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Considering the Role of Children's Levels of Responsiveness and Resistance on the Relations between Maternal Interaction Behaviors and Children's Interaction Behaviors with Peers at School

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Considering the Role of Children's Levels of Responsiveness and Resistance on the
Relations between Maternal Interaction Behaviors and Children's Interaction Behaviors
with Peers at School

A Thesis Presented for the
Master of Science
Degree
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Daniela Andrea Salinas Maturana

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Abstract

Developmental theorists usually agree that children's peer relationships have their roots in family relationships and they have suggested different models of influence between these two major socializing spheres. However, most studies have not included the role that children may play during these social exchanges. The present study focuses on the relative importance of children's levels of responsiveness and/or resistance during mother-child interactions and offers a novel framework of direct and indirect relations between mother interaction behaviors and children's social behaviors with peers. Findings indicated that children of more controlling mothers were likely to be more controlling and dominant in their relationships with peers. Similarly, the mother's imposition was related to children dominant behavior with peers. The results also indicated that the child's level of responsiveness toward mothers moderate the effects of mother's cohesiveness in relation to the child's prosocial behaviors with peers. Children with high level of responsiveness toward their mothers' cohesiveness were more likely to display prosocial behaviors among peers. Similarly, the effect of mother's autonomy support on children's leadership was moderated by either the child's responsiveness or resistance toward mothers. The findings of this study highlight the importance of synchrony in the relationship between the mother and the child and indicate a bidirectional nature of this relationship.

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Chapter 1

Introduction

The importance of establishing positive social relationships for the development of the individual has long been recognized (e.g. Vygotsky & Cole, 1978). For example, at infancy, the purposeful aspects of the relationship between the caregiver and the infant are unquestioned. The survival of the infant depends on the relationship with the caregiver (Bowlby, 1988a; Eibl-Eibesfeldt, 1989). Since the responsibility of the subsistence and adequate development of the child is naturally embraced by the mother, the mother-child dyad has occupied a central position among adult-child relationships (Bowlby, 1980; Freud, 1976). Later on, as children grow older, the interactions that were relatively limited to caregivers are expanded to incorporate child-child interactions.

Most social developmental researchers agree that children's social exchanges with peers provide distinctive and essential contributions to the child's social and emotional development (Asher & Coie, 1990; Hartup & Moore, 1990). The developmental equivalence and egalitarian nature of peer interactions are particularly believed to be responsible for these contributions. For instance, within the child-caregiver system, adults usually lead, direct, and control the interactions. In contrast, within the child-child social system, a child is not particularly more knowledgeable or skillful in social exchanges than a peer. Peers are relatively equal in terms of their ability to negotiate, accomplish their goals, and the extent of their socializations (Ladd, 2005). When children start attending educational centers, their interactions with similar-age classmates are amplified and become increasingly complex. It seems reasonable that children would be able to

strengthen their social skills and form enjoyable relationships with other children when they start attending more structured social settings like the school. However, it is also against this context of increasing social exchanges, access to larger groups of peers, and less adult presence that some children's difficulties in dealing with peers become clear (Hay, Payne, & Chadwick, 2004), putting them at risk of peer rejection or isolation.

While the establishment and conservation of positive relationships with peers during childhood have been recognized as essential elements of psychological adjustment across the lifespan (Carbery & Buhrmester, 1998; Hartup & Stevens, 1997), children's failure to establish positive peer relationships has been associated with diverse negative outcomes in later developmental periods (Coplan, Robert J., Prakash, Kavita, O'neil, Kim, & Armer, Mandana, 2004; Wentzel, K. R., 2003). Therefore, it is important to investigate and understand the factors that may influence children's social experiences with peers.

Developmental theorists usually agree that peer relationships have their roots in family relationships (Attili, Vermigli, & Roazzi, 2010) and they have suggested different modes of influence. Most studies addressing the relations between the family and peer systems have focused either on direct or indirect parental influences (Ladd & Pettit, 2002). For example, studies that are interested in more direct modes of parental influences have focused primarily on processes such as regulating children's access to social contexts, arranging and supervising peer meetings (Ladd & Pettit, 2002), and acting as consultant or adviser when the child has problems in dealing with other peers (Bugental & Happaney, 2002). On the other hand, the literature also supports the idea of a more indirect mode of parental influences on children's peer interactions, including

