Family Functioning and Responsiveness in Family Child Care Providers

THESIS

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By

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Abstract

Social-emotional competence is critical to young children's success in social and academic settings across the lifespan. Non-parental primary caregivers are important socializers of children's social emotional development, particularly through the ways they respond to children's negative emotions. Despite this, little research has examined predictors of responsiveness or the ways they interact to influence responsiveness in samples of non-parental caregivers. The detrimental influence of elevated depression and stress on individual's affect and interactions has been consistently documented in research; additionally, previous research suggests that work-family conflict may decrease responsiveness in parent samples. This study examined how depression and stress was associated with family child care providers' responsiveness, and the influence of family functioning as a mediator. Direct and indirect associations were examined utilizing structural equation modeling with a national survey of 888 licensed family child care providers from across the United States. This study found when family child care providers perceived higher levels of general stress, they reported that they utilized less positively-focused reactions, expressive encouragement, and positive social guidance; they did not report using more negative reactions or negative social guidance. When family child care providers reported higher levels of general stress and depression, they reported lower levels of family functioning. In turn, family functioning was significantly

associated with each responsiveness measure, except for negative social guidance. Providers who reported higher levels of family functioning also reported responding to children in more positive ways. Additionally, higher levels of family functioning were associated with less negative reactions from family child care providers. Bootstrap analysis results found some mediation effects from family functioning for stress and responsiveness and some indirect effects through family functioning from depression to responsiveness. These findings lay a foundation for exploring the influence of family functioning on child care quality. Future studies not only need to expand upon this research and continue to identify predictors of responsiveness but also hypothesize and test the complex ways these numerous variables interact over time to fully capture responsiveness processes. These findings also suggest that child care policy may need to offer access to mental health counselors or family therapists as a way to improve caregiver responsiveness.

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Introduction

Social-emotional competence is defined as the ability to be aware of and understand one's own and other's emotions, to regulate emotions and how they are expressed appropriately based on context, and to form secure, positive relationships with caregivers and peers (Denham, Bassett, & Zinnser, 2012; Shonkoff & Phillips, 2000). Possessing social-emotional competence is critical to young children's success in social and academic settings across the lifespan (Calkins, 1994; Denham et al., 2012; Domitrovich, Cortes, & Greenberg, 2007; Hill, Degnan, Calkins, & Keane, 2006; NICHD Early Child Care Research Network, 2002; Perry, Calkins, Nelson, Leerkes, & Marcovitch, 2011). Children's abilities to acquire and practice social-emotional skills are influenced by the social-emotional learning (SEL) environments they experience (Jennings & Greenberg, 2009). In early child care settings, teachers and caregivers predominantly establish and determine the quality of the SEL environment primarily through the ways they interact with and respond to children (Denham et al., 2012).

Family child care providers are a significant portion of the child-care workforce in the United States representing nearly 30% of paid child-care providers in the United States (National Association of Child Care Resource & Referral Agencies, 2012). Family child care programs differ from other child care programs in that they operate within the providers' own homes rather than a child care center or school setting. Family child care

providers serve 15% of all children under the of age five who are in regular non-parental care; this amounts to over 1.6 million children who are cared for an average of 35 hours each week in the homes of family child care providers (Laughlin, 2013). Compared to center-based care, family child care programs consistently rate lower in overall quality (Kontos, Howes, Shinn, & Galensky, 1995; Vandell & Wolfe, 2000).

Considering the large number of children who spend a significant amount of time in family child care, it is important to understand the factors which influence the quality of family child care provider responsiveness in order to ensure each child's developmental well-being. Although recent research has begun to identify factors which may influence non-parental caregiver responsiveness, studies which examine these variables in samples of family child care providers are lacking. One possible variable which may be especially relevant to family child care provider responsiveness is family functioning. It is well-established in parenting literature that family conflict impairs parental behaviors and responses to their children (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Family child care provider responsiveness may be vulnerable to the negative influence of reduced family functioning similarly to parents' responses because they have little to no separation between their home and work environments and frequently care for their own children in addition to children enrolled in their program. Additionally, teaching and caring for children can be a stressful occupation by nature (Burke & Greenglass, 1993; Gerstenblatt, Faulkner, Lee, Doan, & Travis, 2014) and reduced family functioning may further increase caregiver stress levels, and in turn negatively influence their interactions with children. As family child care providers

continuously interact with children and the quality of these interactions are critical to children's social-emotional development, this study seeks to examine the relationship between family functioning and responsiveness in this population.

Literature Review

Responses to Children

Definition. Researchers examining parent responses to children during the 1950's used the term "responsive parenting" to describe a parenting style which is characterized by strong affection, positive reinforcement, and sensitive reactions to the needs of children (Landry, Smith, Swank, Assel, & Vellet, 2001). Theoretical descriptions by Maccoby and Martin (1983) and Baumrind (1991) define parental responsiveness in terms of the levels of control versus autonomy and acceptance versus rejection the parent demonstrates toward the child. As research in this area proliferated, the term responsiveness expanded and was given numerous definitions by researchers depending upon the nature of each individual study (Gottman, Fainsilber Katz, & Hooven, 1996; Kinard et al., 2017; Merz, Landry, Johnson, Williams, & Jung, 2016). Common characteristics included in responsiveness definitions include: (1) sensitivity, or demonstrating an awareness of the child's interests/concerns (Ainsworth, Blehar, Waters, & Wall, 2015; Gottman et al., 1996; Kinard et al., 2017); (2) offering support, encouragement, or comfort to the child (Ainsworth et al., 2015; Kinard et al., 2017); (3) warmth and demonstration of affection (Ainsworth et al., 2015; Kinard et al., 2017); (4) contingency, or meaningful and appropriate reactions which acknowledge a child's unique interests in a timely manner (Kinard et al., 2017); (5) shared control of the interaction with the child or following the child's lead and cues (Kinard et al., 2017); (6)

joint attention, or demonstrating the same focus or interest as the child (Kinard et al., 2017); (7) synchrony or matching the child, for example, in their pace, affect, or difficulty level (Gottman et al., 1996; Landry et al., 2001); (8) quality of language and vocabulary (Kinard et al., 2017; Landry et al., 2001). Attachment researchers conceptualize responsiveness as responding in a warm and sensitive way (Ainsworth et al., 2015; Landry et al., 2001) whereas cognitive development researchers emphasize the quality of language and synchrony in responsiveness definitions (Merz et al., 2016). Social and emotional development researchers may include several types of responses such as sensitive, contingent, and supportive/encouraging responses, however, in this area researchers specifically examine reactions to children's expression of negative emotion and challenging behaviors, which have been found to be particularly important to child social-emotional outcomes (Davidov & Grusec, 2006; Eisenberg, Fabes, & Murphy, 1996). According to emotion socialization models, responses to children's negative emotions have been dichotomously categorized into supportive and nonsupportive groups (Denham et al., 2012; Fabes, Leonard, Kupanoff, & Martin, 2001; Gottman et al., 1996). Supportive responses encourage emotion expression, acknowledge and legitimize children's distressful feelings, and also include sensitive reactions such as comforting, problem-focused or problem-solving, and assistance (Denham et al., 2012; Eisenberg et al., 1996). Non-supportive responses may include punitive, restrictive, dismissive, or minimizing actions towards children's negative emotion expression and challenging behaviors (Denham et al., 2012; Eisenberg et al., 1996; Fabes et al., 2001; Morris, Denham, Bassett, & Curby, 2013).

Importance of responsiveness. Supportive responses to negative emotions fosters children's emotional competence (Denham et al., 2003; Duncan et al., 2007; Hyson, 2002; NICHD Early Child Care Research Network, 2002); the development of emotional competence is a critical task in early childhood as it is important for success in early childhood and beyond (Calkins, 1994; Denham et al., 2012; Domitrovich et al., 2007; Hill et al., 2006; NICHD Early Child Care Research Network, 2002; Perry et al., 2011). Emotional competence is built from the mastery of two key components: emotion regulation and emotion knowledge (Denham et al., 2012, Domitrovich et al., 2007). Emotion regulation is defined as the ability to manage emotions in productive ways as well as the ability to appropriately express emotions dependent upon the context (Denham et al., 2012; Gross, 1998; Gross & John, 2003). Children with strong emotion regulation skills pay attention to their emotions and are able to modulate, including both up-regulation and down-regulation (Gross, 1998; Gross & John, 2003), when necessary to fit current circumstances (Denham et al., 2012; Gross, 1998; Gross & John, 2003). Emotion regulation also requires that children learn how to express their internal feelings to others in appropriate and constructive external ways (Denham et al., 2012). Children with high levels of emotion knowledge are able to identify emotions and understand their meaning and implications in themselves and others (Denham et al., 2012; Perlman, Camras, & Pelphrey, 2008). When children build emotional competence they can interpret emotion cues and use this information to successfully navigate and problem-solve in various social situations and interactions (Denham et al., 2012; Domitrovich et al., 2007). A lack of emotional competence is linked to the presence of internalizing and

externalizing behavior problems (Calkins, 1994; Hill et al., 2006; Perry et al., 2011) and poor kindergarten readiness (Denham et al., 2003; Domitrovich et al., 2007), thus it is important to understand the influences which promote and impede the development of emotional competence in early childhood.

Emotion socialization practices from parents and significant caregivers act as a primary mechanism to the development of emotion regulation and competence (Zeman, Cassano, & Adrian, 2013). Extending from social learning theory, researchers have proposed several ways that parents and other significant individuals socialize children on emotion. Parke (1994) proposed one well-accepted framework which identifies three ways children may be socialized in regard to emotions. Foremost, Parke (1994) states that children may learn indirectly during dyadic interactions with adults, siblings, or peers; although the goal of the interaction may not be to socialize the child, messages about the rules and regulation of emotion are regularly transmitted during the course of natural interactions. Second, parents and primary caregivers may directly and intentionally teach or coach children about emotions, including describing differences in emotional states, providing emotion labels and vocabulary, and explicitly stating emotion rules (Parke, 1994). Lastly, parents and primary caregivers regulate children's experiences and opportunities to learn about emotions (Parke, 1994), for example, parents may limit exposure to parental conflict or discourage discussions about negative feelings but allow children to watch violent television shows. In another widely accepted parental socialization model, Denham, Bassett, and Wyatt (2007) identify three inter-related ways parents act as socializers of children's emotion development; these include teaching

about emotions, modeling emotion expression, and contingent responses to children's negative emotions. Although teaching, modeling, and contingent responses are all important, ultimately caregivers' responses to children's negative emotions either reinforce or contradict any teaching and modeling lessons by communicating to children how they are actually permitted to express emotions themselves (Denham et al., 2012). For example, a parent may explicitly tell a child, "When people feel sad, they show it by crying." However, if the parent later responds to the child's personal sadness by frowning, reprimanding, or telling the child to stop crying, the initial lesson the child learned about expressing sadness is contradicted. In the end, the message the child receives is that the expectation for their own behavior is different - expressing their sadness has negative consequences.

Nonsupportive responses tend to be associated with less desirable social-emotional child outcomes including poor adjustment and low-functioning behaviors (Eisenberg & Fabes, 1994; Eisenberg et al., 1996; Fabes et al., 2001), whereas supportive responses to children's negative emotions are associated with more positive social-emotional outcomes (Cassidy, Parke, Bukowsky, & Braungart, 1992; Davidov & Grusec, 2006; Eisenberg & Fabes, 1994; Eisenberg, Fabes, & Spinrad, 2006). The majority of responsiveness research examines parental responses to children (Ahn, 2005; Denham et al., 2012), particularly mothers' responses (Morris et al., 2013). In one of their earlier studies, Eisenberg and Fabes (1994) found when mothers self-reported higher levels of distress in response to their child's negative emotions, the mothers were also more likely to report that their child had more emotional intensity and more negative affect. This

study also found mother's punitive and minimizing responses were associated with more negative affect and lower levels of attentional control. Eisenberg et al. (1996) found more minimization responses by mothers were related to increased avoidant coping behaviors and lower levels of social competence in children. Fabes et al. (2001) examined how parental distress influenced child social competence and found parents who experience increased distress to negative emotions coupled with harsh reactions had children who were observed to express emotions intensely; in turn this intensity was related to lower social competence.

