

# **PARENTING IN LATINO HEAD START FAMILIES: A MIXED METHODS STUDY**

A dissertation presented by

**Maria Martí Castañer**

In Fulfillment of Requirements for the Degree of Doctor of Psychology

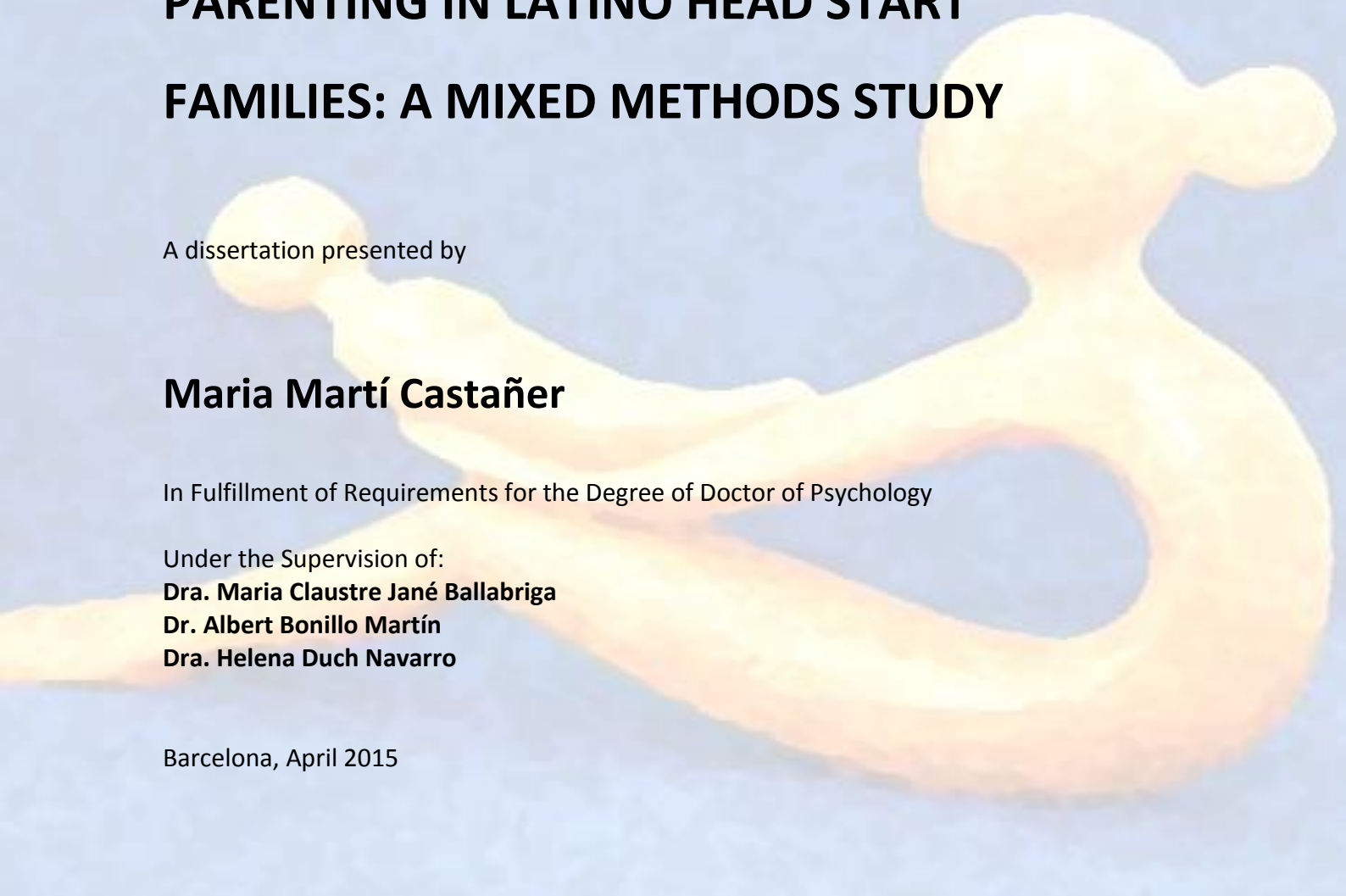
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Barcelona, April 2015





## **EXAMINING PARENTING IN LATINO HEAD START FAMILIES: A MIXED METHODS STUDY**

We hereby certify that we have read this dissertation prepared by Ms. Maria Martí Castañer under our direction and we recommend that it be accepted as fulfillment of the requirements for the Degree of Doctor of Psychology.

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## PROLOGUE

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The dissertation entitled “Parenting in Latino Head Start families: a mixed methods study” is presented with the goal of obtaining the title of Ph.D. in Psychology with International recognition within the Department of Clinical Psychology in the University Autònoma de Barcelona (UAB). This dissertation comprises two complementary studies elaborated under the supervision of Dr. Helena Duch, Dr. Albert Bonillo, and Dr. Maria Claustre Jané. Both studies aimed to understand the influence of maternal cumulative risk and mothers’ childhood experiences on the mother-child relationship, and examine the role of different aspects of the mother-child relationship in mediating the impact of cumulative risk on children’s social-emotional outcomes within a sample of economically poor Latino preschoolers attending Head Start. Two studies are presented in this dissertation:

1. The quantitative study aims to examine the relationship between cumulative risk, the quality of the mother-child relationship, and social-emotional outcomes of economically poor Latino children attending a Head Start Program.
2. The qualitative study explores childhood experiences of a subsample of economically poor Latino mothers and the influence of these experiences in their current parenting.

Part of the findings of the present dissertation have been presented in several international conferences and are in the process of revision in the *Early Education and Development Journal*.

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## ABSTRACT

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Latino children in United States, who are the largest and fastest growing ethnic group, lag behind their white peers in academic achievement yet they show robust social competence outcomes even when raised in low-income households. There is a growing interest to disentangle what aspects of parenting in Latino families are associated with Latino children's social-emotional competence, especially among those living in socio-economic disadvantage. The present study used a mixed methods approach to examine past and present contextual factors potentially related with the quality of mother-child relationship within a sample of Latino Head Start families and identify the association between different aspects of the quality of mother-child relationship and children's social-emotional outcomes. The quantitative investigation examined the relationship between cumulative risk, the quality of mother-child relationship, and social-emotional competence of Head Start Latino children across diverse ecological contexts (i.e. home, school) and within economic contexts. In addition, we examined whether the length of time children had attended the Head Start program moderated the relationship between supportive parenting and child social-emotional outcomes. The qualitative investigation, that comprised 30% of the overall sample, used focus groups to explore the childhood experiences Latino mothers and examine how participants constructed the association between their childhood experiences and their current mother-child relationship that has the potential to influence child socio-emotional development.

Primary findings from the quantitative study indicate that cumulative risk is associated with decreased maternal supportiveness and maternal closeness, and increased maternal conflict. In path analysis maternal cumulative risk showed an indirect effect on child social-emotional outcomes rated by parents (decreasing social

competence and increasing internalizing and externalizing behavior) through perceived quality of the mother-child relationship. Cumulative risk did not show an effect on teachers' ratings of child outcomes. We found no direct association between observed maternal supportiveness and child social competence or problem behaviors. Instead, maternal supportiveness interacted with time spent at Head Start; maternal supportiveness was associated with higher social competence only for children that had spent less time in Head Start at the time of assessment. Focus group results highlight the importance of exploring Latino mothers' childhood experiences in light of both the socioeconomic and cultural contexts in which mothers grew up in order to understand strengths and challenges they face in current parenting. Findings were consistent with previous research suggesting the intergenerational transmission of both insensitive-harsh and supportive parenting. Results highlight that participants maintain some values and practices rooted in the Latino culture, and at the same time experience a process of transformation in which they incorporate new parenting practices that find beneficial for their growing children. Findings further extend the literature by identifying possible factors (e.g. exposure to American culture, adult educational experiences, and personal assets like being flexible and open to new experiences) that may explain shifts in parenting values and practices in economically poor Latino immigrant mothers. These results are discussed in the context of Ecological theories of development highlighting future research and clinical implications.

## 1. INTRODUCTION

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In the preschool years, social-emotional competence, or the child's ability to form positive relationships, express themselves and regulate behaviors in an age appropriate way has been positively associated with later school performance, peer acceptance, and mental and physical health (Raver & Knitzer, 2002; Rose-Krasnor & Denham, 2009; Shonkoff & Phillips, 2000). Conversely, early externalizing and internalizing behavior problems, such as aggressive and withdrawn behaviors in interaction with peers and adults, have been linked to increased levels of psychiatric diagnosis and related problems later in childhood (Feng, Shaw, & Silk, 2008; Moffitt & Caspi, 2001). Therefore, developing social-emotional competence in early childhood has the potential to reduce children's risk of later psychopathology and poor academic performance, placing children on a trajectory of lifelong competence (Denham et al., 2012).

Social-emotional competence emerges out of interactions with adults and peers in different contexts (Laible & Thompson, 2007; Rose-Krasnor & Denham, 2009; Rose-Krasnor, 1997). In the early years, children spend most of their time with parents or primary caregivers; therefore the interaction between parents and children is key in the development of social competence and prevention of problem behaviors. A supportive and warm parent-child relationship has been associated with increased social competence and decreased problem behaviors during childhood (Bornstein, Tamis-Lemonda, Hahn, & Haynes, 2008; Denham, Renwick, & Holt, 1991). However, the accumulation of family risk factors may interfere with parents' abilities to maintain an optimal caregiving environment and use warm and supportive behaviors during interactions with their children (Lengua, Honorado, & Bush, 2007).

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Children living in poverty face disproportionate exposure to ecological stressors, increasing their risk for poorer social-emotional outcomes and increased problem behavior (Brooks-Gunn & Duncan, 1997; Evans & English, 2002). In the United States, 22% of children under age 6 live in families with incomes below the federal poverty line. The problem is exacerbated in Latino communities, which have the highest proportion of young children affected by poverty (National Center for Child Poverty, 2011).

Poverty is associated with a host of risk factors that negatively impact the well-being of children and families (Brooks-Gunn & Duncan, 1997; Day, 2011; McLoyd, 1998; Yoshikawa, Aber, & Beardslee, 2012). There is evidence suggesting that the accumulation of risk factors (cumulative risk) such as single and teenage parenthood, poor living conditions, low parental education or emotional stress, is associated with lower levels of supportive parenting, which in turn is associated with decreased social competence and increased internalizing and externalizing problems during early childhood (Cabrera, Fagan, Wight, & Schadler, 2011; Lengua et al., 2007; Trentacosta et al., 2008). Therefore, cumulative risk indirectly influences children's adjustment by disrupting the quality of the parent-child relationship. Despite the ecological stressors frequently experienced by low-income Latino families in the US, some still are able to offer children nurturing and enriching home environments (Delgado-Gaitan, 1992; Farver, Xu, Lonigan, & Eppe, 2013; Reese & Gallimore, 2000). Ecocultural theories suggest that supportive parenting in Latino homes may nurture social-emotional competence and protect children from the risks associated with adverse socio-economic conditions (Crosnoe, 2007; Escarce et al., 2006; Fuligni, 1997). Despite the growing interest in studying Latino children's development (García Coll et al., 1996; Huston, McLoyd, & García Coll, 1994;

McWayne & Melzi, 2014; McWayne, Melzi, Schick, Kennedy, & Mundt, 2013) most research that has examined the effects of cumulative risk and supportive parent-child relationships on social-emotional outcomes in early childhood has either not included Latino children in their sample or only included a small non-representative group (Diener & Kim, 2004; Lengua et al., 2007; Trentacosta et al., 2008).

Therefore, the impact of cumulative risk on low-income Latino parents and their child's social-emotional outcomes during preschool remains poorly understood.

Many researchers have suggested studying child development within economic, ethnic and cultural contexts, so that factors impacting social and behavioral functioning are better understood in specific populations (García Coll et al., 1996; Harwood et al., 2002; Huston et al., 1994). In addition, the transactional nature of social-emotional competence requires studying social competence and problem behaviors in different contexts given that different settings, such as the family or school may set different goals and expectations, especially in minority groups (Sameroff, 2009; Sameroff, Bartko, Baldwin, Baldwin, & Seifer, 1998).

This study used a mixed methods approach to examine the role of supportive mother-child relationships within economically poor Latino families attending Head Start, a federally funded education program in the US. First, we designed a quantitative study to 1) examine variations in the quality of the parent-child relationship (observed and self-reported) of economically poor Latino Head Start families, and; 2) test the indirect effects of cumulative risk on child social competence and internalizing and externalizing behavior through its effects on the parent-child relationship. We also aimed to examine the role of length of time at Head Start as a moderator of the relationship between maternal supportive behaviors and child outcomes given that early childhood programs, like Head Start, were designed to

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compensate the effects of less enriching environments. Second, because parenting is transmitted between generations and it is embedded in a cultural context, we developed a qualitative study to explore childhood experiences of economically poor Latino mothers and how these experiences may have influenced their current parenting. The quantitative and qualitative investigations, taken together, help to further our understanding of the variation, role, and influences of the mother-child relationship in economically poor Latino families.

This introduction is organized in four sections. In the first section we present a brief description of the Latino population in United States. In the next section we define social-emotional competence in preschool. In the third section we present a bio-ecological model of development and define proximal and distal factors that are related with social-emotional development: the quality of the mother-child relationship, cumulative risk, child individual risk, and participation in the Head Start Program. Then we present a mediational model between cumulative risk, supportive mothering and social-emotional development. The third section presents an integration of Belsky's theory (1984) on the determinants of parenting and research on the intergenerational transmission of parenting with models of parenting in ethnic minorities to frame parenting in Latino families. This last section guides the qualitative investigation. Where possible throughout the introduction, we highlight research that has specifically focused on Latino families.

### **1.1. Latino families in the US: facts and numbers**

Latino children and families are a growing, diverse, and largely understudied population (Harwood et al., 2002). The Latino population now constitutes the largest ethnic minority group in the United States, accounting for 17.1% of the U.S. population and 24% of children under age 18 (U.S. Bureau, 2014). Census data shows



that, over the last decade, the Latino population grew from 35.3 million to 54 million, accounting for more than half of the nation's population growth. By the year 2060, Latinos are projected to account for 31% of the U.S. population, which will represent the largest portion of U.S. population growth between 2005 and 2060.

Latino is a term used to refer to people with origins from Mexico, Central or South America, and the Spanish-speaking Caribbean. In 2012, most Latinos (64%) were of Mexican descent, 9.4% of Puerto Rican descent, 3.8% of Salvadoran descent, 3.7% of Cuban descent, 3.1% of Dominican descent and 2.3% of other Latin American countries. Over 35% of the Latino population was born outside of the U.S. Latinos, like other ethnic minority groups vary greatly in education, income, age, geographic location, and time since migration to the U.S.

Despite the fact that most Latinos do not live in poverty, rates of poverty among Latinos are strikingly high. According to the 2007–2011 American Community Survey, 14.3% of the U.S. population had income below the poverty level (\$23,550 for a family of four). The Latino population had a poverty rate of 23.2%, 9 points above the national mean, becoming the third poorest ethnic group after African American and American Indians. Among different cultures within the Latino community, poverty rates ranged from 16.2% for Cubans to 26.3% for Dominicans

Childhood poverty remains a significant problem in the United States, especially in minority communities. Although, children represent 24% of the U.S. population, they comprise 34% of those in poverty. Approximately 45% of children live in low-income families (\$47,248 for a family of four), half of whom live in poor families (\$23,550 for a family of four), representing 22% of the children population in the U.S. Young children under the age of 6 are even more vulnerable, with 49% living in low-income families and 25% living in poor families (National Center for Children

in Poverty, 2011). The problem is exacerbated in Latino communities, which have the highest proportion of young children affected by poverty (U.S. Census Bureau, 2011). Latino children under the age of six constitute 37% of young children living below the poverty line. Differences in child poverty rates between immigrant families and those with U.S.-born parents are striking; about 30% percent of children in immigrant families live in poverty versus 19% of children with U.S.-born parents (National Center for Children in Poverty, 2011). The vast majority of poor children in both established and recent immigrant families are of Latino origin, constituting 78% and 72% of poor children, respectively. Given the disproportionately high percentage of Latino children living in poverty and the expected growth of the Latino population in the coming years, it is critical that we work towards gaining a better understanding of the many social, cultural and environmental factors that influence healthy development in young, low-income Latino children.

### **1.2. Social-emotional competence in preschool children: the key for success**

Social-emotional competence represents one's capacity to establish and sustain secure relationships with peers and adults in a social context as well as regulate and express emotions in an age-appropriate manner (Rose-Krasnor & Denham, 2009). Research has demonstrated that social-emotional competence during the preschool years predicts various outcomes later in life, including mental health and academic performance (Raver & Knitzer, 2002; Shonkoff & Phillips, 2000).

Rosed-Krasnor and Denham (2009) describe a set of "foundational skills" that underlie social-emotional competence: self-regulation, social-awareness, social problem solving, and prosocial orientation. Self-regulation is defined as the ability to regulate arousal and emotional responses; it allows children to inhibit certain behaviors, direct their attention, wait for gratification, or switch between tasks (Rose-

Krasnor & Denham, 2009). Research has demonstrated that self-regulation facilitates peer and adult relationships (Eisenberg, Fabes, Guthrie, & Reiser, 2000; Spinrad et al., 2006) and hinders problem behaviors, such as aggression and withdrawal (Calkins & Fox, 2002). Another component of social-emotional competence is social awareness, or the ability to understand others' thoughts and feelings. Although understanding the feelings of others can be challenging for younger preschoolers, older preschoolers have demonstrated the ability to recognize emotions and take others' perspective. These skills predict peer and teacher ratings of social competence (Denham et al., 2003). The third component of social competence is social problem-solving, or the capacity to think about social problems (e.g. "A peer took their toy I wanted. What can I do?"), manage and direct one's behavior to find a solution. The ability to encode and analyze social situations and determine effective ways to solve problems has been linked to academic success (Greenberg, Kusche, & Riggs, 2001; Youngstrom, Wolpaw, et al., 2000) and decreased problem behavior (Webster-Stratton & Lindsay, 1999). Finally, prosocial orientation, or the ability to feel empathy for others and act in ways that benefit others, also predicts parent-rated social competence and has been positively associated with peer acceptance and friendship quality (Clark & Ladd, 2000; Walker, 2005). In preschool, prosocial behaviors, such as cooperating, sharing, comforting, defending, or helping, can be observed during peer play. Rosed-Krasnor and Denham (2009) also highlighted the importance of communication skills and socio-dramatic play as part of the skills that comprise social-emotional competence. In summary, there is vast evidence that social-emotional skills are fundamental in achieving social competence and avoiding behavioral problems.

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One way of assessing social-emotional competence in preschool children is through the assessment of social and behavioral functioning (Denham, Wyatt, Bassett, Echeverria, & Knox, 2009). Social-emotional competence is most often measured by assessing children's social skills and problem behaviors. Social skills describe children's ability to initiate and maintain play interactions with peers and include skills like cooperation (e.g., helps with tasks), self-assertion (e.g., self-confident, introduces self), responsibility (e.g., questions unfair rules, asks to use others' property without using aggression), and self-control (e.g., controls temper, attends to instructions) (Gresham & Elliott, 1990; Guralnick, 1993). Problem behaviors in preschool have been conceptualized as externalizing or aggressive behaviors and internalizing or withdrawn behaviors. Some studies investigating determinants of preschool child development tend to focus more on dysfunctional behaviors (externalizing and internalizing behaviors) for their implications in later psychopathology (Bradley & Corwyn, 2012; Kok et al., 2013; Trentacosta et al., 2008), dismissing important healthy social behaviors, such as interacting with others, engaging in play activities, cooperating and being assertive, that represent a key aspect of social-emotional competence. It has been suggested that focusing on deficits rather than strengths leads to stigmatization, especially among populations who already experience marginalization and disenfranchisement on a regular basis, such as those living in poverty and minority communities (Fantuzzo, Perry, & McDermott, 2004; Raver, 2004; Raver & Zigler, 1997). As a result, for the past two decades, researchers argued the importance of examining factors that support the development of social skills and prevent problem behaviors, rather than only studying those correlated with the appearance of dysfunctional behaviors (Masten & Coatsworth, 1998; Masten et al., 1995). In the preschool years, social competence has been

positively associated with later school performance, peer acceptance, and mental and physical health (Raver & Knitzer, 2002; Shonkoff & Phillips, 2000). Conversely, early externalizing and internalizing problems, such as aggressive and withdrawn behaviors in interaction with peers and adults, have been linked to increased levels of psychiatric diagnosis and related problems later in childhood (Feng et al., 2008; Moffitt & Caspi, 2001). Therefore, examining both social competent behaviors and problem behaviors provides a complete picture of the child's social-emotional development. The current study examines both social competence and internalizing and externalizing behaviors.

The transactional nature of social-emotional competence also requires studying competence and problem behaviors through different contexts. Different contexts, like family, school or community, may entail different goals and expectations (Achenbach, McConaughy, & Howell, 1987; De Los Reyes & Kazdin, 2005; Grusec & Hastings, 2008; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Many studies examining social-emotional development in early childhood tend to focus on either parents or teachers' reports of child development. The current study assesses child social-emotional outcomes through reports of both parents and Head Start teachers to account for possible differences between home and school, and examines whether the relationship between cumulative risk, mother-child relationship and child social-emotional outcomes varies by context (home v. school).

#### **1.2.1. Social-emotional competence in Latino poor children**

As early as age 3, Latino children have been reported to exhibit lower levels of cognitive and language skills relative to white peers (Galindo & Fuller, 2010; Reardon & Galindo, 2009). These gaps in academic performance remain throughout the school years (Buysse, Castro, West, & Skinner, 2005; Crosnoe, 2006, 2007; Fuller

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et al., 2009). However, recent empirical work suggests that, despite the gap in academic performance, Latinos show robust social-emotional competence outcomes in preschool (Crosnoe, 2006; Guerrero et al., 2012). Latino preschoolers display self-control, interpersonal skills, approaches to learning, internalizing and externalizing behaviors at levels equal to those of white non-Latino peers (Galindo & Fuller, 2010; Guerrero et al., 2012). Only Latino children living in the poorest households show gaps in social-emotional competence when compared with white peers, and these differences are smaller than disparities in mathematical knowledge and pre-literacy skills and are smaller than the disparities in social-emotional competence seen in children from other low-income, minority communities (Galindo & Fuller, 2010). Some suggest that social competence in Latino children may contribute to growth in academic performance during kindergarten, helping to reduce the academic achievement gap (Galindo & Fuller, 2010).

Despite the growing interest in studying Latino children's development, limited research focuses exclusively on economically poor Latino children (García Coll et al., 1996; Huston et al., 1994). Understanding proximal and distal contextual variables that influence social-emotional competence in Latino preschool children living in poverty is essential, as they may have protective effects on children's academic success and mental health (Raver, 2004; Raver & Zigler, 1997). Research suggest that supportive parenting in Latino homes may nurture social competence of school age and adolescent children and protect them from adverse socio-economic conditions explaining the small disparities in social competence between Latino and White peers (Crosnoe, 2006; Fuligni, 1997) . However, there is a scarcity of research examining the role of supportive parenting in low-income Latino families raising preschool age children and facing risks associated with poverty. The current study

examines how the quality of the mother-child relationship influences children's social-emotional competence in the context of maternal cumulative risk among a sample of economically poor Latino families. Ecological theory, described in the next section, provides a theoretical framework for the current study as it considers how the child develops in interaction with the immediate environment, as well as how aspects of the larger context influence him and his immediate environment (Bronfenbrenner & Morris, 2007).

### **1.3. The etiology of social-emotional competence: a bio-ecological model of development**

According to ecological theories, child development occurs within a dynamic environment in which distal and proximal factors shape child growth in different domains (Bronfenbrenner & Morris, 2007). Child development is influenced by individual characteristics (i.e., gender, temperament, age), the microsystem, made up of the proximal social and physical environment (i.e., parent, sibling, teacher and peer relationships) and the mesosystem, which consists of interactions among the various settings of his immediate environment (i.e., the interaction between the child and the parent). Distal and broader social settings, such as economic processes (i.e., the exosystem level, such as socioeconomic status, parental employment or education, quality of life) which are influenced by the societal and cultural norms (i.e., the macrosystem level, such as inadequate health care, political/societal decisions that negatively affect housing and education, or discrimination) also impact child development in a more indirect way through their effects on proximal contexts (Bronfenbrenner, 1979). In sum, the Ecological Model offers theoretical support for considering the various social-contextual factors that may impact the child's social-emotional development, including factors that are more proximal to the child (i.e.,

child characteristics and parent-child relationships), and factors that are more distal (i.e., poverty, environmental risk factors, cultural beliefs).

In the following sections, we review evidence of proximal and distal factors relevant for the current study that influence social-emotional competence. With regard to proximal factors, we focus on child characteristics and the quality of parent-child relationship; distal factors discussed below focus on cumulative risk in the context of poverty. Although we discuss many studies that relied on national samples, particular attention is given to those comprised of Latino children.

### **1.3.1. Child characteristics**

Individual factors affect the way children develop social-emotional competencies. Child-specific risk factors commonly studied include temperament, individual biological risks, and developmental delays. Infant and toddler temperament has been associated concurrently and longitudinally to social-emotional outcomes. Difficult temperament, characterized by high emotional reactivity and poor regulatory control, predicts behavioral problems, such as aggression and interpersonal conflict (Bates, Bayles, Bennett, Ridge, & Brown, 1991; Rubin, Burgess, & Hastings, 2002; Sanson, Oberklaid, Pedlow, & Prior, 1991). On the other hand, an inhibited, fearful temperament increases the risk of developing internalizing behavior problems such as anxiety, withdrawal, and symptoms of depression (Fox, Schmidt, Calkins, Rubin, & Coplan, 1996; Kagan & Snidman, 1999; Rubin et al., 2002). Biological risks that have been found to impact social-emotional development include low weight or preterm birth (Grunau, Whitfield, & Fay, 2004) and low neonatal cardiac vagal tone (Doussard-Roosevelt, Porges, Scanlon, Alemi, & Scanlon, 1997; Feldman & Eidelman, 2009). Neurodevelopmental disorders and developmental delays also predict social-emotional development (Egger & Angold, 2006; Herring et al., 2006).



Research has shown that preschool children with developmental delays (e.g., cognitive, motor, language/speech, social/emotional, and self-help/adaptive delays) exhibit less social interaction and independence, increased isolated behavior and social withdrawal (Baker et al., 2003), and increased risk to develop externalizing problems (Feldman, Hancock, Rielly, Minnes, & Cairns, 2000)

In addition to impacting one's own developmental trajectory, child-specific risks influence the context in which a child grows up. Research has shown that early child-specific risks-factors increase stress in caregivers and may challenge parenting. For example, some studies have revealed that having a child with a developmental delay increase the risk of decreased maternal sensitivity and increased negative parenting (Brown, McIntyre, Crnic, Baker, & Blacher, 2011; Moran, Pederson, Pettit, & Krupka, 1992). Simultaneously, children's early environment may also modify developmental trajectories by fostering resilience in children who possess individual risk factors early in life. Research on child temperament has offered some evidence about the potential mediating and moderating role of parenting (Bradley & Corwyn, 2008; Rubin et al., 2002). For example, Rubin (2002) showed that toddlers with inhibited temperament would only show withdrawn behaviors at preschool when their mothers were controlling. Similarly, Bradley (2008) demonstrated that when children with difficult temperament had supportive and stimulating parents, problem behavior decreased. Both studies suggested a moderating role of parenting practices. A more recent study, which followed children at-risk of developing a developmental delay through preschool, showed that maternal scaffolding and shared pleasure decreased the risk of later diagnoses of developmental delay after controlling for early risk of developmental delay (Fenning & Baker, 2012). Although growing interest in the role parenting plays in mediating and moderating the effects of early risk on child

development, few have specifically examined the mediating and/or moderating role of parenting specifically in Latino communities. In the current study, we use developmental delay status as an indicator of child risk and examine the association between developmental delay, quality of the mother-child relationship, and child social-emotional development in a sample of economically disadvantaged Latino preschoolers.

### **1.3.2. Parenting and parent-child relationship**

Ecological theories posit that child development occurs within a dynamic environment in which distal and proximal factors shape child growth in different domains (Bronfenbrenner & Morris, 2007). Proximal influences, such as a supportive parenting, create the opportunity to encourage socially accepted behaviors and convey a sense of security to the child, supporting his/her ability to socialize and regulate emotion, as well as his/her behavior in other contexts (Raikes, Robinson, Bradley, Raikes, & Ayoub, 2007; Sroufe, 2000). The quality of the parent-child relationship often refers to parental responses during interactions with the child as well as parents' perceptions of the parent-child relationship (Pianta, 1999; Sayre, Pianta, Marvin, & Saft, 2001). While parental responses can be conceptualized as a combination of independent (McElwain & Volling, 1999), approaches that combine individual aspects of parenting into broad constructs are more common (Baumrind, 1975; Cabrera et al., 2011). One dimension of parenting frequently discussed is sensitivity, which Ainsworth and her colleagues (1974) defined as a combination of awareness and interpretation of child cues, as well as promptness and appropriateness of response. Most researchers have included other aspects of parenting behaviors in their definitions of the construct, including parental affect (Bradley & Corwyn, 2007; van Doesum, Hosman, Riksen-Walraven, & Hoefnagels, 2007), positive regard towards

the child (Mills-Koonce, Propper, & Barnett, 2012; NICHD, 1999, 2006), the consistency of parental demands and responses (Lohaus, Keller, Ball, Elben, & Voelker, 2001; Lohaus, Keller, Ball, Voelker, & Elben, 2004), responsiveness to non-distress signals (NICHD, 1997, 2005), scaffolding behaviors (Bigelow et al., 2010; Biringen & Robinson, 1991), stimulation of cognitive development (Mills-Koonce et al., 2012), awareness of the child's state (Marfo, 1992), and lack of intrusiveness (Bradley & Corwyn, 2007; NICHD, 2005). The construct of sensitivity has also been conceptualized as supportive parenting often characterized by warmth responses, nurturance and positive regard toward the child, encouragement of autonomy, and scaffolding of children's behaviors (Cabrera et al., 2011; Davis & Logsdon, 2010; Laible & Thompson, 2007). Supportive maternal responses during interactions with children have shown stability and consistency over time more so than child behaviors (Else-Quest, Clark, & Owen, 2011).

A body of research has described the concurrent and longitudinal effects of supportive responses observed during parent-child interactions on child social-emotional competence. In infants and toddlers, supportive mothering has been positively associated with children's social competence and emotional regulation over time (Brophy-Herb et al., 2011; Brophy-Herb, Zajicek-Farber, London Bocknek, McKelvey, & Stansbury, 2013; Spinrad et al., 2007), and has shown a protective effect on problem behaviors (Glick, Hanish, Yabiku, & Bradley, 2012; Kok et al., 2013). Supportive home environments predict peer competence and interactive play with peers (Fantuzzo, Tighe, McWayne, Davis, & Childs, 2003). Observed maternal supportive responses have also been associated with social competence and problem behavior in preschool years (Denham et al., 1991; Pianta, 1999). Some have reported that forms of supportive parenting, such as maternal warmth (comfort, connection and

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positive engagement with the child), show a positive impact on preschool children's social competence as reported by parents (Lengua et al., 2007). Others found that higher levels of maternal nurturance (conceptualized as support, stimulation, acceptance and involvement with the child) predicted lower levels of externalizing and internalizing behavior in preschool children (Diener & Kim, 2004; Trentacosta et al., 2008).

The quality of the parent-child relationship has also been assessed through parents' perceptions and insights. Parental perception of a positive and warm parent-child relationship has been associated with increased social-emotional competence and enhanced children peer play in preschool children, while parental perception of conflict and negativity has been associated with increased problem behaviors (Driscoll & Pianta, 2011; Howes & Stewart, 1987). Therefore, not only does the observed supportiveness during parental interactions with the child predict social-emotional competence, but parental perception of the parent-child relationship predicts it as well, making the association more robust. However, despite the fact that research has demonstrated the positive impact of supportive parenting on children's social competence and behavior, most studies either did not include Latino children in their sample or only included a small, non-representative group of them in the sample (Diener & Kim, 2004; Lengua et al., 2007; Trentacosta et al., 2008).