associations between early attachment classification and later peer competence and acceptance (Easterbrooks & Lamb, 1979; Fagot, 1997; Sroufe, Egeland, & Kreutzer, 1990), parenting styles (Dishion, 1990; Hart, Dewolf, Wozniak, & Burts, 1992), quality of parent-child relationships (Macdonald & Parke, 1984; Parke & Ladd, 1992), behavioral exchanges between parent and child during social interactions (Putallaz, 1987), and autonomy support (Grolnick, Kurowski, Dunlap, & Hevey, 2000). Although studies regarding parental influences on children's interactions with peers have been investigated for a long time and have expanded our knowledge of parent-peer linkages, the role that children play during these social exchanges has not been thoroughly examined. For instance, children have personal dispositions or behavioral orientations (Caspi, Elder, & Bem, 1988) that may influence the way they interact with their parents as well as whether they carry or not parental interactional styles forward to the peer social system. Therefore, it is possible that the impact that parent-child pattern of interaction may have on the child's subsequent peer interactions may be ameliorated by children's personal dispositions such as responsiveness and resistance during social exchanges with their parents.

The purpose of this short-term longitudinal study is not only to extend prior research about the impact that maternal patterns of interactions with their children have on subsequent peer interactions, but also to take into account the potential mediating or moderating effect that children's levels of resistance and/or responsiveness toward their mothers may have on the extent to which interactive styles are transferred from the mother-child system to the peer system. First, this study focuses on the links between the

mothers' as well as the children's behaviors during mother-child interactions and children's later behavior with peers in school. Second, it addresses whether children's levels of responsiveness and resistance to social exchanges with mothers has a mediating or moderating role on what is carried forward into social relationships peers.

Chapter 2

Literature Review

Children's Social Relationships

Human beings are social beings. From birth, we are embedded in an environment of social interactions and relationships which are especially necessary for the development of infants. From an ethology perspective, the formation of early relationships has contributed to the survival of the species over the course of evolution (Bowlby, 1969). Adults, as well as infants, are biologically predisposed to form relationships with other people and develop attachments (Eibl-Eibesfeldt, 1989; Perry, 2002). In accord with these theory tenets, ethologists suggest that infants are born with innate signaling behaviors and babyish appearance to elicit adult attachment behaviors (Miller, 2002), which ensure their survival during this extremely vulnerable period. By smiling, cooing, fussing, and crying, infants are able to capture the attention of a proximal adult and provoke a sympathetic response to their needs (Balbernie, 2002; Robson, 1967). Thus, the functional nature of the relationship between the infant and caregiver, particularly with the mother, during the first years of children's life is apparent.

The relationships formed between an adult and a child are classified as "vertical" or asymmetrical for some authors (Hartup, 1989; Kuczynski, 2003; Pianta, 1994), since they are formed with a person that is more knowledgeable, powerful, and skillful than the child (Kuczynski, 2003; Maccoby, 1992; Sroufe, 1985). Later on, as children grow older, their relationships are expanded to incorporate other social partners, for example peers. Because the child's peers are not considered particularly more knowledgeable, powerful,

and skillful, these relationships are viewed as “horizontal” (Youniss, Mclellan, & Strouse, 1994). Most researchers agree that experience in these two major types of relationships (i.e. vertical and horizontal relationships) contribute distinctly to the social and emotional development of the child. For instance, they serve distinct functions, transpire at different developmental periods, and the quality of these relationships impacts the child in various ways and degrees (Hartup, 1989; Mashburn & Pianta, 2006). Thus, children’s interactions with peers should be considered separately from the adult-child interactional system.

Vertical Relationships. Infants need to form early vertical relationships with someone who is more powerful, competent, and knowledgeable and is willing to satisfy their needs in order to survive the extremely vulnerable first years of life; thus this type of relationship is considered to emerge before than horizontal ones. Historically, the mother-child dyad has occupied a central position within vertical relationships regarding the subsistence and adequate development of the child (Bowlby, 1980). Ever since Freud (1940) posited that the mother-child relationship was unique, strong, and unalterable, many developmental theorists have highlighted this relationship as the basis for the development of children’s socio-personality (Bugental & Grusec, 2006). Within the caregiver-child relationship children seem to develop many of basic skills and competencies necessary for social interaction (Hartup, 1985). Since children’s social interactions during these first years of life are somewhat limited to the caregiver-child dyads, caregivers are likely to foster appropriate and desirable behavior in children to accommodate to the family standards and expectations (Collins, Gleason, & Sesma Jr,

1997). Thus, the family is considered children's first socialization institution (Grusec & Goodnow, 1994) and caregivers the primary socializing agents for their children to prepare them to fit into their cultural milieu and social roles (Bugental & Grusec, 2006).

