do.
- 3.6 **General Talk** 3 points
- 4 **Attention Codes**: These codes are strategies that are related to how the provider changes her attention (or the attention of the child) in order to stop the behavior. 2 points
 - 4.1 **Attend Other**: This code is used when there is evidence that the provider puts her attention on the 'victim' or other child involved in the situation.
 - 4.2 **Wait Out**: This code is used if there is evidence that the provider believes that the child will grow out of the behavior, or if there is evidence that the behavior needs to occur before an intervention (e.g. temper tantrum).
 - 4.3 **Separate Child**: This is used when there is evidence that a children are separated from one another in order to stop the behavior from occurring. It is not a time out, nor is it an opportunity to be engaged elsewhere or learn from what is happening but a simple removal. (If the child is then engaged in another activity use the code Environment. If a child is specifically made to spend time along use the code Timeout). Examples for this code: "Separate children," "Remove child from area."
- 5 Reason with child and ask for action: 2 points
 - 5.1 **Hurt**: This code is used when there is evidence that the provider tells the child that he or she is hurting their friend, or shows the child how their friend feels.
 - 5.2 **Be Nice**: The provider tells the child that he or she has to be nice, or that he or she is not being nice.
 - 5.3 **Say Sorry**: This code is used when the provider asks the child to apologize to another child.
 - 5.4 **Give Back**: This code is used when the provider asks the child to give an item back to the child that it was taken from.
 - 5.5 **Share and Wait**: This code is used when the provider tells the child that he or she either has to share the desired object or must wait for a turn. It is not coded when there is evidence that the provider teaches about sharing/waiting, only when they are told to do so without support. For example, "work on sharing" would be coded under 'teach lesson.' It also includes times when a provider allows a child to calm his or herself down on his or her own.
- 6 Punitive: 1 point
 - 6.1 **Timeout**: Evidence of timeout may include going to think alone, cool down, etc. It also includes separating the child from other children without any other intervention. If, however, children are separated and then involved in another activity this code is not used.
 - 6.2 **Warn**: This includes a warning of time out, removal of object or other discipline.
 - 6.3 **Discipline or Consequence**: This code is used when there is a mention of discipline or consequence that is not fully explained.
 - 6.4 **Ignore**: This code is used when there is evidence that the provider does not intervene but ignores it. This is different from 'wait out' (see above).
 - 6.5 **Send home**: This is used when a child is sent home for a challenging behavior.
 - 6.6 **Remove object**: This is coded when there is evidence that the provider takes away an item that is at the center of a dispute.

7 **Other** 3 points

- 7.1 **Patience:** This code is used when the provider states that her strategy is to be very patient.
- 8 **Uncodable:** This code is used when the provider restates the behavior instead of listing a strategy, states that they don't have any challenging behaviors, or writes something else that is too difficult to interpret.

The points system is based on a scale from highly supportive actions that are intended to help children understand feelings and successfully achieve their intentions to discipline.

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