Davidov and Grusec (2006) found that kindergarten-aged children who experienced more supportive parental responsiveness were better able to regulate their negative feelings and had increased empathy and prosocial responses to peers at age eight than children who experienced less supportive responses to their distress. A study conducted by leading responsiveness researchers Eisenberg and Fabes (1994) found that when mothers self-reported more comforting responses to their kindergarten-aged children's negative emotions, their children were observed to constructively articulate their distress to others more frequently when angered, while children who received less maternal comfort were more likely to unconstructively vent or suppress. Additionally, this study found that maternal responses which encouraged emotion expression as well as problem-solving responses were associated with higher levels of attentional control as perceived by mothers and teachers. In a study of third to sixth grade children, maternal problem-focused reactions had stronger association with higher scores on social functioning and coping measures (Eisenberg et al., 2006). A study by Cassidy and

colleagues (1992) found that both mother and father expressiveness was related to their kindergarten and first-grade child's relationship with peers – more expression of emotions was associated with higher peer acceptance. This study also found that higher levels of positive expressiveness was associated with higher levels of child positive expressiveness.

Responsiveness in non-parental caregivers. Although previous studies have established parents' responses to children's negative emotions influence developmental outcomes, few studies have examined non-parental caregiver responses to children's emotions (Ahn, 2005; Ahn & Stifter, 2006; Morris et al., 2013). Recent studies have found that non-parental caregivers in early childhood child care settings act as socializers of young children's social-emotional competence in a way that is similar to parents (Ahn, 2005; Denham et al., 2012; Morris et al., 2013). For example, Ahn (2005) coded center-based child care teachers' responses to children's emotion expression and found that child care teachers acted similarly to parents' engagement with children's emotion expression including supportive responses such as empathy, comfort, and encouraging positive emotions, and non-supportive reactions including displeasure, minimization, and punishment toward negative emotion expression. In light of the importance of responsiveness to child outcomes and the fact that parents today increasingly rely on child care providers to care for their children (Laughlin, 2013), it is important to understand non-parental caregiver responses to young children's emotions. Consistent with parent samples, sensitive and responsive caregiving from early child care providers is associated with increased social competence (Burchinal et al., 2008; Hamre, Hatfield,

Pianta, & Jamil, 2014; Peisner-Feinberg et al., 2001). Interventions designed to improve center-based toddler teacher responsiveness showed improvement in toddler emotion knowledge and emotion regulation measured both by skill assessment and teacher report (Landry et al., 2014). Although a contradictory finding exists (NICHD Early Child Care Research Network, 2002), several studies have found that quality child care experiences which include a caregiver who is sensitive and responsive to children acts as protective factor for at-risk children (Burchinal, Roberts, Zeisel, Hennon, & Hooper, 2006; Peisner-Feinberg & Burchinal, 1997; Peisner-Feinberg et al., 2001).

Given the importance of responsiveness to child outcomes, it follows that an understanding of the antecedents to responsiveness is also needed, yet even less research has been conducted in this area. Studies have started to identify factors which have negative associations with quality caregiver practices, responses, and interactions including child characteristics such as difficult temperament (Kochanska & Kim, 2013; Putnam, Sanson, & Rothbart, 2002; Sanson, Hemphill, & Smart, 2004; Wachs, 2006); structural factors such as less education (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002) and less training in child development (Lang, Mouzourou, Jeon, Buettner, & Hur, 2017; Torquati, Raikes, & Huddleston-Casas, 2007); contextual factors such as chaos (Coldwell, Pike, & Dunn, 2006; Dumas et al., 2005; Jeon, Hur, & Buettner, 2016); and psychological characteristics such as depression (Buettner, Jeon, Hur, & Garcia, 2016; Cummings & Davies, 1994; Goodman & Gotlib, 1999) and elevated stress (Buettner et al., 2016; Rusby, Jones, Crowley, & Smolkowski, 2013).

The Role of Depression and Stress

Studies have consistently found that parents with higher levels of emotional distress respond to children with less supportive responses than parents who are not distressed (Cummings & Davies, 1994; Gondoli & Silverberg, 1997; Goodman & Gotlib, 1999). The detrimental influence of depression on parent interactions and responses to their children has been well-documented (Cummings & Davies, 1994; Goodman & Gotlib, 1999; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Wilson & Durbin, 2010). Depressive symptoms include decreased positive affect, energy levels, and loss of interest in social interactions and activities, as well as increased negative affect, withdrawal, and apathy (Schaefer et al., 1985). The nature of these symptoms can make it difficult for parents to appropriately respond to children, especially when they display negative emotions or behave in challenging ways. Elevated stress levels are also negatively associated with parental responses, specifically higher levels of parenting stress are associated with an increase of negative affect expression towards children (Deater-Deckard, 2005; McKelvey, Fitzgerald, Schiffman, & Von Eye, 2002), as well as decreased expression of warmth and affection and less positive interactions than parents with lower stress levels (Crnic, Gaze, & Hoffman, 2005). Similarly to depression, elevated perceived stress levels have been found to increase health complaints, including fatigue, and negative affect as well as decrease positive mood (Repetti, 1993a; Repetti, 1993b). Parents with higher stress levels are also more likely to utilize harsh and reactive parenting practices (Pinderhughes, Bates, Dodge, Pettit, & Zelli, 2000) rather than more supportive, proactive strategies.

Although understudied in non-parental caregivers, emotional distress has been found to be detrimental to the responses of non-parental caregivers and the children in their care similarly to parents. Gerber, Whitebrook, and Weinstein (2007) found higher depressive symptoms predicted decreased sensitivity in center based child care providers. Hamre and Pianta (2004) examined depressive symptoms and responsiveness in a sample of 1217 non-familial caregivers and found that the presence of self-reported depression symptoms decreased sensitivity and increased withdrawal from children. These findings were strongest for family child care providers, as well as caregivers who spent less time among other adults and had less education. By nature, child care providing can be a stressful occupation, yet to date only two studies have examined stress and responsiveness among family child care providers. Groeneveld, Vermeer, van IJzendoorn, and Linting (2012) examined how stress levels in center-based and home-based child care providers were associated with the quality of caregiving they provided, as measured by caregiver sensitivity and verbal interactions with children. This study measured both psychological stress (cortisol levels) and perceived stress and although both sets of caregivers experienced similar patterns of higher psychological stress, only home based caregivers' higher perceived stress levels, not cortisol levels, were associated with decreased sensitivity and fewer verbal interactions with children. Rusby and colleagues (2013) examined home-based child care providers' perceived stress and found that stress was not associated with responsiveness as measured by Observation Record of Caregiving Environment (ORCE; NICHD Early Child Care Research Network, 2000), however, higher stress was associated with fewer observations of positive attention to

children and an increase of child problem behaviors and lower tolerance for problem behaviors on caregiver self-reports. Jeon, Buettner, and Snyder (2014) utilized data from the Fragile Families and Child Wellbeing study and examined the relationship between depressive symptoms and child outcomes through global child care quality in groups of center-based teacher and family child care providers. Although they did not find differences between the two types of child care providers, depressive symptoms did predict lower global child care quality and increase teacher reports of internalizing and externalizing problem behaviors in children.

Although this research lays a foundation for understanding caregiver responsiveness, there is still a considerable lack of knowledge on the predictors of responsiveness, particularly among family child care providers for whom the unique elements of their caregiving environment may influence the quality of their responsiveness. In their model of the Prosocial Classroom, Jennings and Greenberg (2009) state that numerous contextual factors, including marital relations and personal stress, may affect teachers' overall well-being and ability to establish healthy relationships and to effectively implement social-emotional learning practices with children. Bioecological theory (Bronfenbrenner & Morris, 2006) emphasizes that the ways context interacts with child characteristics over time drives development; proximal processes with caregivers in the child care microsystem are critical to child development, including emotion regulation development (Bronfenbrenner & Morris, 2006; Rimm-Kaufman & Pianta, 2000). To date, no study has examined how the quality of family relationships or depressive symptoms and stress resulting from reduced family

functioning of child care providers influences how these caregivers respond to the children enrolled in their child care programs, despite evidence that psychological factors may better predict teacher-child interaction quality, compared to education, experience, or other structural factors (Gerber et al., 2007). In addition, family functioning contributes to the emotional climate of the home as well as emotion regulation development in young children (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Hence, this study seeks to examine how family child care providers' perceived family functioning is associated with their responsiveness to children's negative emotions and challenging social situations.

The Role of Family Functioning

According to family systems theory, families operate as organized systems which strive to maintain viability and accomplish family functions through roles and communication (Hanson, 1995; Speer, 1970). Family functioning has been studied extensively among family systems theorists and broadly is characterized by the quality of family interactions and relationships relative to the family's ability to perform family tasks and cope with daily demands and transitional events. Systems theorists posit when families are functioning well, roles are well-established but adaptive, communication is effective, interactions and relationships are positive, and the family manages demands and achieves goals easily (Beavers & Hampson, 2000; von Bertalanffy, 1969; Speer, 1970). Conversely, systems theorists consider families with reduced functioning to have ineffective communication, strained or negative relationships, numerous conflicts, and

accomplishing family goals is challenging and requires a substantial investment of energy.

Among family functioning models, conceptualizations of family functioning differ based upon the dimensions which are theorized to primarily influence functioning. The most prominent family functioning models range from one to seven dimensions. Bowen (1978) emphasizes differentiation, the ability of individual family members to have autonomy apart from family processes, as key to family functioning. The Beaver's Systems Model argues family functioning exists along two dimensions, family competence and family style (Beavers & Hampson, 2000). The Circumplex Model identifies three dimensions: cohesion, which identifies the structure of the family; adaptability, which describes the family processes; and communication, which facilitates all movement on the spectrums of cohesion and adaptability (Olson, Sprenkle & Russell, 1979; Olson, Russell, & Sprenkle, 1983). The Process Model of Family Functioning recognizes seven family functioning dimensions, with task accomplishment as the central dimension and the additional dimensions of role performance, communication, affective expression, involvement, control, values, and norms driving families' ability to meet the primary goal (Skinner, Steinhauer, & Sitarenios, 2000). In this study, family functioning is conceptualized and measured (see Methods) in accordance with The McMaster Model of Family Functioning (MMFF), which distinguishes families as healthy and unhealthy based upon the systemic properties of structure, organization, and patterns of interactions among family members (Epstein, Bishop, & Levin, 1978; Epstein, Baldwin, & Bishop, 1983). The MMFF conceptualization of family functioning was selected as the definition

of family functioning in this study because the MMFF dimensions emphasize that the family is an important socializer and acknowledges that the expression of needs and appropriate emotional responses contribute to healthy functioning. Additionally, it is a widely-used model of family functioning and the general functioning measurement tool developed from the MMFF is succinct but highly reliable (Byles, Byrne, Boyle, & Offord, 1988; Miller, Epstein, Bishop, & Keitner, 1985) making it ideal for use in self-report surveys capturing the experiences of a large population.

Reduced family functioning, particularly marital conflict, is directly associated with less effective parenting behaviors (Erel & Burman, 1995). A meta-analysis of 39 studies (Krishnakumar & Buehler, 2000) examining the relationship between marital conflict and parenting behaviors found that higher levels of conflict impaired numerous parenting practices; the associations were strongest for increased use of harsh parenting practices and decreased child acceptance (e.g. expressions of affection, support, and sensitivity). A study by Buehler and Gerard (2002) also found that family conflict increased harsh parenting as well as decreased parental involvement. Decreased marital satisfaction is associated with negative maternal emotion expression (Stocker, Ahmed, & Stall, 1997) and frequency of maternal disapproval statements (Jouriles, Pfiffner, & O'Leary, 1988). Additionally, family conflict is directly associated with increased depression symptoms (Cummings, Keller, & Davies, 2005) and stress (Crnic & Greenberg, 1990); family functioning may act as a mediator between these relationships with lower perceived family functioning further decreasing family child care provider responsiveness.