Few studies have examined the relationship between observed supportive parenting and child social-emotional competence specifically in Latino families, and findings have not been as consistent (Bernstein, Harris, Long, Iida, & Hans, 2005; Brady-Smith et al., 2012; Fuligni et al., 2012; Guerrero et al., 2012). While some studies have suggested a positive relationship between observed supportive parenting and social-emotional competence (Bernstein et al., 2005; Brady-Smith et al., 2012),

others have not found such a relationship (Fuligni et al., 2012; Whiteside-Mansell, Bradley, & McKelvey, 2009). This lack of consensus may be in part because of the wide variety of methods, population sampling, and outcomes used in these studies.

Most studies focused on Latino children and parents have examined supportive parenting in infants and toddlers. Two studies using data from the Early Head Start (EHS) Research and Evaluation Project, consisting of low-income families, consistently found positive effects of supportive parenting on language and cognitive development, but effects on social-emotional outcomes were mixed. Fuligni et al. (2012) found that in low-income Latino families observed supportive mothering across the first three years of a child's life did not predict child problem behavior. However, Brady-Smith et al. (2012) examined patterns of mothering and found that among Mexican American mothers directive (compared to supportive) mothering was associated with lower rates of child emotional regulation. In these two studies, supportive parenting was conceptualized as a composite of different dimensions, such as sensitivity, positive regard, and cognitive stimulation. Others studying the effects of each parenting dimension separately found that, in Latino families, parental cognitive stimulation and harsh discipline at 24 months predicted higher levels of social-emotional competence at 48 months while praise and warm affect did not predict child outcomes (Guerrero et al., 2012).

Fewer studies have focused on parenting in low-income Latino preschoolers, and these also found mixed results (Bernstein et al., 2005; Whiteside-Mansell et al., 2009). Using the revised Parent-Child Observation Guide, (PCOG:Bernstein, Percansky, & Hans, 1987), Bernstein and colleagues (2005) found that sensitivity and teaching were positively associated with social skills reported by parents but were not associated with social skills reported by teachers or with externalizing behavior. In

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contrast, Whiteside (2009) did not find any relationship between different aspects of supportive parenting and child social-emotional outcomes in a sample of Head Start preschoolers.

Concerns have been raised about whether key aspects of supportive parenting (e.g. warmth and sensitivity) may be expressed differently across cultures. While there is consensus that the dimension of supportive parenting is universal, research suggests that behaviors such as physical closeness and verbal interactions may not be equally important or valued across cultures (Bornstein et al., 1992; Brooks-Gunn & Markman, 2005; Rogoff, 2003). Some argue whether observational tools developed using European American families effectively capture all parenting behavior in other groups (Fuligni & Brooks-Gunn, 2012). This controversy could partly explain the inconsistent results. Some research has suggested that self-reported measures also developed by the mainstream culture may be less sensitive to cultural differences than observed measures in certain minority groups (Chan, Penner, Mah, & Johnston, 2010; Ho, Bluestein, & Jenkins, 2008; Whiteside-Mansell et al., 2009).

In sum, the scarce research and the mixed results in the current literature call for further research to understand the role of supportive mothering on the social-emotional competence of low income, Latino preschoolers. Therefore, the first goal of this study is to examine the variability in observed supportive mothering and self-reported quality of the mother-child relationship and test the association between these variables and child social-emotional outcomes across diverse ecological contexts (i.e. home, school) and within economic (low income) and ethnic contexts (Latino) in order to explore specific areas of intervention for this population (García Coll et al., 1996). We included a combination of measures that examined observed mother-child interaction and parents' perception of the parent-child relationship and

assessed whether these measures were differentially associated with child social-emotional outcomes and mediated the association between cumulative risk and child outcomes.

### **1.3.3. Cumulative risk**

Consistent with both ecological (Bronfenbrenner & Morris, 2007) and transactional theories (Sameroff, 2009), distal family contextual variables also impact child development. It is well established that living in poverty leads to increased risk of social-emotional delays in children (Barnett, 2008; Brooks-Gunn, Duncan, & Aber, 1997; Shonkoff & Phillips, 2000). Researchers have identified numerous risk factors in children's environments that negatively impact development, thereby increasing the likelihood of adjustment problems later in life (Sameroff, Seifer, Baldwin, & Baldwin, 1993; Webster-Stratton & Hammond, 1998). This is especially true for children living in poverty, as they tend to experience a higher number of risk factors and more unfavorable outcomes (Pungello & et al., 1996). Rutter (1979) was among the first to state that it is the accumulation of risk factors that a family experiences, rather than any single risk factor in isolation, that best predicts children's developmental outcomes (Appleyard, Egeland, van Dulmen, & Alan Sroufe, 2005; Rutter, 1979; Sameroff & Seifer, 1983b).

Findings of the *Rochester Longitudinal Study (RLS)* conducted by Sameroff and his colleagues (1983) demonstrated that while single risk factors predicted differences in outcomes, they did not explain a large portion of outcome variance. The sum of the risk factors present for each individual, known as cumulative risk index, was the more robust predictor of child academic outcomes; children exposed to a larger number of risk factors were more likely to exhibit poor academic outcomes (Sameroff et al., 1998). These findings have been replicated in many studies. More

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recent studies have demonstrated that children who experience higher levels of cumulative risk exhibit poorer academic outcomes (Gassman-Pines & Yoshikawa, 2006; Swanson, Valiente, & Lemery-Chalfant, 2012), more problem behaviors (Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999; Appleyard et al., 2005) and poorer social functioning (Lengua et al., 2007).

The cumulative risk index is typically computed by summing dichotomized single risk factors where the presence of risk is counted as one and the absence of risk as zero (Sameroff, Seifer, & McDonough, 2004). Although the process of dichotomization sacrifices some data and prevents researchers from analyzing differential effects between risk factors, the cumulative risk index approach offers “the most comprehensive assessment of overall adversity experienced by the child” (Luthar, 1993, p.445). In addition, it is especially useful when a large set of risk factors are assessed using a small sample (Burchinal, Roberts, Hooper, & Zeisel, 2000). Studies of cumulative risk typically combine risk factors drawn from different domains of the ecological context. Socioeconomic conditions (e.g. poverty), family characteristics (e.g. single parenting, teenage parenting, and low levels of parental education), and psychosocial factors (e.g. maternal depression and levels of stress among others) (Belsky, Bell, Bradley, Stallard, & Stewart-Brown, 2007; Cicchetti, Rogosch, & Toth, 1998; Coley & Chase-Lansdale, 1998; Crnic, Gaze, & Hoffman, 2005; Dougherty, Tolep, Smith, & Rose, 2013; Fuller et al., 2010; Galindo & Fuller, 2010; McLoyd, 1990; Waldfogel, Craigie, & Brooks-Gunn, 2010; Zeiders, Roosa, & Tein, 2011). Some studies also include more proximal factors in the cumulative risk index, such as the biological factors (e.g., low birth weight; (Adams, Hillman, & Gaydos, 1994), and parenting behaviors (Corapci, 2008; Gassman-Pines & Yoshikawa, 2006). However, the inclusion of these factors, specifically those related



to parenting, prevent researchers from examining the mediating role of supportive parenting responses on the relationship between cumulative risk and child outcomes, which is implied by both transactional and ecological models of development. These models suggest that cumulative risk influences child development by altering parenting and affecting the parent-child relationship. Therefore, to examine the ability of supportive parenting to buffer the effects of cumulative risk, parenting quality should not be included as part of the cumulative risk count (Ackerman et al., 1999; Belsky, 1997; Belsky et al., 2007; Cabrera et al., 2011; Guo & Harris, 2000; Trentacosta et al., 2008).

Economically disadvantaged Latino families, who represent a disproportionate number of those living in poverty in the US, are exposed to an array of co-occurring, socio-environmental risk factors, such as low maternal education, teen pregnancy, single-parent households and high levels of environmental stress (Cauce & Domenech-Rodríguez, 2002; García & Miller, 2008; National task force on early childhood education for Hispanics, 2007). Evidence of cumulative risk has been documented in Latino low-income populations (Marcella, Howes, & Fuligni, 2014), yet research examining how cumulative risk influences social competence and problem behaviors in Latino preschoolers is limited. Most research examining the influence of cumulative risk on child outcomes in this population has focused on school-aged children and adolescents and revealed detrimental effects of cumulative risk on social-emotional development (Loukas, Prelow, Suizzo, & Allua, 2008; Prelow & Loukas, 2003).

### **1.3.4. Cumulative risk, parenting quality, and social-emotional competence: a mediational model**

In this section, we review evidence that cumulative risk may be related to both social competence and problem behavior through its influence on parenting behavior and quality. There is vast evidence showing the negative impact of single risk factors on parenting. To cite a few, lower socioeconomic status, teenaged pregnancy or, maternal depression have been associated with lower maternal warmth and higher negativity and harsh parenting (Dodge, Pettit, & Bates, 1994; Mistry, Biesanz, Taylor, Burchinal, & Cox, 2004; Network, 1997, 2005; Pettit, Bates, & Dodge, 1997). In the last decade, there has been a growing interest in examining the relationship of cumulative risk and parenting in early childhood. Cross-sectional studies have demonstrated that higher levels of cumulative risk are associated with higher levels of harsh parenting and lower levels of positive engagement at 6 months (Burchinal, Vernon-Feagans, Cox, & Investigators, 2008) and with higher levels of maternal negative affect and reduced scaffolding behaviors at 36 months (Lengua et al., 2007). Longitudinal studies have revealed similar results. Exposure to higher levels of cumulative risk during infancy predicted lower levels of maternal supportiveness and positive affect during parent-child interaction at 24 and 36 months respectively (Cabrera et al., 2011; Kochanska, Aksan, Penney, & Boldt, 2007; Trentacosta et al., 2008) , and lower levels of parental responsiveness at 30 months (Popp, Spinrad, & Smith, 2008). Cumulative risk during infancy had a similar effect on mother-child interactions at 48 months, reducing expression of positive emotion, increasing negative emotion, and decreasing maternal involvement (Barocas et al., 1991).

Conger et al. (1994) family process model posit that the accumulation of risk factors compromises parenting, limiting parents' ability to be supportive while

favoring more negative or intrusive behaviors (Conger et al., 1992; Conger, Ge, Elder, Lorenz, & Simons, 1994). Similarly, McLoyd's (1998) person-process-context model argues that cumulative risk has a detrimental effect on child development by disrupting parenting. Recent research has shed some light on this issue. Trentacosta et al. (2008) revealed an indirect effect of cumulative risk on externalizing and internalizing problems at age 4 through its negative effects on nurturing and involved parenting. Interestingly, when the effect of parenting was taken into account, the direct relationship between cumulative risk and problem behavior faded, suggesting that during early childhood, parents' capacity to cope with stress is essential in reducing detrimental effects of contextual risk. Cabrera et al. (2011) also found evidence for a mediating role of supportive mothering explaining the negative effect of cumulative risk on social competence at 24 months. However, maternal supportiveness and child outcomes were coded from the same mother-child interaction, which likely introduced measurement bias. Despite early evidence suggesting the mediational role of parenting predicting the effects of cumulative risk on social-emotional development, research evaluating these mediational models in early childhood remains scarce (Lemelin, Tarabulsy, & Provost, 2006; Mistry, Benner, Biesanz, Clark, & Howes, 2010; Rhoades, Greenberg, Lanza, & Blair, 2011), particularly for Latino families. Within the few studies that have examined the effects of the quality of mother-child interaction on low-income Latino preschoolers' social-emotional competence, none have taken into consideration the effects of cumulative risk, although they have controlled for single risk factors (Bernstein et al., 2005; Brady-Smith et al., 2012; Fuligni et al., 2012; Guerrero et al., 2012). Therefore, the second goal of the present study was to examine the impact of cumulative risk on social competence and problem behavior and study whether the quality of the mother-

child relationship mediates the relationship between cumulative risk and social-emotional competence in a sample of low-income, Latino preschool children.

### **1.3.5. Early childhood programs: Head Start as a compensatory model**

Preschool programs offer young children the opportunity to develop academic and social-emotional abilities, and are especially beneficial for children from low-income families (Abbott-Shim, Lambert, & McCarty, 2003; Karoly, Kilburn, & Cannon, 2006; Manning, Homel, & Smith, 2010; Weiland & Yoshikawa, 2013). Head Start was designed to address the needs of young children, aged 3 to 5 years, living in poverty (Zigler & Styfco, 1994), and research suggests that Head Start may have a moderate impact on multiple areas of child development (Puma et al., 2010). Some evidence indicates that greater exposure (e.g. hours of care, time of instruction, or number of years/months attended) to preschool programs like Head Start leads to positive social-emotional outcomes (Hubbs-Tait, Culp, Culp, & Miller, 2002; Jenkins, Farkas, Duncan, Burchinal, & Vandell, 2014; Reynolds et al., 2014; Tarullo, Xue, & Burchinal, 2013). The Head Start impact study followed children who entered Head Start at 3 and 4 years old and compared them with community children attending other preschool programs. For the 3 year-old cohort, Head Start appeared to have a small but significant impact as children who attended had increased social skills and reduced hyperactive behavior at kindergarten entry. No impact on the social-emotional domain was observed for the 4 year-old cohort (Puma et al., 2010). Additionally, a recent study using 2006 and 2009 FACES data compared children who had been exposed to Head Start for one year to those who had attended for two years, and found stronger developmental outcomes across domains for children who had attended the program for two years, which included improved social skills and fewer behavior problems (Tarullo et al., 2013). Others studies have also found larger

gains for 2-year participation over 1-year participation (Domitrovich et al., 2013; Lee, 2011; Wen, Leow, Hahs-Vaughn, Korfmacher, & Marcus, 2012).

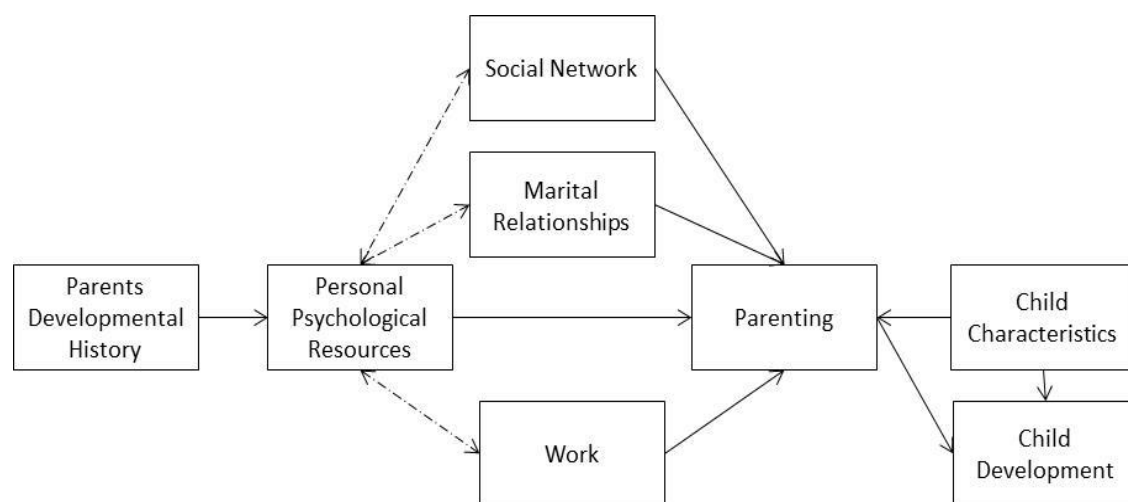
Head Start was created as a compensatory program aimed to counterbalance the disadvantages of growing up in poverty (Zigler & Styfco, 1994). Although research examining the evidence of compensatory effects of Head Start is limited, some studies support the theory that participation in Head Start compensates for risk in the home lives of children (e.g. poverty, poor maternal education, and poor parenting). Puma and Connell (2001) compared first grade children who had attended Head Start with children who did not attend Head Start and showed that, despite the fact that Head Start children came from families with lower incomes, lower maternal education, and had higher rates of disabilities, there were no significant differences in academic achievement. However, these results were cross-sectional and did not take the risk levels before first grade into account. Others have examined the compensatory effects within Head Start. For example, Hubbs-Tait et al. (2002) reported that, among children who experienced higher levels of cumulative risk (poverty, intrusive and non-stimulating parenting, and maternal depression); increased exposure to Head Start was associated with higher receptive language (PPVT-R scores). The same study also found that, increased exposure to Head Start was associated with improved social-emotional development regardless levels of cumulative risk (Hubbs-Tait et al., 2002). Similarly, others found that academic benefits of 2-year participation versus 1-year were greater among children with 4 or more family risk factors. Unfortunately they did not assess social-emotional outcomes (Lee, 2011). These results suggest that exposure to Head Start may compensate for family risk in some areas of development.

Research has demonstrated that aspects of the home and the school environment influence child behavior. A supportive and warm parent-child relationship has a positive impact on child development and social-emotional competence in particular (Sroufe, 2000). Additionally, aspects of the Head Start context (e.g. quality of the classroom, teacher-child relationship, or exposure to the program) foster social-emotional development (Myers & Morris, 2009; Pianta, Barnett, Burchinal, & Thornburg, 2009). To our knowledge, no studies have specifically explored the simultaneous association of exposure to Head Start (number of years/months attended) and quality of the parent-child relation with children's social-emotional outcomes. Thus, although there is clear evidence of the positive effects of both supportive parenting and higher exposure to Head Start individually, the interaction between these two variables and their combined effect on social-emotional development has not yet been explored.

#### **1.4. The determinants of parenting**

Based on research examining the etiology of child maltreatment, Belsky (1984) developed a model that suggests three sources of influence on parental functioning; 1) parents' developmental histories, personal psychological resources and well-being, 2) child's characteristics, and 3) contextual sources of stress and support, such as marital relationships, work and social networks (Belsky, 1984). Beyond contextual risks, other factors influence parenting and thus the quality of the parent-child relation. Belsky found some evidence to suggest that these three factors not only explained negative and harsh parenting but also influenced parenting that falls within the range of normal functioning, therefore supporting the idea of a continuum of influence. Based on previous research, Belsky hypothesized that parent's developmental histories influence parental well-being, which in turn

influences the broader context and parenting behaviors. Parents' characteristics and psychological resources guide in part the relationships they build with others, and broader social networks as well as occupational experiences. This relationship is bidirectional - experiences occurring within the broader context in which parent-child relationships occur also influence parents well-being which will influence child development through parenting practices (see figure 1 for a graphical example). Belsky's model serves as a broad framework for developmental researchers to study the processes by which parents' developmental histories, and more specifically, childhood experiences with their own parents, influence parenting.



*Figure 1.* Adapted from Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55, 83-98.

#### 1.4.1. The intergenerational transmission of parenting

It is well documented that the nature and quality of parenting is transmitted across generations (Belsky, Conger, & Capaldi, 2009). Van Ijzendoorn (1992) described the intergenerational transmission of parenting as “the process through which, purposively or unintendedly, an earlier generation psychologically influences

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parenting attitudes and behavior of the next generation” (Van Ijzendoorn, 1992, p.76). In his review, Van Ijzendoorn differentiated the influence of genetic and contextual factors on parenting from the psychological transmission of parenting. Not only do mothers/fathers share genes with their own parents, they also have shared social and physical contexts. Both the shared genes and social contexts facilitate the continuity of parenting, however, the intergenerational transmission of parenting focuses specifically on the influence of a parent’s own childhood experiences on their parenting practices and attitudes, rather than on transmission associated with genetics or shared context (like live in the same house or the same neighborhood where their parents lived).

Several mechanisms through which parenting is transmitted from one generation to the other have been suggested (Crittenden, 1984; Crittenden & Bonvillian, 1984; Simonton, 1983). Simonton (1983) proposed the role-model hypothesis as a social learning process by which the child emulates parenting. Crittenden (1984) presented three transmission models. Parenting would be transmitted through experiences interacting with their own parents, observation of their parents’ interactions with other children, and parental scaffolding of the child interacting with other children. These models provide a foundation for understanding the various means of parenting transmission.

Early studies on intergenerational transmission of parenting focused on abusive and harsh parenting (Belsky, 1993; Egeland, Jacobvitz, & Papatola, 1987; Egeland & Susman-Stillman, 1996; Main & Goldwyn, 1984). Various studies examining three generations (grandparents, parents and children) showed that early experiences of parental abuse and insensitive parenting predicted individuals’ later abusive behavior with their own children, even after controlling for socioeconomic



status, psychological well-being, and parenting beliefs (Capaldi, Pears, Patterson, & Owen, 2003; Conger, Neppl, Kim, & Scaramella, 2003). Meanwhile, Simons et al. (1993) examined the intergenerational transmission of both supportive and harsh parenting using data from the *Iowa Youth and Families Study*. Results revealed a positive association between reports of a supportive relationship with the respondents' own parents and reported satisfaction with the relationships respondents had with their children, various parenting beliefs and supportive parenting practices as parents (Simons, Beaman, Conger, & Chao, 1993). Similarly, attachment researchers revealed that parents who recalled more warmth and acceptance from their own parents tended to be more responsive to their infants. (Main, Kaplan, & Cassidy, 1985; Steele, Steele, & Johansson, 2002; van IJzendoorn, 1995). Research found that mothers/fathers who had secure attachments with their own parents were more responsive and accepting of their infants (Haft & Slade, 1989), providing initial evidence of the intergenerational transmission of supportive parenting.

Recent longitudinal studies have added more robust evidence to the transmission of supportive parenting. Belsky et al. (2005) followed children from age 3 until they had their first child, which was, on average, at 23 years of age. Results showed that a positive childrearing history measured independently in three developmental periods (early childhood, middle childhood, and early adolescence) predicted warm, sensitive, and stimulating interactions between mothers and their toddlers, even after controlling for the effects of the toddlers' behavior (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005a). The experience of parental support and acceptance during adolescence has also been linked to supportive parenting (Chen & Kaplan, 2001) of one's own children. In an effort to examine the mechanism through which parenting was transmitted from one generation to the other, Chen & Kaplan

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(2001) showed that positive experiences with parents during adolescence had a positive influence on interpersonal relationships and social participation in educational and organizational settings, and that in turn had a positive impact on later supportive parenting. Nonetheless, the direct effect of the experience of supportive parenting on later supportive parenting remained significant after accounting for the effects of interpersonal relationships and social participation. These results highlight a two-way transmission model. Parenting is transmitted through a social learning process, by which early experiences with caregivers have a direct effect on later parenting. At the same time, other experiences, such relationships formed in childhood and adolescence (friends, teachers, and intimate partners) and experiences in other educational contexts (school, voluntary organizations, political participation) also help explain the continuity of parenting and function as mediational mechanisms.

While there is vast evidence showing that childhood experiences influence later parenting practices, less research has examined how adults can change and modify learned parenting practices. Egeland & Farber (1984) suggested that when harsh-insensitive parenting has been experienced, protective factors, like positive relationship experiences or “corrective emotional experiences,” may break the intergenerational transmission of parenting. Having a supportive adult available during childhood, like a grandparent or a teacher, having a caring and supportive romantic partner, or establishing a positive relationship with a therapist could reduce the effects of negative parenting experiences (Egeland & Farber, 1984). For example, a recent study showed that mothers who experienced harsh and hostile parenting did not transmit the negative parenting behaviors if their romantic partners were warm and supportive with children (Conger, Schofield, & Neppl, 2012). It may be that romantic partners provide a role model of supportive parenting that reduces the

negative effects of harsh parenting during childhood. Therefore, as attachment theorists posit, developmental trajectories may change when experiences offer the opportunity to modify expectations about self, others, and relationships, despite the significant influence of relationships experienced during childhood (Ainsworth & Eichberg, 1991). Still, there remains scarce research examining possible factors that could explain changes in parenting and therefore become possible intervention targets.

The transmission of parenting in adults from minority groups that have experienced a migration process themselves or through their parents' experience of migration also requires further exploration. Van Ijzendoorn (1992) noted that changes in social context may impact the continuity of parenting. In that sense, being exposed to a different culture or different social and historical contexts may affect the transmission of parenting practices and beliefs. Therefore, in the current study, we aim to explore Latino mothers' narratives about their childhood experiences with caregivers and how these experiences may or may not have influenced their current parent-child relationship. Through mothers' narratives, we will explore possible factors that affect the continuity and discontinuity of parenting in the context of being a first- or second-generation Latino mother.

#### **1.4.2. Culture and parenting**

In order to understand the process of transmission of parenting in first- and second- generation Latino families, one must acknowledge the influence of culture on parenting. Although mainstream models of parenting, such as Belsky's (1984) model, offer a comprehensive description of different components that affect parenting, they overlook the influence that cultural contexts have on parenting. Theoretical models that are intended to understand parenting in ethnic and minority groups have focused

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on understanding the impact of larger sociocultural context on parenting practices. As Garcia Coll (1995) explains, “There has been a shift away from a social pathological perspective to one emphasizing the resilience and adaptiveness of families under a variety of social and economic conditions” (p. 4). Models for minority parenting, such as Garcia Coll’s model (2000), have led to a paradigm shift that moved away from a deficit framework in which minority parenting was compared against middle-class, white American parenting norms. Current models of minority parenting advocate for examining variability within groups to understand differences within minority groups and identify unique, culturally-defined forms of parenting values and behaviors (Fuller & García Coll, 2010; Garcia Coll & Magnuson, 2000).

Despite the recognition that universal goals of parenting (e.g. providing a safe environment, supporting children development and passing social values) exist across groups, parents accomplish these goals in the context of cultural beliefs and varying economic and social circumstances (García Coll & Garrido, 2000; Garcia Coll & Magnuson, 2000). Ecocultural theories have noted that parenting practices in Latino families are rooted in culturally-based values that place great emphasis on good behavior and obedience to adults (*bien educado, respeto*) and less emphasis on individual autonomy. They also emphasize feelings of loyalty and solidarity to family members (*familismo*) and cooperation and caring for others (*cariño*) (Halgunseth, Ispa, & Rudy, 2006; Reese, 2002; Sarkisian, Gerena, & Gerstel, 2006). These culturally-based values prepare children to be socially competent in accordance to family and cultural social norms (Roosa, Morgan-Lopez, Cree, & Specter, 2002) and guide parenting practices and parent-child relationship (Calzada, Huang, Anicama, Fernandez, & Brotman, 2012).

The values of *respeto* and *familismo* have been widely studied in Latino populations and have been found relevant in diverse Latino groups and SES groups (Calzada, Fernandez, & Cortes, 2010; Calzada, Huang, Linares-Torres, Singh, & Brotman, 2014). In various studies, *respeto* has been associated with children being compliant, well-behaved, well-mannered, polite, courteous, obedient to authority (i.e., parents, grandparents, or other adults) and accepting rules without question (Arcia & Johnson, 1998; Arcia, Reyes-Blanes, & Vazquez-Montilla, 2000; Gonzalez-Ramos, Zayas, & Cohen, 1998). One of the functions of *respeto* is to maintain harmony within the extended family and teach what appropriate and inappropriate behavior is (Marin & Marin, 1991). Qualitative research has revealed that Mexican, Puerto Rican, and Dominican mothers value *respeto* more than other dimensions of personal development (e.g. independence, autonomy, and self-confidence) (Arcia & Johnson, 1998; Delgado-Gaitan, 1993; Gonzalez-Ramos et al., 1998; Harwood, Schoelmerich, Schulze, & Gonzalez, 1999). Nonetheless, Calzada (2012) explored cultural values among Latina mothers living in U.S. and found that, while they place great emphasis on respect and obedience, they wanted their children to communicate opinions and express disagreement as long as they do so in a respectful way. Another study from the same author found that Mexican and Dominican parents living in U.S. reported to use respect and independence socialization messages, apparently two opposed values, as often (Calzada et al., 2010). Therefore, while there is evidence of a model of Latino parenting characterized by values of *respeto* and *familismo*, Latino parents living in U.S. also incorporate more typical western values of parenting that encourage independence and autonomy.

*Familismo* explains the high value Latino families place on mutually supportive relationships with extended family (grandparents, uncles, cousins). One

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aspect of *familismo* is the strong role that extended family has in the family life and, more specifically, in childcare. For example, research has shown that Latino parents are more likely to rely on grandmothers and other relatives to take care of their children than leaving them with unrelated caregivers or in childcare centers (Goodman & Silverstein, 2002; Liang, Fuller, & Singer, 2000). Along the same lines, two studies conducted with Central American families suggested that infants and children frequently spend time in the company of adults other than their parents (Leyendecker, Lamb, Schölmerich, & Fricke, 1997; Rogoff, Mistry, Goncu, & Mosier, 1993). In contrast, European American infants would spend most of their time with their mothers. Although time spent with mothers may vary by social and economic circumstances, Leyendecker (1997) did not find any differences between low-SES and middle-SES Costa Rican families in the time children spend with their mothers. Similarly, Farver (1993) revealed that sibling caregiving and peer play was more common than mother-child organized activities among a group of Mexican mothers (Farver, 1993).

These culturally-based values also influence parents' expectations about child development and behavior. Two studies with Mexican-American families found that children were expected to participate in household chores and everyday tasks at an earlier age than those in European American families (Azmitia, Cooper, García, & Dunbar, 1996; Delgado-Gaitan, 1993). These results contrast with other studies that found that Puerto Rican and Mexican-American parents expected their children to accomplish specific self-care milestones, like self-feeding, self-care, or autonomy to decide about afterschool activities, at an older age than European American children (Savage & Gauvain, 1998; Schulze, Harwood, & Schoelmerich, 2001). Harwood (2002) suggested that these apparently contrasting findings are actually consistent

with culturally-based values (*familismo* and *respeto*) that expect and encourage obligations towards the family and dependencies on others. In this case, the child would have the “obligation” to participate in the family chores from a young age, yet at the same time, would be “dependent” on their caregivers in aspects of self-care and personal autonomy.

We know from research on the intergenerational transmission of parenting that there is both continuity and discontinuity of values and beliefs about parenting and parenting practices from one generation to the next. How culturally-based values and parenting practices in Latino families are transmitted and modified from generation to generation remains understudied. In a case study of five Mexican immigrant and first-generation Mexican American families in California, Delgado-Gaitan (1993) found that in both groups, teaching a child to be respectful to authority figures was a main component of childrearing. In contrast, Mexican American families also allowed a child to demonstrate aspects of critical thinking and questioning the others point-of-view, while Mexican immigrant families did not place as much importance on critical thinking. Calzada (2010) conducted focus groups with primarily immigrant Dominican and Mexican mothers living in U.S. to explore their views of Latino values. Participants reported a generational shift in the definition of respect. While these mothers keep placing a great importance on the value of respecting and being obedient, they also believed that children should be able to express themselves with their parents, something they were not able to do while growing up. Therefore, these results suggest that Latino families that live in the U.S. may go through a process of transformation of culturally based values and practices.

Acculturation, conceptualized as the process of changes in language use, ethnic pride, traditions and values due to exposure to a new culture (Garcia Coll et al.,

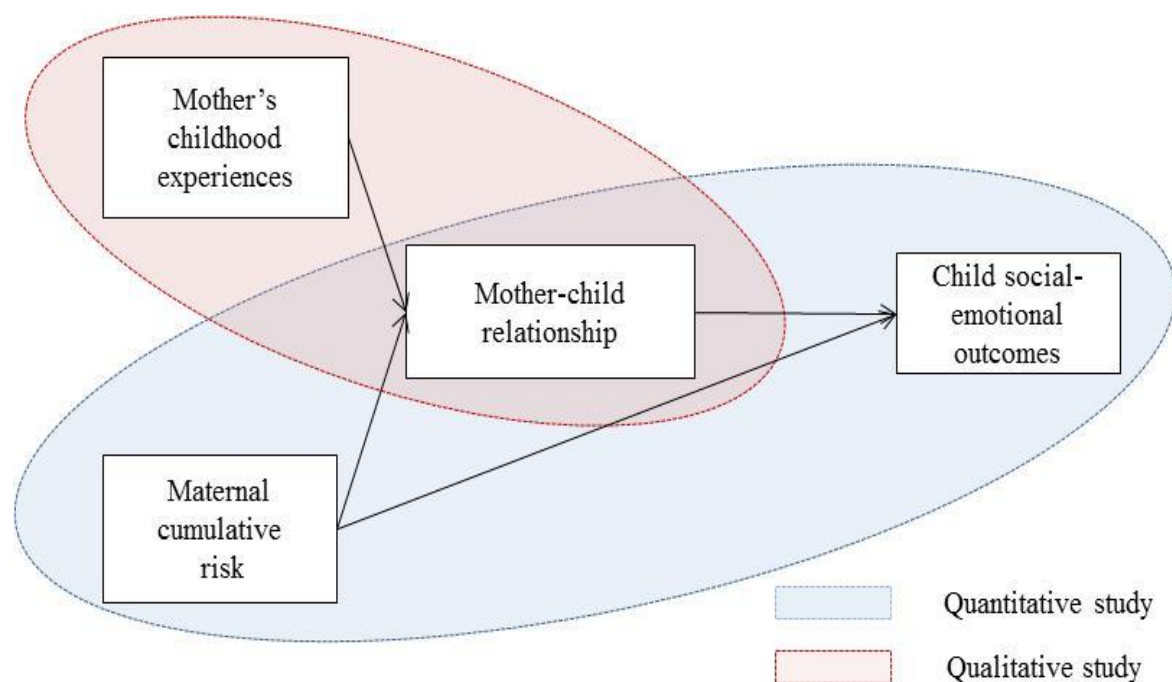
1995), may be related to changes in parenting. For example, in a sample of Puerto Rican and Dominican mothers of preschoolers, higher levels of acculturation were associated with using more praising and asking more questions during a teaching task (Planos, Zayas, & Busch-Rossnagel, 1995). In a similar vein, more acculturated Mexican-American mothers showed higher levels of warmth in interaction with their toddlers (Ispa et al., 2004a). Gonzalez-Ramos found that more acculturated Puerto Rican mothers valued independence and creativity more than less acculturated mothers (Gonzalez-Ramos et al., 1998). Therefore, acculturation may change parenting values and practices. These findings elucidate differences between more and less acculturated Latino parents but do not inform about the process by which these changes in parenting occur. What are the experiences in the process of emigrating and being exposed to a new culture that can potentially change parenting practices and values? This question remains unexplored. In addition, other aspects related with the maintenance of cultural values and parenting practices remain unknown. For example, there is no research examining how experiences and beliefs about mother-child play are transmitted across generations of Latinos and how migration could impact the maintenance of these patterns.