Horizontal Relationships. This classification includes relationships that the child forms with other children of similar age. These types of interactions differ from vertical ones in the sense that peers share similar levels of knowledge, social power, and competence. At the same time, these social partners are different enough to provide a source of enrichment of the social experience. In most cultures, it is only after the third year of life that horizontal relationships are more evident (Hartup, 1989). Thus, they appear to emerge later than vertical relationships. When children start attending school, these horizontal relationships tend to increase in frequency and become more complex and diverse as children grow (Hastings, Utendale, & Sullivan, 2007; Howes, Rubin, Ross, & French, 1988; Parten, 1932). Researchers estimate that the amount of time two year-olds spend interacting with other children increases from approximately 10 percent to more than 30 percent in middle and late childhood (Rubin, Bukowski, & Parker, 2006). Similarly, according to Barker and Wright (1951) a typical school day may include approximately 299 episodes with peers. Children's participation in larger peer groups creates an important developmental context for them (Rubin, et al., 2006). In these contexts, children have the possibility to elaborate, adapt, or change the social skills learned during caregiver-child interactions with individuals who are relatively similar to them (Hartup, 1989; Ladd, 1999). For example, young children may employ strategies such as pointing, fussing, or crying to obtain a resource from adults and these strategies

may be successful most of the time. However, these same strategies may not lead to the same results when employed with peers, and children need to acquire new set of strategies such as helping, sharing, lying, and aggression to obtain a resource from peers (Miller, 2002). Also, within the peer context children have greater opportunities to negotiate solutions to disagreements (Corsaro, 1981; Verba, 1994), learn how to take the perspective of others, formulate and state their own opinions, and resolve conflicts (Hartup & Moore, 1990). Therefore, while experiencing peer relationships, children elaborate their social skills and enable abilities to distinguish which strategies are more effective in various contexts. However, it is also against this context of increasing social interactions with peers that some children's difficulties in dealing with peers become evident.

Peer Relationships at School

Children at school are generally expected to form positive relationships with other children and to belong to a peer group (Barnett, 1991; Christie & Johnsen, 1983; Connolly & Doyle, 1984; Connolly, Doyle, & Reznick, 1988; Johnsen, 1991). However, while some children seem to thrive on social interactions and are able to form harmonious relationships with most of their classmates, some others are ignored or actively rejected by their peers. For many years, scholars have studied how children relate and interact with peers as an indicator of current and future social competence (Hartup, 1983; Mcdowell & Parke, 2009). Although, there are several definitions of a child's social competence, most researchers agree that socially competent behaviors are those that facilitate successful relationship with peers (Howes, 1987; Humphries, Keenan,

& Wakschlag, 2012) and led to peer acceptance (Attili, et al., 2010; Dodge, 1983). Thus, the development of social competence during childhood has become a targeted area of study, particularly for its significance on children as well as adult adjustment (Parker & Asher, 1987).

Positive Peer Relationships. The idea that developing socially competent relationships with peers is an important developmental task that children and adolescents face is well known among developmental researchers (Hartup & Stevens, 1999; Masten & Coatsworth, 1998; Sullivan, 1953). There is a significant amount of empirical research that supports the possibility that being accepted by peers may serve as a protective role in child's adjustment and development (Collins & Laursen, 2004; Hartup, 1996; Ladd, 1999; Masten & Coatsworth, 1998). For example, for preschool children, being able to develop positive relationships with other children has been associated with better adaptation to kindergarten (Ladd & Price, 1987). In school-aged children, being liked and socially accepted by peers have been associated with better academic achievement (Ladd, Kochenderfer, & Coleman, 1997) and with the development of protective factors that promote resilience (Wiener, 2004). Also, there is abundant evidence that peer relations may contribute positively to mental health in childhood and subsequent developmental periods (Hartup, 1983; Parker & Asher, 1987). For example, Bagwell, C. L., Newcomb, A. F., and Bukowski, W. M. (1998) concluded that children who had have a stable best friend in fifth grade had a more positive sense of self-worth as adults than children who were friendless in fifth grade. Similarly, pleasant peer relationships during adolescence are linked with positive mental health at midlife (Hightower, 1990).