Problematic interactions between family members is a key indicator of reduced family functioning (Epstein et al., 1978; Epstein et al., 1983) and family child care providers who struggle with their own family relationships may perform poorly in their work as child care providers; this may include decreased ability to perform critical caregiving tasks including providing a positive social-emotional learning environment and responsive care for the children enrolled in their program. Repetti and Wood (1997) examined work-related stress and found that when mothers reported increased workloads or interpersonal conflict with co-workers, both self-report and observation of mother-child interactions found fewer verbal exchanges, decreased positive affect expression, and more irritability; these findings were strongest for mothers who also reported higher levels of depression or anxiety. Family child care providers may be more vulnerable to the harmful influence of stress from reduced family functioning and conflict on their responsiveness because their home and work boundaries are blurred, they have increased responsibility and demands as small business owners, and they often work long hours without social support or task assistance.

Family child care providers are a unique population which may be more likely to experience work-family conflict than other professions. Working from their home may allow family child care providers the benefit of simultaneously fulfilling both family and work duties with greater ease than working outside the home. However, they are also in a position where the boundaries between their work and family roles are continuously overlapping. The absence of clearly defined boundaries and separation may result in greater role conflict for the family child care provider. Family child care providers who

had a stronger professional identity and were able to create firm boundaries between their personal life and work reported higher well-being than those who reported a lack of a professional identity and fewer boundaries between work and home (Gerstenblatt et al., 2014).

In early childhood education research, family child care providers are often considered comparable to and grouped with center-based caregivers or early childhood teachers, however, contextually they may be more similar to parents as they operate child care programs out of their personal homes and often care for their own children alongside the children enrolled in their programs. Differences in responsiveness amongst child care providers in different types of program settings has been found. Zinsser, Bailey, Curby, Denham, and Bassett (2013) conducted a study comparing the responsiveness of Head Start and private center teachers and found Head Start teachers consistently responded to children with higher levels of emotional support than private center teachers and in turn children in Head Start displayed less negative emotion and aggression. Teachers in private centers on average were very supportive to children but had more variability between supportive and unsupportive responses to the children in their care than Head Start teachers; inconsistency in responses predicted more aggression and more negative emotions in these children. Loeb, Fuller, Kagan, and Carol (2004) conducted a five-year longitudinal study examining the influence of child care on children residing in low-income communities. This study included center-based child care and home-based family child care settings and found that participation in center-based care at both time points (baseline at age 2 ½ and at age 4) had a consistently strong and positive association with

cognitive development and enrollment in family child care was associated with higher levels of aggression. Regardless of center type, when caregivers were more sensitive and responsive, children later scored higher on cognitive growth measures. Although this research does not identify why various program types are associated with differences in responsiveness, differences in working environments may play a role.

The Current Study

Although it is clear that family functioning is related to parental caregiving behavior, the role of family functioning on child care providers' caregiving behaviors in child-care settings is not well established. Therefore, the goal of the current study is to determine if family functioning is associated with responsiveness in a national sample of family child care providers. Understanding the elements that may increase supportive responses and decrease unsupportive responses can help states and early childhood education professionals establish effective policies and training to specifically support family child care providers and, in turn, assist in the developmental success of the many children enrolled in family child care programs. This study will explore the direct and indirect associations between family child care providers' perceived general stress and depression (exogenous variables) and responsiveness to children's negative emotions and challenging social interactions through their own family functioning. Based upon previous research as outlined in the literature review, this study hypothesizes that higher levels of perceived general stress and depression will decrease supportive responses and positive social guidance as well as increase unsupportive responses and negative social guidance. Family functioning will mediate this relationship; higher levels of perceived general stress and depression will be associated with decreased family functioning which in turn will decrease positive responsiveness and increase negative responsiveness. The hypothesized model is presented in Figure 1.

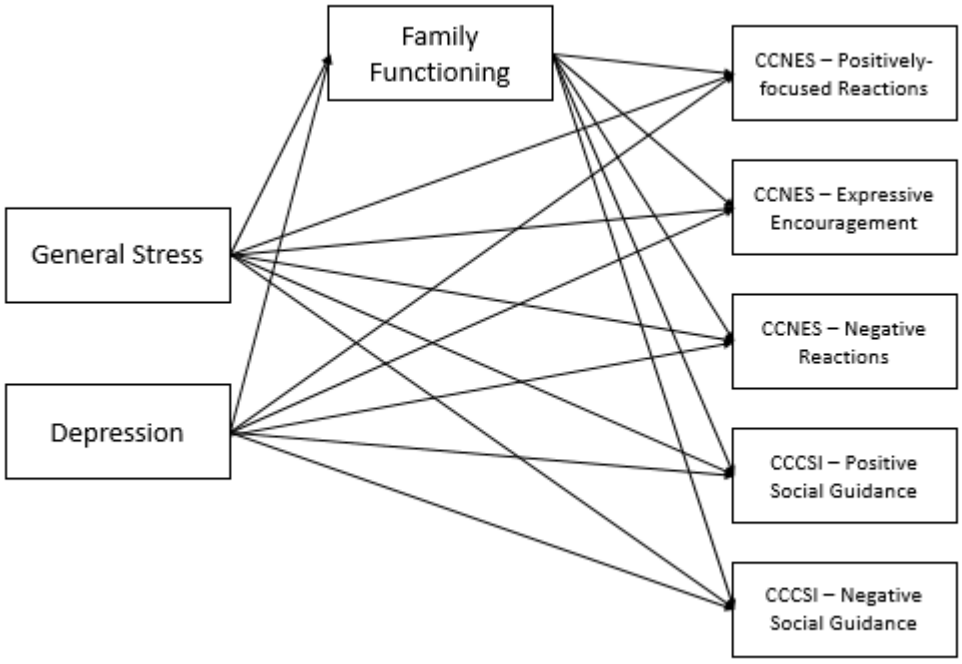

Figure 1. Hypothesized model

Methods

Participants

The sample consisted of 888 licensed family child care providers from across the United States (US). Demographic information is summarized in Table 1. The vast majority of participants were female (98%, male n = 14) and the average age of participants was 49 years old (youngest = 20, oldest = 79, SD = 11.87). The majority identified themselves as White, non-Hispanic (74%), while 14% identified as Black/African American, non-Hispanic, 6% Hispanic, 4% as Multi-racial, 2% as Asian/Native Hawaiian or Pacific Islander, 1% as American Indian or Alaska Native. Education levels ranged from no high school diploma/GED (1%), Associate degree (16%), Bachelor's degree (16%), to a graduate degree (MA/MS) (7%). The mean education level was some college, no degree (29%). This is consistent with findings from the National Survey of Early Care and Education (National Survey of Early Care and Education Project Team, 2016). Income reports indicate participants earn a mean income of $25,001 - $30,000 as a family child care provider and the mean household income was $35,001 - $40,000. Nearly one third of participants reported caring for their own children (31.6%).

Table 1. Demographics

Variable	n	M (SD) *or %*
Gender (1 = female)	868 (male = 14)	98%
Race/ethnicity		
White	670	74%
Black/African-American	132	14%
Multi-racial	31	4%
Asian/Native Hawaiian or Pacific Islander	16	2%
American Indian or Alaska Native	7	1%
Hispanic	50	6%
Age	847	49.23 (11.87)
Marital status		
Married	619	70%
Divorced	120	14%
Single/Never married	54	6%
Co-habiting/Living together	24	3%
Widowed	33	4%
Separated	20	2%
Household income		$35001 - $40000
Annual salary		$25001 - $30000
Educational attainment		
Less than high school, no GED	9	1%
High school diploma or GED	220	25%
Some college, no degree	260	29%
Associate Degree	138	16%
Bachelor's Degree	143	16%
Education beyond bachelor's degree	58	7%
CD or ECE course beyond HS	655	74%

Note. ECE = early childhood education; CD = child development.

Procedures

Survey procedure. Data for this study come from a national survey of licensed family child care providers conducted in 2014. Definitions and regulations for family child care providers are determined at the state level and typically a family child care provider is defined as an individual who is compensated for providing regular/consistent care for unrelated children ages 5 and younger in their own home. A population list of small licensed family child care providers was created from publically available contact information provided on states' child care services websites or child care referral agency websites (n = 23). When this information was not available on the website, contact information was requested from the states' government office for child care services or referral agency (n = 17). Eleven states were dropped from data collection. States were dropped when it was not possible to contact the government office or agency (n = 3), when the state did not license family child care providers (n = 5), when it was against state policy to distribute family child care provider's contact information (n = 2), and when the state had too few small licensed FCC providers (n = 1). Stratified random sampling was used to select a total of 5,000 family child care providers. The number of providers from each state was proportional to the number of providers in each state according to the population list.

A survey packet was mailed using the contact information for each selected participant. The survey packet included 1) a letter describing the study and asking for participation, 2) a questionnaire, 3) a stamped return envelope and 4) an address card for participants to indicate their preferred mailing address to receive the incentive.

Participants who completed and returned the survey within the allotted timeframe received a $10 gift card incentive. Participants received two reminders by post card at one week and four weeks after the initial survey packet was mailed. When research staff received a returned questionnaire, the participant's address card was promptly separated from the questionnaire to ensure anonymity of the participants. To further ensure anonymity, each questionnaire was assigned a unique identification code which was not connected to participant personal information. The identification code allowed research staff to know the geographical location of the participant. All contact information for participants was stored separately during this course of the study and destroyed after study completion. Out of the 5,000 surveys mailed, 135 were returned due to undeliverable addresses and 888 completed questionnaires were returned (18.25% response rate).

Questionnaire development. A questionnaire was designed to capture the experiences of family child care providers, including their unique challenges, stressors, and family functioning. The development of the questionnaire was informed by a literature review and semi-structured focus group interviews with licensed and unlicensed family child care providers in a Midwestern state. The final questionnaire was reviewed by early childhood researchers and a group of licensed family childcare providers to ensure face validity.

Measures

General Stress. General stress was measured with the Perceived Stress Scale – short version (Cohen & Williamson, 1988) which includes 10 items. Participants were

asked to respond to each item considering their perceived stress levels within the last month (e.g. “In the last month, how often have you found that you could not cope with all the things that you had to do?”). Items were measured on a 5-point scale (1 = Never, 3 = Sometimes, 5 = Very Often); four items were reverse-coded and higher scores indicate higher perceived general stress levels. The mean of all 10 items was calculated to use in the model and the reliability (Cronbach’s alpha) of this measure in this study was high at .83.

Depression. Depression was measured with the short form of the Center for Epidemiologic Studies-Depression (CES-D) scale (Radloff, 1977) which includes 9 items. Items were measured on a 4-point scale (1 = rarely or none of the time, 2 = some or a little of the time, 3 = occasionally or a moderate amount of time, 4 = most or all of the time). Participants were asked to report the frequency of each item only within the past week (e.g. “You did not feel like eating, your appetite was poor” and “You felt that everything you did was an effort”). Higher scores indicate higher levels of depression. The mean of all 9 items was calculated to use in the model and reliability (Cronbach’s alpha) in this study was high at .84.

Family functioning. General family functioning was measured with 11 items from the general functioning scale of the McMaster Family Assessment Device (FAD; Epstein et al., 1983). The original FAD identified six related but distinct dimensions of family functioning (Epstein et al., 1978; Epstein et al., 1983). The first dimension is problem-solving which captures the family’s ability to resolve conflict. The second, communication, describes how the family shares and receives information. Third, roles

are established when individual family members repeatedly perform behaviors to fulfill family functions. Fourth, affective responsiveness describes the ability to respond to provocations with appropriate emotions and expression relative to the person and situation at hand. Fifth, affective involvement is the extent to which family members appreciate and engage in whole family interests and activities. Lastly, behavior control captures family behavior patterns in response to managing behavior in three situations: situations where there is physical danger, socialization situations both within and outside the family, and situations involving the fulfillment and expression of psychobiological needs. Healthy families are those who report stronger cumulative skills and abilities in each dimension while families who report lower cumulative skills and abilities among the different areas function in unhealthy ways. The general functioning scale of the FAD includes 12 items, two from each dimension on the original scale. The participant reports the extent to which he/she agrees with each statement/item on a 4-point scale (1 = *Strongly disagree*, 4 = *Strongly agree*). A higher score indicates higher family functioning for 5 items and lower family functioning for 6 items (reverse coded in the analysis). The reliability (Cronbach's alpha) of this measure was .83 (Epstein et al., 1983).