### **1.5. The present study**

The present study aims to examine the impact of the mother-child relationship in children's social competence within Latino families living in economically poor conditions. To do so, we used a mixed-methods approach as seen in figure 2. We quantitatively examine the relationship between cumulative risk, observed maternal supportiveness and self-reported quality of the mother-child relationship, and preschoolers' social-emotional outcomes. Simultaneously, we explore Latino mothers' childhood experiences, emphasizing experiences around play, and how these



experiences influence their current parenting experience. To do so, we use a qualitative approach and conduct a series of focus groups with Latino mothers. The purpose of using a mixed methods approach is to understand the impact of current stressors, conceptualized as a cumulative risk index, on the mother-child relationship and at the same time, examine mothers past experiences, such as childhood experiences, that may also influence the current mother-child relationship. Data collection for both studies took place as part of a larger pilot randomized control study to examine the impact of the CARING preschool program, a parent-child play intervention, on Head Start children.



*Figure 2.* Conceptual model: a mixed methods-approach

### 1.5.1. Quantitative study: aims and hypothesis

While it is well-documented that different aspects of the mother-child relationship, like supportive mothering, impact preschoolers' social-emotional development and can mediate the detrimental effects of cumulative risk on child

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outcomes, relatively few studies investigate how the quality of the mother-child relationship influences the social-emotional development of Latino children living in economically poor conditions. In addition, to date, no research has examined how the mother-child relationship may mediate the relationship between cumulative risk and child social-emotional outcomes within a group of Latino Head Start children.

The present study aims to 1) examine associations between maternal cumulative risk, the quality of the mother-child interaction (observed and self-reported), and both teachers' and parents' reports of child social-emotional competence in a sample of Head Start Latino families, 2) examine whether mother-child interaction variables mediate the association between maternal cumulative risk and child outcomes, and 3) examine the association between length of time spent in Head Start and social-emotional outcomes and explore whether time spent in Head Start moderates the relation between observed maternal supportiveness and child social-emotional outcomes (figure 3). Child characteristics (i.e. age, gender, having a developmental delay, having participated in Early Head Start) that may be associated with social-emotional competence are also included in our model.

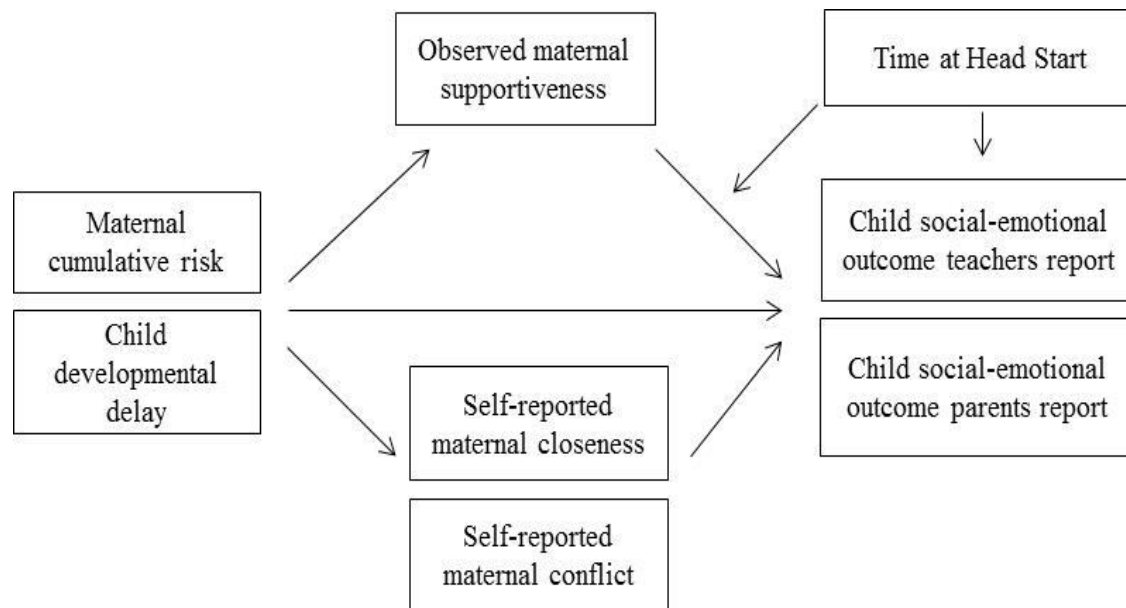


Figure 3. Quantitative investigation: theoretical model being tested

Because social-emotional development happens across multiple dimensions, we examined the relationship between maternal cumulative risk and quality of the mother-child relationship in 3 separate models: child social competence, externalizing and internalizing behavior. Although correlated, social competence and problem behavior have shown to be separate aspects of child functioning and offer different insights into children's social-emotional competence (Masten et al., 1995; Renk & Phares, 2004). Therefore, in the present study, three exact models (figure 3) were tested for each dimension: social competence, internalizing, and externalizing behavior.

The quantitative study has the following specific aims:

1. To examine concurrent relationships between cumulative risk and different aspects of the quality of mother-child relationship.
  - a) Examine the relationship between cumulative risk and both observed and self-reported quality of the mother-child interaction. We hypothesize that maternal

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cumulative risk will be negatively associated with observed maternal supportiveness and self-reported closeness and positively associated with self-reported conflict.

- b) Explore whether the association between cumulative risk and mother-child relationship remained after controlling for the individual child risk of having a developmental delay.
2. To examine concurrent relationships between mother-child relationship and social-emotional outcomes. Social-emotional outcomes will be measured through parents and teachers reports separately.
  - c) Examine the relationship between self-reported quality of the mother-child relationship (closeness and conflict) and social-emotional outcomes. We hypothesize that the perception of a positive mother-child relationship (closeness) will be associated with increased social competence and decreased externalizing and internalizing problems in children as reported by both parents and teachers, whereas the mothers' perception of conflict will be associated with decreased social competence and increased problems behavior.
  - d) Examine the relationship between observed maternal supportiveness and social-emotional outcomes. Following the general literature on the role of maternal supportive parenting, we expect to find a positive relationship between maternal supportiveness and social competence and a negative relationship between maternal supportiveness and problem behavior. However, given the mixed results found in the reviewed literature on Latino families these analyses have an exploratory nature.
3. To examine the relationship between length of time spent at Head Start and child's social-emotional outcomes and test a model of moderation of the relation

between maternal supportiveness and child outcomes by length of time spent in Head Start.

- a) Examine the relation between length of time spent at Head Start and child social-emotional outcomes. Based on the literature about the impact of 1-year versus 2-year exposition at Head Start, we expect that children that have spent more time in Head Start (measured as months spent at Head Start at time of assessment) will show more social competence and less externalizing and internalizing behavior after accounting for the effect of control variables.
  - b) Examine whether length of time spent at Head Start moderates the relationship between maternal supportiveness and child social-emotional outcomes. Because some research suggests that children exposed to more family risk (including less nurturing parenting) benefit more of a longer exposure to Head Start, we hypothesize that the longer children are exposed to Head Start, the weaker the relationship between maternal supportiveness and outcomes will be. In other words, if Head Start compensates for family risk, we expect children who have spent more time in Head Start to have higher social-emotional competence even if they are exposed to lower levels of supportive mothering at home.
4. To examine whether or not cumulative risk has an indirect effect on child social-emotional outcomes through its effects on the quality of mother-child relationship. In other words, to test the mediating role of the quality of mother-child relationship.
- a) Examine the direct relationship between cumulative risk and child social-emotional outcomes. We hypothesize that cumulative risk will be negatively associated with social competence and positively associated with externalizing and internalizing problems.

b) Examine the indirect effect of cumulative risk on social-emotional outcomes through its effects on observed maternal supportiveness, self-reported closeness, and self-reported conflict. We will examine the indirect effects separately for each dimension of the quality of the mother-child relationship. We hypothesize that cumulative risk will show an indirect influence on children's social competence and problem behavior through its direct impact on all dimensions of the quality of the mother-child relationship (observed maternal supportiveness, self-reported closeness and conflict). Based on cumulative risk literature on early childhood, we expect that the direct association between cumulative risk and social-emotional outcomes will fade when the quality of mother-child relationship is taken in account. In other words, the quality of mother-child relationship will fully mediate the effect of cumulative risk on the child social-emotional outcomes.

We expect that these relationships will remain significant after controlling for child age, gender, developmental delay status, times spent in Head Start and Early Head Start participation.

### **1.5.2. Qualitative Study**

The purpose of the qualitative study is to explore economically poor immigrant Latina mothers' childhood experiences, with an emphasis on play related experiences, and examine how mothers associate these past experiences with their current parenting experiences.

Calzada and colleagues (2010, 2012) developed a model of Latino parenting that highlights the association between culturally based socialization values and parenting practices/styles. (Calzada et al., 2010; Calzada et al., 2012; Calzada et al., 2014). Calzada (2010) suggests that in order to understand parenting in Latino families residing in U.S., researchers have to consider the influence of socialization

messages embedded in the Latino cultural values, as well as those embedded in mainstream U.S. American culture, as key determinants of parenting practices and styles. Interestingly, Calzada (2010) showed that Mexican and Dominican immigrant parents reported frequent use of socialization messages to teach *respeto*, identified as a pan-Latino cultural value that stresses obedience, deference and decorum, but also independence, considered a U.S. cultural value that emphasizes assertion, negotiation, and exploration. These results suggest that Latino parents maintain some aspects of Latino cultural values while incorporating new values from the receiving culture. Different values may influence parenting practices in different ways. For example, Calzada (2010) revealed that socialization messages of *respeto* were associated with more authoritarian parenting style, while independence was associated with more authoritative style.

The process by which mothers embrace new parenting values and practices while maintaining important aspects of Latino values, like *respeto*, is not quite understood. In addition, despite findings linking socialization values with authoritarian and authoritative parenting style, parenting practices in different socialization contexts, like parent-child play, have not been studied in relation to socialization values (Calzada & Eyberg, 2002; Livas-Dlott et al., 2010).

In the current study, we explore the impact of broad childhood experiences of first and second generation Latino mothers on their current parenting practices as identified in their narratives. In addition, we examine whether mothers report parenting values and practices different than those experienced while growing up. Secondly, we aim to identify the process by which these values and practices changed.

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The following sections describe methods, results and discussion for each study, quantitative and qualitative. Data collection for both studies took place as part of pilot randomized control evaluation to examine the impact of the CARING preschool program, a parent-child play intervention, on Head Start children. Because both studies are drawn from the same population, within each chapter (method, results, and discussion) we describe first the quantitative investigation and then the qualitative investigation (see index for a detailed description). In the discussion chapter we present a separate discussion for each investigation, including limitations and strengths, and we finish the section with a discussion integrating results from both the quantitative and the qualitative investigation and a final conclusion that points out research and clinical implication.



## 2. METHOD

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### 2.1. Rationale for mixed-methods investigation

Due to the scarce research in this area, a mixed-methods approach was used in the current study. Each of the investigations contributed unique information to understand mother-child relationships in low-income Latino mothers and their preschool children. The purpose of using two different types of data to inform this dissertation was twofold. First, results from the qualitative study were used to elaborate results from the quantitative study, also referred to as complementarity studies (Hanson, Creswell, Clark, Petska, & Creswell, 2005). Results of the qualitative data were used to elaborate and add depth of meaning to the quantitative data. Research investigating the role of parent-child relationships in Latino children's social-emotional development is mixed. Because some research has not found a positive relation between parent-child supportive interactions and child social-emotional outcomes, focus groups aimed to shed some light on this issue. The second purpose was to extend the scope of analysis by using different methods for different components (also referred to as expansion; Hanson et al., 2005). While the quantitative investigation aimed to examine the influence of current cumulative risk on the mother-child relationship, the qualitative study aimed to explore past influences, such as childhood experiences that may also impact parenting and thus the mother-child relationship.

Following Creswell's classification of mixed methods research designs, the present study was grounded on a sequential explanatory design (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Data collection procedure had a sequential implementation (i.e., quantitative data was collected, followed by qualitative data). For each wave of participants, quantitative data was collected before starting the

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CARING intervention and focus groups were conducted 3 months later, after the intervention finished. Both types of data were given high priority. Integration of results occurred at the data interpretation stage and in the discussion. These designs are particularly useful for explaining relationships and study findings (Hanson et al., 2005).

While the overreaching goal of the quantitative investigation was to understand the relationship between cumulative risk, mother-child relationship and child social-emotional competence, the primary purpose of the qualitative investigation was to explore how mother's childhood experiences influences their current mother-child relationship and how these experiences help understand current parenting. Therefore, the research questions and methods of inquiry were different. The quantitative data was obtained by administering measures to assess risk factors, quality of the mother-child relationship, and social-emotional competence to a Head Start sample of Latino dyads. Responses were quantified and statistically analyzed in order to make statements about the relationships between these variables. Qualitative data was obtained by conducting 8 focus groups. The participants in these focus groups were low-income Latino mothers whose children attended Head Start. They were asked questions about their participation in the CARING intervention (as part of the larger study that examined the efficacy of the CARING intervention). As part of the present study, participants in focus group also discussed their experiences with play when they were children and how their childhood experiences may play a role in their current parent-child relationship. Data included transcriptions of focus groups and was analyzed according to thematic analysis (Braun & Clarke, 2006) methodology.

Overall, the qualitative data complemented the quantitative results by adding rich narrative descriptions and allowed for greater depth to be explored in relation to the topic of mother-child relationships in Latino Head Start families. Additionally, because qualitative methods are exploratory in nature, there was openness to unexpected results by researchers and participants had the opportunity to explain their experiences without being constrained by preconceived hypotheses (Ritchie, Lewis, Nicholls, & Ormston, 2013).

## **2.2. Description of the larger study**

Data collection for this study took place as part of a larger study pilot randomized control evaluation to examine the impact of the CARING preschool program by comparing Head Start parent-child dyads receiving the intervention versus business-as-usual services at Head Start (wait-list control group).

The CARING preschool program is a 12-week play-based parent-child intervention that aims to promote preschoolers' social-emotional development by strengthening the parent-child bond. In contrast with other parent-child programs developed for clinical populations, the CARING preschool program was designed as a preventive intervention to be implemented with low income preschoolers and their parents attending Head Start programs.

The objective of the larger study (Duch, Marti, Garcia, Snow, and Wu, under review) was to evaluate the effectiveness of the CARING preschool program with respect to:

1. Improving parent-child interactions.
2. Increasing child's social competence.
3. Reducing child's problem behaviors.
4. Reducing parenting stress and depressive symptoms .

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Data was collected over two academic years between 2011 and 2013. To date, 109 families have participated in the larger study. Participants came from two urban Head Starts centers in Northern Manhattan, New York City. Both programs had experience implementing the CARING program before the study started.

Head Start (HS) program is a federally-funded, community-based intervention program for low-income families with children between 3 and 5 years old. It is designed to support the development of children, offering educational experience, and promote healthy family functioning. HS focuses on child development and parenting skills using developmental curricula. The HS programs included in the current study were administered by two different community service agencies located in upper Manhattan.

### **2.3. Quantitative methods**

#### **2.3.1. Participants**

The present study employed baseline data from 106 Latino mothers and their preschoolers chosen from the larger sample of 109 dyads. These subjects were recruited from two Head Start Programs situated in the Upper Manhattan. Both programs serve a large percentage of Latino families (91% in Center 1 and 77% in Center 2). The original sample contained 109 dyads, all but two of whom identified as Latino, and all but one consisted of a mother and her child. As such, non-Latino dyads and the father-child dyad were dropped for purposes of the present study to create a more homogenous sample. The sample of the present study consisted of first- and second-generation Latino mothers and their children. All participants reported incomes below the Federal Poverty Level. Overall, this sample encompassed a majority of Latino immigrant mothers and their children, with a dominance of Spanish speaking households, about 80%. Maternal education ranged from some elementary school to a

bachelor's degree, with finished High school representing the median. Table 1 and 2 provide an overview of child and mother demographic characteristics.

Table 1  
*Child Demographics Characteristics*

	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range	
					Min.	Max.
Age (months)	106	-	46.05	6.51	33.60	63.36
Gender						
Female	54	50.90	-	-	-	-
Male	52	49.10	-	-	-	-
Identified developmental delay	30	28.60	-	-	-	-
Early Head Start participation	44	41.90	-	-	-	-
Time at Head Start (months)	103	-	6.17	5.54	.1	25.84

Table 2  
*Maternal Demographic Characteristics*

	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range	
					Min.	Max.
Age (years)	106	-	30.99	5.97	21.15	48.08
Country of origin						
Mexico	55	51.90	-	-	-	-
Dominican republic	22	20.80	-	-	-	-
Ecuador	10	9.40	-	-	-	-
El Salvador	6	5.70	-	-	-	-
Other South American countries	3	2.80	-	-	-	-
United States	9	8.50	-	-	-	-
Years living in US	85	-	10.30	5.63	1.00	25.00
Home Language						
Spanish	80	75.50	-	-	-	-
English	6	5.66	-	-	-	-
Bilingual Spanish-English	16	15.09	-	-	-	-
Other	3	2.83	-	-	-	-
Level of Education						
Less than high school	41	38.70	-	-	-	-
High school or GED	32	30.20	-	-	-	-
Vocational/technical	23	21.70	-	-	-	-
Bachelors	10	9.40	-	-	-	-
Marital Status						
Married/with Partner	83	78.30	-	-	-	-
Single	23	21.70	-	-	-	-
Living arrangements						
Renting a house	51	48.1	-	-	-	-
Renting a room	55	51.90	-	-	-	-
Number of family members	106	-	3.94	1.07	2	7
Number of people in the household	106	-	5.46	2.27	2	13

*Note.* Variables where levels of frequencies do not add to 106 and percentages not totaling 100% reflect missing data.

### **2.3.2. Procedure**

This project was approved by the Columbia University institutional review board. Baseline data collection for the present study took place from spring 2010 to fall 2013. All parents of 3-5 year old children at participating Head Start centers were informed of the study through a parent meeting and a letter sent home. A random selection process, similar to a lottery, was used to invite families to participate in the study. Since there were more families enrolled in the program than spots available, a lottery system was an adequate recruitment strategy. One to three CARING intervention programs were offered each semester. At the beginning of each semester (fall and spring), the principal investigator conducted a random selection process from the Head Start program's roster to select potential participants for the research project. Half of the families selected were invited to participate in the intervention group and the other half were in the wait list control. Once potential participants were identified through the random selection process, the Head Start program's Family Services Coordinator contacted families and invited them to participate in an informational meeting where study procedures were discussed. Families in the control group were offered the CARING intervention the following semester.

Interested families signed appropriate study consents during a brief individual session with a trained bilingual English-Spanish research assistant. Families could agree to participate in the CARING intervention and not in the research study without this impacting their participation in the Head Start program or CARING. Overall, only two families agreed to participate in CARING but refused to participate in the research study. After providing consent, families participated in an assessment session at the Head Start Center conducted by a trained research staff that was blind to their assigned group (intervention versus control). Families were able to choose their

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preferred language for completing the questionnaires (English or Spanish). The baseline assessment took place 2 weeks before the intervention started. Parent-child dyads participated in a 15-minute videotaped play observation followed by a structured interview with the primary caregiver to obtain demographic and questionnaire data. The structured interview was conducted in either English or Spanish and demographic forms and all questionnaires were available in both English and Spanish. Parents filled out four questionnaires, the Center for Epidemiological Studies Depression Scale (CES-D: Radloff, 1977), the Parenting Stress Index (PSI: Abidin, 1995), the Child-Parent Relationship Scale (CPRS; Pianta 1994), and the Social Skills Improvement System-Parent Form (SSIS-PF: Gresham & Elliott, 2009). After the intervention finished all families participated in a post-assessment session in which the same measures were administered. Only participants randomized to the intervention group were invited to participate in a focus group at the completion of the intervention. At pre- and post- test the teacher most familiar with the child completed three questionnaires assessing children's social-emotional development: the Social Skills Improvement System-Teacher Form (SSIS-PF: Gresham & Elliott, 2009), the Social Competence and Behavior Evaluation- Short Form (SCBE-30; LaFreniere & Dumas, 1996), and the Penn Interactive Peer Play Scales Teacher Form (PIPPST; Fantuzzo & Hampton, 2000). A total of 15 classroom teachers, 8 principal teachers and 7 assistant teaches, of participating children took part in the study. For the present investigation only pre-assessment data and focus group data was used.

### **2.3.3. Measures**

Based on the review of the literature, instruments were chosen to quantitatively measure the study variables (i.e., outcomes that have been used with preschoolers in previous research). When possible, efforts were made to choose



measures that had been previously used with Latino preschoolers as well and that demonstrated adequate reliability and validity with this population. (Castro, Mendez, & Fantuzzo, 2002; Fagan & Fantuzzo, 1999; Gross et al., 2006; National Inst. of Child & Human Development, 1991; Raver & Zigler, 1997; Solis & Abidin, 1991). Spanish versions of the measures were available from the test developer. For all questionnaires, we report reliability coefficients obtained for this sample and consider Cronbach alphas ranging from .60 to .70 acceptable and larger than .70 good (Kline, 2011).

**Demographic questionnaire.** A socio-demographic questionnaire was included in order to obtain background information about the participants. Items on the questionnaire included the child's age, and gender, and the parent's age, gender, race/ethnicity, country of origin, years living in the US, highest school degree, living arrangement, family composition, and number of people in the family. (see Appendix ). Some information obtained through the demographic questionnaire was later used to create the cumulative risk index.

**Cumulative risk.** This measure is a cumulative risk index representing mothers' interview responses. Based on our review of the literature, we selected 6 items that addressed three domains of maternal risk: socioeconomic risk (level of education, teenaged parenting, and living arrangement), demographics (family composition) and emotional health (depressive symptoms and parenting stress). (Cabrera et al., 2011; Gassman-Pines & Yoshikawa, 2006) Because all families were living below the Federal Poverty Line, income was not included in the cumulative risk index due to lack of variability. Thus, the maternal cumulative risk index must be understood as the cumulative risk within families living in poverty. Categorical and continuous risk variables were recoded to a dichotomous variable of 0 (*no/low risk*)

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and 1 (*yes/high risk*). A risk index ranging from 0 to 6 was constructed by summing the six risk variables. It is recommended to define thresholds of risk a priori, rather than being based on distributional properties of the data (Burchinal, Roberts, Zeisel, Hennon, & Hooper, 2006; Gassman-Pines & Yoshikawa, 2006). In the present study, all risk variables except parenting stress had a priori risk thresholds. Consistent with the majority of recent research, the cumulative risk index was treated as a continuous variable (Trentacosta et al., 2008); high scores suggest greater risk.

The socioeconomic domain contained three risk items: level of education, teenaged parenting, and living arrangement. For level of education, parents who had completed high school or higher at time of assessment were coded as no risk ( $0 = \geq \text{completed High school or higher}$ ) and those who did not complete a high school degree were coded as at risk ( $1 = \text{did not receive a diploma or successfully complete the GED examination}$ ). For status as a teenaged parent, parents 20 years or older at the time of the birth of the target child were coded as no risk ( $0 = \geq 20$ ) and parents younger than 20 years at the time the target child was born were coded as being at risk ( $1 = < 20$ ). For living arrangement, parents renting a room in an apartment were coded as being at risk ( $1 = \text{rents a room}$ ), parents that rented the whole apartment were coded as no risk ( $0 = \text{rents an apartment}$ ). The living arrangements variable was used as a proxy for economic strain.

The demographic domain included only family composition. A one-parent household at time of assessment was considered risk ( $1 = \text{mother alone}$ ). When both parents were living together it was considered no risk ( $0 = \text{both parents}$ ). Two mothers reported living with the child's step-father, which was also considered no risk.

The emotional health domain risk variables included depression and parenting stress. Maternal depressive symptoms were measured using the Center for

Epidemiological Studies Depression Scale (CES-D: Radloff, 1977), a self-report measure developed by the National Institute of Mental Health to screen for depression risk in the general adult population. Parents responded to 20 items that measure the frequency of negative thoughts, feelings, and behaviors during the prior week on a 4-point Likert scale (0=*rarely* to 3=*most of the time*). It includes six components: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. A depressive symptom index was constructed by summing the 20 CES-D items, resulting in a range of possible total scores from 0 to 60. Higher scores indicated more depressive symptoms. Cronbach's alpha was .84. The index was recoded to a scale from 0 to 1. CES-D scores equal to or greater than 16 indicated risk for clinical depression (Radloff, 1977) and were therefore coded as presence of risk (1=*moderate to severe depressive symptoms*). Scores below 16 were coded as absence of risk, (0=*low to mild depressive symptoms*).

Perceived maternal stress was measured using the Parenting Stress Index (PSI: Abidin, 1995). The PSI contains 13 subscales that measure the degree of stress inherent in the parent-child relationship. For the present study, a selection of 4 subscales from the child domain (Adaptability, Reinforces Parent, Demandingness, and Acceptability) and 2 subscales from the parent domain (Competence and Attachment) were used. Parents responded to 58 items that measure the degree of stress they experience in their roles as parents on a 5-point Likert scale (1=*strongly disagree* to 5=*strongly agree*). A parenting stress index was constructed by summing the 58 items. Higher scores indicated higher levels of parenting stress. Cronbach's alpha was .91. When is not possible to define thresholds of risk a priori, research suggest to make risk assignments such that 25% of the samples are coded as 'at risk'

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(Appleyard et al., 2005; Network, 2004; Pasco Fearon & Belsky, 2004; Raviv, Taussig, Culhane, & Garrido, 2010; Trentacosta et al., 2008). However, research examining the use of PSI (including all 13 scales) as a screening and diagnostic tool suggests that a total raw score of 260 or more (equivalent to 85<sup>th</sup> percentile) is an indicator of significant parenting stress and requires a referral for a professional (Loyd & Abidin, 1985). Therefore, the index of parenting stress obtained from 6 subscales of the PSI was recoded to a dichotomous variable of 0 and 1. Scores at or above the 85<sup>th</sup> percentile were considered indicative of risk (1=*high parenting stress*), while scores below the 85<sup>th</sup> percentile were considered no risk (0=*low to moderate parenting stress*)

***Parent-child interaction measures.*** Observational and self-report measures were used to assess the quality of mother-child interaction and to account for the potential bias in using either observational or self-report measures.

Observed maternal parenting behaviors were assessed using the Three Boxes Protocol that was developed for the National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (Owen , Barfoot , Vaughn , Domingue , & Ware 1996). During the assessment session at the Head Start center, mothers were asked to play with their child for 15 minutes with items found in three separate boxes and to do so in the order specified. The first box contained a set of markers, paper and stencils, the second contained dress up clothes and a toy cash register, and the third contained blocks and a family figures kit. These items represented universal themes and were culturally appropriate for Latino families. The sessions were videotaped and analyzed by members of the research team who held or were pursuing a Master's degree in psychology or related field at the time of the study. All members of the research team were trained by Helena Duch and the author

of this dissertation using the scales developed by Owen and colleagues (1996). Mother-child interactions were rated on ten 7-point rating scales (1=*very low* to 7=*very high*) describing child (enthusiasm, agency, affect towards the mother, negative affect), maternal (support, respect for child's autonomy, cognitive stimulation, confidence, and hostility) and dyadic responses (affective mutuality). Reliability was established by requiring coders to first code ten videotapes and met 100% agreement in eight out of ten scales, and allowing only a one point difference in coding in any two out of ten scales.

For the present study we only used three of the maternal response scales. Guided by previous literature we created a measure of maternal supportiveness as composite index of three highly correlated maternal scales (maternal support, respect for child's autonomy and cognitive stimulation) that touched on positive dimensions of the mother child interaction (Owen, Ware, & Barfoot, 2000). The maternal support scale measured the extent to which the mother offered positive regard and emotional support to the child. The respect for child's autonomy scale measured whether the mother recognized and encouraged the child's individuality and intentions. The cognitive stimulation scale measured the degree to which the mother fostered the child's cognitive development, such as teaching the child new words, skills, concepts and stimulating pretend play. Combined, these measures assessed mothers' positive regard and emotional support for children, as well as the extent to which they encourage their children's individuality and cognitive development. We only included positive dimensions of the mother-child interaction because there was little variability in the negative dimension, such as the maternal hostility scale. Previous research has used similar procedures (Cabrera et al., 2011). In the present study, the composite of maternal supportiveness had a Cronbach's alpha of .85.

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Reliability was established by requiring coders to first code ten videotapes and meet 100% agreement in eight out of ten scales, and allowing only a one point difference in coding in two out of ten scales. Sixty percent of videotapes were double coded by independent research staff. When inter-rater reliability was below 80%, both coders reviewed the video again together to reach agreement. If no agreement was reached, a third independent coder analyzed the video and scores from the coder with lower reliability were dropped. In 16.66% of videos that were double coded (10 videos), inter-rater reliability was below 80% (ranging from 50% to 70%) and videos needed to be reviewed by the coders or analyzed by a third coder if agreement was not reached. After agreement was reached for these videos, inter-rater reliability reached 90.77% ( $r_s$  ranging from 80 to 100).

The Child-Parent Relationship Scale (CPRS; Pianta 1994) was used to assess mothers' perceptions of the mother-child relationship. Parents responded to 26 items rated on a 5-point Likert scale ( $1=definitely\ does\ not\ apply$  to  $5=definitely\ applies$ ). The CPRS has been used with parents of children aged from 2–5 years and is based on attachment theory (Waters & Deane, 1985). The measure contains three subscales: closeness, conflict and dependence; however, only the closeness and conflict scales were used as previous studies found the dependence scale had low reliability (Pianta, 1994). The closeness subscale measures the extent to which a parent feels that the relationship with a particular child is characterized by warmth, affection, and open communication (e.g., “*I share a warm relationship with my child*”). The conflict subscale measures the degree to which a parent feels that the relationship is characterized by negativity and conflict (e.g., “*My child sees me as a source of punishment and criticism*”). In the present study, Cronbach's alphas were .67 for closeness and .78 for conflict.

**Child social-emotional competence measures.** Mother filled out one questionnaire (SSIS-PF) and teachers filled out three questionnaires (SSIS-TF, SCBE-30, PIPPS) rating different aspects of social-emotional competence because studies suggest that parents and teachers provide valuable but distinct information when examining childhood functioning (Renk & Phares, 2004).