Responsiveness. Provider responsiveness was measured with the short form of the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990) and the Coping with Children's Challenging Social Interactions scale (CCCSI; Lang et al., 2017). The original CCNES was developed to measure how parents respond to their children in twelve situations that commonly evoke negative affect and

emotion expression in children. For each scenario, there are six response options that are categorized into the following response types: (1) parental distress reactions or the extent to which parents express distress in response to their child's negative affect; (2) punitive responses or responses intended to decrease the need for the parent to deal with the emotion; (3) encourage expression of emotion or responses which validate; (4) emotion-focused socialization reactions or comforting; (5) problem-focused socialization responses or problem-solving assistance/encouragement; (6) minimizing responses or responses which dismiss or trivialize the seriousness of the child's feelings (72 total items). Parents are asked to rate how likely they are to respond in accordance with each of the six possible responses on 7-point scale (1 = Very unlikely, 7 = Very likely). The original authors (Fabes et al., 1990) previously adapted this scale for use with early childhood teachers, and the authors of the version used in this study selected five situations most applicable to family child care providers for the questionnaire (e.g. "If a child in your care becomes angry because he/she is unable to participate in a planned activity, how likely are you to…") as well as adapted the language for family child care providers (e.g. "child in your care" rather than "child in your classroom"). Additionally, the authors of the version used chose to remove the Distress Reaction items because of their high correlation with social desirability items, which is in line with previous research (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). The final CCNES measure included 25 total items (5 possible responses for 5 different negative emotion situations). The reliability of the original scale ranged from .69 to .85 (Fabes et al., 1990). Additional examination of the psychometric properties of the CCNES supporting

previous responsiveness theories found the six categories of responses on the CCNES may be combined into two groups of supportive and nonsupportive reactions (Fabes et al., 2002). In studies with early childhood teachers (Buettner et al., 2016; Lang et al., 2017), factor analyses found three factors: Negative Reactions (α = .82), Expressive Encouragement (α = .77), and Positively-focused Reactions (α = .76).

The CCCSI was developed to measure how teachers and caregivers respond when children exhibit challenging behaviors during social interactions. The CCCSI replicates the format of the CCNES and presents caregivers with two common situations in which children display negative emotions and challenging behavior (e.g. "If two children in your care want to use the same toy and become distressed and/or aggressive, how likely are you to…" and "If a child in your care hits another child for the first time, how likely are you to…"). In total, 11 responses were provided across the two scenarios with 7 responses indicating positive social guidance reactions (e.g. "ask the children to share their own ideas and feelings with one another") and 4 responses indicating negative social guidance reactions (e.g. "send the child who hit to a space to be alone until you determine he/she can play again"). Like the CCNES, caregivers select how likely they are to respond in accordance with the presented response items on a 7-point scale (1 = Very unlikely, 7 = Very likely). The reliability (Cronbach's alpha) of the negative social guidance scale was .63 and the positive social guidance scale was .82 (Lang et al., 2017). The .63 reliability coefficient for the negative social guidance scale is slightly lower than the generally accepted minimum level of approximately .65 (Peterson, 1994), however, it is above the lowest minimum of .50 as suggested by Nunnally (1967).

Covariates. This study included a set of covariates including social desirability and provider characteristics. Previous research has found that self-report measures are vulnerable to bias as individuals attempt to present themselves more favorably to others (van de Mortel, 2008); as participants are reporting their positive and negative responses to children, social desirability was included as a control. Social desirability is measured with the short form of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) which includes 10 items (True = 1, False = 2; 5 items recoded True = 0 and False = 1 and 5 items reverse coded True = 1 and False = 0 so that a higher score indicates higher social desirability and then averaged into a mean score). Demographics included race (1 = American Indian or Alaska Native, 2 = White, 3 = Asian/Pacific Islander, 4 = multi-racial, 5 = African American), ethnicity (1 = Hispanic, 0 = Non-Hispanic), education level (8 items; 1 = less than HS, no GED, 8 = Graduate or professional degree beyond a master's), possession of a degree in an area related to early childhood education (1 = yes, 0 = no), completion of child development or early childhood education courses after high school (1 = yes, 0 = no), annual income (11 items; 1 = $5,000 or less, 11 = $75,000 or more), household income (13 items; 1 = $5,000 or less, 13 = $201,001 or more), and marital status (1 = Married/civil union, 2 = Co-habiting/living together, 3 = Single/never married, 4 = Separated, 5 = Divorced, 6 = Widowed).

Data Analysis

Because the CCNES and the CCCIS were not originally developed for use with family child care providers and because previous studies with teachers have found

different factor structures (Buettner et al., 2016; Lang et al., 2017), an exploratory factor analysis and confirmatory factor analysis was conducted. Previous studies have provided their initial EFA results for the CCCIS measure using responses from a center-based preschool teacher sample; this study sought to confirm their findings. The EFA was completed for each measure using two sets of randomly split samples, due to the large sample size. The EFA was conducted in IBM SPSS Statistics Version 24. The distribution of the data from the scale items was examined to determine the best extraction method. If the data were relatively normally distributed, maximum likelihood is recommended and would be selected (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Hu & Bentler, 1999); if the data set did not meet this requirement, principal axis factoring should be selected (Fabrigar et al., 1999). As recommended for social science data (Field, 2013), this study assumed that all factors are correlated and used oblique promax rotation, as opposed to orthogonal rotation which assumes all factors are independent. List-wise deletion, as opposed to pair-wise deletion or mean replacement, was selected to handle missing data; list-wise deletion does not result in loss of power when the proportion of missing cases is less than 5% or less (Roth, 1994), which is the case with both the CCNES and CCCIS data. Eigenvalues greater than 1 (Kaiser, 1960) and a scree plot (Cattell, 1966) were utilized and factor loadings less than .30 were considered nonsignificant and those items were removed from the model (Tabachnick & Fidell, 2007).

Next, confirmatory factor analysis of the measurement model was conducted in AMOS. Missing data was handled by utilizing Full Information Maximum Likelihood

(FIML) estimation because it is has been found to be less biased than other missing data methods including list-wise deletion (Acock, 2005; Enders & Bandalos, 2001), pair-wise deletion (Acock, 2005; Enders & Bandalos, 2001), similar response pattern imputation (Enders & Bandalos, 2001), and mean substitution (Acock, 2005). AMOS was selected because it is a widely used structural equation modeling program which is used in conjunction with SPSS and provides FIML as an easily accessible analysis option (Arbuckle, 1995; Enders & Bandalos, 2001). Correlations between the error terms of variables were determined using an iterative model modification process considering significance and model fit. Model fit was assessed with multiple fit indices including: (1) a nonsignificant ($p > .05$) Chi square (χ^2) (Bollen, 1989); (2) a comparative fit index (CFI) greater than .90 indicative of good fit (Marsh & Hau, 1996); (3) a root-mean-square error of approximation (RMSEA) less than .08 indicative of an adequate fit (MacCallum, Browne, & Sugawara, 1996) and less than .05 indicative of a close fit (Marsh & Hau, 1996). The Chi square statistic is not always an accurate indicator of fit because it is sensitive to sample size, therefore, additional fit indices should be considered if a significant Chi square is produced (Bollen, 1989).

After confirming the factor structure for the CCNES and the CCCIS, structural equation modeling was conducted in Amos to simultaneously test (1) the direct associations between family child care provider depression and general stress and their responsiveness to children's negative emotion and challenging social behaviors, and (2) the indirect associations through family functioning as a mediator. Although mediation may be tested using a series of multiple regression equations (Baron & Kenny, 1996),

traditionally through a three-step approach established by Baron and Kenny (1996) and Sobel's (1982) indirect effects test (Preacher & Hayes, 2004; Hayes, 2009), structural equation modeling produces the total, direct, and indirect coefficients in a single analysis using a bias-corrected bootstrapping method (Shrout & Bolger, 2002). Baron and Kenny's approach tests for mediation from variable M between variables X and Y through three sequential requirements: (1) X significantly predicts Y; (2) X significantly predicts M; (3) M significantly predicts Y controlling for X (Preacher & Hayes, 2004). Sobel's indirect effects test estimates the indirect effect of X on Y through M as the product of the X →M path (a) and the M →Y path (b), or a x b and compares the value of ab to the null hypothesis that it equals zero (Preacher & Hayes, 2004). Bootstrapping extends the Sobel test by calculating a x b for each sample from a large number of samples of size n (n = original sample size and replacement sampling is used); this test also provides the probability that a x b is significantly different than zero with a 95% confidence interval. Both the Baron and Kenny method and Sobel's indirect effects test assumes normal distribution, however, the bias-corrected bootstrap method makes no assumptions about distribution. A comparison of several mediation tests found the bias-corrected bootstrap method outperformed the Baron and Kenny method (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), and eliminated the need to use either Baron and Kenny's method or Sobel's indirect effects test (Hayes, 2009; Shrout & Bolger, 2002). Because the current data set does not have normal distribution, the bootstrap method was a better choice comparatively. The current study used 5,000 bootstrap samples. The mean scores of the family functioning, general stress, and depression

measures were calculated and included as observed variables (general stress and depression as exogenous variables and family functioning as a mediator) and the measurement model of the CCNES and CCCIS was carried over to the final model. Provider characteristics as outlined above were included as covariates to further strengthen support for the hypothesized model. Model fit was assessed utilizing the same indices employed in the CFA. Bootstrap analysis indicates a mediation effect when the indirect effect is statistically significant and the confident interval (CI) does not contain zero (Mallinckrodt, Abraham, Wei, & Russell, 2006; Preacher & Hayes, 2004).

Results

Exploratory and Confirmatory Factor Analysis

CCNES. First, the responses for this set of questions were examined for relatively normal distribution. The Shapiro-Wilks test of normality (Shapiro & Wilk, 1965) revealed the data was not normally distributed for any item. Additionally, a visual examination of the data distribution on a histogram and the Normal Q-Q Plot for each item confirmed this result, as recommended as best practice for determining normality by previous research (Ghasemi & Zahediasl, 2012). Since the data are significantly non-normal, principal axis factoring was selected as the extraction method for the EFA. Next, using a randomly split sample, an EFA was conducted following the methods outlined in the analysis section. The results from the Eigenvalues and the scree plot were contradictory; seven factors with Eigenvalues greater than one were found, however, the scree plot indicated three factors. Ultimately, three factors were selected for the current study as the Kaiser method is less accurate and often over-estimates the number of factors (Costello & Osborne, 2005) and three factors is in line with previous research which utilized a similar adapted version of this measure with preschool teachers (Buettner et al., 2016; Lang et al., 2017).

Once the three factor structure was determined, a second EFA was conducted in order to confirm which items best fit in each factor by forcing SPSS to extract factors based on three factors as opposed to Eigenvalues. Factors and factor loadings are

summarized in Table 2. Based upon these results, one negative response item had a factor loading less than .30, and one additional negative response item was placed into a factor inconsistent with the original scale; both items were dropped. Punitive and minimizing items were grouped into one factor which was named Negative Reactions (NR), which is consistent with research which found all negative reaction subscales load on a single factor (Morris et al., 2013), and factor loadings ranged from .38 to .68. Problem-focused and comforting items were grouped into one factor which was named Positively-Focused Reactions (PFR), which is consistent with previous research using a similarly adapted version of this measure with preschool teachers (Buettner et al., 2016; Lang et al., 2017), and factor loadings ranged from .35 to .74. Lastly, items which encouraged children's negative emotion expression loaded on one individual factor which was named Expressive Encouragement (EE) and is consistent with the original scale (Fabes et al., 2002) as well as studies using the similarly adapted version with preschool teachers (Buettner et al., 2016; Lang et al., 2017). Factor loadings for the EE subscale ranged from .35 to .62. One expressive encouragement item from the original scale was grouped with the PFR items in the second EFA. This item was not dropped from the model due to a high factor loading (.51) and was tested for model fit in the confirmatory factor analysis as described below.

	PFR	NR	EE	C
If a child in your care becomes angry because he/she is unable to participate in a planned activity, how likely are you to:				
25a. send the child to a different area to cool down	-	-	-	.17
25b. help the child think about other ways he/she can participate (e.g. participate in a different activity)	.37			.32
25c. tell the child not to make a big deal about missing the activity		.54		.26
25d. encourage the child to express his/her feelings of anger and frustration			.46	.26
25e. soothe the child and do something fun with him/her to make him/her feel better about missing the activity.	.39			.38
If a child in your care accidently breaks a favorite toy, and then gets upset and cries, how likely are you to:				
26a. comfort the child and try to get him/her to forget about the accident.	.53			.30
26b. tell the child that he/she is overreacting.		.65		.41
26c. help the child figure out how to fix the toy.	.35			.24
26d. tell the child it's OK to cry.			.62	.46
26e. tell the child to stop crying or he/she won't be allowed to play with the toy anytime soon.		.50		.30
If a child in your care is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, how likely are you to:				
27a. comfort the child and try to make him/her feel better	.74			.55
27b. tell the child that he/she is overreacting.		.68		.50
27c. tell the child to straighten up or he/she will have to sit out for a while.		.58		.38
27d. encourage the child to talk about his/her feelings.	.51			.53
27e. tell the child you will help him/her practice so that he/she can do better next time.	.69			.52

Continued

Table 2. Factor loadings and communalities of the Coping with Children's Negative Emotions Scale (CCNES)

Table 2 continued

	PFR	NR	EE	C
If a child in your care is upset and appears to be on the verge of tears because other children are mean and won't play with him/her, how likely are you to:				
28a. tell the child that if he/she starts crying then he/she will have to sit out for a while.		.38		.18
28b. tell the child it's OK to cry when he/she feels bad.			.58	.51
28c. comfort the child and suggest an activity to change his/her focus.	.74			.53
28d. help the child think of constructive things to do when other children are hurtful.	.45			.34
28e. tell the child he/she will feel better soon.	.51	.43		.32
If a child in your care is shy and scared around strangers and consistently becomes quiet and withdrawn when visitors come to your home care, how likely are you to:				
29a. help the child think of things to do that would make meeting new people less intimidating.	.53			.40
29b. tell the child that it is OK to feel nervous.	.36		.35	.38
29c. try to make the child feel better by talking about fun things we can do with new people.	.58			.40
29d. tell the child he/she must stay nearby and interact with visitors appropriately.		.50		.26
29e. tell the child that he/she is acting like a baby.	-.40	.40		.42

Note. Factor loadings < .3 are suppressed. PFR = positively-focused reactions; EE = expressive encouragement; NR = negative reactions; C = communalities.

Second, a confirmatory factor analysis was conducted in a separate random-split sample in order to test the fit of the measurement model established above. The initial CFA included all items as suggested by the EFA and no correlated measurement error. The model fit did not meet requirements for the Chi square (significant) or CFI (above .90), however, fit was adequate according to the RMSEA (less than .08): χ^2 (227, N = 422) = 574.167, p = .000, RMSEA = .060 (90% CI [.054, .066]), CFI = .864. The second CFA tested for improved fit after moving the one item that loaded on PFR but was an EE

item in the original scale to load on EE. The model fit still did not meet requirements for the Chi square or CFI and worsened according to the CFI, but improved slightly according to the RMSEA: χ^2 (227, N = 422) = 562.790, p = .000, RMSEA = .059 (90% CI [.053, .069]), CFI = .869. The squared multiple correlation for the item in each model was compared in order to determine the best placement. In the first CFA, the squared multiple correlation was .437 and in the second CFA it was .477, therefore the item was kept loading on EE in line with the original scale. To further improve the fit of the model, correlated errors were added to the subscale items in line with their original subscale (problem-focused items, comforting items, expressive encouragement items, punitive items, and minimizing items); only significant correlations were kept in the model. The fit of the final CFA model was good and met both the RMSEA and CFI guidelines: χ^2 (212, N = 422) = 404.945, p = .000, RMSEA = .046 (90% CI [.040, .053]), CFI = .924. The measurement model was used in the subsequent structural equation model. Descriptive statistics for the CCNES are provided in Table 4.

CCCIS. Again, each item for this measure was examined to determine if the data were relatively normally distributed using the Shapiro-Wilks test of normality and a visual examination of a distribution histogram and the Normal Q-Q Plot. Similar to the CCNES data, the CCCIS data were not normally distributed; therefore principal axis factoring was selected as the extraction method for the EFA once again. Next, using a randomly split sample, an EFA was conducted following the methods outlined in the analysis section. Factors and factor loadings are provided in Table 3. The results of the Eigenvalues and scree plot were aligned – both indicated two factors, which is consistent

with the original scale (Lang et al., 2017). Also in line with the original scale, 7 items loaded on a factor which was named Positive Social Guidance (PSG), with factor loadings ranging from .58 to .70, and 4 items loaded on a factor which was named Negative Social Guidance, with factor loadings ranging from .31 to .63.

Table 3. Factors loadings and communalities of the Coping with Children's Challenging Social Interactions Scale (CCCIS)

	PSG	NSG	C
If two children in your care want to use the same toy (e.g. a new fire truck) and become distressed and/or aggressive, how likely are you to:			
30a. tell the children that fighting is unacceptable and ask them both to walk away and choose a different activity.		.54	.21
30b. ask the children to share their own ideas and feelings with one another.	.64		.46
30c. ask the children to think about how the other child feels and what he/she wants.	.68		.49
30d. tell the children that one can use the toy now and the other child in 5 minutes.		.31	.12
30e. help the children develop a plan to share the toy.	.60		.33
If a child in your care hits another child for the first time, how likely are you to:			
31a. send the child who hit to a space to be alone until you determine he/she can play again.		.57	.21
31b. tell the child who hit to say "I'm sorry."		.63	.23
31c. ask the child who is hurt to tell the other how he/she feels.	.70		.47
31d. ask the child who hit how he/she can make the other child feel better.	.70		.49
31e. ask the child who hit why he/she hit and discuss what he/she could do next time.	.58		.36
31f. discuss with the child who hit how he/she can handle his/her negative emotions next time.	.65		.43

Note. Factor loadings < .3 are suppressed. PSG = positive social guidance; NSG = negative social guidance; C = communalities.

Second, a confirmatory factor analysis was conducted using a separate random-split sample in order to test the fit of the measurement model established above. The initial CFA included all items as suggested by the EFA and no correlated errors. The fit

of this model did not meet specified guidelines for the Chi square, the RMSEA, or the CFI: χ^2 (43, N = 444) = 224.453, p = .000, RMSEA = .098 (90% CI [.085, .110]), CFI = .849. Correlated errors were added to variables using an iterative process to improve fit; only significant correlations were included in the final model. Fit improved to well above the desired CFI level and was adequate according to the RMSEA: χ^2 (36, N = 444) = 81.858, p = .000, RMSEA = .054 (90% CI [.038, .069]), CFI = .962. To further improve the RMSEA, items with less than .10 factor loadings were dropped from the model. Only one item from the NSG subscale was removed, resulting in 3 total items with factor loadings ranging from .32 to .36; no items were removed from the PSG subscale and factor loadings ranged from .35 to .49. Model fit improved for all fit indices: χ^2 (27, N = 444) = 54.054, p = .001, RMSEA = .048 (90% CI [.029, .066]), CFI = .977. This model was selected as the final measurement model and was used in the subsequent structural equation model. Descriptive statistics for the CCNES and the CCCIS are provided in Table 4.

Table 4. Descriptive statistics for the three Coping with Children's Negative Emotions Scale factors and the two Coping with Children's Challenging Social Interactions Scale

	No. of items	Scale M (SD)	Item M	Cronbach's α
CCNES				
Positively-focused Reactions	10	60.88 (7.1)	6.1	.81
Expressive Encouragement	5	28.18 (5.6)	5.6	.78
Negative Reactions	8	13.59 (6.1)	1.7	.76
CCCIS				
Positive Social Guidance	7	41.20 (6.8)	5.9	.84
Negative Social Guidance (initial EFA)	4	19.74 (5.4)	4.9	.58
Negative Social Guidance (final measurement model)	3	14.24 (4.6)	4.7	.60

Bivariate Correlations

Table 5 provides the descriptive statistics and bivariate correlations for the primary variables included in the model. Both independent variables, general stress and depression, were significantly correlated with each other with a moderately large effect size ($r = .56$, $p < .01$). General stress was significantly correlated ($p < .01$) with four outcome variables including positively-focused reactions ($r = -.25$), expressive encouragement ($r = -.15$), negative reactions ($r = .20$), and positive social guidance ($r = -.16$). Depression was correlated with three outcome variables including positively-focused reactions ($r = -.12$, $p < .01$), negative reactions ($r = .16$, $p < .01$), and positive social guidance ($r = -.07$, $p < .05$). Additionally, general stress and depression were negatively correlated with the mediator variable, family functioning, ($r = -.38$ and $-.40$, p

< .01). Family functioning was also correlated with four outcome variables including positively-focused reactions (r = .25), expressive encouragement (r = .14), negative reactions (r = -.26), and positive social guidance (r = .16). Among outcome variables, all variables were correlated, except positive social guidance and negative social guidance (r = -.15 to .58, p < .01).

Table 5. Descriptive statistics and bivariate correlations among key variables

	1	2	3	4	5	6	7	8
1. Stress	1							
2. Depression	.56**	1						
3. Family functioning	-.38**	-.40**	1					
4. Positively-focused reactions	-.25**	-.12**	.25**	1				
5. Expressive encouragement	-.15**	-.06	.14**	.56**	1			
6. Negative reactions	.20**	.16**	-.26**	-.15**	-.15**	1		
7. Positive Social Guidance	-.16**	-.07*	.16**	.62**	.58**	-.14**	1	
8. Negative Social Guidance	.06	.05	-.01	.10**	-.09**	.27**	.05	1
N	882	878	876	880	874	866	882	874
Mean	2.07	1.34	3.68	6.08	5.64	1.65	5.92	4.93
SD	.58	.43	.40	.74	1.14	.75	.97	1.34
Theoretical range	1-5	1-4	1-4	1-7	1-7	1-7	1-7	1-7
Range	1 – 4.2	1-4	1.27-4	2-7	1-7	1-7	1-7	1-7

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

Structural Equation Model

After confirming the factor structure for the CCNES and the CCCIS, the model was estimated in AMOS to simultaneously test (1) the direct paths from family child care provider depression and general stress to their responsiveness to children's negative emotion and challenging social behaviors, and (2) the indirect path through family functioning as a mediator. The hypothesized model fit the data adequately: χ^2 (806, N = 888) = 1953.344, p = .000, RMSEA = .040 (90% CI [.038, .042]), CFI = .892. The model explained 17.2% of the variance in negative focused reactions, 13.6% of the variance in positively-focused reactions, 10.3% of the variance in negative social guidance, 8% of the variance in expressive encouragement, and 58% of the variance in positive social guidance.

Direct Associations. Results are summarized in Table 6. As shown in Figure 2, family child care providers' general stress was directly associated with the three responsiveness variables measuring desirable responses, after controlling for race/ethnicity, marital status, annual income, household income, education level, possession of degree in early childhood education area, completion of child development or early childhood education courses after high school, social desirability, and depression. Specifically, general stress had a negative association with positively-focused reactions (B = -.20, *standard error* [SE] = .05, β = -.20) expressive encouragement (B = -.22, SE = .07, β = -.15), and positive social guidance (B = -.18, SE = .08, β = -.11) – when family child care providers perceived higher levels of general stress, they reported that they utilized less positively-focused reactions, expressive encouragement, and positive social

guidance. Family child care providers reporting higher levels of perceived general stress did not report using more negative reactions or negative social guidance. Additionally, when family child care providers reported higher levels of depression, they also reported higher levels of positively-focused reactions (B = .13, SE = .06, β = .10). No additional associations between family child care provider depression and responsiveness variables were found.