The Social Skills Improvement System-Parent Form (SSIS-PF: Gresham & Elliott, 2009) was used to assess social competence and problem behavior as rated by parents. The SSIS-PF is a standardized assessment used from preschool through adolescence. Parents responded to 79 items rated on a 4-point scale (1=*never to* 4=*almost always*) to indicate the frequency with which the child exhibited each behavior. The measure contains two domains: social skills/social competence and problem behaviors. The social skills/competence scale measures positive social behaviors, including communication, cooperation, empathy, assertion, engagement, self-control, and responsibility. The problem behavior scale measures externalizing problems, hyperactivity, bullying, internalizing problems, and autism spectrum behaviors. A number of parents had difficulty understanding questions in the autism scale (e.g. stereotypical behaviors). Because of the focus of the study was on internalizing and externalizing behaviors, we did not use the autism spectrum subscale in the analyses. In order to distinguish externalizing and internalizing problem behavior in the path analysis model we created a score for externalizing behavior that combined the three highly correlated subscales of the problem behavior domain: externalizing, hyperactivity and bullying. The externalizing subscale was significantly correlated with bullying,  $r=-.62$  ( $p<.001$ ), and hyperactivity,  $r=.87$  ( $p<.001$ ). The bullying and hyperactivity subscales were also correlated,  $r=.53$  ( $p<.001$ ). In the present study, Cronbach's alpha for social skills was .85 and for externalizing

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behavior was .82. The internalizing subscale was used by itself and had a Cronbach's alpha of .71. The three scales, social competence, internalizing, and externalizing problems were entered in path models as raw scores.

The Social Skills Intervention System-Teacher Form (SSIS-TF; Gresham & Elliott, 2009) was used to measure social competence and problem behavior as rated by teachers. Teachers responded to 79 items rated on a 4-point scale (1=*never to 4=almost always*) to indicate the frequency with which the child exhibited each behavior. The teacher form focuses on keystone classroom behaviors and skills and contains the same two domains: social skills and problem behaviors. Each scale measures the same areas described in the SSIS-PF. In the present study, Cronbach's alpha for social skills was .93 and for problem behavior was .80.

The Social Competence and Behavior Evaluation- Short Form (SCBE-30; LaFreniere & Dumas, 1996) was used to assess social behaviors associated with the child's ability to regulate emotion in a social context as rated by teachers. The SCBE-30 is used for children from 3 to 6. Teachers responded to 30 items rated on a 6-point scale (1=*never to 6= always*). Three scale scores are computed: (a) angry-aggressive (e.g., *easily frustrated, defiant when reprimanded*), (b) anxious-withdrawn (e.g., *isolated from a group of children; looks sad, unhappy, depressed*), and (c) sensitive-cooperative (e.g., *comforts children in difficulty, takes other children's viewpoints into account*). In the present study, Cronbach's alpha for the sensitive-cooperative, angry-aggressive, and anxious-withdrawn scale were .88, .93, and .79 respectively.

The Penn Interactive Peer Play Scales Teacher Form (PIPPST; Fantuzzo & Hampton, 2000) was used to assess children's social-emotional competence in peer play from teachers' perspectives. The PIPPS-T scale was developed in collaboration with Head Start teachers and parents to describe peer play interactions of diverse



samples of low-income preschool children (Hampton & Fantuzzo, 2003). The PIPPS is designed to differentiate children who demonstrate positive peer relationships from those who are less successful with peers during play. Teachers responded to 32 items rated on a 4-point Likert scale indicating how often they observed a certain behavior during free play (1=*never* to 4= *always*). Three scales for underlying dimensions of peer play behaviors may be computed: play interaction, which is an indicator of prosocial behavior, play disruption, which reflects aggressive behavior that interferes with ongoing play, and play disconnection, which describes avoidant behavior and non-participation in play. In the present study, Cronbach's alphas for play interaction, play disruption, and play disconnection were .88, .90, and .86, respectively.

***Child characteristics.*** We included child age, gender and presence of developmental delays in order to assess the potential effect that these variable might have on children social-emotional outcomes. Research shows that preschool children with developmental delays exhibit less social interaction, more problem behavior and increased social withdrawal (Baker et al., 2003). Moreover, some studies suggest that mothers of infants with developmental delays show lower levels of maternal sensitivity and exhibit more negative parenting (Brown et al., 2011; Moran et al., 1992).

Child gender and age were obtained through parental report. We obtained a list of children with developmental delays that were receiving an individualized education plan (IEP) through the Head Start coordinator; a total of 28.6% of children had a developmental delay and were receiving an IEP. Of the total of children with an IEP, 86.7% were receiving speech therapy, 28.6% occupational therapy, 17.9% physical therapy and 32.1% one to one assistance. Fifty percent of children with developmental delays were receiving more than one type of individualized service.

***Enrollment in Head Start and Early Head Start.*** We obtained date of enrollment in the Head Start program through program records and created two variables: length of time (in months) that the child had spent in Head Start at time of assessment and whether or not the child had attended Early Head Start. Early Head Start is a federally-funded program that provides intensive, and comprehensive child development and family support services to low-income infants and toddlers and their families, and pregnant women and their families. Overall, 41.9% of children had participated in the Early Head Start program. The mean time that children had spent in the Head Start program when they were assessed was 6.17 months (SD= 5.54).

#### **2.3.4. Analytic plan**

First, we conducted descriptive statistics to examine the distribution of each risk factor and describe the composition of the maternal cumulative risk index. Second, we conducted descriptive statistics for the mother-child interaction variables obtained through the three boxes task and examine bivariate correlations between these variables. Third, we conducted descriptive statistics for all child outcome measures. Then conducted a factor analysis with all teacher report measures of child social-emotional development to reduce the number of outcome variables and look for an interpretable structure that conformed social competence and problem behavior separately. Fourth, we examined variable distributions and associations between study variables by conducting bivariate analysis. Fifth, we conducted Path analytic models in Mplus version 6.11 (Muthén & Muthén, 1998-2011) to estimate model fit and parameter estimates for the hypothesized paths (figure 4).

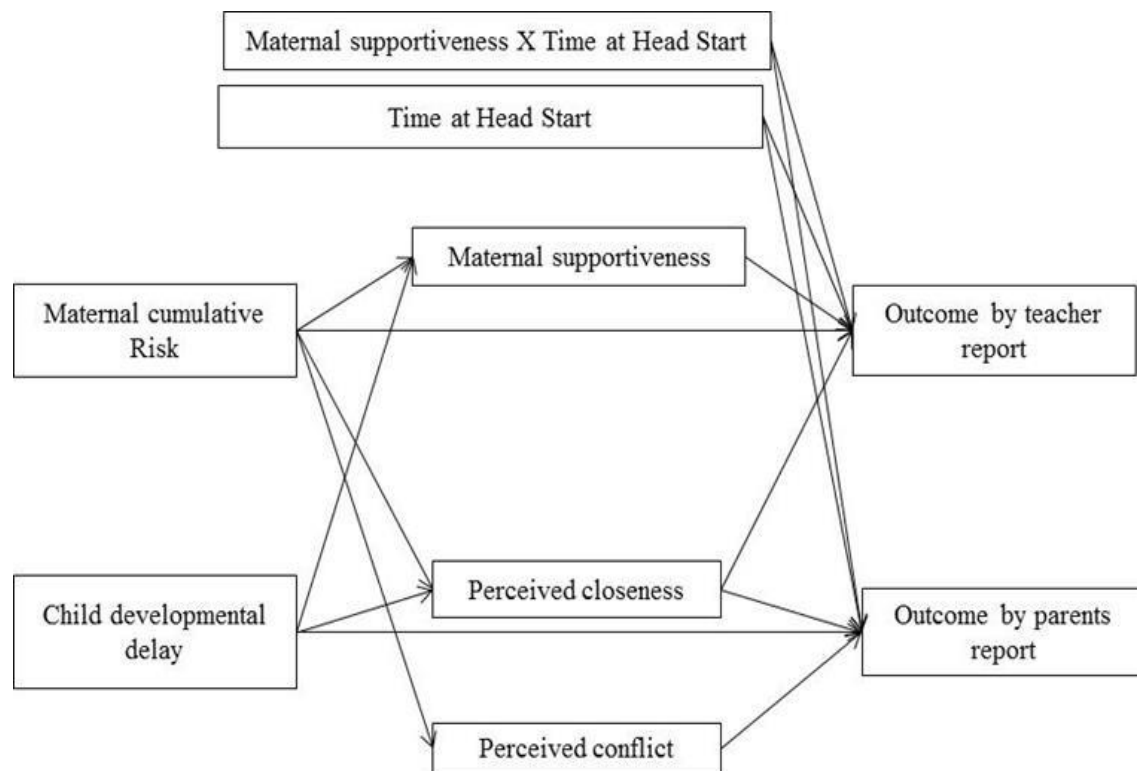


Figure 4. Path analysis model being tested

Path analysis models were estimated for social competence, externalizing behavior and internalizing behavior separately. The three models included the same predictor variables but different outcomes and control variables. Exogenous variables included cumulative risk, child developmental delay, time spent in HS, the interaction variable, (maternal supportiveness x time spent in HS), and control variables (child age, sex and Early Head Start participation not shown in figure 4). Endogenous variables included mother-child interaction variables (observed maternal supportiveness, perceived maternal closeness, and perceived maternal conflict) and child outcomes reported by parents and teachers separately. Each model included direct paths from cumulative risk to all mother-child interaction variables and all child outcomes, from mother-child interaction variables to child outcomes, and from time spent in HS to child outcomes. To test for the moderating role of time spent at Head

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Start, the interaction term maternal supportiveness-by-time in HS was formed as the product of the two predictors centered to the mean as recommended by Cohen, Cohen, West, & Aiken (2013). A direct path from the interaction variable to child outcomes was included in the path models. Correlations between mother-child interaction variables and between outcomes were allowed. The indirect paths from cumulative risk to child outcomes via any mother-child interaction variable were analyzed to test for possible indirect effects. To preserve power, the effects of the control variables on the child outcomes were only entered in the model when they were significantly related to child outcomes in bivariate analysis.

A path analysis approach was used instead of a latent variable model due to limitations of sample size. Path analysis offers important advantages as an analytic strategy, such as testing the direct effects of exogenous variables on endogenous variables, and the indirect effects that may be applied through their influences on each other. Path analysis serves here to estimate the models that explain the correlations between variables simultaneously and test various types of relationships among variables and assess direct and indirect effects (Olobatuyi, 2006). Causality cannot be determined given the cross-sectional and observational nature of our data.

We used maximum likelihood estimation with robust standard errors (MLR) for all models. This method has been recommended to handle non-normally distributed data. Various indices were used to assess goodness of fit (Byrne, 2012). Chi-square goodness-of-fit tests exact model fit, and a non-significant chi-square value supports model fit. Fit indices with a value  $<.08$  or  $<.05$  for the root mean square error of approximation (RMSEA), at or below  $.08$  or  $.05$  for the Standardized Root Mean Square Residual (SRMR), and greater than  $.90$  or  $.95$  for the Comparative Fit Index (CFI) were considered an acceptable or excellent fit, respectively (Hu &

Bentler, 1999). We used the delta method provided as the default method in Mplus to test the indirect effects of cumulative risk and developmental delay on child outcomes (Muthén & Muthén, 1998-2011). This method allows to examine the indirect effect of an exogenous variable (cumulative risk) on a specific outcome (child social-emotional outcomes), through its impact on various mediating variables (maternal supportiveness and the self-reported quality of the mother-child relationship). Based on Baron and Kenny (1986) model to test mediation effects, in order to calculate the indirect effects of X (cumulative risk) on Y (child outcomes) via a mediator (mother-child interaction variable), X has to be correlated with Y and the mediator, and the mediator has to be correlated with Y. When these steps are met, the Delta Method provides an estimate of the indirect effect of X predicting Z via one or multiple mediator variable by multiplying the direct effects.

When the association between the interaction variable (maternal supportiveness x time spent in HS) and child outcomes was found significant in path models, separate regression lines were computed and tested for individuals at high, medium and low values for the moderator variable (Holmbeck, 1997). To interpret the interaction between two continuous variables it is recommended either to define a priori high and low values for the moderator variable or establish values of the predictor and the moderator at 1 *SD* above the mean and 1 *SD* below the mean (Aiken & West, 1991; Aiken, West, & Reno, 1991; Warner, 2012). Another approach is to convert the moderator variable to a categorical variable. For interpretation purposes we chose to categorize the variable time spent at Head Start in three groups: children that had spent less than 6 months at Head Start, children that had spent between 6 and 12 months, and children that had spent more than 12 months. When the interaction between maternal supportiveness and time spent at Head Start was found

significant in path analyses, the association between maternal supportiveness and child outcomes were estimated in regression analyses for the three groups: children that had spent less than 6 months at Head Start, children that had spent between 6 and 12 months, and children that had spent more than 12 months.

## **2.4. Qualitative methods**

### **2.4.1. Participants**

This qualitative study is part of a the larger pilot randomized control evaluation to examine the impact of the CARING preschool program by comparing Head Start parent-child dyads receiving the intervention versus Head Start parent-child dyads in a wait-list control group.

Forty families participated in focus groups. However, because the focus group script was modified after the first two focus groups to include questions about parents' childhood experiences only thirty-two families are included in this qualitative study. Only families who participated in the CARING preschool intervention were invited to participate in focus groups, as these were designed to learn from families about the program's impact. Although we invited all participants (both immigrant and non-immigrant) all mothers participating in focus groups except one were first generation immigrants and from Hispanic origin (68.75% from Mexico, 12.50% from the Dominican Republic, 12.50% from Ecuador, 3% from other Latin American countries). Aside from immigration status, there were no significant differences in demographics and study variables between mothers who participated in focus groups and those who did not. Table 3 depicts detailed demographic characteristics.

Table 3  
*Focus Group Participants Demographic Characteristics*

	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	
					<i>Min.</i>	<i>Max.</i>
Childs' age (months)	32	-	45.76	6.79	34.07	59.07
Childs' gender						
Female	62.5	50.90	-	-	-	-
Male	37.5	49.10	-	-	-	-
Child developmental disability	6	18.80	-	-	-	-
Early Head Start participation	12	37.50	-	-	-	-
Time at Head Start (months)	32	-	5.48	5.70	1	20.4
Mothers' Age	32	-	31.57	4.68	24.57	45.74
Country of origin						
Mexico	22	68.75	-	-	-	-
Dominican republic	4	12.50	-	-	-	-
Ecuador	4	12.50	-	-	-	-
Other South American countries	1	3.10	-	-	-	-
U.S.	1	3.10	-	-	-	-
Years living in US	31	-	9.31	3.77	5	20
Home Language						
Spanish	29	90.60	-	-	-	-
Bilingual Spanish-English	3	9.40	-	-	-	-
Maternal Education						
Less than high school	16	50	-	-	-	-
High school or GED	8	25	-	-	-	-
Vocational/technical	5	15.60	-	-	-	-
Bachelors	3	9.40	-	-	-	-
Marital Status						
Married/with Partner	30	93.70	-	-	-	-
Single	2	6.30	-	-	-	-
Living arrangements						
Renting a house	13	40.60	-	-	-	-
Renting a room	19	59.40	-	-	-	-
Number of family members	32	-	3.94	1.07	2	7
Number of people in the household	32	-	5.46	2.27	2	13

*Note.* Variables where levels of frequencies do not add to 32 and percentages not totaling 100% reflect missing data.

### **2.4.2. Procedure**

From the total sample of 106 mothers, sixty-one mothers were randomly selected by the larger study to participate in the CARING intervention. Only participants randomized to the intervention group were invited to participate in a focus group at the completion of the intervention. The purpose of the focus group was to gather qualitative information on the impact of the CARING preschool program on participants, as well as to obtain feedback to make programmatic improvements. After the two first focus groups (that included a total of 8 people), we modified the focus group scripts to include some questions aimed to explore parent childhood experiences around play and the impact of childhood experiences on parenting. These questions were included for the purposes of the present dissertation; therefore, for the present study we only include results from 8 focus groups (32 participants).

From the 61 mother invited to the focus groups, 40 participated. Twenty-one families participated in the CARING intervention but did not attend a focus group. We did not find significant differences in any demographic or baseline data between parents that participated in focus groups and those who were invited but did not participate. Families that participated in focus groups had a mean attendance of 10 sessions (out of 12,  $SD=2.6$ ), while those who did not attend had a mean attendance of 4.71 sessions ( $SD=3.87$ ). All families were invited to participate in the focus groups, despite their program attendance or drop out status but the same reasons for poor attendance in CARING affected their focus group participation (new baby, no longer in the Head Start program, illness...).

Focus groups were conducted by an academic researcher involved in CARING and a research assistant, both of whom were bilingual English-Spanish. All groups were conducted in Spanish at the Head Start Center in the morning with refreshments



and childcare provided. Participants were invited to participate in a focus group the week after finishing the CARING intervention. Each focus group consisted of 3 to 6 mothers, except for two mothers that were not able to attend to the focus groups and were interviewed individually. After all participants arrived at the meeting room, participants were introduced and the two facilitators encouraged participants to speak openly, respect others and assure participants confidentiality. After they agreed, the facilitator turned on the recorder and began asking questions that encourage discussion of participants' experience in CARING and generate a general description of the perceived effectiveness of the intervention based on the perspectives of participating mothers. Facilitators also inquired about mothers' experiences with play during their childhood and the impact of these experiences on their current parenting. All questions were meant to encourage discussion among the participants, who stimulated each other with further comments. The focus group discussions lasted between 60 and 80 minutes.

#### **2.4.3. Research questions and focus group protocol**

The main research questions addressed in this qualitative investigation focused on examining participants childhood experiences and how participants related their childhood experiences and their current parenting. While numerous other areas of inquiry could have been addressed in the qualitative portion of this investigation (e.g., impact of the CARING intervention), the aim to keep it focused on the impact of participants' childhood experiences on current parenting beliefs, values and practices was consistent with the goals of the study. The first section of the focus group included questions about the effectiveness of the CARING intervention and areas for improvement, while the second section included questions related to the goals of the present study: 1) where did you grow up? 2) What was your experience with play

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when you were growing up? Can you tell us some things you did as a child for fun? Who did you play with? 3) How was play similar/ different than it is for your child now?? 4) Did you have experiences with creative-expressive play like the kind you have discussed in CARING? , Do you think that your experiences growing up impacted you as a parent? If so, in what ways? Appendix A includes a full list of the focus group interview protocol questions.

Participants were encouraged to provide open responses to these questions and the facilitators made every effort to hear from all members of each group on each question.

### **2.4.4. Data analysis plan and reliability**

For the focus group analysis, audio files were fully transcribed verbatim. Two independent researchers analyzed parental responses using QRS International's NVivo 10 (2012) qualitative data analysis software. Although one of the aims of the focus group was to explore parents experience during the intervention, for the present study we only coded those responses that informed the study aims. We followed thematic analysis procedures to analyze focus group data (Braun & Clarke, 2006). Thematic analysis is a method for identifying, analyzing, and reporting patterns or themes within data. It minimally organizes and describes your data set in detail. It also allows interpreting various aspects of the research topic (Boyatzis, 1998). We used an inductive approach to identify themes within the data in which themes identified are strongly linked to the data and the data is not analyzed to fit into a pre-existing coding frame.

We followed the 6 phases of thematic analysis proposed by Braun & Clarke (2006):

- 1) *Familiarising yourself with the data.* The first author and two research assistants transcribe the verbal data. Then, the first author read several times the data set searching for meanings and patterns and made notes before the formal coding process.
- 2) *Generating initial codes.* Codes are applied to short segments of data and are different than themes, which are broader. In the present study, the first author analyzed focus group data using open and selective coding. A second independent coder analyzed 50% of focus groups using the coding system created by the first author, allowing for the identification of new codes. Researchers met to review new emerging codes created by the second coder, which led to a refinement of the coding system and a review of data set using new codes. We only coded the content that informed our research question. Individual extracts of data could be coded as many different themes as they fit into, thus an excerpt may be uncoded, coded once, or coded many times, as relevant.
- 3) *Searching for themes.* After having created a list of codes identified across the data set, the first author sorted the codes into potential themes. The themes and categories created were discussed with the second independent coder and the advisor, Dr. Helena Duch. Then we developed levels or categories within themes to organize the data.
- 4) *Reviewing themes.* This phase involves a refinement of the themes created assuring a clear definition of each theme and identifiable distinction between themes. We reviewed all the codes and data excerpts for each theme and decided whether they formed a coherent pattern. Then a thematic map was

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developed to reflect the codes, categories, themes and relationships between them.

- 5) *Defining and naming themes.* This phase requires reviewing the “essence” of what each theme is about and determines what aspect of the data is captured and what is most interesting about it. This process leads to describing the meaning of each theme and how each theme relates to the research question.
- 6) *Producing the report.* This phase involves writing up the results of the thematic analysis, including data excerpts.

## 3. RESULTS

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### 3.1. Quantitative results

#### 3.1.1. Exploratory data analysis and reduction

In this section we report descriptive data for all measures and we describe the process of data reduction to create the study variables included in path analysis models.

##### 3.1.1.1. *Cumulative risk*

*Descriptive statistics.* Measures of six risk factors were included in our cumulative risk index: distal factors were single-parent status, low maternal education, living conditions, and teenage motherhood; proximal factors were depressive symptoms, and high level of parenting stress. These are some of the most-commonly cited factors that are considered distal and proximal sources of risk (Burchinal et al., 2008), and each has been demonstrated to predict social-emotional development, parenting behaviors, or both, as reviewed above. Descriptive data is reported for each of these six risk factors in table 4.

Table 4  
*Descriptive statistics for Indices of Cumulative Risk*

	<i>n</i>	%
Maternal education		
Less than High School	41	38.7
High School or GED	32	30.20
Associate degree	23	21.70
B.A.	10	9.40
Living arrangements		
Family lives in an apartment	51	48.1
Family lives in a room	55	51.90
Family composition		
Two parent household	83	78.3
Single mother	23	21.70
	<i>M</i>	<i>SD</i>
Age at child's birth	27.24	5.92
Maternal depression (CES-D)	7.54	7.52
Parenting stress (PSI)	109.39	23.24

Mothers' ages at the time of the child's birth was calculated using maternal age and the age of the child participating in the study. Maternal age at birth and parenting stress were normally distributed. Maternal depression was positively skewed (skewness=1.63, SE=.24). Because depression does not have a normal distribution in the population, this variable was not expected to have a normal distribution in the present study.

*Data reduction.* Responses on each measure were dichotomized as providing evidence of risk or no such evidence. Wherever possible, thresholds of risk were defined *a priori*, rather than being based on distributional properties of the data (as recommended by Burchinal et al., 2000 and Gassman-Pines & Yoshikawa, 2006). Justification of the thresholds used to dichotomize each risk factor is reported on the measures section. Table 5 summarizes thresholds used to define risk and reports the proportion of the sample categorized at risk and not at risk for each measure.

Table 5  
*Classification of Risk Status*

	<i>n</i>	%
Maternal education		
No risk (High School or GED)	65	61.3
Risk (Less than High School)	41	38.70
Missing	0	0
Teen pregnancy		
No risk ( $\geq 20$ years)	92	85.8
Risk ( $< 20$ years)	13	12.30
Missing	1	.99
Living arrangements		
No risk (family live in an apartment)	51	48.1
Risk (family lives in a room)	55	51.90
Missing	0	0
Family composition		
No risk (two parent household)	83	78.3
Risk (single mother)	23	21.70
Missing	0	0
Maternal depression		
No risk ( $< 16$ CES-D)	92	86.8
Risk ( $\geq 16$ CES-D)	13	12.30
Missing	1	.99
Parenting stress		
No risk (PSI $< 85^{\text{th}}$ percentile)	88	83
Risk (PSI $\geq 85^{\text{th}}$ percentile)	16	15.10
Missing	2	1.9

Cumulative risk scores were calculated as the sum of dichotomized risk scores. Cumulative risk had a mean of 1.52 (SD=1.21) and had an approximate normal distribution (skewedness= .73, SE= .24). Frequencies for the cumulative risk index are presented in figure 5. Most participants had one (35.8%) or 2 risk factors (24.5%). No participants had 6 risk factors.

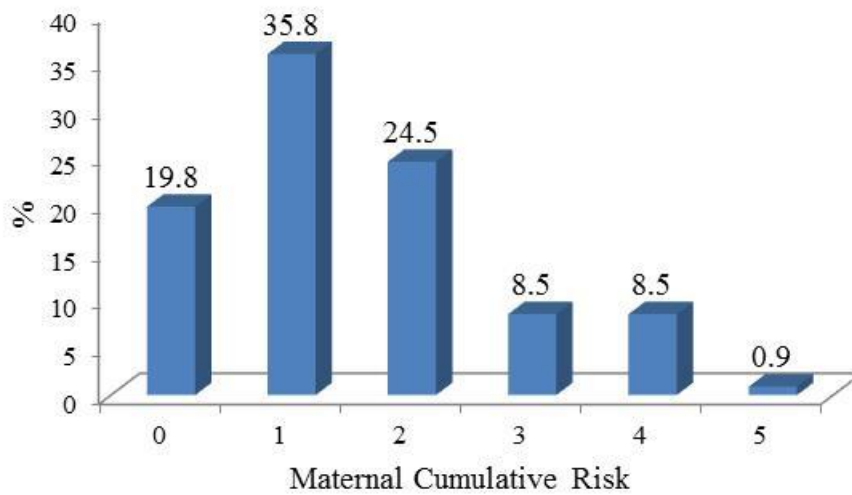


Figure 5. Frequency distribution of cumulative risk index

### 3.1.1.2. Mother-child relationship

*Descriptive statistics.* To describe the quality of the mother child relationship we assessed the self-report quality of the mother-child relationship, and maternal parenting behaviors that were assessed using a mother-child interaction observation task. Self-report data were obtained from 105 parents, and observed mother-child interaction data, from which we obtained maternal parenting behaviors, were available for 104 dyads. Table 6 displays descriptive scores on the self-report quality of the mother-child relationship and observed mother-child interaction data (5 parenting subscales, 1 dyadic subscale, and 4 child subscales). For observational data, when ratings were made by two coders, scores were calculated as the mean of ratings. On average, mothers displayed moderate to high levels of positive parenting behaviors (maternal supportive, respect for child's autonomy, cognitive stimulation, and confidence) and low levels of negative parenting behaviors (maternal hostility) toward children during play interaction. Evaluation of descriptive data and distributions of variables revealed that, for self-reported measures, mother child closeness was negatively skewed (skewedness = -1.15, SE=.24) and for observed



measures of mother-child interaction, child negativity (skewedness = 3.36, SE=.24) and maternal hostility (skewedness = 2.98, SE=.24) were positively skewed, while affective mutuality was negatively skewed (skewedness = -13, SE=.24). Others have also reported little variability and non-normal distribution for maternal hostility (Cabrera et al., 2011). All other variables were normally distributed.

Table 6  
*Descriptive Statistics for Mother-Child Interaction Variables*

	<i>M</i>	<i>SD</i>	Range	
			Min.	Max.
Self-report quality of mother-child relationship				
Mother-child closeness	45.10	4.69	28.00	50.00
Mother-child conflict	27.67	8.21	12.00	49.00
Mother-child interaction				
Child variables				
Persistence	5.62	1.29	2	7
Agency	5.53	1.24	1	7
Affect towards mother	5.44	1.16	2	7
Negativity	1.43	0.97	1	7
Dyadic variable				
Affective mutuality	5.33	1.40	1	7
Mother variables				
Confidence	5.36	1.40	2	7
Supportive presence	4.98	1.46	1	7
Respect for autonomy	4.88	1.26	2	7
Cognitive stimulation	4.04	1.58	1	7
Hostility	1.42	0.78	1	7

Bivariate analyses presented in table 7 confirmed that maternal and child behaviors during the play interaction show small to moderate significant correlations (ranging from .30 to .66), except for maternal cognitive support and child negativity that were not significantly correlated ( $r=-.11$ ). In addition, all maternal behaviors showed moderate to strong significant correlations (ranging from .50 to .80) with the dyadic variable, affective mutuality. These results suggest that observed parenting behaviors contribute to patterns of reciprocal communication and shared emotion

## *Results*

between mother and child. Self-reported closeness showed a positive correlation with all observed positive maternal behaviors (ranging from .22 to .46) and a negative correlation with maternal hostility ( $r=-.24$ ). Maternal conflict was not significantly correlated with any observed mother or child behavior.

Table 7

*Correlations between Mother-Child Interaction variables*

	1	2	3	4	5	6	7	8	9	10	11
Self-report quality of mother-child relationship											
1. Mother-child closeness	-										
2. Mother-child conflict	.01	-									
Child variables											
3. Persistence	.31**	-.10	-								
4. Agency	.24*	.00	.78**	-							
5. Affect towards mother	.18	-.09	.58**	.67**	-						
6. Negativity	-.14	.10	-.50**	-.48**	-.40**	-					
Dyadic variable											
7. Affective mutuality	.27**	-.09	.53**	.62**	.70**	-.50**	-				
Mother variables											
8. Confidence	.22*	-.03	.48**	.58**	.51**	-.41**	.64**	-			
9. Supportive presence	.34**	-.10	.45**	.51**	.61**	-.36**	.80**	.64**	-		
10. Respect for autonomy	.31**	-.09	.56**	.61**	.66**	-.44**	.71**	.71**	.70**	-	
11. Cognitive stimulation	.46**	-.11	.32**	.33**	.40**	-.11	.60**	.58**	.76**	.51**	-
12. Hostility	-.24*	-.05	-.34**	-.40**	-.30**	.55**	-.50**	-.57**	-.54**	-.52**	-.43**

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

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*Data reduction.* Guided by previous literature we created a measure of maternal supportiveness as composite index of three highly correlated maternal behaviors (maternal support, respect for child's autonomy and cognitive stimulation) that touched on positive dimensions of the mother child interaction (Owen et al., 2000). Correlations between these three scales ranged from .60 to .80 (table 7). We did not include negative parenting behaviors (hostility scale) in the current study due to little variability. Previous research has used similar procedures (Cabrera et al., 2011). In the present study, the composite of maternal supportiveness had a mean of 4.63 (SD= 1.26) and a Cronbach's alpha of .85, and it had an approximate normal distribution (skewedness=-.53, SE=.24).

### ***3.1.1.3.Social-emotional outcomes***

*Descriptive statistics.* Different measures were used to assess social-emotional outcomes rated by both parents and teachers. Table 8 displays descriptive data for all measures of child social-emotional competence rated by parents and teachers. The SSIS measure contains two scales; the social skills/social competence and problem behaviors scale, and provides normed scores with a mean of 100 and standard deviation of 15. Each scale is composed by subscales that are reported as raw scores. The SCBE-30 contains three scales that are reported as raw scores; normed scores do not exist for the short version of the SCBE. The PIPPS contains three scales and provides normed T scores. Evaluation of descriptive data and distributions of variables revealed that the SSIS-TF problem behavior scale and its subscales were positively skewed (skewedness ranging from 3.21 to 1.70), and the SCBE-30 anxiety/withdrawn scale (skewedness= 1.63, SE=.24) and the anger/aggression scale (skewedness=2.13, SE=.24) were positively skewed. All other measures were approximately normally distributed.

Table 8  
*Descriptive Statistics for Measures of Child Social-Emotional Competence*

	N	M	SD	Range	
				Min.	Max.
Teachers' questionnaires					
SSIS-TF					
Social skills scale	104	93.83	15.9	53	125
Communication	104	14.6	3.92	5	21
Cooperation	105	12.32	3.45	3	18
Assertion	104	10.96	4	3	20
Responsibility	105	12.33	3.43	4	18
Empathy	105	10.33	3.43	1	18
Engagement	104	13.7	3.9	2	21
Self-control	104	12.86	3.9	1	21
Problem behavior scale	105	91.7	9.75	82	130
Externalizing	105	2.89	4.34	0	21
Bullying	105	0.64	1.44	0	9
Hyperactive	105	2.73	3.36	0	15
Internalizing	105	1.34	2.02	0	10
SCBE-30					
Social competence scale	104	37.82	9.24	17	60
Anxiety/withdrawn scale	104	15.03	4.77	10	37
Anger/aggression scale	104	14.76	6.63	10	41
PIPPS					
Play interaction scale	103	46.88	11.79	10	73
Play Disruption scale	103	41.14	9.41	10	70
Play Disconnection scale	103	41.83	8.51	13	68

Table 8 cont.