Among covariates, some associations were found. When family child care providers reported higher levels of social desirability, they also reported higher levels of positive social guidance (B = .05, SE = .02, β = .09), as well as lower levels of negative social guidance (B = -.06, SE = .03, β = -.10) There was an association between respondents who identified as Hispanic and negative reactions (B = .34, SE = .11, β = .12). Race (1 = American Indian or Alaska Native, 2 = White, 3 = Asian/Pacific Islander, 4 = multi-racial, 5 = African American) was associated with positive social guidance (B = .07, SE = .04, β = .08). Dummy coding revealed that participants who identified as White (white = 1, all other races = 0) utilized less positively-focused reactions (B = -.15, SE = .06, β = -.11) and positive social guidance (B = -.29, SE = .10, β = -.12). No other races had associations with responsiveness variables. Marital status was associated with negative reactions (B = -.04, SE = .02, β = -.09), when married = 1, co-habiting = 2, single = 3, separated = 4, divorced = 5, and widowed = 6. Dummy coding revealed that participants who reported they are married (married = 1, all other marital statuses = 0) also reported using more negative reactions (B = .05, SE = .07, β = .09) and that participants who reported they were divorced (divorced = 1, all other marital statuses = 0)

utilized less negative reactions (B = -.20, SE = .08, β = -.10). No other marital status had associations with responsiveness variables.

Providers who reported a higher level of education also reported lower levels of expressive encouragement (B = -.04, SE = .02, β = -.10). However, participants who reported that they had completed courses in child development or early childhood education were more likely to report lower levels of negative social guidance (B = -.37, SE = .13, β = -.14). This association increased for participants who reported having a degree related to early childhood education (B = -.50, SE = .14, β = -.18). No other significant associations between covariates and responsiveness variables were found. Two covariates were associated with family functioning. Providers who reported higher social desirability scores in turn reported higher family functioning (B = .02, SE = .01, β = .09) and race (1 = American Indian or Alaska Native, 2 = White, 3 = Asian/Pacific Islander, 4 = multi-racial, 5 = African American) was negatively associated with family functioning (B = -.04, SE = .01, β = -.12). Dummy coding revealed family care child providers who identified as White (White = 1, all other races = 0) reported higher levels of family functioning (B = .12, SE = .03, β = .12) and those who identified as African American (African American = 1, all other races = 0) reported lower levels of family functioning (B = -.10, SE = .04, β = -.10). No other race had associations with family functioning.

Table 6. Results from structural equation model

Variable	FF	PFR	EE	NR	PSG	NSG
Independent						
General stress	-.21***	-.20***	-.15**	.08	-.11*	.03
Depression	-.26***	.10*	.08	.02	.06	.02
Mediator						
Family functioning	--	.25***	.17***	-.28***	.13**	.06
Covariates						
Race	-.12***	.07	.04	.07	.08*	.06
Hispanic	-.03	.04	.02	.12**	-.03	.05
Marital status	-.02	.00	-.03	-.09*	-.01	-.04
Annual income	-.00	.04	-.02	-.02	-.01	-.05
Household income	.05	-.05	-.04	-.08	.06	-.08
Educational attainment	.02	-.07	-.10*	-.02	-.05	-.02
Completed CD or ECE course after HS	.01	.03	.03	-.05	.01	-.14**
Possesses a degree in an area related to ECE	.06	-.00	.06	.01	.02	-.18**
Social desirability	.09**	.05	.05	-.04	.09*	-.10*
R^2	.23	.06	.08	.17	.06	.10

Note. Data are β. FF = family functioning; PFR = positively-focused reactions; EE = expressive encouragement; NR = negative reactions; PSG = positive social guidance; NSG = negative social guidance. *$p < .05$; **$p < .01$; ***$p < .001$

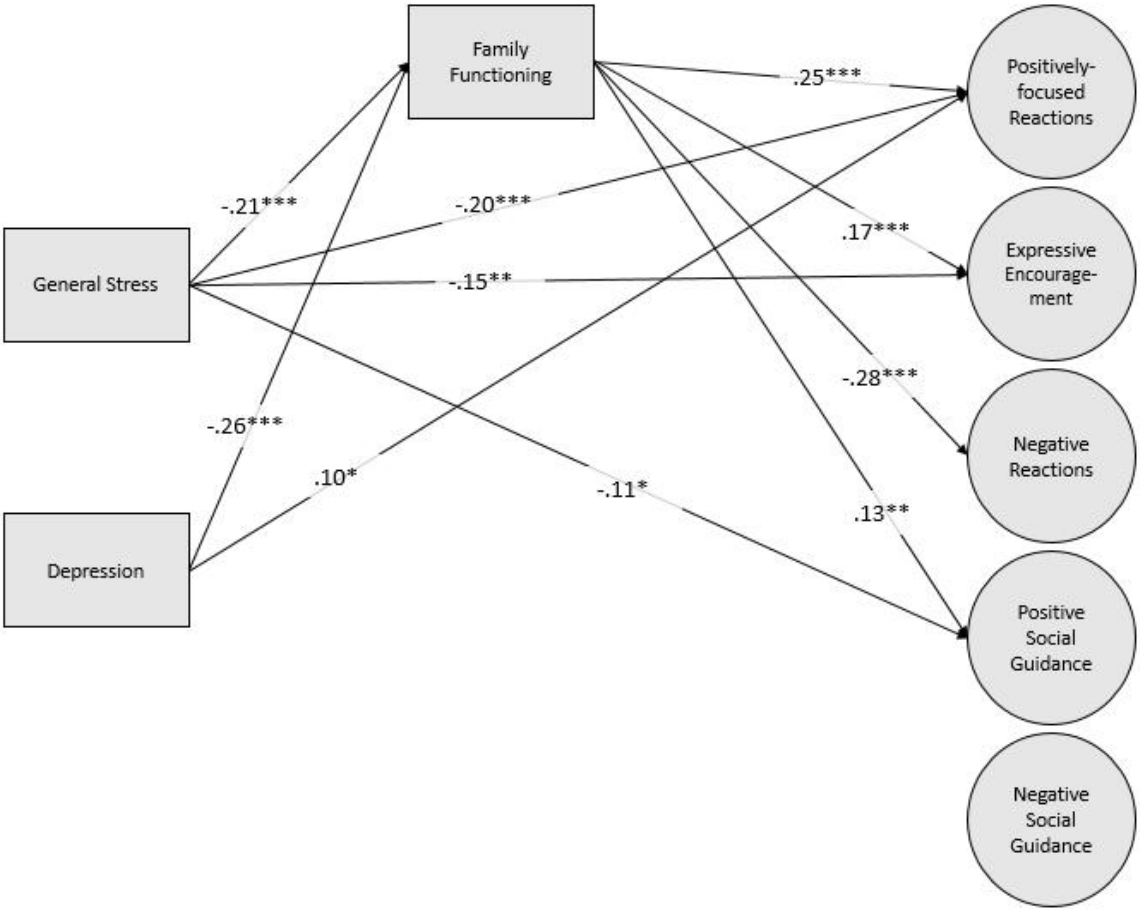

Figure 2. Results of final structural equation model. Standardized path coefficients are reported. Covariates and error terms are omitted. Covariates include family child care providers' race/ethnicity, marital status, annual income, household income, education level, possession of degree in early childhood education area, completion of child development or early childhood education courses after high school, and social desirability. *$p < .05$; **$p < .01$; ***$p < .001$

Indirect Associations. The mediating role of family functioning between general stress, depression, and responsiveness was also tested. As shown in Figure 2, when family child care providers reported higher levels of general stress, they reported lower levels of family functioning (B = -.15, SE = .03, β = -.21). This negative association was also found for higher depression levels and family functioning (B = -.24, SE = .03, β = -.26). In turn, family functioning was significantly associated with each responsiveness measure, except for negative social guidance. Providers who reported higher levels of family functioning also reported responding to children in more positive ways (positively-focused reactions B = .36, SE = .09, β = .250; expressive encouragement B = .05, SE = .14, β = .17; and positive social guidance B = -.12, SE = 16, β = .13). Additionally, higher levels of family functioning was associated with less negative reactions from family child care providers (B = -.47, SE = .08, β = -.28).

Test for Mediation

General Stress. As shown in Table 7, the estimate of indirect effects was significant at the .05 level of significance and the 95% CI did not contain 0, indicating that family functioning mediated the association between general stress and at least three of the five responsiveness variables (positively-focused reactions, expressive encouragement, and positive social guidance). The mediation relationship between general stress and negative reactions was less clear. According to the Baron and Kenny (1986) method, a direct effect from the independent variable and the dependent variable is a criteria for mediation; general stress and negative reactions do not have a significant

direct effect. However, Preacher and Hayes (2004) counter that this requirement is not always necessary and emphasize that mediation and indirect effects are distinct - it is worthwhile to investigate indirect effects even when a direct relationship between the independent and dependent variables does not exist. In this case, there was evidence that general stress had an indirect effect on negative reactions, with the effect occurring through family functioning. As reported in Table 7, the bootstrap test revealed the indirect effect from general stress to negative reactions was different from zero with 95% confidence.

Table 7. Bootstrap results for general stress

	Estimate	SE	*p*	Confidence Interval (BC 95%)
Indirect Effects				
GS → PFR	-.05	.02	.000	[-.08, -.02]
GS → EE	-.04	.01	.002	[-.06, -.01]
GS → NR	.06	.02	.000	[.03, .10]
GS → PSG	-.02	.01	.02	[-.05, -.00]
GS →NSG	-.01	--	NS (.17)	[-.03, .01]
Direct Effects				
GS → PFR	-.21	.05	.000	[-.31, -.12]
GS → EE	-.16	.05	.002	[-.25, -.07]
GS → NR	.08	.06	NS (.14)	[-.03, .20]
GS → PSG	-.12	.05	.013	[-.21, -.03]
GS →NSG	.04	--	NS (.49)	[-.07, .14]

Note. BC = bias corrected; GS = general stress; PFR = positively-focused reactions; EE = expressive encouragement; NR = negative reactions; PSG = positive social guidance; NSG = negative social guidance, NS = not significant.

Depression. In this case, depression had only one significant direct association with positively-focused reactions in the initial model, as reported in Figure 2; the bootstrap test did not find this path to be significant. However, similar to general stress, there was evidence that depression had an indirect effect through family functioning on positively-focused reactions and three additional responsiveness variables. As reported in Table 8, the bootstrap test revealed the indirect effect from depression to positively-focused reactions, expressive encouragement, negative reactions, and positive social guidance was different from zero with 95% confidence.

Table 8. Bootstrap results for depression

	Estimate	SE	*p*	Confidence Interval (BC 95%)
Indirect Effects				
D → PFR	-.06	.02	.000	[-.10, -.04]
D → EE	-.04	.02	.001	[-.08, -.02]
D → NR	.08	.02	.000	[.04, .13]
D → PSG	-.03	.01	.01	[-.06, -.01]
D →NSG	-.02	--	NS (.17)	[-.05, .01]
Direct Effects				
D → PFR	.09	--	NS (.09)	--
D → EE	.07	--	NS (.18)	--
D → NR	.02	--	NS (.76)	--
D → PSG	.05	--	NS (.28)	--
D →NSG	.02	--	NS (.70)	--

Note. BC = bias corrected; D = depression; PFR = positively-focused reactions; EE = expressive encouragement; NR = negative reactions; PSG = positive social guidance; NSG = negative social guidance, NS = not significant.

Discussion

By examining the associations between family child care provider depression, general stress, family functioning, and responsiveness, this study hoped to contribute to the knowledge on predictors of non-parental caregiver emotion socialization. The results of this study found significant direct and indirect associations between variables, even after controlling for several factors. The findings from this study offer a foundation for future empirical research to further examine how factors beyond the child care program and child care provider may influence child care quality as well as identify an area which should be addressed in early child care policies and training to support providers' positive emotional responses and social guidance.