*Descriptive Statistics for Measures of Child Social-Emotional Competence*

	N	M	SD	Range	
				Min.	Max.
Parents' questionnaire					
SSIS-PF					
Social skills scale	103	110.22	13.27	72	134
Communication	103	17.2	3.19	7	21
Cooperation	104	14.31	2.81	4	18
Assertion	104	16.67	3.87	3	21
Responsibility	103	13.83	3.4	2	18
Empathy	104	14.96	2.98	7	18
Engagement	103	16.09	4.74	1	21
Self-control	103	12.5	4.4	0	21
Problem behavior scale	104	101.11	14.09	78	143
Externalizing	104	8.35	5.31	0	27
Bullying	104	1.57	1.72	0	8
Hyperactive	104	6.85	4.55	0	17
Internalizing	104	4.65	3.75	0	17

*Data reduction.* Given the moderate to low correlation between parents and teachers reports of child behavior reported on the literature and confirmed in the present study (table 9), we wanted to keep parents ratings and teachers ratings separated. First, we conducted an exploratory factor analysis with all teacher reported measures to reduce the number of variables based on three different measures. We performed a principle-components factor analysis of the 17 subscales from SSIS-TF, SCBE-30 and PIPPS using promax rotation to acknowledge possible correlation of components. A three-factor structure emerged for all the subscales explaining 76.3% of the variance. The factor loading matrix for this solution is presented in table 10. The three components were identified as social competence, externalizing behavior and internalizing behavior. Composite scores were created for each of the three factors based on the mean of the subscales that had their primary loadings on each factor. Internal consistency for each factor was examined using Cronbach's alpha.

The social competence, internalizing behavior, and externalizing behavior factors obtained alphas of .95, .76, and .93 respectively.

Table 9  
Correlations between Child Social-Emotional Measures

	1	2	3	4	5	6	7	8	9
Teachers questionnaires									
SSIS-TF									
1. Social skills	-								
2. Problem behavior	-.49**	-							
SCBE-30									
3. Social competence	.76**	-.58**	-						
4. Anxiety/withdrawn	-.60**	.27**	-.54**	-					
5. Anger/aggression	-.34**	.79**	-.44**	.15	-				
PIPPS									
6. Play interaction	.67**	-.39**	.71**	-.48**	-.35**	-			
7. Play Disruption	-.46**	.59**	-.53**	.12	.61**	-.35**	-		
8. Play Disconnection	-.45**	.37**	-.47**	.57**	.18	-.35**	.43**	-	
Parents' questionnaire									
SSIS-PF									
9. Social Skills	.51**	-.27**	.45**	-.45**	-.30**	.44**	-.23*	-.36**	-
10. Problem behavior	-.14	.27**	-.19	-.04	.19	.01	.20*	.06	-.45**

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



Table 10

*Principal Component Structure Matrix of the Factorial Analysis with all teachers questionnaires*

Subscale name (questionnaire)	Social competence	Externalizing behavior	Internalizing behavior
Engagement (SSIS)	0.89		
Assertion (SSIS)	0.86		
Communication (SSIS)	0.85		
Social competence (SCBE)	0.84		
Play interaction (PIPPS)	0.84		
Self-control (SSIS)	0.81		
Empathy (SSIS)	0.81		
Respect (SSIS)	0.79		
Cooperation (SSIS)	0.71		
Externalizing (SSIS)		0.96	
Bullying (SSIS)		0.94	
Anger/aggression (SCBE)		0.89	
Hyperactivity (SSIS)		0.81	
Play disruption (PIPPS)		0.77	
Play disconnection (PIPPS)			0.87
Internalizing (SSIS)			0.79
Anxiety/withdrawn (SCBE)			0.74
Components Cronbach's $\alpha$	0.95	0.93	0.76
Percentage variance accounted for	53.16	16.11	7.03

*Note.* Extraction Method: Principal Component Analysis.

Rotation Method: Promax rotation with Kaiser Normalization. Variance reported is based on the unrotated matrix. Only factor loading included in each factor composite score are reported

Social-emotional outcomes rated by parents were based only in one measure, the SSIS-PF. The SSIS-PF contains 13 subscales that are reduced in two domains: social skills/social competence and problem behaviors. The social skills/competence scale measures positive social behaviors, including communication, cooperation, empathy, assertion, engagement, self-control, and responsibility. The problem behavior scale measures externalizing problems, hyperactivity, bullying, internalizing problems, and autism spectrum behaviors. The autism spectrum subscale was dropped from the current study. In order to distinguish externalizing and internalizing problem

## *Results*

behavior in the path analysis model we created a score for externalizing behavior that combined the three highly correlated subscales of the problem behavior domain: externalizing, hyperactivity and bullying. The externalizing subscale was significantly correlated with bullying,  $r=-.62$  ( $p<.001$ ), and hyperactivity,  $r=.87$  ( $p<.001$ ). The bullying and hyperactivity subscales were also correlated,  $r=.53$  ( $p<.001$ ). In the present study, Cronbach's alpha for social skills was .85 and for externalizing behavior was .82. The internalizing subscale was used by itself and had a Cronbach's alpha of .71.

### **3.1.2. Descriptive statistics and bivariate analyses between study variables**

Descriptive data for all study variables included in estimation models are provided in Table 11. Cumulative risk, maternal supportiveness, maternal conflict, all child outcomes reported by parents and social competence reported by teachers were normally distributed. Maternal closeness, with skewedness of -1.15 (SE=2.36), time spent at Head Start, with skewedness of 1.31 (SE=2.38), and internalizing and externalizing behavior reported by teachers with skewedness of 1.39 (SE=2.38) and 2.08 (SE=2.38) respectively, showed a non-normal distribution

Table 11  
*Descriptive Statistics for Predictor Variables and Outcome Variables*

	<i>M</i>	<i>SD</i>	<i>Range</i> <i>Min.</i>	<i>Range</i> <i>Max.</i>	<i>Skewness</i>	<i>Kurtosis</i>
Maternal cumulative risk	1.52	1.21	0.00	5.00	.73	-.03
Identified developmental delay	0.28	0.45	0.00	1.00	.92	-1.17
Time in Head Start (months)	6.17	5.54	0.1	25.84	1.13	.87
Mother-child interaction variables						
Self-reported maternal conflict	45.10	4.69	12.00	49.00	.23	-.12
Self-reported maternal closeness	27.67	8.21	28.00	50.00	-1.15	1.05
Observed maternal supportiveness	4.63	1.26	1.00	7.00	-.53	-.06
Interaction: MSxtHS	-.78	7.27	-25.69	17.65	-.80	2.61
Parents reports (SSIS)						
Social competence	105.67	13.27	45.00	138.00	-.63	-.05
Internalizing	4.65	3.75	0.00	17.00	.98	.80
Externalizing	12.20	7.85	0.00	40.67	.84	.69
Teachers reports (Factors)						
Social competence	49.42	8.58	31.74	69.01	-.21	-.40
Internalizing	47.10	7.65	37.25	77.57	1.39	2.48
Externalizing	48.11	8.64	36.86	85.40	2.08	5.53
Covariate variables						
Child age	46.01	6.49	33.60	63.36	.45	-.28
Child sex	1.51	0.50	1.00	2.00	-.04	-2.04
Participation in EHS	.41	.50	0.00	1.00	.37	-1.90

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Child's sex and Early Head Start participation, all dichotomous variables, were first examined in relation to mother-child interaction variables and each social-emotional competence outcome measure as potential covariates conducting independent samples t-test (table 12). There were significant differences between girls and boys in externalizing behaviors and social competence. Girls showed higher levels of social competence as rated by parents ( $M= 109.58$ ,  $SD=16.51$ ) than boys ( $M= 101.52$ ,  $SD=20.10$ ),  $t(101) = 2.23$ ,  $p < .05$ . Boys ( $M= 13.76$ ,  $SD=8.58$ ) showed significantly higher levels of externalizing behavior rated by parents than girls ( $M= 10.74$ ,  $SD=6.87$ ),  $t(102) = 1.99$ ,  $p < .05$ . When child's behavior was rated by teachers, boys ( $M= 49.22$ ,  $SD=8.89$ ) also showed significantly higher levels of externalizing behavior than girls ( $M= 46.01$ ,  $SD=6.52$ ),  $t(101) = 2.09$ ,  $p < .05$ . Therefore, child's sex was included as a covariate in model estimation for externalizing behavior. Early Head Start participation did not show any significant correlation with any child outcomes and therefore was not included in further analysis

Table 12

*Comparisons (T-test) for Mother-Child Interaction Variables and Child Outcomes by Child's Sex and Participation in EHS*

	Child's sex		<i>t-test</i>
	Boys <i>M (SD)</i>	Girls <i>M (SD)</i>	
Mother-child interaction variables			
Self-reported maternal closeness	43.78 (4.96)	46.35 (4.10)	2.90**
Self-reported maternal conflict	28.39 (9.29)	26.98 (7.06)	n.s.
Maternal supportiveness	4.47 (1.31)	4.79 (1.21)	n.s.
Parents reports (SSIS)			
Social competence	49.10 (8.52)	50.48 (7.89)	n.s.
Internalizing	47.87 (7.12)	46.56 (8.20)	n.s.
Externalizing	49.22 (8.89)	46.02 (6.52)	2.09*
Teachers reports (Factors)			
Social competence	101.52 (20.10)	109.58 (16.50)	2.23*
Internalizing	5.14 (4.09)	4.20 (3.37)	n.s.
Externalizing	13.77 (8.58)	10.74 (6.87)	1.99*
Participation EHS			
	No <i>M (SD)</i>	Yes <i>M (SD)</i>	<i>t-test</i>
Mother-child interaction variables			
Self-reported maternal closeness	43.78 (4.96)	45.16 (4.90)	n.s.
Self-reported maternal conflict	28.39 (9.29)	27.98 (8.65)	n.s.
Maternal supportiveness	4.47 (1.31)	4.87 (1.13)	n.s.
Parents reports (SSIS)			
Social competence	49.10 (8.52)	49.48 (7.98)	n.s.
Internalizing	47.87 (7.12)	47.43 (7.61)	n.s.
Externalizing	49.22 (8.89)	46.99 (7.04)	n.s.
Teachers reports (Factors)			
Social competence	108.94 (13.40)	109.02 (13.37)	n.s.
Internalizing	5.14 (4.09)	4.71 (3.92)	n.s.
Externalizing	13.77 (8.58)	12.33 (8.67)	n.s.

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

## *Results*

In Table 13, the zero-order correlations among independent variables are presented. Cumulative risk showed a significant positive correlation with maternal conflict ( $r=.40$ ,  $p<.01$ ) and a significant negative correlation with maternal supportiveness ( $r=-.28$ ,  $p<.01$ ), maternal closeness ( $r=-.29$ ,  $p<.01$ ), and social competence reported by parents ( $r=-.22$ ,  $p<.05$ ). Cumulative risk was significantly and positively correlated with externalizing ( $r=.30$ ,  $p<.01$ ) and internalizing ( $r=.39$ ,  $p<.01$ ) behavior reported by parents. In contrast, no significant correlations between cumulative risk and child outcomes reported by teachers were found.

Child developmental delay showed a significant negative association with maternal supportiveness ( $r=-.26$ ,  $p<.01$ ), maternal closeness ( $r=-.34$ ,  $p<.01$ ), and social competence by parent ( $r=-.39$ ,  $p<.01$ ) and teacher ( $r=-.23$ ,  $p<.05$ ) reports, and a positive association with internalizing behaviors reported by both parents ( $r=.34$ ,  $p<.01$ ) and teachers ( $r=.22$ ,  $p<.05$ ).

Maternal closeness showed a significant positive correlation with social competence reported by both parents ( $r=.52$ ,  $p<.01$ ) and teachers ( $r=.33$ ,  $p<.01$ ), and a significant negative correlation with externalizing behavior reported by both parents ( $r=-.21$ ,  $p<.05$ ) and teachers ( $r=-.23$ ,  $p<.05$ ). Maternal closeness also showed a significant negative correlation with internalizing behavior reported by parents ( $r=-.24$ ,  $p<.05$ ).

Maternal conflict was significantly associated with all child outcomes reported by parents, but was not with those reported by teachers. It showed a significant positive correlation with externalizing ( $r=.58$ ,  $p<.01$ ) and internalizing behavior ( $r=.50$ ,  $p<.01$ ) and negative correlation with social competence ( $r=-.24$ ,  $p<.05$ ). No significant direct association was found between maternal supportiveness and any child outcomes as reported by teachers or parents.

The time in months that children had spent at Head Start was positively correlated with social competence as reported by parents ( $r=.27$ ,  $p<.01$ ) and teachers ( $r=.35$ ,  $p<.01$ ) and negatively correlated with externalizing behavior reported by teachers ( $r=-.20$ ,  $p<.05$ ). The interaction variable maternal supportiveness-by-times spent at Head Start was negatively correlated with social competence as reported by teachers ( $r=-.20$ ,  $p<.05$ ).

Control variables (child's age, sex, and participation in Early Head Start) were also examined in relation to child outcomes as potential covariates., child's age showed a significant positive correlation with social competence reported by parents ( $r=.21$ ,  $p<.05$ ) and teachers ( $r=.35$ ,  $p<.01$ ). Child sex was correlated with social competence reported by parents and externalizing behavior reported by parents and teachers. Therefore, child's sex was included as a covariate in model estimation for externalizing behavior and social competence Early Head Start participation did not show any significant correlation with any child outcomes and therefore was not included in further analyses.

Table 13  
Correlations Between Predictor Variables, Covariates and Outcome Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Maternal cumulative risk	-														
2. Child developmental delay status	.21*	-													
3. Time in Head Start (months)	.06	.11	-												
Mother-child interaction variables															
4. Observed maternal supportiveness	-.28**	-.26**	-.11	-											
5. Self-reported maternal closeness	-.29**	-.34**	.09	.43**	-										
6. Self-reported maternal conflict	.40**	.15	.13	-.11	.01	-									
7. Interaction MSxTHS	-.13	-.08	-.16	.04	.05	.09	-								
Parents reports (SSIS)															
8. Social competence	-.21*	-.39**	.27**	.17	.52**	-.24*	-.17	-							
9. Internalizing	.39**	.34**	.00	-.13	-.24*	.50**	.03	-.43**	-						
10. Externalizing	.30**	.06	.04	-.12	-.21*	.58**	.12	-.44**	.49**	-					
Teachers reports (Factors)															
11. Social competence	-.05	-.23*	.35**	.16	.33**	.02	-.21*	.52**	-.20*	-.12	-				
12. Internalizing	.11	.22*	-.10	.08	-.16	.05	.15	-.42**	.08	-.03	-.64**	-			
13. Externalizing	.01	.06	-.20*	-.12	-.23*	.01	.17	-.31**	.18	.31**	-.55**	.33**	-		
Covariates															
14. Child age	.00	.08	.66**	-.06	.04	.10	-.09	.21*	.00	.02	.35**	-.15	-.04		
15. Child sex	-.19*	-.07	-.11	.13	.28**	-.09	-.05	.22*	-.13	-.19*	.08	-.09	-.20*	.02	
16. Early Head Start participation	.08	.03	-.05	.15	.01	.03	.09	-.09	.02	.01	-.04	.03	-.06	-.23*	-.04

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



### 3.1.3. Model specification and testing

Figure 4, presented in the methods section, shows a generic path diagram summarizing the models specified to test the hypotheses outlined. Three models were analyzed, one for each outcome (social competence, externalizing behavior, and internalizing behavior). Cumulative risk was expected to negatively impact social competence and positively impact externalizing and internalizing behavior both rated by parents and teachers. However, it was anticipated that this effect could be mediated by observed maternal supportiveness, perceived closeness and conflict; therefore indirect effects of cumulative risk were tested. In addition, we included a direct path from developmental delay to child outcomes, to account for the effects of the child individual risk. We also anticipated that observed maternal supportiveness, perceived closeness and conflict would mediate this relationship and so we tested for indirect effects. Finally, we wanted to explore whether time spend at Head Start would moderate the direct effect of maternal supportiveness on child outcomes. Model testing was conducted in two steps. First, based on bivariate analyses we selected covariates (child gender and sex) that had to be included in each e model due to significant relationship with child outcomes. Second, the expected relationships between variables, as shown in figure 4, were specified and tested.

#### 3.1.3.1. Model estimations for social competence

As seen in figure 6, the first model examined whether cumulative risk, child developmental delay, mother-child interaction variables, and time spent in HS, and the interaction maternal supportiveness-by-times spent at Head Start predicted social competence. Fit indices for the hypothesized model suggested an excellent model fit with  $\chi^2_{14} = 19.49$ ,  $p = 0.15$ ; RMSEA = .06, SRMR = .05, CFI = .96. Overall, predictors explained 31% and 44% of the variance in social competence rated respectively by

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parents and teachers. Effect sizes for the standardized beta ( $b$ ) statistic are presented below, where .10 represents a small effect, .30 represents a moderate effect, and .50 represents a large effect (Cohen, 1988).

In the model of social competence, there was a direct, negative association between maternal cumulative risk and both maternal supportiveness and maternal closeness ( $bs = -.20$  and  $-.18$ , respectively), and a direct positive association with maternal conflict ( $b=.32$ ), representing a small to moderate effect. Having a child with a developmental delay was associated directly and negatively with both maternal supportiveness and maternal closeness ( $bs= -.45$  and  $-.65$ , respectively), and with social competence reported by parents ( $b=-.53$ ), all representing large effects. Maternal closeness showed a direct, positive association with social competence reported by parents ( $b =.45$ ) and maternal conflict showed a direct, negative association with social competence reported by parents ( $b=-.21$ ), all small to moderate effects. Maternal closeness showed a direct, positive association with social competence reported by teachers that was closely to reach significance ( $b =.20$ ,  $p=.06$ ). Maternal supportiveness and time spent at Head Start did not show any direct association with child's social competence. However, the interaction term (maternal supportiveness x time spent in HS) was negatively associated with social competence reported by parents and teachers ( $bs = -.02$  and  $-.03$  respectively). Child age was positively associated with social competence reported by teachers ( $b=.05$ ,  $p=0.01$ ). Child sex did not show any significant association with social competence.

Maternal cumulative risk was indirectly related to social competence reported by parents, though the effect was small. When cumulative risk increased 1SD, parent-reported social competence was reduced by a total of .13 SD ( $p<.01$ ), explained entirely by the specific mediating effect of maternal conflict ( $\beta=-.07$ ,  $p<.05$ ) and

closeness ( $\beta=-.08$ ,  $p < .05$ ). Having a child with a developmental delay was also indirectly related to social competence reported by parents. When developmental delay increased 1SD, social competence reported by parents was lowered by a total of .27 SD ( $p < .05$ ), explained partially by the specific mediating effect of maternal closeness ( $\beta=-.30$ ,  $p < .05$ ). Despite the significant indirect effect, the direct effect of developmental delay remained significant, with a large effect ( $b=-.53$ ). No indirect effects of cumulative risk or developmental delay on social competence reported by teachers were found.

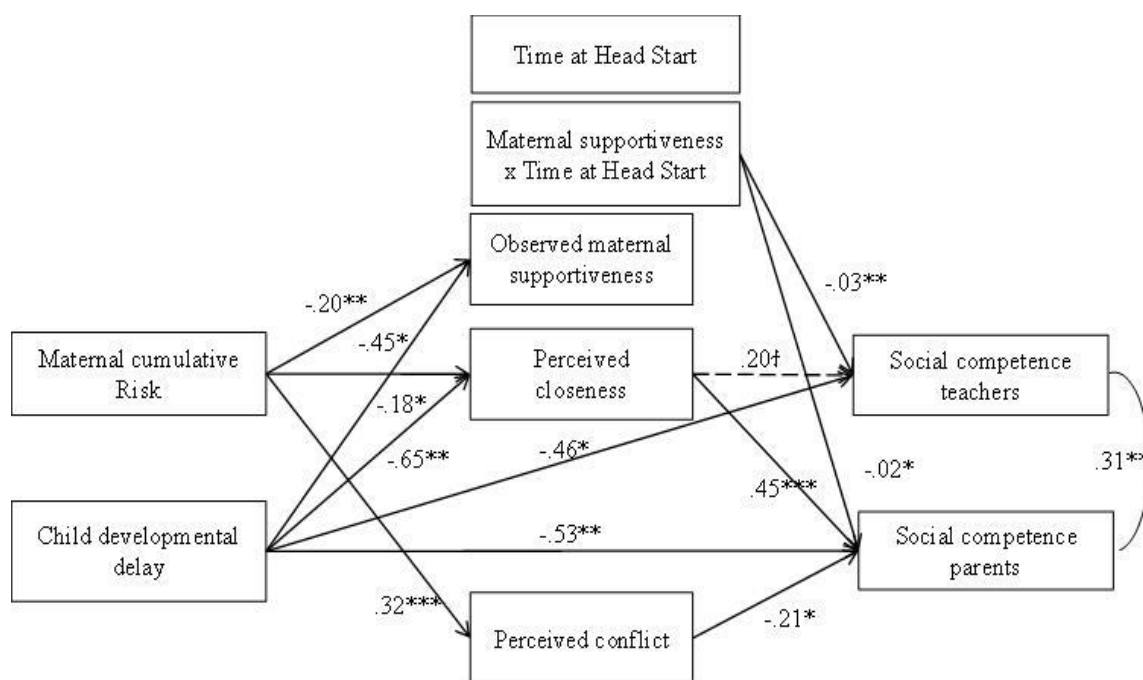


Figure 6. Path analysis model for child social competence.

Note. Only significant paths are shown. The model includes indirect effects of cumulative risk and child developmental delay on child social competence. Child age and sex were entered as control variable and are not shown. Observed maternal supportiveness and perceived closeness, and perceived closeness and perceived conflict are correlated but not shown.

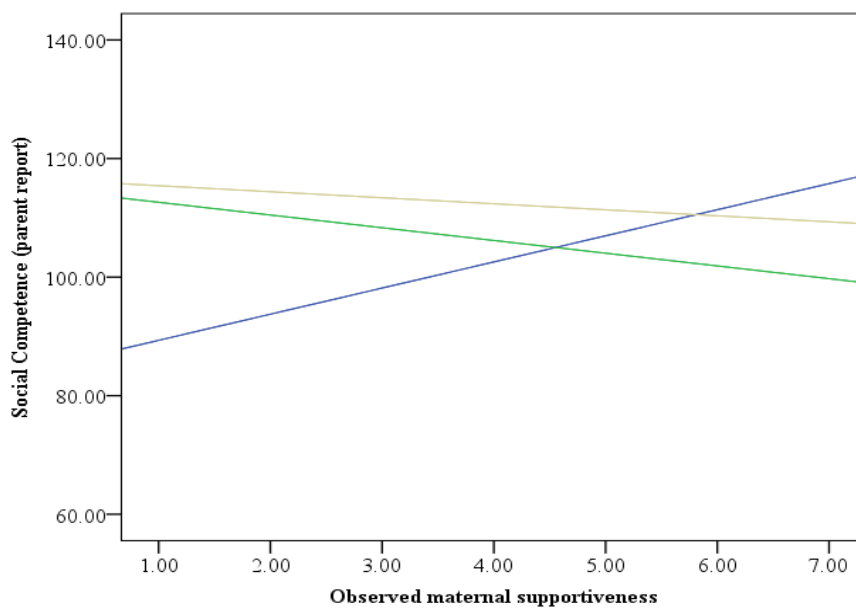
$\dagger p < .10$ ,  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$

Because the interaction term was statistically significant, we explored the nature of the interaction maternal supportiveness-by-times at Head Start. For interpretation purposes, the association between maternal supportiveness and social

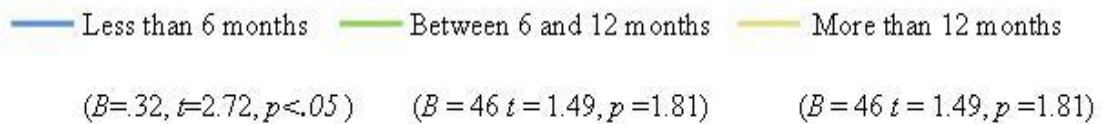
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competence reported by teachers and parents were estimated for three groups: children that had spent less than 6 months at Head Start, children that had spent between 6 and 12 months, and children that had spent more than 12 months. A significant, positive association was only found between maternal supportiveness and social competence reported by parents ( $B=.32, t=2.72, p<.05$ ) and teachers ( $B=.29, t=2.49, p<.05$ ) for children that had been at Head Start less than 6 months at Head Start. This association was not significant for children that had spent between 6 and 12 months and more than 12 months at Head Start. A visual representation of the interaction effects is presented in figure 7.

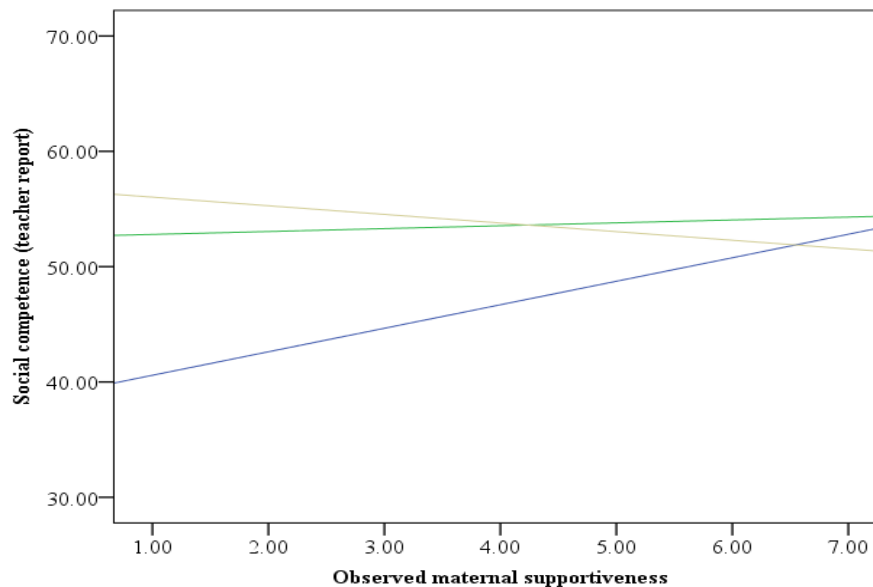
a)



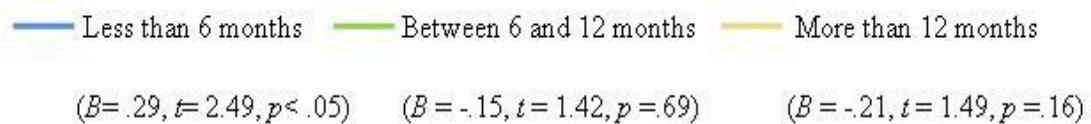
Time spent at Head Start



b)



Time spent at Head Start



*Figure 7.* Simple slopes for observed maternal supportiveness predicting a) social competence by parents' reports, and b) social competence by teachers' reports for three levels of time spent at Head Start (less than 6 months, between 6 and 12 months, more than 12 months).

### 3.1.3.2. Model estimations for internalizing behaviors

Figure 8 presents the model for internalizing behavior. The model examined whether cumulative risk, child developmental delay, mother-child interaction variables, time spent in HS and the interaction variable maternal supportiveness-by-time spent were associated with internalizing behavior as reported by parents and teachers. Fit indices for the hypothesized model suggested an acceptable model fit with  $\chi^2 = 8.86$ ,  $p = 0.26$ ; RMSEA = .05, SRMR = .04; CFI .98. Overall, predictors explained 35% and 14% of the variance in internalizing behavior rated by parents and

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teachers respectively. For the model of internalizing behavior, there was a direct, negative association between maternal cumulative risk and maternal supportiveness and maternal closeness ( $bs = -.20$  and  $-.18$ , respectively), and a direct positive association with maternal conflict ( $b=.32$ ). Cumulative risk did not show any direct association with internalizing behaviors, although a trend was observed with internalizing behavior reported by parents ( $b=.15$ ,  $p=.07$ ). Having a child with a developmental delay showed a direct, negative association with both maternal supportiveness and maternal closeness ( $bs = -.45$  and  $-.65$ , respectively). A direct, positive association was observed between having a child with a developmental delay and internalizing behavior reported by parents and teachers ( $bs = .49$  and  $.52$ , respectively), representing a large effect. Maternal conflict showed a moderate direct, positive association with internalizing behavior reported by parents ( $b=.40$ ). Neither maternal closeness nor maternal supportiveness was directly associated with internalizing behavior. Time spent at Head Start and the interaction term maternal supportiveness-by-time spent at Head Start were not associated with internalizing behavior.

Cumulative risk was indirectly related to internalizing behavior reported by parents. When cumulative risk increased 1SD, internalizing behavior reported by parents was increased by a total of .13 SD ( $p<.01$ ), explained entirely by the specific mediating effect of maternal conflict ( $\beta=.13$ ,  $p<.01$ ). No other indirect effects were found significant.



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direct, negative association with both maternal supportiveness and maternal closeness ( $bs = -.45$  and  $-.65$ , respectively). There was no direct association between externalizing behaviors and cumulative risk or having a child with a developmental delay. Maternal closeness showed a direct, negative association with externalizing behavior reported by parents ( $b=-.25$ ) showing a moderate effect. Maternal conflict showed a direct and positive association with externalizing behavior reported by parents ( $b=.55$ ), representing a large effect. Maternal supportiveness was not associated with externalizing behavior. Time spent at Head Start showed a negative association with externalizing behavior reported by teachers ( $b=-.03$ ), but not by parents. The interaction term maternal supportiveness-by-time spent at Head Start was not associated with externalizing behavior. Child sex did not show any significant association with externalizing behavior.

Regarding the indirect effects, a moderate, positive association was found between cumulative risk and externalizing behavior, as reported by parents. When cumulative risk increased 1SD, externalizing behavior reported by parents increased .24 SD ( $p<.01$ ), explained entirely by the specific mediating effect of maternal conflict ( $\beta=.17$ ,  $p<.001$ ) and maternal closeness ( $\beta=.05$ ,  $p=.05$ ). No other significant total indirect effects were found.



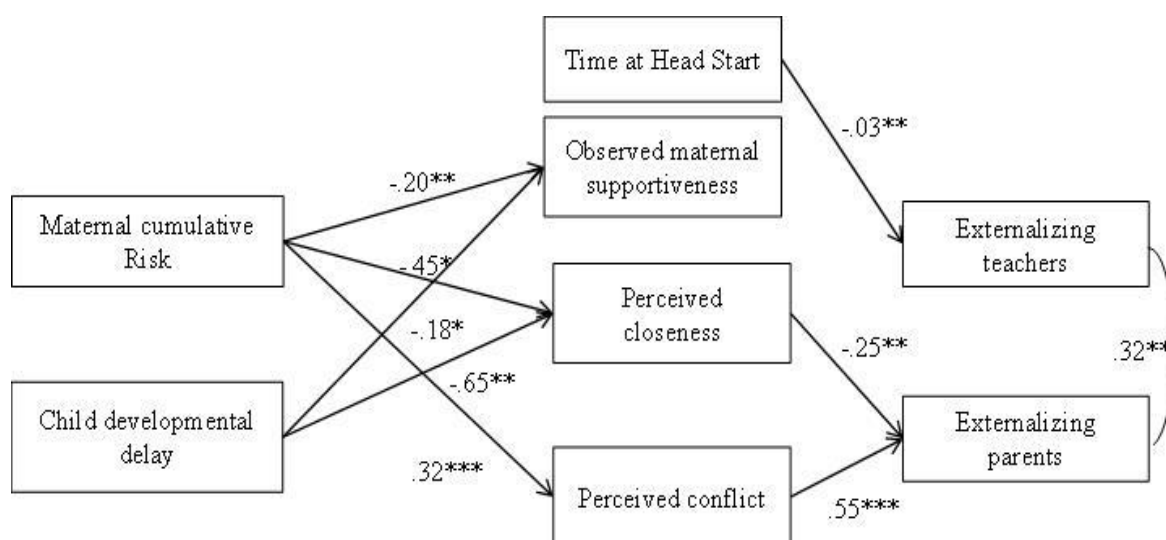


Figure 9. Path analysis model for child externalizing behavior.

Note. Only significant paths are shown. The model includes indirect effects of cumulative risk and child developmental delay on externalizing behavior. Interaction effects between maternal supportiveness and time at Head Start were entered as a predictor but are not shown due to its lack of association with other variables. Child sex was entered as control variable and is not shown. Observed maternal supportiveness and perceived closeness, and perceived closeness and perceived conflict are correlated but not shown.

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

All path models were repeated excluding non-immigrant mothers. Given that 90% of participants were immigrants we wanted to examine whether the models and path coefficients tested hold when the sample was restricted to immigrant parents. All three models were re-examined and no differences were found. Despite the smaller sample ( $n=97$ ), all the indices remained acceptable and all paths remained the same. See Appendix for a detailed description of path analysis models for only immigrant mothers.