Depression and Stress. This study hypothesized that higher levels of depression and stress would be associated with lower levels of desired responsiveness (positively-focused reactions, expressive encouragement, and positive social guidance) and increased levels of undesired responsiveness (negative reactions and negative social guidance). This hypothesis was partially supported by the current study. The results of the analysis found that when family child care providers perceived higher levels of general stress, they reported utilizing less positively-focused reactions, expressive encouragement, and positive social guidance as predicted, however this association was not significant with negative reactions or negative social guidance. Previous research on the relationship

between elevated stress and responsiveness has been mixed. Although several studies have found a relationship between elevated stress and the quality of interactions in samples of both parents (Crnic et al., 2005; Deater-Deckard, 2005; McKelvey et al., 2002; Pinderhughes et al., 2000) and child care providers (Buettner et al., 2016; Groeneveld et al., 2012), one study found elevated stress levels did not influence responsiveness in non-parental caregivers (Rusby et al., 2013). Although numerous studies have found increased stress increases negative reactions, in this study the participants reported relatively low levels of stress (see Table 5), and it may be that their stress levels were not high enough to incite negative reactions at a significant level. However, this makes the negative associations between stress and desired responsiveness found in this study more pertinent as it indicates that even slightly elevated stress levels may diminish the responsiveness of child care providers. Although children who receive care from providers who report slightly elevated stress levels may not experience negative reactions which are detrimental to their emotional development (Fabes et al., 2001; Perlman et al., 2008), they may not consistently receive high levels of positive responses which are also important to developing high levels of emotional competence (Davidov & Grusec, 2006; Eisenberg et al., 1996).

Similarly, this study found no direct associations between depression and negative responsiveness. Again, the sample in this study scored relatively low on the depression measure (see Table 5) compared to previous studies (Cummings & Davies, 1994; Gerber et al., 2007; Hamre & Pianta, 2004; Lovejoy et al., 2000) in which the samples were medically diagnosed as depressed and had clinical level depressive symptoms. Research

examining depression has found that depressive symptoms and their subsequent impact on daily functioning exists on a spectrum - low-level nonspecific depressive symptoms (non-clinical symptom levels) impact daily functioning less than minor or major depressive disorder level symptoms (Backenstrass et al., 2006). It may be that depressive symptoms in this sample are not high enough to cause providers to react more negatively. Additionally, the participants in this study may be utilizing coping strategies in their interactions with children. Buettner et al. (2016) found that while preschool teachers' increased psychological load, which included depression, stress, and burnout levels, increased negative reactions to children, teachers who reported frequently using coping strategies such as active coping, planning, and emotion regulation were more likely to positively respond to children's negative emotions as well as encourage children to express their negative emotions.

The positive association between depression and positively-focused reactions was inconsistent with previous research which has found that depression decreases positive responses and interactions among mothers and their children (Cummings & Davies, 1994; Lovejoy et al., 2000) and among child care providers and children in their care (Hamre & Pianta, 2004). In addition to having low-level depressive symptoms and unknown influence of coping strategies, another possible explanation for this finding comes from evidence that positive social interactions can reduce the severity of depressive symptoms and prevent depressive symptoms from progressing to a major depressive episode (Lincoln, 2000). The progression of depressive symptoms of this sample is unknown since this study is cross-sectional, however, the interactions family

child care providers have with children and families enrolled in their program may act as protective factor against elevated depression symptoms. If this is the case, family child care providers with a history of depression and current low-levels of depression may have more motivation to respond positively to children to protect their own mental health. They may also have greater awareness of the importance of positive social interactions from their own experiences with depression, which causes them to respond more positively to children than even the child care providers who reported no depressive symptoms. Lastly, research based upon socio-evolutionary theories of depression, which argue that low levels of depressive symptoms alert people to potential rejection from their social group, has found that individuals with sub-clinical levels of depression are more sensitive to both negative and positive social interactions and this enables them to adapt their behavior to maintain a positive standing in their community (Steger & Kashdan, 2009). Family child care providers who reported low-levels of depression may be overcompensating in positively-focused reactions in order to improve their relationships and strengthen connections with the children in their program.

Family Functioning. As predicted, when family child care providers reported higher levels of depression and stress, they reported lower levels of family functioning. The effect sizes for these relationships were among the largest found in this study. Also in line with the hypothesis, when family child care providers reported higher levels of family functioning, they also reported higher levels of the three desired responsiveness variables and fewer negative reactions. A significant association between family functioning and negative social guidance was not found. These results suggest that the

quality of functioning occurring within a child care provider's own family may influence the quality of care non-related children receive from that caregiver.

A possible explanation for this finding is that family child care providers who report lower family functioning may be struggling to sensitively respond in their interactions with family members as well as the children in their program. The McMaster Model of Family Functioning posits the transactional patterns of family members in large part determine functioning (Epstein et al., 1978). This study is not able to determine the cause of decreased family functioning among this sample, however family child care providers who report lower levels of family functioning and decreased responsiveness may be revealing that they do not have an understanding of appropriate responses to negative emotions or possibly how to have appropriate interactions in general. Family child care providers with higher levels of family functioning may be more competent at sensitively and positively interacting with others. Furthermore, it is possible that providers who report lower family functioning and lower responsiveness have struggled with social-emotional competence in their childhood family unit and are repeating their own parents' parenting styles and socialization practices. Indeed, intergenerational studies of emotional functioning identify parenting style as a possible mechanism in the development of emotional competence over generations (Stack, Serbin, Enns, Ruttle, & Barrieau, 2010).

Another possible way family conflict may influence provider responsiveness is through increased work-family conflict and spillover. Work and family demands call for an individual to fulfill many roles throughout the day and an individual's work life and

family life intersect today more than ever before. This is especially true for family child providers. The majority of research examining how work and family intersect has focused on the ways work and family responsibilities conflict. Work-family conflict, or work-family interference, occurs when an individual experiences conflict between their work and family responsibilities as they attempt the difficult task of fulfilling numerous role requirements as well as overcoming work and family incompatibilities (Byron, 2005). The literature has recognized that the influence of work on family is distinct from the influence of family on work (Byron, 2005; O'Driscoll, Ilgen, & Hildreth, 1992). Work interference with family (WIF or work-to-family conflict) occurs when "the general demands of time devoted to, and the strain created by the job, interfere with performing family related responsibilities" (Netemeyer, Boles, & McMurrian, 1996, p. 401). On the other hand, family interference with work (FIW or family-to-work conflict) is the opposite and occurs when time and strain from family related responsibilities conflicts with work demands. Family and employment have a bi-directional relationship and each may negatively influence the other in several ways, however studies have established that family interference with work is more pervasive than work interference with family (Adams, King, & King, 1996; Frone, Yardley, & Markel, 1997). In a meta-analysis of 61 studies, Byron (2005) found that family stress and family conflict are strongly associated with family interference with work. Although work-family conflict is extensively studied and it has been found that family-supportive work place policies and reliable child care reduces work-family conflict (Goff, Mount, & Jamison, 1990), few studies examine work-family conflict among the child care providers themselves. A

search only identified one study that utilized a sample of child care providers; it found child care providers who experience consistent work-family conflict are more likely to experience burnout, characterized by emotional exhaustion, depersonalization, and cynicism (Boyd & Pasley, 1989). Family child care providers not only experience stressors commonly reported by child care providers, including responding to challenging child behaviors and managing parent and family expectations, low wages, and negative attitudes and perceptions of early childhood professionals (Gerstenblatt et al., 2014; Hall-Kenyon, Bullough, MacKay, & Marshall, 2014), they undertake these tasks in a context which may exacerbate these common stressors as well as create stressors unique to the profession. Family child care providers most often work alone without assistance from co-workers or support staff. Multiple studies have found that working in isolation is reported by family child care providers as a significant source of stress (Rusby et al., 2013; Swartz, Wiley, Koziol, & Magerko, 2016). Family childcare providers report working longer hours to accommodate the families they serve and to generate additional income as they earn the lowest wage on average compared to providers in other child care settings (National Survey of Early Care and Education Project Team, 2016). In addition to providing direct care for children and families, family child care providers are small business owners who experience the challenges of entrepreneurship. The success of their business and their livelihood depends on their ability to market their program to attract family enrollment, maintain enrollment, act as an accountant and manage all financial responsibilities. Furthermore, they experience the challenges of operating a business out of their own home (Gerstenblatt et al., 2014). The home becomes a dual-

purpose space subject to accelerated wear and tear from additional use, reduced autonomy over the use of space due to licensing requirements, and decreased privacy from the presence of children, families, and licensing inspections. Despite the hard work invested into their businesses, family child care providers report feeling misunderstood and disrespected in their role by others who see them as a "babysitter" rather than a professional (Gerstenblatt et al., 2014). Considering that the vast majority of family child care providers are women who assume a greater share of household responsibilities (Brines, 1994; Yarvorsky, Kamp-Dush, & Schoppe-Sullivan, 2015), it may be that the combined demands of family and the family child care business have overwhelmed the family child care provider to a point where they simply do not have the time and energy to positively respond to the children in their care.

Another way decreased family functioning may negatively impact provider responsiveness is through increased household and program chaos. Chaotic environments are characterized as noisy, crowded, and have a lack of organization, structure, and routines which make it unpredictable (Matheny, Wachs, Ludwig, & Phillips, 1995). Studies examining chaos in households have found that chaos is associated with negative outcomes in parents (Corapci & Wachs, 2002; Deater-Deckard, Chen, Wang, & Bell, 2012; Dumas et al., 2005) and children (Coldwell et al., 2006; Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). For example, among parent samples chaotic home environments were associated with higher levels of stress (Deater-Deckard et al., 2012), fewer responses to infants' cues (Corapci & Wachs, 2002), and inappropriate discipline and insensitivity to children (Dumas et al., 2005). Valiente, Lemery-Chalfant,

and Reiser (2007) specifically examined household chaos and parents' contingent responses to children's emotions and found higher levels of chaos decreased parents' supportive responses to children. A recent study examining program chaos and preschool teacher responsiveness found higher levels of teacher-reported chaos was associated with increased non-supportive responses (Jeon et al., 2016). As the level of chaos is one component of family functioning according the McMaster Model of Family Functioning (Epstein et al., 1978) utilized in this study, it may be that family child care providers who have higher levels of chaos within their family and their home struggle with effective family management, organization, and communication strategies. Improving the functioning of the family may decrease chaos levels in the home as well as the child care program; a calm, organized, and predictable environment will likely reduce stress and improve responsiveness to children.

Additionally, the studies by Valiente and colleagues (2007) and Jeon and colleagues (2016) both presented models which included emotion regulation as a mediator in the relationship between chaos and responsiveness. Valiente et al. (2007) found that parents' effortful control (EC) mediated this relationship, with higher levels of EC associated with more positive responses to children's negative emotions as well as fewer negative responses. Jeon et al. (2016) found that the relationship between chaos and responsiveness was mediated by teachers' emotion regulation and coping skills – higher levels of chaos were associated with use of fewer positive emotion regulation strategies, such as reappraisal, and more negative strategies, such as suppression, as well as less coping skills. In turn, less reappraisal was associated with fewer positive

responses to children and increased suppression was associated with a greater number of unsupportive reactions and less expressive encouragement.

These studies demonstrate that there may be a number of variables which interact and contribute to the ways caregivers respond to children in their programs. While the study of emotion regulation strategies is relevant for all, it is especially important to consider how it may be influencing family child care providers' ability to respond to children. By nature of the work, early childhood caregivers experience frequent emotional demands as they care for young children. Lazarus (2006) defined coping as efforts to change thoughts and behaviors in response to environmental demands which generate emotions and places coping strategies into two groups: problem-focused coping and emotion-focused coping. Problem-focused coping involves an individual utilizing planning and taking action to address emotional challenges. Emotion-focused coping involves an individual's attempt to change the meaning or significance of the emotional challenge. Gross (1998) defines emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p. 275). A meta-analysis conducted by Aldao, Nolen-Hoeksema, and Schweizer (2010) reviewed the associations between six types of emotion regulation strategies (acceptance, avoidance, problem-solving, reappraisal, rumination, and suppression) and the symptoms of four psychopathologies (anxiety, depression, eating, and substance-related disorders). The putative maladaptive strategies (avoidance, rumination, and suppression) were associated with greater symptoms of psychopathology while the presumptive adaptive strategies were associated with fewer

symptoms of psychopathology. While the effect sizes for maladaptive strategies ranged from large to medium, the effect sizes for reappraisal and acceptance were small. This study indicates that the absence of adaptive strategies (with the exception of problem-solving) is not as damaging as the presence of maladaptive emotion regulation strategies. Family child care providers may be primarily utilizing maladaptive strategies to manage their emotions and become trapped in a cycle of decreased positive responses, negative emotions, maladaptive emotion regulation and coping strategies, increased psychopathology, and decreased family functioning.