### 3.2. Qualitative investigation

The purpose of the qualitative study was to explore mother's childhood experiences, specifically those related with play, and investigate how participants constructed the association between their childhood experiences and their current

parenting, specifically those experiences centered on parent-child play to inform the generational transmission of parenting in low-income Latino mothers.

Following thematic analysis procedures (Braun & Clarke, 2006), the core themes and categories will be described using illustrative quotes of participants' own words that exemplify codes. Three main themes were identified: mother childhood experiences, current experiences with parent-play, and generational transmission of values, beliefs and practices. The model will be described starting with a description of the main childhood experiences that participants discussed, then, their current experiences with parent-child play, and last, how their childhood experiences influence parenting and how the current experiences of play are connected to parent childhood experiences and culture. Finally, following (Braun & Clarke, 2006) procedures, we will present a conceptual map that depicts the relationships between codes, categories and themes.

### **3.2.1. Description of content by themes and categories identified**

All themes and categories are summarized in Table 14 and percentages of participants coded at each theme and category are presented. Coder reliability was calculated for 50 % of the data. For the all codes identified, indicators of reliability (Kappa coefficient) ranged from .80 to .99 (Landis & Koch, 1977).

Table 14  
*Percentage of Participants Coded at each Theme and Code*

Theme	Categories	# of subjects	% of subjects	Kappa coefficient
Parents childhood experience		33	100	.98
	Experiences around play	33	100	.96
	Quality of the relationship with caregivers	16	48.48	.93
	Importance of other family and community members	20	60.61	.98
	Traumatic experiences	3	9.09	.98
Current experience with parent child play		27	81.82	.94
	Challenges with parent-child play	27	81.82	.94
	Limited play with the child	8	25	.80
Generational transmission of childhood experiences		27	81.82	.99
	Generational Shifts in parenting	24	72.73	.99
	Impact of lack of support and harshness	15	45.45	.99
	Transmission of supportive parenting	4	12.5	.99

### ***3.2.1.1. Mother's childhood experiences***

Our first aim was to identify characteristic childhood experiences of a sample of Latina mothers that were raised by families living in suburban and rural areas. This theme summarizes the most common childhood experiences of this sample and the less frequent but relevant experiences mentioned. Our sample was heterogeneous in regards to nationality; participants came from different Latin American and Caribbean countries (Mexico, Dominican Republic, Ecuador), yet most of them came from rural areas in Mexico. Only one participant was born in U.S. from Mexican parents. Based on the questions posed about their play experiences during their childhood (see methods section), participants referenced different aspects of their childhood experiences. Codes were categorized under four categories: experiences with play during childhood, quality of the experience with parents, importance of other family members, and traumatic experiences. Some experiences were common between most participants such as the absence of parent child play, experiences of poor emotional

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support, the importance of the value of respect (*respeto*), and the importance of extended family in their daily life. The following section describes each category and presents evidence from participants' answers.

***Experiences around play.*** When asked to reflect on their own experiences with play as children, most parents (n=26) reported not having played with their parents during their childhood and only one referred to having played with her parents. The majority of mothers in our sample came from rural areas where parents had to work very long hours and did not have time to spend with their children. Like participant 1 said: *“my mom was working all the time and she never had time to be with us or play with us”*. Some pointed out that the reason their parents could not play with them was related to the harsh circumstances in which they lived. Like a participant 2 said: *“my mom separated from my dad when I was 3 years old. We never played with them. We barely saw them. My mom had 5 young children, working. We tried to take care of ourselves in the house. I appreciate what she did because she had to work without having an education, not knowing how to write or read, and she got ahead with the five of us”*.

Other participants pointed to the lack of warmth and closeness with their parents that prevented them from playing together. In that sense, they not only referred to the lack of parent child play but also to the poor emotional support they received from them. Like participant 3 reported: *“with my parents, I think I only hugged them once for my birthday, this was the closest I was from them. So, you know, the word play never existed.”*

Others reported not playing with their parents but alongside them. Some would play by themselves or with other children while their parents were doing house chores or taking care of a younger sibling. In that sense, their parents did not

necessarily devote time to play with them, but they felt free to play and did not perceive the lack of support that other parents reported. Although parents may not play with them, they socialize their children through other shared activities like telling stories. Like participant 4 noted *“I used to play a lot with my cousins, brothers, uncles, “nanas”. I don’t remember playing with my parents but I remember my dad telling us many stories”*

Participants also noted different ways in which their culture defines the importance and relevance of parent-child play. As participant 5 pointed *“All the blanquitos (referring to white-Caucasian parents in U.S.) are playing with their children in the park, up and down. You won’t see this in México”*. Some participants felt that, in the Latino culture, daily chores and responsibilities are far more important than play, and therefore they experienced fewer opportunities to play. Participant 6 noted: *“in my culture playing is a waste of time. For instance, if someone saw you playing they would say that you had better things to do”*. Also, In Latino countries, older siblings have adult responsibilities at home that may prevent them from having time to play like participant 7 noted: *“In our countries when you are the oldest you are responsible for taking care of your siblings. All the house responsibilities fall on you. That is why I have vague memories. I barely played, and when I did play I did it alone.”* In that sense, family obligations tied to the value of *familismo* and the belief that the family comes before the individual may put a toll on children’s time and energy that can lead to less opportunities to play. In sum, these quotes highlight a lack of familiarity with parent-child play for most of the participants in our sample. Participants described different reasons that prevent them from playing with their caregivers, like economic hardship and parents’ absence due to work conditions, lack of support, or cultural views around play.

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Despite the fact that most parents denied playing with their parents, they mentioned playing with other children. Almost half of the focus group participants (n=15) recalled playing outdoors, primarily in the fields while their parents worked. Parents reported a lot of physical play, such a “stop” or “hide and seek” that did not require any materials. Participants also explained that, because they grew up in families with few economic resources, they learned to build their own toys and use their imagination and creativity. For instance, several parents explained how they used materials found on the “*tierra*” (ground) to entertain themselves. As participant 8 said: *“I would play and pretend to cook. We made little houses with coconut leaves with my cousins and my siblings. We used broken slabs of cement pretending that they were dishes.”* In general, parents enjoyed playing outdoors with siblings, peers, cousins and other children from the community. Some (n=5) reported a sense of freedom and safety that they don’t experience in United States as participant 2 noted *“playing basket, soccer, climbing trees, harvesting fruits, cooking... here children don’t have the same freedom, they don’t have space to play and run free”*. This sense of freedom in their home countries contrasted with a perceived lack of safety in their neighborhoods *“here you bring the kids to the park and that is it. Most of the time we stay at home to avoid having a conflict with kids from the neighborhood”*

***Quality of the relationship with caregivers.*** Parents discussed their relationship with their own parents. Fifty percent of participants described different aspects of the quality of the experience with their caregivers. Experiences were mixed but the value of respect came across different comments. Some parents (n=5) described their caregivers as very warm, supportive, and caring (“*cariñosos*”). Like participant 9 said, *“My dad gave me a very good education and he was very warm. He*

*never beat us, he never drank, and that was a great influence. If he was sad, we would go for a walk with him and he would be affectionate”.*

In contrast, more participants experienced a lack of support (n=9). As this quote from participant 10 illustrates, participants reported a lack of closeness and emotional support with their parents - *“I never felt I had their support and their trust”*. This lack of support was in part due to their parents never learning to be affectionate, as participant 4 noted *“My mother was not taught to be warm and affectionate. We all need a hug or that parents say they love us, and when this things don’t happen, even if you know your parents love you, you create a need for affection, a need for feeling loved and cared for”*. Similarly, some participants noted that their parents were not verbally or physically affectionate as participant 11 noted *“My mother never told me – I love you- or –you can do it!”*

The importance of the value of *respeto*, a pan-Latino value, was apparent. Some participants pointed that their caregivers stressed the importance of respect and obedience (n=6) to adults, and that defined their relationship with their caregivers. Participant 11 stated *“with my parents and grandparents it was all about respect, not play”*. Respect meant being obedient and following the rules without questioning. It also implied not talking back to adults or arguing with them when you disagree. A Few parents (n=3) pointed that they would never talk back to their parents like participant 12 said *“I was scared of talking to my dad”*. A Few parents (n=3) mentioned the use of physical discipline and harsh tone of voice as a way of controlling their behavior and teaching respect, like participant 7 mentioned *“we had to do what my parents said; otherwise they would spank us (te caia)”*. These experiences of harsh parenting were also perceived as a lack of emotional support.

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Therefore, *respeto*, in some cases, would lead to authoritarian parenting practices that rely on punitive strategies and corporal punishment.

Some participants (n=5) also pointed that they never felt they were able to express their feelings to their parents. As participant 11 noted “*I was never able to tell my mom how I was feeling*”, or participant 5 mentioned “*When I wanted to cry I would hide from them*”. In some cases, because parents were absent, working very long hours, they were not able to build a close relationship and therefore, as children they did not feel comfortable talking about their feelings to parents. As participant 7 pointed, “*My parents were not there, they never sat with me when I needed to tell them something*”. Most pointed that it was not a matter of not knowing how they were feeling but not knowing how to verbalize and express these feelings because they were not taught how to do it. As participant 13 noted, “*I was shy with my feelings because I didn’t know how to express them. I did not feel confident because at home you didn’t express your feelings. Then as an adult, you know how you feel but you don’t know how to express it*”. More importantly, “*at home you don’t express your feelings*” may be related with values of *respeto* and conformity to authority. The value of respect implied not talking back to adults when you disagree. Accordingly, talking back to their parents and explicitly expressing one’s feelings, especially when feeling angry or mad, would not be accepted.

In sum, parents mentioned different core aspects of their relationship with their caregivers. Although some participants reported very positive experiences based on warm and supportive relationships, most mentioned experiences based on a lack of support and emotional communication. Most of these experiences could be related to poverty and harsh living circumstances. Parents also mentioned the importance of



showing respect towards adults as a core value that was sometimes tied to authoritarian parenting practices.

**Importance of other family and community members.** Although mothers commonly reported a lack of time spent with parents, other family figures appear to have been very important in their early lives. More than half of participants (n=19) commented on the important role of siblings, children and other adults in the family and community. For instance, grandparents, aunts and uncles, or cousins played a significant role in participants' experiences of being cared for and feeling supported pointing to the importance of extended family in Latino cultures. Participant 8 mentioned: *“my experience was really good. I was raised by my grandma since I was a baby. I was her granddaughter and she was very supportive of me”*. In regards to play, most parents recall enriching experiences of playing and sharing with siblings and cousins. As participant 14 said: *“we spent a lot of time with other children, we played a lot and also fought a lot with our siblings, we rode our bikes together, and we used our imagination all the time”* As this participant pointed out, despite the lack of parent-child play, they had opportunities to socialize through play with other children. The importance of the extended family in the participants' life points to behavioral manifestations of the value of *familismo* that is characterized by shared daily activities, shared living and support received by the extended family (Calzada et al., 2012)

**Traumatic experiences.** Few parents reported traumatic experiences (n=3) related to abandonment, and physical and sexual abuse. It is important to point out that the focus group questions did not ask and were not intended to explore such experiences. Parents voluntarily shared this experience, which may be an underestimate of the prevalence of trauma in this population. Like participant 15 said:

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*“my mom and my dad were always working. We needed her but she would beat us if we made any mistake. As the years went by we learnt to heal. It was hard to get home and nobody was waiting for you. But, we never starved; there was always food on the table”*. A younger Mexican mother, participant 10, reported a case of sexual abuse: *“I was sexually abused by my husband and I have tried to move forward by myself but sometimes is too hard. Because I was also abused when I was 9 years old and I couldn’t tell my parents. I told them when I was older but they never believed me. My mother would say “what are you going to do now, you have to move forward” And when it happened again with my husband I was alone in US, I didn’t have anybody to share what happened.”* These trauma experiences were reported in the context of parents’ reflection on their childhoods and their current parenting, indicating challenges related to early emotional wounds. Traumatic experiences lead to a lack of trust and communication with parents. As participant 10 pointed *“I never trusted my mother and felt comfortable telling her how I was feeling. Now I understand why, we were 7 siblings, my dad was a heavy drinker and he beat her.”* Traumatic experiences at an early age posit a challenge for future attachment relationships and hinder the capacity to develop healthy and supportive relationships with others (Drapeau & Perry, 2004; Liotti, 2004; Lyons-Ruth, Yellin, Melnick, & Atwood, 2003). In addition, those that have suffered traumatic experiences become more vulnerable to other stressors (Glaser, Van Os, Portegijs, & Myin-Germeys, 2006; Heim et al., 2009).

### ***3.2.1.2.Current parent child play experiences***

Based on the questions posed to the participants in regards to their experience with the CARING program, more than eighty percent of participants (n=27) discussed their current experiences with parent-child play that often reflected more broadly

experiences of mother-child interaction. Parents' participation in CARING may have facilitated a reflective process about participants' experience with parent-child play. After their CARING participation, parents were encouraged to discuss the skills they learned during the program. Most parents discussed the benefits of CARING and how the program improved their experiences around play. Participants also discussed the most common challenges that they were experiencing or had experienced playing with their children. Because the aim of this study is not to examine the benefits of the CARING intervention, we only report on two main categories: lack of experience with parent-child play and challenges with parent child-play. Most parents linked the challenges experienced with parent-child play with their own childhood experiences (reported under the theme generational transmission of values, beliefs and practices). Two main challenges emerged: using a descriptive language to engage and play with the child, and respect the child's autonomy. In addition, other challenges were mentioned by some participants like difficulties in understanding the meaning of play, challenges praising and being warm, and finally, challenges playing pretend.

**Limited play with child.** Some participants (n=8) noted that they never played with their children before coming to the CARING program. As participant 10 pointed, *"I never sit and played with my child"*. Some parents didn't play with their children because of a lack of time or being tired after work. For others, the role as mother is to take care of the child's needs, make sure they are safe. They foster play between siblings but not necessarily join them. Participant 12 noted, *"Usually my daughters are playing and I am around the house cleaning and doing other stuff and I don't pay attention to what they are playing, although I know they are doing alright. I never was involved on their play like – Oh you are doing this or that."* In few cases, the lack of play was related with a lack of attention to the child that lead to a lack of

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understanding about the child's needs and feelings. Participant 11 pointed, *"I did not pay a lot of attention to my child. If he wanted to be with me I was like- give what he wants to have him quiet (toma y caya). I didn't realize that children are also scared, my child would be very quiet and speechless."* In addition, participants also mentioned to experience challenges to understand child's play as they grow up. As participant 16 pointed, *"When he was a baby I bought books for him, I read with him but he grows...and for instance, if he wants to play, I may play for a while with him but I feel I don't understand him (when he plays)"*. As these mothers noted, because parents may not understand the meaning of play or what their child want during play, parent-child play interactions may be less frequent or shorter. In addition, some type of play, like pretend play may be less familiar for some of these families and therefore more challenging. Participant 17 noted, *"To me it feels very silly to talk to dolls (talking about pretend play), probably because no one did it with me"*. Others reported being discouraged by community members or their families for playing with their children because of beliefs that play is for children but not for adults. Like participant 18 pointed out: *"when I played with my daughter I felt embarrassed, I felt bad, because on my mind I was running and sliding up and down, but then I felt remorse, shame. I thought, what would all these people (in the community) think? Is she crazy?"*

**Challenges with parent-child play.** This category summarizes any challenge that parents mentioned in regards to parent-child play. Most challenges described were related with skills that parents learned during the CARING program and that are defined by mostly Western views of parent play (e.g. use language to describe and reflect on the child's play, allow autonomy, verbal praise). One of the main skills parents learned at CARING is the use of language to describe and reflect what the

child is doing and how he is playing, to engage with him and expand his play. Almost half of participants (n=14) noticed difficulties in engaging with their children using language in such way. As participant 19 noted, *“for me, to describe what she was doing during play was very hard. I never did it, I learned here and then I was able to start playing with her. I felt very silly doing it.”* This mother was barely playing with her daughter and despite the challenges; using language to enter her daughter’s play allowed her to start playing with her and become more engaged. Some mothers noted being around their children when they play, and reinforcing them, but less frequently sitting with them and having a conversation with them. As participant 20 pointed out, *“It is challenging to play with her, I mean, having a conversation with her about play”* and participant 8 noted *“I usually go to see what my child is doing and say – that is great or good job-. But, sitting there with him and having a conversation about what he is doing... like it is very hard for me, you don’t do this...”* In contrast, other participants did play with their children yet felt their language in interacting with them was somehow limited. Participant 8 also noted *“I can’t find so many words. You run out of vocabulary.”* Parent child conversations may occur in other contexts more often than through play, for example, when they have to give advice, follow rules, or ask for help.

Most participants (n=13) also mentioned difficulties allowing their child to take the lead and respecting their autonomy. These practices stem from socialization values of independence. Most parents noted the conflict between giving more autonomy and independence to their child and the fact that their role, as they perceive it, is to focus on setting the rules. Participant 21 noted, *“Giving them more autonomy is challenging because we are used to only setting the rules”*. Parents tended to overestimate their children’s capacities for their age and therefore, set very

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demanding rules that could potentially create more frustration. The struggle between being the authority that set rules and following the child's lead and supporting their autonomy became apparent. As participant 6 pointed, *"I sometimes think my child is older than what he really is, that is why he can't understand the rules I set. I know I should adapt my language to him, put myself in his shoes, and don't set up rules that he won't understand. And I think that is my challenge, it is difficult for me to follow his lead when I am trying to be the authority."* In the same lines, this mother pointed *"We always impose to our kids what we want them to do. I want my daughter to do the things exactly as I say but then I realize that she is only 5 and she doesn't have the ability to think as an adult."*

Parents were raised on values of respect and obedience to adults. As participant 4 noted, *"To me it is hard to follow her lead. I guess it is related to how we were raised. For example, she is drawing like a little face, I have my own idea but she wants to do it her own way and it is challenging not making her do what I think it should be."* The belief that children have to do what parents say became a challenge when parents tried to give more autonomy to their children. Some parents also mentioned their belief that they have to teach their children how to do things the *"right way"*. When it comes to play and exploring art materials, when less teaching and directing can lead to more creativity, parents struggled to let go of their own ideas and allow children to lead. As participant 17 noted, *"I have always been very demanding with my son. I always tell him "this is how it is". I always give him instructions. If he was playing with a train I would show him how to put the train and the rail together. I never gave him the opportunity to explore by himself. It was hard for me to listen to what he had to say first because I never gave him personal*

*initiative*". The majority of parents mentioned the conflict between wanting to teach their children and allowing children to explore and be creative.

In general, parents felt very comfortable being supportive with their children. However, a few parents (n=3) discussed difficulties praising their children, specially expressing affection and using verbal praise. As this participant 1 pointed, these difficulties were linked to experiencing a lack of verbal affection and recognition as children. *"I was not taught to express affection like this (verbal affection), then you think, If they never taught me to do it, I don't have to do it. This is something that many parents should change."* Parents teach proper behavior through explicit demands and setting rules, and verbal reinforcement of positive behavior is less common for some families. This mother noted how before the program she didn't praise her daughter much and now she is trying to teach her husband how to praise their daughter. *"I used to praise my daughter very little. Now, I learn and I try to teach my husband"*

Overall, despite some parents not being familiar with parent-child play, and a tendency to not play with their children, other families engage in dyadic play yet expressed challenges related to allowing children more autonomy, and engaging in conversations around play. .

### ***3.2.1.3. Generational transmission of values, beliefs and parenting practices***

Based on the questions posed, eighty-one percent of the focus group participants reflected on the impact that their childhood experiences had on them as parents. Codes were organized in three categories: Impact of lack of support and harshness, transmission of supportive parenting, and generational shifts in parenting.

***Impact of lack of support and harshness.*** Almost half of participants (n=14) discussed how the lack of support or harsh parenting they experienced as children

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affected the way they felt about themselves and had an impact in their parenting. Like participant 1 reported *“I was not used to having my parents telling me things, being with me. They never said “you can do it”. And for me it is difficult to say “oh you did a great job” or things like that. It is difficult”*. Challenges to be openly supportive of their children were be related with the lack of encouragement and support some parents experienced growing up. The lack of emotional support experienced, coupled with current daily stressors may affect parents’ capacity to engage with children. As participant 7 noted: *“I work a lot and I have to leave my daughter with other people. Then when I am at home I am tired and she comes and wants to tell me things, and I tell her we will talk later but I don’t do it. I feel ashamed, and I think in part I do this because this is how I grew up”* As this mother noted, current daily stressors that low-income Latino mothers experience also make it more challenging to engage with their children and devote quality time.

In addition, some parents were raised so that physical punishment was a valid and accepted way of disciplining children. When they became parents, they also use it as a way of controlling their children’s behavior. Like participant 22 reported when talking about her response to her daughter crying: *“sometimes, because my parents were stricter with me, I sometimes tell my daughter - I will hit you- or something like that.”* When parents experienced harsh parenting, it influence the way they use punitive control or coercive control to manage their child’s behavior, as participant 7 pointed, *“When my child has a tantrum I tell her to shut up or I will hit her. I guess this is unconscious because this is how I was raised”*. Despite some parents recognizing the transmission of harsh and unsupportive parenting, they also mentioned their efforts to manage their child’s behavior in more constructive ways (reported under generational shifts in parenting).



In addition, past experiences with caregivers also influenced participants' experience with parent-child play. Current challenges in play were associated to the lack of familiarity playing with adults during participants' childhoods. A few mothers that had to work from an early age pointed to difficulties engaging with their children through play due to their lack of familiarity with play. As participant 23 noted: *"I have a hard time playing with my child because I never played as a child. I was working all the time. This is why it is difficult to play with my children."* Some also pointed out that the lack of familiarity with pretend play made them feel uncomfortable or "silly", like participant 17 said: *"I felt silly playing with toys and pretending because no one did that with me. And this is like a circle, this is how I learned and this is how it is, and you don't look for other options."*

***Transmission of positive and supportive experiences.*** Most parents that experienced supportive and warm relationships with their caregivers pointed to the positive effects that these experiences had on themselves as adults and as parents (n=4). As participant 24 noted: *"All the love my mom and dad gave us...I think I am a reflection of that, you know, all the love and dedication I put on my children come from them. Of course I have a different way of parenting but I try to transmit these values to my children. I remember my mom giving me advice when I was going to school, watch out with this, and do not accept that. I think it worked and it is still on my brain. Now I try to do the same thing with my daughter. I talk to her, when we walk on the street and we see people, trying not to discriminate people but showing her what I believe is right and what is wrong. Tell her in a very nice way, as my mom did. And I hope she will keep these values, although we live in a different country, society, I try."* Parents kept positive values that their parents taught them, like caring

for your family, developing a close relationship with your children, and giving them advice so that they trust you when they grow up.

***Generational shifts in parenting.*** More than half of the focus group participants (n=18) discussed how their parenting practices and values were different than the ones they grow up with. Most parents expressed their desire to spend time with their children, viewing a positive parent-child relationship and parent-child play as important for child development. Several explained that their own childhood experiences of not being able to spend time with their parents or not feeling cared for, made them more aware of the importance of providing a healthy and enriching environment for their children, spending quality time and giving them support. Like a participant 19 noted: *“I don’t want my kids to go through my experience. I didn’t spend time with my parents and didn’t play with them. Now I try to be there for my kids and play with them as much as I can”*. In the same lines, a participant 11 reported: *“I don’t want my kids to live what I lived. Now I try to give them quality time. For instance, my mom never said ‘oh, I love you’ or ‘my sweetheart you can do it! This is why I try to do it now with them”*. Parents’ reports are a sign of resilience, demonstrating empathy for their own parents’ experiences while wanting to give their children more positive opportunities in early life.

Some parents also mentioned how they maintained values of obedience and respect to adults, while simultaneously acknowledging the benefits of being flexible and allowing children some autonomy. Like participant 6 pointed out: *“I think this comes from the time one is a little kid... I had parents that were very authoritative and then, we believe that to be parents, we have to be the authority...but I also realize that they are young and that they can’t process all the rules I set... I have to get to their level, use their language and tell them things instead of making rules that they are not*

*going to understand... it's difficult to join their play when we want to be the authority, we need to let them be, it's their play and we should just join them".* The process of balancing respect with autonomy comes from an understanding of child development but also as a consequence of being exposed to other ways of parenting.

Parents explicitly described not wanting to lose the values they learned growing up, like respect and obedience, but not wanting to use harsh ways of discipline, like what they experienced. Participant 12 noted: *"sometimes, because my parents were stricter with me, I would tell my daughter - I will hit you- or something like that. Now I say -This is not ok-. We have roots that...it is like we want to educate our children as we were educated but we should be a little bit more flexible."* Instead, parents try to communicate positive expectations and reinforce behaviors they like, while being more demanding when it is necessary. Like participant 7 pointed *"I used to praise my daughter very little. Now, I learned and I try to teach my husband, because he is very strict and demanding, and when she is playing, when it is not time to be so demanding, he is. I am teaching him to understand our daughter so she will understand us."*

In addition, some parents that were not used to receiving verbal affection believed in the positive value of being verbally affectionate with their children. As participant 11 noted *"I was not taught to express affection like this (verbal affection), then you think, If they never taught me to do it, I don't have to do it. This is something that we as parents should change."* It is important to note that some of these changes could be as a consequence of participating at CARING.

Finally, some parents also pointed out how their views on gender roles and machismo changed, and in turn so did their behavior. For example, participant 25 stated *"My husband changed my son's diapers and people told him -he is your wife's*

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son-. And it is hard because you have to deal with criticism and tell them that he will do it because he is his son too and it doesn't disgust him. This is Mexico, it is a change". As this mother pointed out, fathers want to be more involved and share caretaking roles yet these changes in roles are sometimes criticized by their own community and can create some intergenerational conflict. The generational shift is also observed in the way participants view women roles. As participant 6 noted "I want to be able to talk to my kids about many things. I have seen in Spain, children talk to their parents about girlfriends and boyfriends. I couldn't do it when I was 20. My cousins were 15 and had children or they gone through abortions. When I was 20 I didn't want to marry, and I didn't understand when my mom told me – you look like a single woman-. Can you imagine? But they didn't say that with any bad intention. They said that because this is how they were raised. In Ecuador culture is very machista, women have to be at home, have kids and that is it." There is a desire to break the machist culture and with that to have more open communication with their sons and daughters so that they built trust and share their experiences.

Participants pointed to different reasons why they changed some of the values, beliefs and practices they learned growing up. Some of them mentioned how having participated in early childhood programs offered them opportunities to learn new practices. Like participant 6 noted "When I had my first daughter...my parents were very authoritative, if you didn't do what they said, they would spank you, so then with my first daughter...I came to the pregnancy program.(Early Head Start) I knew I didn't want to follow the same pattern; I wanted to be warmer, try to understand my daughter. And there was a clash between how I was raised and the information they gave me in the program. But the information they gave me was based on research, and then you think "may be it can help", maybe the thing they do in this country

(U.S.)” Changes in parenting came from a reflection process in which learned values and practices were contrasted with new information. It is not only being exposed to a new culture but being open minded as this participant 6 pointed “*You need to have an open mind. Because if you don’t, you can’t learn to take thing form outsiders, analyze it and take advantage.*” It is when one tries new ways of relating with their children and observes what changes occur in the relationship that these changes remain. Like participant 7 stated “*One needs to choose what things you want to take from your culture and what thing you want to take from American culture. With my first daughter, I was working all the time. But now, with my second baby, from my second husband, it is different. I don’t work and I can talk to her, explain her things. My husband, who is from Mexico, used to tell me “why you talk to her if she doesn’t understand you?”. He would say “she is dumb”. And would tell him-you are dumb because you are older and you don’t know that children understand a lot. And now, he is coming to the babies program and he understands. He is amazed that the baby dances, she knows where her eyes are, she climbs the stairs. He recognized I was right. Children know more than we imagine, and we have to help them to show it and keep developing their abilities.*”

Immigration may also play a role in the change in beliefs and values. Like participant 5 pointed out “*I think the fact that we all wanted to immigrate makes a difference. In my country everything is a little bit different. When you come here you open your mind a bit and you learn new things from the culture here. For instance, all the white people are playing in the playground with their kids; this would be very rare in Mexico. What if we had been here? Maybe then we could do things as they do. The people you relate with also influence the things you do in your life. And you know, here there are people from all cultures*”

### 3.2.2. Summary of findings and relationships between themes

We present a thematic map, in Figure 10a that serves to explain the connections between the different themes, categories and codes identified (Braun & Clarke, 2006). Figure 10b focuses on the connections between categories and themes. As exemplified in figure 10b, the lack of parent-child play experiences created some challenges in parent child-play. When parents did play with their children, play seemed to be more parent-directed than child-directed due to the transmission of values of obedience and respect. Parents' childhood experiences with their parents were mixed in quality, while some parents recalled supportive and caring experiences, most expressed experiences of lack of emotional support, most times due to contextual harsh circumstances. Nonetheless, other family figures, like grandparents, siblings, cousins had a very important role in their life, pointing out the values of *familismo*, a core value in Latino families. These childhood experiences were passed to the next generation and influenced their parenting values and practices, yet parents also reflected on these experiences and expressed changes in some of the ways they were raising their children compared to the ways they were raised themselves. For example, parents keep valuing obedience and respect but didn't want to use harsh discipline and coercive strategies, and want to allow the mutual expression of feelings. In addition, parents shared the desire to give their children opportunities they didn't have growing up, like spending time with their parents or having an education. Changes in parenting values and practices may be due in part to having participated in educational programs (like early childhood programs) that promote parenting practices base on responsiveness, warmth, and emotional communication between parent and child. In addition, parents' curiosity to explore different values and practices and flexibility to hold different points of view (what I was taught vs.

different parenting values and practices) may allow a process of reflection in which parents can choose what is more beneficial for themselves and their children.

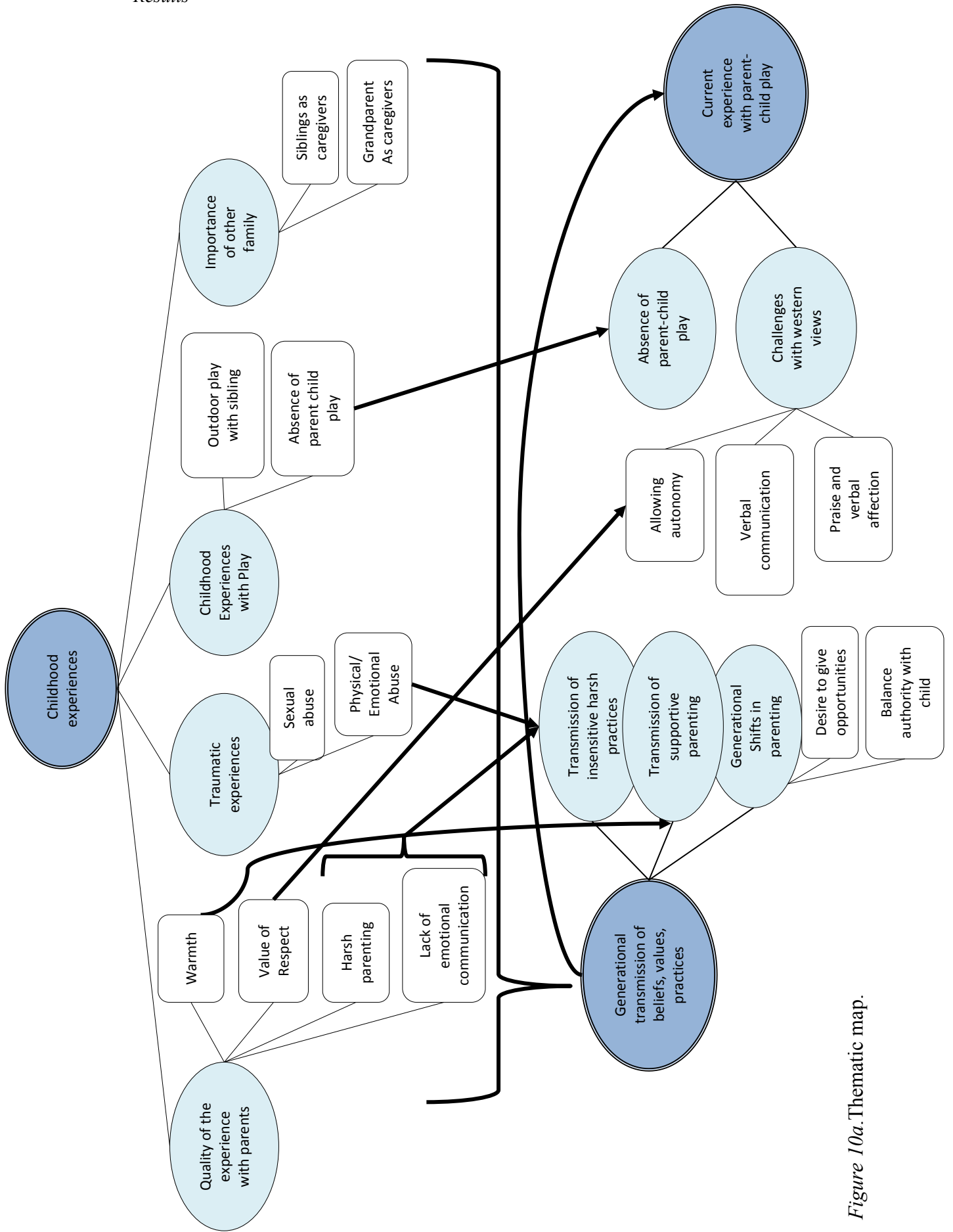


Figure 10a. Thematic map.



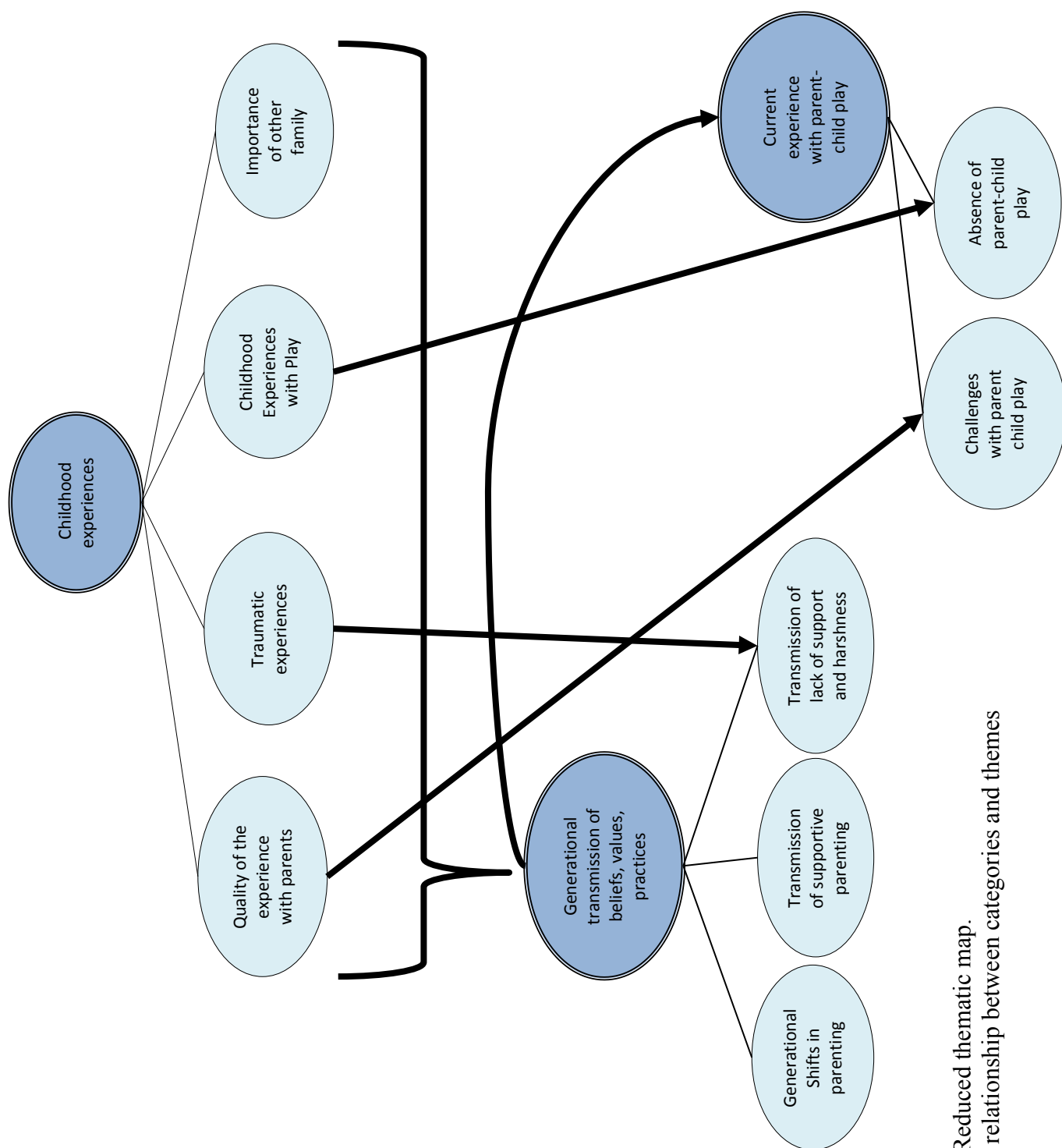


Figure 10b. Reduced thematic map.  
 Note. Shows relationship between categories and themes



## 4. DISCUSSION

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The quantitative and qualitative results from this study taken together yield several interesting findings with regard to the overarching aims of this study. To briefly review, the quantitative section aimed to examine the simultaneous association between cumulative risk, the quality of the mother-child relationship, and child social emotional outcomes within an economically poor Latino sample attending Head Start using a multi-informant approach. In addition, we aimed to examine the interaction between maternal supportiveness and length of time spent at Head Start to explore the compensatory effects of exposure to the program. The qualitative section was designed to explore economically poor Latina mothers' childhood experiences, with an emphasis on play related experiences, and examine how mothers associate these past experiences with their current parenting practices. The two sections taken together shed some light on the current and past influences on the mother-child relationship and the role of this relationship on the development of children's social-emotional competence within economically poor Latino families.

The first section of this discussion will review the extent to which the hypotheses laid out in the quantitative section were supported and we will offer an interpretation of the results. Following, we will discuss the implications of qualitative findings that contribute to our understanding of the mother-child relationship in economically poor Latino families. Next, we will present an integration of qualitative and quantitative results and a final conclusion highlighting implications for practice and research.

### **4.1. Quantitative results discussion**

Although Latino families are more likely to be affected by poverty, relatively little research has focused on the social-emotional outcomes of economically poor

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Latino preschoolers. The purpose of the quantitative investigation was to examine the simultaneous association between cumulative risk, the quality of the mother-child relationship, and child social emotional outcomes of Head Start Latino children across diverse ecological contexts (i.e. home, school) and within economic contexts in order to explore specific areas of intervention for this population. The quantitative section was designed to test the following hypotheses: 1) that cumulative risk would have a negative impact on the mother-child relationship, so that higher levels of cumulative risk would be associated with lower levels of observed maternal supportiveness and perceived closeness and with higher levels of perceived conflict; 2) that the quality of the mother-child relationship will be associated with child outcomes so that, higher levels of perceived closeness would be associated with higher levels of social competence and lower levels of externalizing and internalizing behavior, higher levels of perceived conflict would be associated with lower levels of social competence and higher levels of externalizing and internalizing behavior, and higher levels of observed maternal supportiveness would be associated with higher levels of social competence and lower levels of externalizing and internalizing behavior; 3) that the relationship between maternal supportiveness and child outcomes would be moderated by the length of time children had spent at Head Start, so that the association between maternal supportiveness and child outcomes would be smaller as time spent at Head Start increased supporting a compensatory model of Head Start; 4) and that cumulative risk would have an indirect effect on child outcomes (decreasing social competence and increasing internalizing and externalizing behavior) through its effects on the quality of the mother-child relationship.

Results indicated that maternal cumulative risk is associated with reduced levels of social competence and increased externalizing and internalizing behavior

through its effects on the mother-child relationship. However, this relationship differs depending on the measure used to assess the mother-child relationship (whether it is observed or self-reported), and the role of the person rating the child's behavior (parent or teacher). In path analysis, maternal cumulative risk had an indirect effect on child social competence and problem behavior through perceived quality of the mother-child relationship only when using parents' rating of child behavior. Contrary to our hypothesis, we found no direct association between observed maternal supportiveness and child social competence or problem behaviors and between cumulative risk and teachers ratings of child behavior. Interestingly, maternal supportiveness interacted with time spent at Head Start; the positive association between maternal supportiveness and social competence disappeared as children had spent more time at Head Start.

#### **4.1.1. Influences on the quality of mother child interaction**

In the present study maternal cumulative risk was negatively associated with observed maternal supportiveness and mothers' perception of the parent-child relationship. These results are consistent with the growing body of literature examining the impact of psychosocial risk on the quality of parenting and parent-child relationships (Brophy-Herb et al., 2013; Cabrera et al., 2011). These results add validity to the use of a cumulative risk index to explain variability in maternal supportiveness and perception of the parent-child relationship among Latino families participating in Head Start.

Having a child with developmental delays was even more strongly associated with maternal supportiveness and perceived closeness than maternal cumulative risk. These findings are consistent with previous research suggesting that characteristics of developmentally delayed children, such as slow response rates, extreme shyness, or

unintelligible speech, may harm parent-child interactions (Stormont, 2001). However, research also suggests that a less supportive mother during infancy increases the risk of future developmental delays, especially in the area of language development (Warren & Brady, 2007). The cross-sectional design of this study does not allow us to distinguish whether maternal supportiveness during infancy predicted developmental delays in preschool; future research must explore the transactional relationship of these two variables in economically disadvantaged Latino families (Fenning & Baker, 2012).

#### **4.1.2. Relationship between perceived quality of mother-child relationship and child outcomes**

To our knowledge, ours is the first study that examines the association between perceived conflict and closeness with social-emotional competence within economically poor, Latino preschoolers. Consistent with previous research with different populations, path analysis confirmed the hypothesis that increased levels of perceived closeness within the mother-child relationship were positively associated with social competence when rated by parents. Teacher report neared significance. (Driscoll & Pianta, 2011; Pianta, Nimetz, & Bennett, 1997). These results suggest that mothers' perceptions of a warm and positive relationship with their child promote social competence both at home and school.

Increased maternal perceptions of conflict were associated with lowered parental reports of social competence, however this association was not found for teachers' reports of social competence. Previous research has indicated that positive teacher-child relationships are an important predictor of children's social skills and nurture their ability to engage with peers (Jerome, Hamre, & Pianta, 2009; Webster-Stratton, Reid, & Hammond, 2001) . Research suggest that children develop

relationships with parents and teachers that are different in quality and that teacher-child relationships may be more important than parent-child relationships in predicting child social competence in school (Davis, 2003; Howes, Matheson, & Hamilton, 1994). Therefore, variables not examined in the current study, such as the quality of the teacher-child relationship, may protect children from the effects of parent-child conflict in the school context and may explain the lack of association between mother-child conflict and teachers' reports of social competence.

In regards to problem behavior, higher levels of closeness were associated with lower parents' reports of externalizing behavior, and higher levels of conflict were associated with higher parents' reports of internalizing and externalizing behavior. These results are consistent with research highlighting the key role of affection and open communication in preventing problem behaviors and the negative impact of parent-child conflict on the child behavior (Khodapanahi, Ghanbari, Nadali, & Mousavi, 2012). However, these associations were not found for teachers' ratings of problem behaviors. In addition teachers' ratings of externalizing and internalizing behavior tended to be lower than parents' ratings. These discrepancies may due to different expectations held by teachers and caregivers or discrepancies in raters' values and tolerance for specific behaviors (Lambert, Puig, Lyubansky, Rowan, & Winfrey, 2001). Latino families may have specific cultural expectations that differ from teachers expectations (Halle et al., 2014). It could also point to differential behavior in the home and school contexts due to different structure and demands. More research is needed to investigate whether different mechanisms predict social-emotional outcomes among Latino children at home and school. Future research should examine the impact of both parent-child relationship and teacher-child

relationship on social-emotional development of Latino preschoolers at home and school.

#### **4.1.3. Relationship between observed maternal supportiveness and child outcomes**

Contrary to our hypothesis, no direct association was found between observed maternal supportiveness and social competence, externalizing behavior or internalizing behavior. Instead, an interaction effect emerged with regard to the length of time a child had spent in Head Start. Maternal supportiveness was positively associated with social competence, as reported by teachers and parents, only among children recently enrolled in Head Start (that had spent less than 6 months at Head Start); the association was not present among children who had been enrolled at Head Start for a longer length of time. Although the cross-sectional and non-experimental nature of this analysis prevents us from drawing meaningful conclusions, we could hypothesize that prior to entering Head Start, maternal supportiveness influences social competence, and that Head Start has the potential to offer children growing up in less supportive homes the environment necessary for them to develop socially (Palacios, 2012; Raver & Zigler, 1997). These results provide more evidence supporting the theory that more exposure to Head Start compensates for risk in the home lives of children (Zigler & Styfco, 1994). Future research should examine the relationship between maternal supportiveness and social-emotional development in Latinos over the entire course of a child's enrollment in Head Start to further investigate the compensatory model of Head Start for children that live in less supportive home environments.

The lack of a direct association between observed maternal supportiveness and parent's ratings of children's social-emotional competence in Latino children requires



further explanation. It is important to note that the lack of a direct association occurred both when teachers and parents reported on child social-emotional development, suggesting that the lack of findings is independent of the instruments used to assess social-emotional competence at home and school. Contrary to our findings, studies have found that positive aspects of the parent-child relationship, such as cognitive stimulation and sensitivity, were associated with increased social skills, and that negative aspects, such as harshness, were associated with poorer social outcomes in samples of Latino children (Guerrero et al., 2012; Bernstein et al., 2005). Negative patterns of parenting not examined in the present study, such as maternal negativity or harshness, may explain the variability in children's problem behaviors and social competence (Brown & Ackerman, 2011). The lack of association could be also explained by the methods used to create the maternal supportiveness composite. Recent research is supporting the use of person-oriented techniques to identify profiles of parenting defined by different patterns of associations among observational qualities of parenting (Brady-Smith et al., 2012). Dyer et al. (2014) examined mother-child interactions within a sample of Mexican-American toddlers and found three mothering profiles: child-oriented, directive, and harsh-intrusive. The child-oriented profile, characterized by higher levels of sensitivity, cognitive stimulation, and positive regard, and low levels of detachment, intrusiveness, and negative regard, predicted lower levels of behavior problems in preschool compared to Directive and Harsh-intrusive mothering. In the present study we used a variable-oriented approach that helps understand the relationship between two variables (maternal supportiveness and child outcomes). However, this approach tends to overlook inter-individual differences. The person-oriented approach considers inter-individual differences and allows creating groups of individuals with similar characteristics. Therefore, it may be

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that the composite of maternal supportiveness does not capture heterogeneity in parenting within Latino families. In addition, the fact that our composite of maternal supportiveness only included positive aspects of mothering (support, cognitive stimulation, and support of child autonomy), whereas Dyer et al. (2014) also included intrusiveness, detachment, and negative regard, may explain the lack of a direct association between supportive mothering and social-emotional outcomes.

There may be other explanations for the lack of a direct association between observed maternal supportiveness and child outcomes. Consistent with our findings, Fuligni et al. (2012) found that within a sample of Latino toddlers supportive mothering patterns did not predict lower rates of problem behavior at age 5, but they did predict increased receptive vocabulary. Given the association between language development and social-emotional competence (McCabe & Meller, 2004), it may be that maternal supportiveness predicts the child's ability to regulate and control their behavior through its effects on children's language skills (Farver et al., 2013).

Whiteside-Mansell et al. (2009), using a different observational instrument, also found that, among low-income Latino families, supportive parenting behaviors did not predict social skills and problem behavior as reported by parents and teachers. It has been suggested that definitions and measures of "supportiveness" may not capture different expressions of maternal supportiveness in non-Western cultures (Rogoff et al., 1993; Rogoff & Morelli, 1989). It is likely that cross-cultural variation in the expression of maternal warmth and supportiveness exists, and there may be different mechanisms through which Latino parents demonstrate support for young children's social emotional development (Halgunseth et al., 2006; Livas-Dlott et al., 2010) than those accounted for in existing measures. Therefore, despite measures like the Three Boxes Protocol have been widely used with Latino families, future research

should explore more culturally sensitive definitions of supportive parenting that include direct compliance commands related to socialization norms of respecting adults (*respeto*) and giving advice (*consejos*), key components of Latino parenting (Livas-Dlott et al., 2010).

Finally, these findings might also be impacted by the variability of countries of origin represented in our Latino sample. While research notes some similarities in parenting practices between Latino groups (i.e. Mexican American, Puerto Rican, South American) that include an emphasis on good behavior, obedience and respect for adults, and dominant importance of the family (Halgunseth et al., 2006; Sarkisian et al., 2006), Latinos represent an heterogeneous group with differences in their particular history, cultural beliefs and socialization. In addition, other factors that may influence parenting and parents' view of the child such as acculturation, and immigration experience could impact the relationship between parenting and child development (Fuller & García Coll, 2010; Ispa et al., 2004a).

#### **4.1.4. Influence of cumulative risk on child outcomes: the role of mother-child relationship**

Path models for social competence showed that the relationship between maternal cumulative risk and maternal report of social competence and externalizing behavior was mediated by mothers' perceived closeness and conflict with the child. Additionally, perceived conflict mediated the influence of cumulative risk on internalizing behavior. Increased contextual risk in families living in poverty may limit the caregivers' capacity to establish a positive relationship with her child, thereby reducing the child social competence in the eyes of the caregiver. These findings are consistent with an ecological perspective where distal aspects of the

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broader context in which the child grows influence the parent–child relationship and, subsequently, child social competence (Bronfenbrenner & Morris, 2007).

As a noteworthy contrast, we did not find a direct or indirect influence of cumulative risk on teachers' reports of social competence and problem behavior, which differs from previous studies (Corapci, 2008). Interestingly, Corapci (2008) found that, the cumulative risk index based on the sum of 8 risk factors from the demographic, family, and contextual domains failed to predict social competence rated by teachers among Head Start children. However, when they included two child temperament variables (inhibition and impulsivity) in the count of cumulative risk, it did predict social competence. Therefore, it is possible that the quantity and quality of risk factors included in the cumulative risk index determines the predictive power of cumulative risk. Child individual risk factors, like temperament or developmental delay, that may have a direct impact on teacher's interaction with the child, could explain more variance in social-emotional competence in the classroom than maternal risk factors that may not be noticed by the teacher.

The differences between path models of child outcomes reported by parents and teachers could also be explained by a reporter effect. Because parents reported on depression and parenting stress (components of the cumulative risk index), the quality of parent-child relationship and child outcomes, the association between these variables may be hiding a lack of independence between these measures.

Alternatively, the lack of association between cumulative risk and child social-emotional outcomes rated by teachers may be due to the benefits inherent in attending Head Start. Head Start was first formulated as a compensatory program aiming to counteract for risk factors intrinsic in the lives of children attending the program (Palacios, 2012; Raver & Zigler, 1997). Different aspects of the Head Start context

such as the quality of the teacher-child relationship or the classroom quality, predict child social competence (Hamre & Pianta, 2001; Mashburn et al., 2008; Pianta et al., 1997). Therefore, it is possible that these factors play a protective role by facilitating the development of social competence among children in families facing higher cumulative risk. Other factors not examined in the current study, like family involvement or preschool attendance (number of days the child attended school) may also contribute to teachers ratings of child behavior (Fantuzzo, McWayne, Perry, & Childs, 2004; Hubbs-Tait et al., 2002). More research is needed to understand the relationship between cumulative risk and child social-emotional outcomes in the classroom context and the potential compensatory effect of early educational experiences, such as Head Start. Research should also examine whether specific combinations of risk factors associate differentially with child social-emotional outcomes in different contexts (home versus school).

Although it was not the focus of this study, our finding that perceived mother-child closeness partially mediated the association between having a child with a developmental delay and social competence is consistent with other research (Baker et al., 2003; Brown et al., 2011) and suggests the importance of targeting parent-child interaction in interventions aimed at improving social-competence for children with developmental delays.

#### **4.1.5. Limitations and strengths**

The findings of the quantitative investigation must be considered in light of several limitations. First, our cross-sectional design does not allow us to establish causal effects between variables. Second, the small sample size may have prevented us from detecting associations between some study variables. Third, some potentially relevant maternal (e.g. violence in the household, harshness, child temperament) and

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child risk factors (e.g. premature, low birth weight, inhibited and impulsive temperament) were not assessed in our study, limiting our ability to comprehensively assess cumulative risk. Fourth, there is strong evidence suggesting the important role played by fathers in supporting child development (Cabrera, Shannon, & Tamis-LeMonda, 2007; Cabrera, Shannon, West, & Brooks-Gunn, 2006). This may be particularly relevant in this study as nearly 80% of children came from two-parent households. Because our study only used data from the primary caregiver of the child (his/ her mother), we were unable to examine the role of the father or other family members in the child's development. Finally, it is likely that parenting styles vary across Latino groups, and although heterogeneity in maternal country of origin and level of acculturation was present in our sample, we lacked the statistical power to explore the role of these variables. Some research has found higher levels of supportiveness in more acculturated immigrant mothers (Cabrera et al., 2011), which may indicate a process of change in parenting responses towards a more Westernized model of parenting that Western measures are more adept at measuring. Thus, future research should explore whether the relationship between parental supportiveness and child social-emotional competence is influenced by these variables.

Despite these limitations, there are several important strengths of this quantitative investigation. To our knowledge, ours is the first study that examines the association between cumulative risk, the mother-child relationship and social-emotional outcomes within a sample of Latino Head Start children using a multi-informant method. Studies examining determinants of child social-emotional competence tend to fall on one informant, usually a parent, instead of multiple informants. Yet research has shown discrepancies in the way children are viewed in the classroom and at home, either due to behavioral differences or differences in rater

perspectives (Gresham, Elliott, Cook, Vance, & Kettler, 2010) The present study examined child outcomes from the perspective of teachers and parents and showed different pathways that influence social competence at home and school. These results highlight the importance of using an ecological approach that considers the different contexts in which child development occurs (Bronfenbrenner & Morris, 2007), which may be particularly relevant in the case of Latino families who may have cultural socialization goals that differ from those of American schools (Fuller & García Coll, 2010).

In addition, we included observed and self-reported measures to examine the quality of the mother-child relationship. Given the mixed results reported in previous studies that have primarily relied on observational measures of supportive parenting, and the uncertainty surrounding the validity of using Western definitions of “quality” to analyze maternal behavior in interaction with the child, including a self-report measure enabled us to account differences that may not be captured in observational measures but are inherently taken into account in self-reported responses. Thus, using a combination of observational and self-report measures offered a more comprehensive understanding of the mother-child relationships and allowed use to capture the association between the quality of the mother-child relationship and child social-emotional outcomes within Latino families that has not been found in previous studies using exclusively observational measures.

#### **4.2. Qualitative results discussion**

The present qualitative study used focus groups to explore the childhood experiences of economically poor Latino mothers of preschoolers and examine how participants constructed the association between their childhood experiences and their current parenting practices. All participants but one were first generation immigrants.

Therefore results are only relevant for immigrant Latino mothers living in economically poor households. Focus group results highlight the importance of exploring mothers' childhood experiences in light of both the socioeconomic and cultural contexts in which mothers grew up in order to understand strengths and challenges they face in their current parenting. Findings were consistent with previous research suggesting the intergenerational transmission of both insensitive-harsh and supportive parenting. Findings further extend the literature by identifying possible factors that may explain shifts in cultural values and parenting practices in economically poor Latino immigrant mothers.

#### **4.2.1. Mothers' childhood experiences: common themes in economically poor Latino immigrant mothers**

Findings from the present study suggest that economically poor Latino immigrant mothers have experienced a wide range of childhood experiences. However, mothers in this sample indicated that, as children, they often perceived a lack of parental support and emotional communication. It is possible that these experiences are related to the socioeconomic context in which they grew up, as most mothers in the sample indicated that they were raised in economically poor households. As such, they reported that working conditions in their native countries required parents – most of whom had low levels of education – to be absent from the home for extended periods of time. This hypothesis is consistent with a long line of research that has highlighted the detrimental effects of poverty on parenting (Evans, 2004; Magnuson & Duncan, 2002). Results from these studies suggest that parents living in poverty experience difficulty in providing the same level of support as higher income parents and are more likely to use a punitive parenting style and physical punishment (Kaiser & Delaney, 1996; McLoyd, 1990; McLoyd & Wilson, 1990;



Russell, Harris, & Gockel, 2008). Although most of the research around the influence of poverty on parenting was conducted in United States, it is possible that the findings translate to other cultures as well. Therefore, the lack of parental support discussed by focus group participants may be explained by the experience of growing up in poverty.

Findings from the present study also indicate that other family members played a key role in caregiving during participants' childhoods. Grandparents, uncles, cousins, or older siblings often became caretakers and offered participants support, especially in the absence of parents. These results are consistent with previous research suggesting the importance of *familismo* in Latino families, which refers to family closeness, loyalty and contribution to the wellbeing of the nuclear and extended family (Cauce & Domenech-Rodríguez, 2002; Guilamo-Ramos, Bouris, Jaccard, Lesesne, & Ballan, 2009). Our findings, combined with evidence from the literature, highlight the importance of considering relationships with the extended family and community in order to understand the broad childhood experiences of Latino immigrant mothers.

In western societies, parent-child play serves to socialize children in terms of norms and values (Haight & Miller, 1993; Sutton-Smith, 1993). In contrast, the majority of participants in the present study, raised in Latino countries, indicated that parent-child play was absent from their childhoods and, therefore, was not a socialization practice through which they learned social norms and values. Although participants had the opportunity to play with siblings and other children in the community, they did not do so with their caregivers. Participants may have learned plenty of norms and values about how to interact with peers but these may be different than norms and values that one learns in adult-child play. Participants cited a

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range of reasons that play with parents may not have been a part of their childhood, including 1) economic adversity, which required parents to work long hours; 2) lack of a close parent-child relationship, in which the principal caregivers were not emotionally available and 3) the belief that parents were simply not expected to engage in dyadic play. Results support a cultural-ecological perspective that emphasizes the strong influence of both cultural and socio-economic context on parent-child play. Research supporting cultural variations in parental roles in play is consistent with the findings from the present study. For example, Vandermass-Peler (2002) suggested that in the Mayan culture parents are supportive of child development by giving children time and space to play and overseeing the child's activities, but such support does not necessarily involve engaging in dyadic play. In that sense, they may transmit a sense of security and nonverbal support, but do not directly become involved in play activities or stimulate child play. Similarly, some evidence showed that in rural Mexico, complex play interactions that involve pretend play happen between children and siblings, rather than between children and their mothers. Mothers were less involved in parent-child play compared to low-income American families (Farver & Howes, 1993; Farver, 1993). These differences may be rooted in the ecological context of different cultures. Farver (1993) suggests that societies characterized by extended family social organization and sibling rearing have less parent-child play. Research in western societies has also noted that class differences play a strong role explaining differences in parent-child play. Because economically poor parents have to cope with social, emotional, and economic stressors, they may have less time, energy, and emotional resources to engage in parent-child play (Ginsburg, 2007; Milteer et al., 2012). Therefore, cultural beliefs that parents are caretakers but not necessarily playmates and adverse socio-economic

circumstances may explain the scarce parent-child play experiences during childhood reported by Latino mothers in the present study. It is important to note that these results are specific to Latino mothers that were raised in economically disadvantaged families. Future research should explore parent-child play within Latino immigrant mothers raised in middle-class families to investigate the influence of cultural beliefs about play in more diverse SES sample.

Participants' lack of experience engaging in play with their parents during childhood, combined with beliefs about the importance of peer play versus parent-child play, may explain the lack of familiarity with current experiences of parent-child play reported by some participants in the present study. In the next section we will discuss the implications of participants' childhood experiences on their current parenting experience.

#### **4.2.2. Transmission of parenting practices and cultural values**

Consistent with previous research supporting the theory that parenting practices and beliefs are transmitted between generations, (Van Ijzendoorn, 1992), findings from the present study demonstrate an association between participants' childhood experiences and their current parenting experiences. The present study also extends the literature by exploring both continuities and discontinuities of parenting practices and cultural values that potentially influence the mother-child relationship.

In the present qualitative investigation, participants who experienced harsh parenting as children noted that they found themselves naturally inclined to use harsh parenting styles as well. For example, some participants conveyed they use physical discipline to control child misbehavior because this is how they were raised. Similarly, participants who reported that they lacked emotionally supportive relationships with parents during childhood felt that, although they cared deeply for

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their children, they had difficulty expressing affection. These findings are consistent with research on the transmission of harsh and insensitive parenting (Belsky, 1993; Capaldi et al., 2003). As others have indicated, experiencing unsupportive or harsh parenting as a child likely impacts one's childrearing behavior as an adult, which in turn may influence her child's social-emotional development (Contreras, Narang, Ikhlas, & Teichman, 2002; Serbin & Karp, 2004).

Findings from this study were also consistent with the theory of intergenerational transmission of supportive parenting (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005b; Simons et al., 1993). Although few participants in this study reported supportive and nurturing experiences with caregivers, those who did also perceived themselves to be warm and supportive parents. These participants felt that their early experiences served as the foundation of their current parenting practices. Future research should explore whether having a model for supportive parenting may be a protective factor to face stressors experienced by Latino immigrant families like poverty or lack of support in the receiving country.

The transmission of parenting practices rooted in the Latino value of *respeto* was also evident in findings. Past studies have highlighted that *respeto*, considered a pan-Latino cultural value, plays a key role in Latino parents' childrearing practices (Calzada et al., 2010). These findings have been replicated in diverse Latino groups - Dominican, Mexican, Puerto Rican, and for children ranging from preschoolers to teenagers (Arcia & Johnson, 1998; Gonzalez-Ramos et al., 1998). The main goal of *Respeto* is to teach children obedience, good manners and respect for elders and adults. *Respeto* has been associated with authoritarian parenting, a style that expects children to be obedient and may rely on punitive measures to control the child's behavior (Baumrind, 1975; Calzada et al., 2012). Research suggest that while

authoritarian practices could play a protective role among Latino adolescents living in disadvantaged neighborhoods (Gorman-Smith, Tolan, Henry, & Florsheim, 2000); at very young ages, authoritarian practices are associated with increased problem behaviors (Calzada et al., 2012). In the present study, when mothers discussed their childhood experiences, the value of *Respeto* came across as a key value in the Latino culture that was related to strict and sometimes harsh parenting practices. Results from the present study also emphasized the transmission of parenting practices based on *respeto*; participants noted the influence that their experience of *respeto* as children has on their current parenting practices, specifically in relation to the use of forceful measures to address children's misbehavior.

The present study extended previous literature by identifying a link between mothers' childhood experiences and current experiences of parent-child play and recognizing the influence of *respeto* on parent-child play interactions. Participants indicated that, influenced by their childhood experiences, they viewed the role of a mother as one which aimed to teach the child right from wrong and set rules so their children learn proper behavior with little questioning. While these practices may be beneficial to teach proper behavior and set clear and predictable expectations (Crosnoe, 2006; White, Zeiders, Gonzales, Tein, & Roosa, 2013) they also may be a barrier to participating in child directed play. Mothers in the present study reported challenges engaging with their child in child-directed play and allowing their children to have autonomy. Despite these challenges, mothers also highlighted the benefits of "letting go" and allowing more independence during mother-child play. Consistent with Calzada's (2012) Latino model of parenting, these results suggest the possible coexistence of demands of obedience with practices that enable autonomy and independence. Research has revealed that play builds self-esteem, helps children cope

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with stress, and can foster positive parent-child bonding (Ginsburg, 2007; Milteer et al., 2012). When play is child-directed, children can explore and be creative guided by their own interest, they can practice problem solving and learn to control and master challenging situations. When parents engage in child-directed play, they can discover the child's inner world and better understand their emotions (Fromberg & Bergen, 2006; VanFleet, Sywulak, & Sniscak, 2011). Therefore, parent-play interventions could offer the possibility to learn new parenting strategies that encourage independence while preserving the importance of respect and its behavioral expressions in other contexts relevant to Latino parents (e.g. helping with the household chores, following school homework, relating with adults and elders). Parent-child play interventions may be especially important given recent findings showing that, in low-income Latinos, directive and harsh-insensitive mothering, assessed through mother-child play interactions, predicts worst school readiness outcomes (social competence and language development) (Dyer, Owen, & Caughy, 2014).