Covariates. The findings in this study become especially pertinent considering that significant results were found even after the inclusion of numerous covariates, including social desirability, providers' level of education, whether or not the provider earned a degree in an area related to early childhood education, completion of any child development or early childhood education courses after high school, annual and household income, race/ethnicity, and marital status. Among controls, several significant associations were found. Although social desirability was not associated with the CCNES subscales, higher levels of social desirability were associated with both the positive and negative social guidance subscales of the CCCIS to almost the same effect size (see Table 6). This indicates that family child care providers overstated their positive social guidance responses to the same extent they censored their negative social guidance responses to children's challenging social situations. Higher social desirability was also associated with higher levels of family functioning. Providers who reported a higher level of education also reported lower levels of expressive encouragement, which is

inconsistent with previous research that found family child care providers who have higher levels of education also report more sensitive caregiving (Clarke-Stewart, Vandell, Burchinal, O'Brien, & McCartney, 2002). One explanation for this finding is that family child care providers with higher education attainment may value and emphasize academic preparation and learning activities in their program. If caregivers believe negative emotion expression impedes this progress they may be more likely to discourage it. Family child care providers who reported that they have previously completed courses in child development or early childhood education reported lower levels of negative social guidance; this is consistent with findings with center-based preschool teachers from the first study to utilize the CCCIS measure (Lang et al., 2017). This association increased for participants who reported having a degree related to early childhood education and indicates that increased knowledge of child development better equips caregivers to respond to children when they have challenging social interactions. Lastly, family child providers who identified as White reported higher levels of family functioning and those who identified as African American reported lower levels of family functioning. Previous research examining African American parents found that experiencing more instances of racial discrimination strengthened the positive association with stressor pileup and their psychological distress as well as the negative association from their psychological distress to the quality of their intimate and parent-child relationships (Murry, Brown, Brody, Cutrona, & Simons, 2001). Although race was not associated with stress or depression in this study, it does not eliminate the possibility that the ways African American individuals experience society may be unique and cause harm to their family

functioning. Indeed, intersectionality argues that institutionalized racism, gender inequality, and social class relations come together in many ways to shape experiences of oppression which influences African American family organization and functioning (Collins, 1998).

Limitations

The results of this study must be interpreted with caution due to several key limitations. First, generalizability may be limited by the predominantly female sample (98% female), which is higher than the Current Population Survey statistics on the national workforce of child care providers (94.5% female) (United States Department of Labor, Bureau of Labor Statistics, 2016). Although this study has a large, geographically representative sample collected by stratified random sampling, the 18.25 % response rate was low and may also limit the generalizability of the findings. Family child care providers who elected to participate in this study may be different in unknown ways from those who declined. For example, the family child care providers who declined to participate may not have extra time or energy to spare to complete the survey or their culture may make them less open to sharing psychological information.

Second, all data was collected through self-report and respondents may have reported on their depression, stress, family functioning, or responsiveness to children more favorably than what actually occurs; a measure of social desirability was included in the analysis to help account for this. Including observation methods would strengthen this and future studies. However, the significant findings of this model are especially pertinent to the early childhood child care and responsiveness literatures and deserve

increased attention in future studies if the participants in this study censored their responses, such as over-reported their family functioning and responsiveness, for any reason.

Third, exclusively utilizing a self-report survey also limits the results because associations between variables could be caused by common method variance (or common method bias). Common method variance is a type of measurement error that results in variance between variables because of various similarities in the measures, such as one reporter, one time point, or the response format, rather than the constructs the variables are attempting to measure (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This may be minimized by including additional measures of constructs, such as observation, in future studies to reduce the potential for this error and to confirm findings.

Fourth, there are a number of variables which were not explained or accounted for in this study. Parental and child care provider research as well as theory have identified a number of possible influences on responses including several child characteristics and contextual influences which should be considered in future studies, in addition to the role of work-family conflict, chaos, and coping strategies as discussed above. Research examining child characteristics and responsiveness have predominantly focused on the role of child temperament (Bates & Pettit, 2007; Putnam et al., 2002, Wachs, 2006). Studies examining the interaction between temperament and parenting responses have inconsistent findings with some showing that young children's difficult temperament provokes less supportive parenting responses (Hinde, 1989) and easy temperaments elicit supportive responses (Hinde, 1989; Kyrios & Prior, 1990; Spangler, 1990); other studies

find the opposite – difficult temperament characteristics compel parents to respond in more supportive ways than parents of children with easy temperaments (Crockenberg, 1986; Rubin, Hastings, Chen, Stewart, & McNichol, 1998). Although researchers have not been able to definitely conclude if or how child temperament influences parenting responses (Putnam et al., 2002; Sanson et al., 2004), increasingly study findings show that parent responses are especially important for children with difficult temperaments (Putnam et al., 2002) and that difficult child temperament acts as a moderator between responsiveness and child outcomes (Kochanska & Kim, 2013). In addition to temperament, associations between child sex and responsiveness have also been found by researchers (Chaplin, Cole, & Zahn-Wexler, 2005; Crockenberg, 1986; Putnam et al., 2002; Shields, 2002). For example, Klein (1984) found when boys and girls displayed intense reactions to stimulation, mothers' contingent responses to girls were vocal whereas boys received more physical contact. Research has also found that the presence of disabilities, such as autism, in children influences parental responsiveness (Kinard et al., 2017). Further clarification of context may also elicit different responses than those reported in this survey. Many factors contribute to how family child care providers interact with children and, for example, a family child care provider in a multi-age setting who reported highly encouraging children to express their negative emotions on the survey may feel differently about encouraging an angry two-year old to express his/her feelings when a 6-month old infant is sleeping nearby. Future studies should consider the influence of each of these variables when examining family functioning and responsiveness.

Fifth, this study lacks data from other relevant individuals, such as the providers' family members, parents of the children enrolled in the program, and the children themselves. The providers' family members could contribute additional perceptions of family functioning which may differ from the child care provider's report. Parents and children could provide their perceptions of the family child care providers as well as child outcome information, which would further enhance the contribution this and other studies may make to the literature and public policy. Inclusion of multiple perspectives will provide additional insight into the interactions occurring in this setting.

Lastly, this study is cross-sectional, therefore all associations are correlational. Causality cannot be claimed nor can the direction of any relationship be identified. It is possible that decreased family functioning may increase stress or depression levels, vice-versa, or that this relationship is bi-directional. Also, progression of any variable cannot be determined in this study. A longitudinal study design would be able to describe changes in variable levels over time, determine directions in relationships, and could also contribute child outcomes as discussed above.

Implications and Future Directions

Despite its limitations, this study has important implications for future research, practice, and policy. In regard to future research, foremost, there is currently a lack of studies which seek to examine and understand the experiences of children and caregivers in family child care (Morrissey, 2007). An increase in studies examining this population will benefit the caregivers themselves, the many families who rely on them for care, and add nuance to the early child care literature. Second, this study found indirect effects

between stress, depression, and responsiveness through family functioning. As this study is cross-sectional, the direction of the associations are unknown. Longitudinal research examining the progression of each variable and their respective influences on one another over time are needed. Additionally, research which includes perspectives beyond the family child care provider including their family members and the families and children enrolled in the program and objective measures such as observation are also needed to further enhance the validity of the associations found. Lastly, research suggests the ways that caregivers respond to children are influenced by numerous variables and future studies not only need to expand upon this research and continue to identify antecedents but explore the interactive influence of these variables as well. Studies may control for each variable to determine their individual influence, however, it is also necessary to hypothesize and test the complex ways these numerous variables interact over time to fully capture responsiveness processes.

In regard to implications for practice, this study suggests that any intervention which seeks to improve responsiveness in family child care providers should have a component which addresses the functioning within the child care providers' families. It will be important for these interventions or training programs to identify the cause of reduced family functioning in order to identify the best course for improvement. For example, because family child care providers operate their child care business within their private homes, their family members are directly involved in the child care business by proximity. If family functioning has decreased because family members resent sharing their space or view it as intrusive to their privacy, then a trainer may help the family child

care provider develop clear boundaries or improve organization in the home in order to improve family functioning, psychological well-being, and responsiveness. If family functioning has decreased because of a transitional event, grief, or infidelity, providers may benefit from access to professionals such as family counselors or therapists who can help them address the issue, improve communication and relationships within the family unit, and strengthen their emotional competence and coping skills.

Lastly, this study has implications for policymakers. This study found that family functioning may influence the ways child care providers respond to children's negative emotions and has suggested that access to professional support such as family therapists may be beneficial. As professional caregivers of young children, family child care providers perform one of our country's most responsible and important jobs, however, they earn low wages even compared to other child care workers; according to a study conducted by Economic Policy Institute, while child care providers earn a median income of $9.23 per hour, self-employed child care providers earn 18% less (median income of $7.53 per hour) (Shierholz, 2013). In addition to making less, home business owners do not have access to lower-cost group plans larger employers are able to provide (Shierholz, 2013). Policymakers in early child care and education as well as health care should consider the societal and economic benefits of passing legislation which ensures a living wage and access to affordable health care with mental health benefits for family child care providers. For example, according to the Pew Research Center (2015), 60% of U.S. households were dual income in 2012 and many of these families rely on non-familial child care arrangements for their children while they are at work. A study by

Gordon, Kaestner, and Korenman (2008) examined illness, child care, and absenteeism in the work place and found that the different types of child care available to parents cause parents to miss work for different reasons when illness occurs. Parents who rely on child care centers are more likely to miss work when their child is ill due to exclusion policies; family child care providers, who may not be subject to the same licensing requirements as centers, are more likely to care for sick children. However, when the child care provider becomes ill, centers are more likely to have substitute caregivers for children than family child care providers thereby reducing absenteeism for parents. This study also found that when mothers missed more work because their family child care provider was unavailable, they were more likely to exit the workforce entirely compared to women who relied on center-based care. Mothers who earned low wages and did not have family members as backup caregivers were the most likely to exit the workforce. Other research (Goff et al., 1990) found that parent satisfaction with child care arrangements was associated with lower levels of work-family conflict, which was associated with less absenteeism. These studies indicate policies which support child care providers support working parents, employers, and the economy as well. In addition to living wages and affordable access to health care services, policymakers should examine current policies designed to support U.S. workers in order to determine how they can be strengthened to support home-based child care providers and their families. For example, the Family Medical Leave Act (FMLA) was established in order to "help employees balance their work and family responsibilities by allowing them to take reasonable unpaid leave for certain family and medical reasons" (United States Department of Labor, n.d.). FMLA

guarantees that employees who meet certain qualifications may take up to twelve weeks of unpaid leave to attend to family and/or medical issues and requires the continuation of group health coverage during this time (United States Department of Labor, n.d.). However, FMLA is only available to employees who work for public agencies, public and private elementary and secondary schools, and companies with 50 or more employees (United States Department of Labor, n.d.). Home-based family child care providers who need to take extended personal time to attend to family issues cannot simply bring in a co-worker to cover for them and manage their business during these times. A lack of support leaves them in a no-win position where they face the collapse of their business if they take time off or the escalation of family/medical issues if they cannot fully address the issue. Policymakers should be aware of gaps in policies like this that leave subgroups of workers inequitably vulnerable to consequences from family or medical issues.

Conclusion

The results of this study found that when caregivers experience higher levels of family functioning within their family unit, they are able to respond to children's negative emotions more positively than those who report reduced family functioning. This study establishes that it is important to consider how factors beyond the context of the program and the characteristics of the child care provider contribute to the quality of responses. Research is just beginning to examine the antecedents to non-parental early childhood caregivers' responses to children's negative emotions and it is important to remember in this research that caregivers have lives beyond their work, which may enhance or harm their ability to provide quality care. Although it is essential to examine child outcomes in studies of child care, it is also critical to view child care providers as worthy of attention and respect not only for the invaluable services they provide to families but also as members of society with family lives of their own. Family child care providers do not exist in isolation - their work and home lives are interconnected. This study shows that when family functioning is reduced, work performance suffers simultaneously; it follows that improvement in family functioning will likely demonstrate improvement in work performance as well. Interventions designed to improve family functioning along with psychological well-being and responsiveness and policies which ensure affordable access to mental health and family therapy services as well as protected time off to attend to family matters for family child care providers could have far reaching benefits beyond

the providers themselves, extending to their own families and the families they serve each day.

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