Overall, to understand the transmission of parenting in Latino families, researchers and clinicians have to consider cultural values related with child-rearing values and parenting practices (Calzada, 2010; Harwood et al., 2002).

### **4.2.3. Shift in parenting practices and values**

Although findings from the present study support theories around the intergenerational transmission of parenting, they also provide evidence of discontinuity in values and practices. Findings highlight a process of transformation in parenting values and practices. While participants reported directive parenting and a focus on developing obedience in children, they also recognized the need to avoid harsh and punitive practices to control the child's behavior, especially those practices

involving physical punishment. In that sense, while parents continued to value *respeto*, they actively try to avoid harsh practices rooted in traditional values (Calzada et al., 2010). Interestingly, parents noted the conflict between being directive, related to the value of *respeto*, and allowing more autonomy, related to western value of independence. Mothers also reported other changes in their parenting practices, like being more openly affectionate and wanting to have a more open communication with their children. In addition, mothers' responses emphasized a strong desire to give their children the opportunities they did not have when growing up. Thus, despite difficult past experiences, participants demonstrated a strong desire to adopt the parenting practices that they felt best met the needs of their children, while still attempting to hold onto cultural values they deemed important.

Findings from this study also pointed to possible mechanisms that may help elucidate the reasons Latino immigrant parents incorporate new values and transform some of their parenting practices learned during childhood. Previous research has highlighted the association between acculturation and parenting. Higher levels of acculturation have been associated with using more praising and asking more questions in teaching tasks, with higher levels of warmth, and with less inconsistent discipline practices. (Dumka, Roosa, & Jackson, 1997; Ispa et al., 2004b; Planos et al., 1995). In addition, more acculturated mothers valued independence and creativity more than less acculturated mothers (Gonzalez-Ramos et al., 1998). Acculturation is conceptualized as the process by which individuals adapt to a new culture however most measures of acculturation have focused exclusively on linguistic competence, ethnic interaction, and ethnic identity (Bornstein & Cote, 2006). Therefore, despite the fact that acculturation explains differences in parenting, the process by which parents learn about new parenting values and transform their parenting practices is not

yet understood. Findings from the present study highlight shifts in parenting practices as a result of exposure to new values and practices through educational experiences. In the present study, participants were exposed to new child-rearing values and practices through early education programs (like Early Head Start and CARING). Participating in these educational experiences can create a conflict between one's values and practices and new ones. For example, participants noted the tension between being directive and allowing autonomy, or between not expressing emotions and expressing emotions verbally. Two aspects allowed the process of transformation of parenting beliefs and practices. First, participants mentioned the need to be "open-minded" to new ideas and values. Personal assets like curiosity and flexibility could allow individuals to hold different values and practices and decide what aspects are to be retained from each culture. In a recent review, Fuligni and Tsai (2015) suggested that immigrant youth appear to be flexible in the face of social and cultural change allowing them to hold multiple identities and balance autonomy with connectedness to the family (Fuligni & Tsai, 2015). Our results are similar for immigrant mothers. However, there may be certain constraints to flexibility. Fuligni highlights that low SES and ethnic and racial stratification in the host society may limit one's capacity to be flexible. Thus, we could hypothesize that immigrant mothers from lower SES, experiencing higher levels of environmental stressors or cumulative risk, could potentially experience more difficulties having flexible negotiation of cultural values and identities. In addition, participants noted that the fact they decided to emigrate could also promote changes in beliefs and values. Therefore, reasons to emigrate may be a motor of change and need further investigation. Are those who decide to emigrate a selected group? Are immigrants more prompt to be flexible? These questions need further investigation. Second, educational experiences offered the



space to practice new skills and explore the consequences for their child and their relationship. Therefore, parents can decide what aspects of parenting they uphold and those they relinquish. For example, participants keep valuing the importance of showing respect and obedience to adults but relinquish harsh practices and report the benefits of using positive reinforcement or talking to their children about their feelings. Experiences that allow parents to keep important culturally based values like *respeto*, while incorporating new values and practices will ultimately allow a transformational process towards a more bicultural approach to parenting which may have positive effects on parents' cognitive capacities and child development (Calzada, Brotman, Huang, Bat-Chava, & Kingston, 2009; Gutierrez, Sameroff, & Karrer, 1988).

#### **4.2.4. Limitations and strengths**

There are limitations to the qualitative investigation that warrant mention. Results are limited to economically poor immigrant Latina mothers. It is not known whether the present findings extend to Latino's from other SES groups, to second generation Latina mothers, or to Latino fathers. Further research should explore whether these results can be replicated in diverse Latino samples with different levels of acculturation. In addition, although in the present study we included Latinos with different nationalities (Mexico, Dominican Republic, Ecuador, and Peru), most were from Mexico. Therefore, results cannot be generalized to other Latino subgroups. Because mothers were participating in Head Start program, it is not known whether low-income Latino mothers not engaged in early education programs would report a generational change in parenting values and practices. Despite these limitations, our findings highlight the importance of understanding parents' pre-migration experiences and the influence of these experiences on their parenting values, goals and practices.

This understanding may help providers be more attuned to parents' needs, and help identify specific areas for intervention. In addition, it is important to note that parents desire to offer their children opportunities to grow in a healthy and enriching environment can serve as protective factors and may predispose parents to engage in interventions aimed to support their child's development. Interventions that create a safe space to discuss Latino values and promote a balance between beneficial practices rooted in values of respect and practices rooted on independence require further investigation (Calzada, 2010). Early childhood programs and preschool interventions centered on play could offer this possibility.

#### **4.3. Integration of quantitative and qualitative research**

The quantitative and qualitative components of this dissertation taken together aimed to identify past and present factors that potentially impact parenting and the mother-child relationship within Latino low-income families, an understudied population. In addition, the quantitative investigation examined the association between the quality of mother-child relationship and preschoolers social-emotional outcomes in the context of cumulative risk.

Based on these results, we propose a framework (Figure 9) to understand Latino parenting in immigrant families and its implications for child development that represents a bridge between ecological theories of child development, the intergenerational transmission of parenting literature, and culturally informed models of Latino parenting. It is important to note that while our sample was composed mostly by first generation Latino mothers and a small percentage of second generation Latino mothers; all participants in focus groups except one were immigrant Latino mothers. Therefore, qualitative findings cannot be generalized to second generation Latino mothers.

As seen in Figure 9, quantitative findings highlighted the negative impact of maternal cumulative risk and child individual risk (conceptualized as developmental delay) on children's social-emotional outcomes through their effects on the quality of the mother-child relationship (as perceived by the mother). These findings are consistent with ecological theories that highlight that child development is influenced by individual characteristics (like child developmental delay), the proximal social environment (like the mother-child relationship), and more distal and broader social settings (like cumulative risk) (Bronfenbrenner, 1979; Conger et al., 1994). Besides the influence of cumulative risk on the mother-child relationship, qualitative results noted the importance of exploring mothers' childhood experiences that can potentially influence parenting among economically poor Latino immigrant families. Results showed that participants' childhood experiences with primary caregivers impact the mother-child relationship through the transmission of parenting values and practices, supporting the literature on the intergenerational transmission of parenting (Conger et al., 2012; Neppl, Conger, Scaramella, & Ontai, 2009; Van Ijzendoorn, 1992). Parents that experienced harsh and insensitive parenting tended to use harsh and controlling parenting practices as well. When parents were raised by more supportive and warm parents they perceived themselves as being supportive and nurturing. Therefore, participants' childhood experiences imparted both challenges and strengths on their relationship with their child. Findings also suggest that the transmission of parenting practices in Latino immigrant families needs to be understood in the context of culturally-based values. Consistent with previous research, *respeto*, appeared as a core value closely related to parenting practices (Calzada et al., 2010). Participants were raised to obey and be respectful to parents without questioning. When they became parents, the value of *respeto* influenced some of their parenting practices, like being

directive and teaching children what is right and what is wrong without allowing them to give their opinion.

Nonetheless, qualitative findings revealed that mothers transformed some of their parenting values and practices. Latino mothers that emigrate and become mothers in the United States are exposed to a new culture with its own values. Previous research has noted that more acculturated parents incorporate some western child-rearing values like independence and show more typically western parenting practices (Cabrera et al., 2006; Dumka, Gonzales, Wheeler, & Millsap, 2010; Gonzalez-Ramos et al., 1998). As seen in Figure 9, we suggest that in order to understand parenting in Latino immigrant families we have to consider child-rearing values from both the Latino culture and the host culture (where parents emigrate) (Calzada et al., 2012). Findings suggest that participating in educational experiences in the US (like being involved in early education programs), allows parents to explore new values and practices, and to contrast them with traditional values. Reasons for emigration could potentially explain changes in parenting within Latino immigrant parents as well. To understand the complexity of parenting in economically poor Latino immigrant families, we must consider past experiences that inform the transmission of parenting, rooted in Latino values, and current experiences, including both stressors and risks associated to poverty, and parents' experiences in the community that may facilitate or hamper a process of parenting transformation.

Future studies should explore whether past experiences with primary caregivers not only influence parenting, but may potentially interact with current risk factors. Research has shown that supportive parenting predicts self-esteem and psychological well-being through childhood (Laible & Thompson, 2007; Laible, Carlo, & Roesch, 2004). Individuals who have better self-esteem and psychological

well-being tend to be more resilient and cope better with adverse circumstances (Dumont & Provost, 1999). In that sense, we hypothesize that parents that experienced supportive relationships with primary caregivers may be more prepared to cope with current stressors, like having a child with a developmental delay, and the many adversities faced by immigrant families like poverty, poor housing or lack of social support. On the other hand, we suggest that parents who had negative experiences with caregivers, especially those that experienced traumatic experiences, may be more vulnerable in situations of cumulative risk. Previous research has suggested that parents that have to deal with social, emotional, and economic stressors may have more difficulties in providing supportive and nurturing parenting (Magnuson & Duncan, 2002; Milteer et al., 2012; Russell et al., 2008). We suggest that if parents carry harsh and insensitive parenting from generation to generation, it may be more challenging for them to learn and put in practice more beneficial parenting practices when facing adverse circumstances related with poverty. From an intervention perspective, Latino immigrant families that have experienced harder pre-immigration experiences may need more support to cope with stressors related to poverty that can potentially affect their parent-child relationship and child development. Qualitative results also present the flexibility of some participants who, despite early adverse experiences, were able to consider new parenting practices based on their perception of the best way to provide a healthy and enriching environment for their children. Therefore, interventions aimed to help immigrant Latino parents facing adversity should value and consider the strengths of these families, which may serve as a pathway to engaging them in intervention programs and educational experiences. Future research must explore the personal characteristics

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(e.g. cognitive flexibility,) and social context characteristics in the host country that promote supportive parenting in Latino immigrant families.

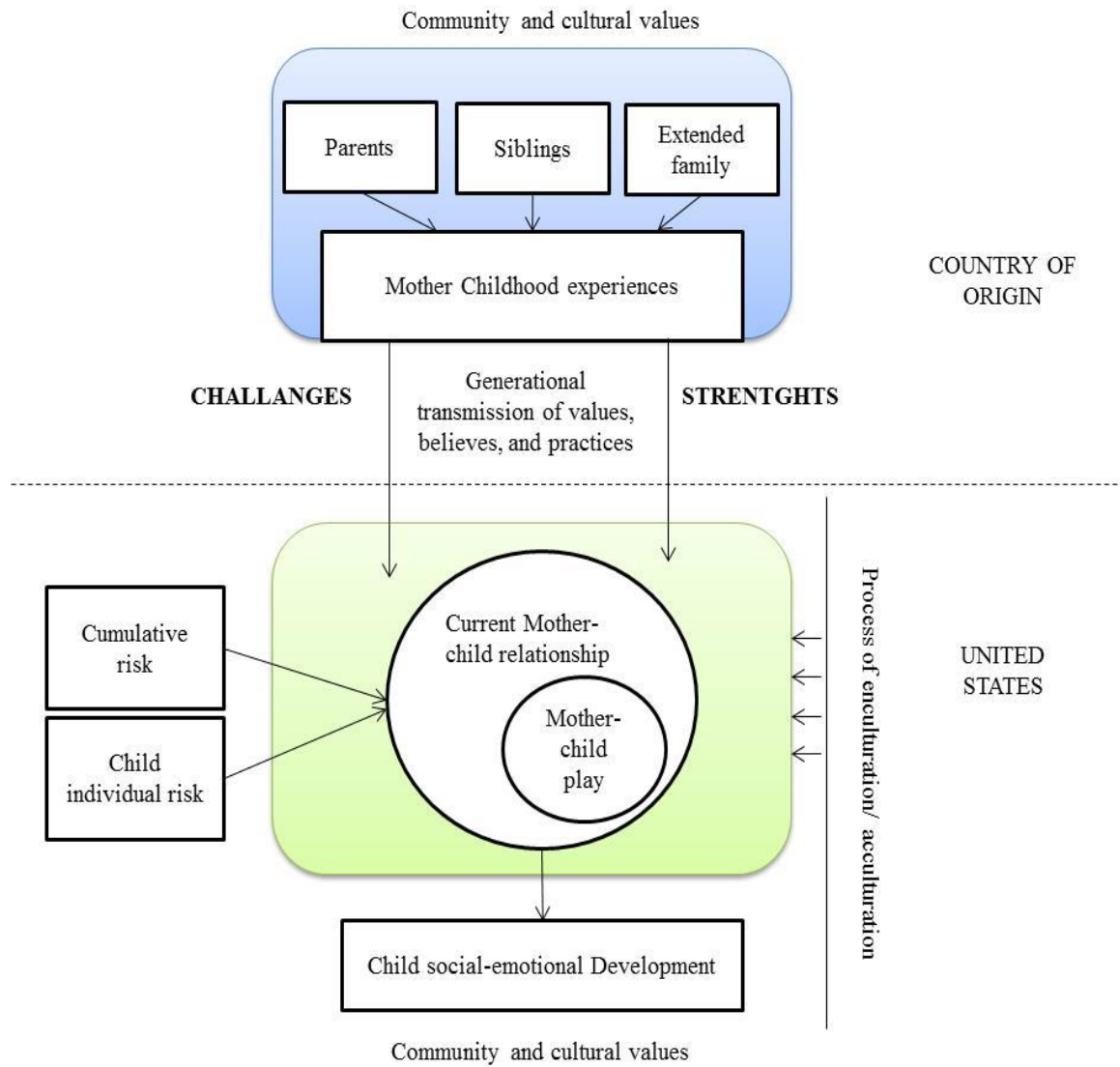


Figure 11. An integrative model of Latino parenting in immigrant families

The qualitative results also provided an explanatory hypothesis for our quantitative results showing a lack of association between observed maternal supportiveness and child social-emotional outcomes. For most mothers, parent-child

play was not a typical socialization practice by which they learned social norms and values. Although mothers had the opportunity to play with siblings and other children in the community, they did not do so with their caregivers, and those experiences influence how they relate with their children now. Some parents reported that they protect their child's time to play, but do not necessarily engage with them in dyadic play. Research has suggested that, in some Latino communities, parents may not be expected to be playful with their children (e.g. engaging in pretended play), which contrasts with current views of parent-child play in western cultures (Haight & Miller, 1993). We hypothesize that, in our sample of Latino immigrant mothers, maternal supportiveness assessed through a dyadic parent-child play task may not capture all aspects of sensitive parenting that support children's social and emotional development for this population. We argue that some supportive mothers may underperform in this task due to their lack of familiarity with dyadic play. It could also be that the western construct of maternal supportiveness, which includes respecting child's autonomy, verbal reinforcement and cognitive stimulation, does not capture other culture specific ways of showing support and transmitting security to the child, especially for those mothers that are less acculturated. For example, some participants reported they were warm with their children but they were not accustomed to using verbal reinforcement as a way of showing support. In addition, they may transmit a sense of security and nonverbal support, not directly becoming involved in play activities, nor reinforcing or stimulating child play. Thus, because some parents may not be familiar with parent-child play, and some parents may not express warmth and support verbally, it may be important to assess the mother-child interaction not only through a play-based observation, but also include other

naturalistic observation in the home environment during shared activities that could help to redefine maternal supportiveness in a more culturally appropriate manner.

#### **4.4. Conclusion**

In the current study we used a mixed methods approach to exploring different aspects of the mother-child relationship in economically poor Latino mothers and their children attending Head Start. The quantitative study examined the effects of cumulative risk on social-emotional outcomes, rated by both parents and teachers, and the role of different aspects of the mother-child relationship in mediating these effects. We then investigated the role of time spent at Head Start as a moderator of the direct effect of observed maternal supportiveness on social-emotional outcomes. The qualitative study aimed to explore childhood experiences of economically poor Latino mothers and identify how childhood experiences influenced their current parent-child relationship. The present study yielded interesting results and highlights several implications for clinicians and policymakers working with economically poor Latino families. It is the first to demonstrate that mothers' perception of the quality of the mother-child relationship mediated the impact of cumulative risk on both social competence and problem behaviors rated by parents within an economically poor Latino sample. These results highlight the need to develop preventive interventions that aim to decrease cumulative risk and support healthy parent-child relationships for this population. As posited by Bronfenbrenner's ecological systems theory (Bronfenbrenner & Morris, 2007), the mesosystem, such as the relationship between children and caregivers, has the greatest potential of impacting the development of children. Findings from the present study suggest that the potentially negative impact of cumulative risk on children's social-emotional outcome through its effects on the mother-child relationship could be buffered by fostering positive and supportive



parent-child relationships and reducing conflict in the dyad. Preventive interventions that focus on the parent-child relationship have the potential to foster a supportive and nurturing relationship in high-risk populations. A recent pilot study suggests that the CARING preschool intervention, a parent-child play-based preventive intervention, improves maternal supportive behaviors for Latino families facing socio-economic and psychosocial adversity (Martí Castañer, Wu, Snow, & Duch, 2015). Changes in maternal responses may impact child behavior over time. Therefore, future research must explore the long term effects of promising intervention such CARING (Duch, Martí Castañer, Snow, & Wu, under review).

Results also suggest the strong negative association between child individual risk, such as having a developmental delay), the mother-child relationship, and social competence and internalizing behaviors. Therefore, interventions that target parent-child interaction may be especially important among children with developmental delays facing high levels of cumulative risk. Future research should explore the interaction between cumulative risk and child-individual risk and whether children with developmental delays would benefit more from a positive and supportive parent-child relationship than children without developmental delays. For children with poor social competence and high levels problem behaviors, it is imperative to understand and address psychosocial stressors faced at home and the quality of parent-child relationship in addition to addressing the challenging behaviors themselves. Therefore, when social-emotional delays in preschoolers are detected, interventions should take an ecological approach and intervene in the different systems; child, parent, dyadic and contextual (Inclan, Martí Castañer, & Gay Pascual, 2012).

Results from the present study argue the importance of exploring parenting and the parent-child relationship within a culturally sensitive framework, using

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measures that assess parenting quality in a broad range of daily situations. In addition, the findings encourage researchers to explore the meaning and expression of supportive parenting for immigrant Latino parents and to investigate other parenting practices not embedded in dyadic play that support socio-emotional development in the family context. To study maternal supportiveness in low-income Latino mothers, researchers may need to consider culturally-specific ways in which parents are supportive of their child's development and assess mother-child interactions within a variety of daily situations. In addition, interventions targeting the parent-child relationship in Latino families need to be sensitive to cultural influences on parenting. Latino parents living in the U.S. hold values and practices rooted in Latino values, like *respeto* and *familismo*, yet at the same time are exposed to the host culture and values. Latino parents' experience with both cultures and other contextual variables (contextual risk and support) will inform their parenting practices and will potentially influence child development. Parents' educational experiences within the host community could potentially allow a process of balance between parenting practices rooted in the Latino values and practices more common in western societies (such as allowing child's autonomy). Nevertheless, we still know very little about what individual factors facilitate a process of transformation towards a more bicultural model of parenting. Future research must explore whether individual aspects like cognitive flexibility predict changes in parenting and allow Latino parents to incorporate some aspects of the host culture while holding relevant values of the Latino culture.

The lack of a direct association between cumulative risk, maternal supportiveness and child outcomes at school supports the need to further explore the role that high quality preschool programs can play as protective environments for

children facing adversity. Different aspects of the Head Start context such as the quality of the teacher-child relationship or the classroom quality predict child social-emotional competence (Hamre & Pianta, 2001; Mashburn et al., 2008; Pianta et al., 1997). Future research must explore whether diverse aspects of the Head Start context facilitate the development of social competence among Latino children in families facing higher environmental risk. Along these lines, the present study suggests the potential buffering effect of longer exposure to Head Start on social competence for children that experience less supportive parenting. The results of this study are promising and encourage researchers to examine the compensatory role of quality Head Start Programs



## APPENDIX

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### Demographic Questionnaire

Today's date: \_\_\_\_\_

Child's Name: \_\_\_\_\_

Child's DOB: \_\_\_\_\_

ID:

Child's Gender:  Male

Female

Parent's name: \_\_\_\_\_

Parent's DOB: \_\_\_\_\_

Country of Origin: \_\_\_\_\_

Ethnicity:  Hispanic or Latino

Non-Hispanic or Latino:

If born outside the United States, what year did you come to the US? \_\_\_\_\_

Father's education:  Less than High School

High School or GED

Associate degree, vocational school or some college

B.S or Advances Degree

Mother's education:  Less than High School

High School or GED

Associate degree, vocational school or some college

B.S or Advances Degree

Living arrangements:  Family rents an apartment

Family rents a room in shared apartment

Living in a shelter

Family composition:  Single parent

Both parents

Number in family: \_\_\_\_\_ Number in household: \_\_\_\_\_

## **CARING Preschool Intervention – Focus Group Script**

### ***Questions about the CARING intervention:***

1. *What was your overall impression of the CARING Program? What are the key things you have learned from participating in this group?*
2. *Were there specific topics that were difficult/ challenging in the lessons? What made them difficult? Were you able to master these topics? What helped you master them?*
3. *Were there some topics that you felt were too easy or repetitive? If so, which ones?*
4. *Did you encounter any challenges to regular participation in the program? If so, were you able to manage these challenges? How? How could the program help you meet some of the challenges you encounter to regular participation?*
5. *Were you able to practice the activities at home?*
6. *What challenges did you face when trying to practice the activities at home? How did you resolve these challenges?*
7. *What helped you practice these activities at home?*
8. *What was your favorite part of the class?*
9. *What was your least favorite part of the class?*
10. *Did you feel like you had enough time for all the lessons? If not, how would you change the duration of the program?*
11. *What did you think of the handouts and materials used in the class?*
12. *Would you change anything in the materials? If so, what would that be?*
13. *What did you think of your program facilitators?*
14. *How did she help you understand the materials presented in class? What did she do to support your learning/ participation?*
15. *Were there areas that your teacher was not able to help you with?*
16. *Tell me any changes you have noticed in your children since you started the program*
17. *Tell me a about any changes you have noticed in yourself since you started the program*
18. *Have you shared what you have learned in class with any other family members/ household members? How?*
19. *What has contributed to your child's readiness or lack of readiness for school?*
20. *Is there anything else you want to share with us about your experience with CARING?*
21. *Do you think this program would help other parents participating in Head Start programs around the country?*

### ***Questions about parents' childhood play experiences:***

22. *Where did you grow up?*
23. *What was your experience with play when you were growing up? Can you tell us some things you did as a child for fun? Where? With whom did you played?*
24. *How was play similar/ different? Did you have experience with creative-expressive play like the kind you have discussed in CARING?*
25. *Do you think that your experience growing up impact you as a parent? In what ways?*

**Model estimation for immigrant families.**

All path models were repeated excluding non-immigrant mothers. We wanted to examine whether the models and path coefficients tested hold when the sample was restricted to immigrant parents. All three models were re-examined and no differences were found. Despite the smaller sample (n=97), all the indices remained acceptable and all paths remained the same.

As seen in Figure 12, the model for social competence examined whether cumulative risk, child developmental delay, mother-child interaction variables, time spent in HS, and the interaction maternal supportiveness-by-times spent at Head Start predicted social competence. Fit indices for the hypothesized model suggested an excellent model fit with  $\chi^2_{14} = 16.52$ ,  $p=0.28$ ; RMSEA= .04, SRMR= .05, CFI = .98. Overall, predictors explained 33% and 48% of the variance in social competence rated respectively by parents and teachers.

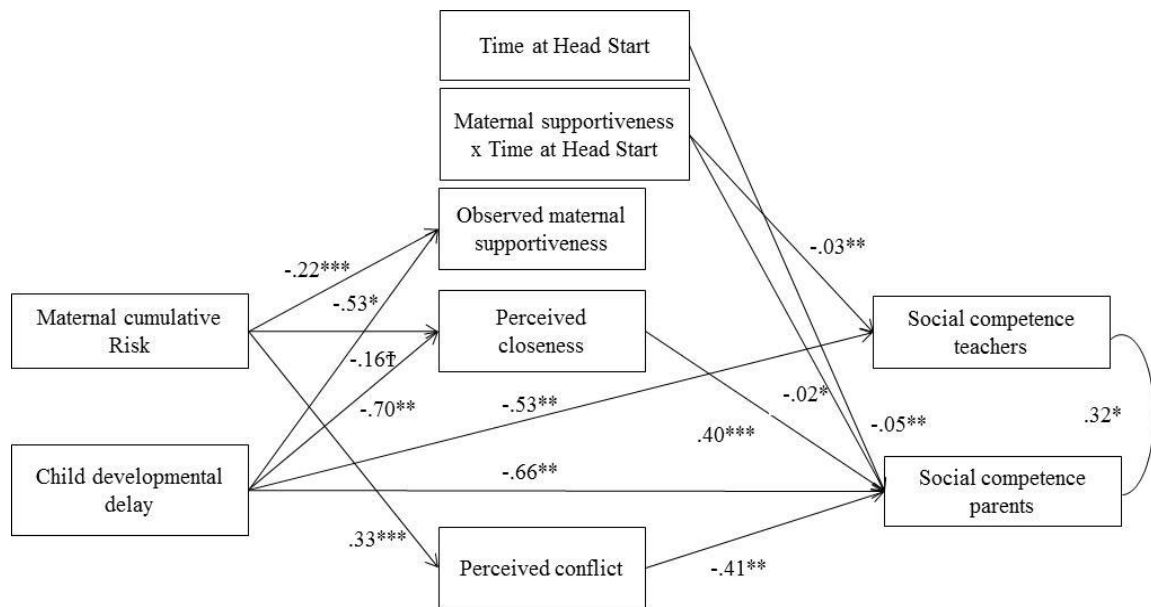


Figure 12. Path analysis model for child of immigrant parents social competence.

Note. Only significant paths are shown. The model includes indirect effects of cumulative risk and child developmental delay on child social competence. Child age and sex were entered as control variable and are not shown. Observed maternal supportiveness and perceived closeness, and perceived closeness and perceived conflicted are correlated but not shown.

$\ddagger p < .10$ ,  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$

Figure 13 presents the model for internalizing behavior. The model examined whether cumulative risk, child developmental delay, mother-child interaction variables, time spent in HS and the interaction variable maternal supportiveness-by-time spent were associated with internalizing behavior as reported by parents and teachers. Fit indices for the hypothesized model suggested an acceptable model fit with  $\chi^2_7 = 8.15$ ,  $p = 0.32$ ; RMSEA = .04, SRMR = .04; CFI .99. Overall, predictors explained 35% and 14% of the variance in internalizing behavior rated by parents and teachers respectively.



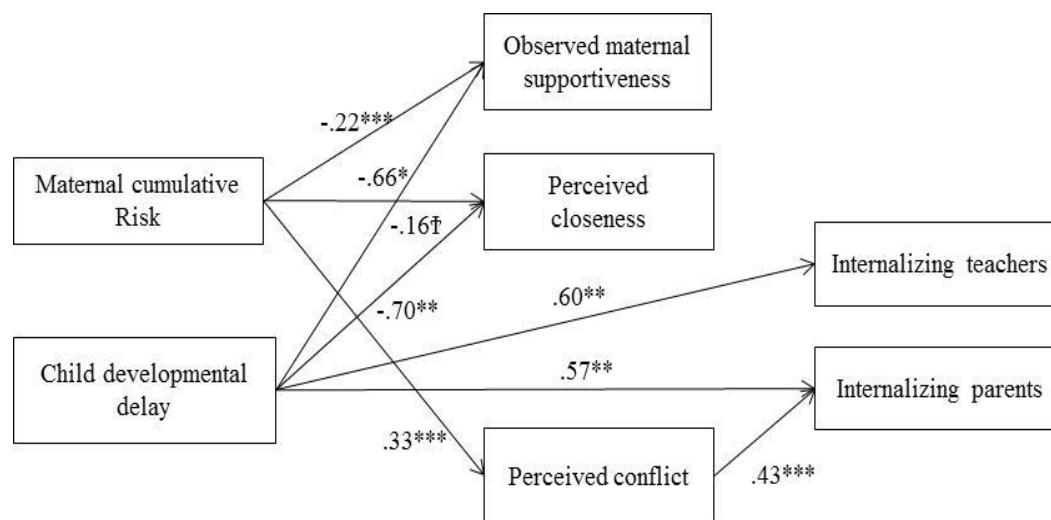


Figure 13. Path analysis model for child of immigrant parents' internalizing behavior.

Note. Only significant paths are shown. The model includes indirect effects of cumulative risk and child developmental delay on internalizing behavior. Interaction effects between maternal supportiveness and time at Head Start were entered as a predictor but are not shown due to its lack of association with other variables. Observed maternal supportiveness and perceived closeness, and perceived closeness and perceived conflict are correlated but not shown.

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Figure 14 presents the model for externalizing behavior. The model examined whether cumulative risk, child developmental delay, mother-child interaction variables, time spent in HS and the interaction variable maternal supportiveness-by-time spent were associated with externalizing behavior as reported by parents and teachers. Fit indices for the hypothesized model suggested an acceptable model fit with  $\chi^2_{10} = 14.14$ ,  $p = 0.17$ ; RMSEA = .07, SRMR = .05; CFI = .96. Overall, predictors explained 35% and 12% of the variance in internalizing behavior rated by parents and teachers respectively.

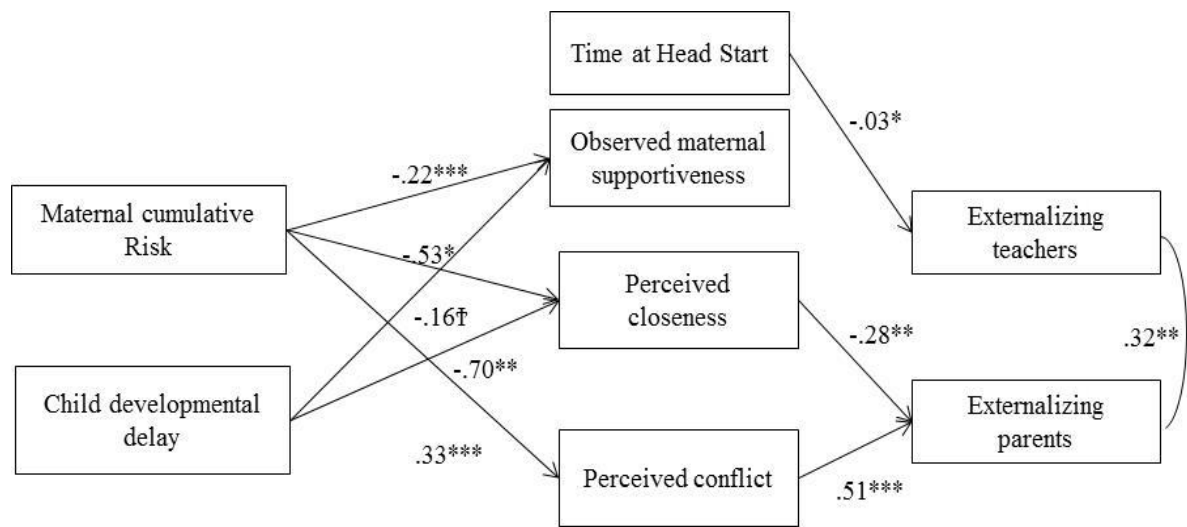


Figure 14. Path analysis model for child of immigrant parents externalizing behavior.

Note. Only significant paths are shown. The model includes indirect effects of cumulative risk and child developmental delay on externalizing behavior. Interaction effects between maternal supportiveness and time at Head Start were entered as a predictor but are not shown due to its lack of association with other variables. Child sex was entered as control variable and is not shown. Observed maternal supportiveness and perceived closeness, and perceived closeness and perceived conflicted are correlated but not shown. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

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