Negative Peer Relationships. Although establishing positive close relationships with peers may not be considered a developmental requirement by some authors, being socially rejected by other children has been considered as a risk factor (Parker & Asher, 1987). Longitudinal studies have indicated that peer rejection during childhood predicts increases in both externalizing and internalizing problems over this age period (Kraatz-Keiley, Bates, Dodge, & Pettit, 2000). For example, some longitudinal studies have predictively associated peer rejection during childhood with externalizing problems such as antisocial behavior (Wentzel, Kathryn R., 2003), behavioral problems (Bagwell, Catherine L, Newcomb, Andrew F, & Bukowski, William M, 1998), association with delinquent peers (Brendgen, Vitaro, & Bukowski, 1998), delinquency (Parker & Asher, 1987), and substance abuse problems (Dishion, Capaldi, & Yoerger, 1999; Dishion & Owen, 2002). Similarly, recent studies have found a positive correlation between peer rejection and a wide range of internalizing problems including low self-esteem, anxiety problems, loneliness (Coplan, R. J., Prakash, K., O'neil, K., & Armer, M., 2004) and depressive symptoms (Kistner, Balthazor, Risi, & Burton, 1999).

For children who are constantly disliked or ignored by classmates, schools might become an undesirable place to be in and an environment that is unlikely to promote learning (Rubin, et al., 2006). The findings of a longitudinal study done by Ollendick, Weist, Borden, and Greene (1992) showed that children who were continuously rejected by their peers were more likely to fail a subsequent grade than children who were more accepted. Relatedly, a 4-year longitudinal study conducted by DeRosier, Kupersmidt, and Patterson (1994) reported that children who experienced peer rejection at any year

during the first three years of attending school, were at greater risk of truancy in the fourth year. Thus, the results of a 5-year longitudinal study indicating that rejected children (17.5%) were more than three times more likely to drop out of school before the ninth grade than popular or average children (5.4%) (Ollendick, et al., 1992) are somewhat expected.

Given the developmental significance of peer relationships and the negative outcomes associated with peer rejection, it is important to examine the underlying factors that may influence children's social experiences with other children, especially at school. In the next section, I will first examine the association between parent-child relationships and subsequent peer relationships. Following this, literature examining the role of individual characteristics of children that account for what is transferred from the caregiver-child system to the peer social system will be reviewed.

Parent-Child Relationships at Home and Subsequent Peer Relationships at School

Since children's first social and emotional experiences happen within the family context (Grusec & Goodnow, 1994), it appears logical that within this context many basic social competencies necessary for social interactions develop, which in turn influence subsequent peer relationships (Hartup, 1985). For example Ladd and Ladd (1998) suggest that mothers play an important role in the development of their children's social competence, particularly when they start attending school. Several developmental researchers and theorists have been interested in how family relationships, particularly the mother-child dyad, might influence children's social competence within peer groups for a long time (Elicker, Englund, & Sroufe, 1992; Kerns, Contreras, & Neal-Barnett,

2000; McDowell & Parke, 2000). However, the nature of the underlying mechanisms that link early mother-child relationships to later peer relationships is the subject of an intense debate, because this link has not been thoroughly demonstrated.

Researchers and theorists have speculated that there may exist more than one mode of transmission whereby parents influence their children's social experiences with peers (Parke et al., 1989; Putallaz & Heflin, 1990). According to Ladd and Pettit (2002), parent, particularly mother, may contribute to the development of their children's social competence either in a direct or indirect way. Direct influences refer to the strategies that parents conscientiously employ to influence their children's social experiences with other children. For example, parents may explicitly teach their children appropriate ways to initiate and maintain positive relationships with peers. In contrast, indirect influences refer to parental behaviors and patterns of parent-child relationship that do not explicitly aim to influence children's social experiences with other social partners such as peers.

Direct Influences. Parents may explicitly influence their children's social experiences by acting as *supervisors* of children's social activities, as *consultants* when the child brings up concerns about how to handle a social challenge, and the *manager* of the access that their children have to peer's groups (Williams, Mastergeorge, & Ontai, 2010).

Supervisor. Parents may directly influence children's social relationships by supervising or monitoring their children's social activities. Bhavnagri and Parke (1991) found that children who were assisted by an adult while playing with peers showed more respect for the turn of the peer, cooperation, and their play last longer than children

without any assistance. Moreover, parental supervision correlates negatively with children's antisocial behaviors and getting involved with delinquent peers in middle school (Reid, Patterson, & Snyder, 2002). Similarly, other studies have found that children of parents who provided poor supervision tended to display more delinquent and externalizing behaviors (Li, Stanton, & Feigelman, 2000) and had lower peer acceptance (Sandstrom & Coie, 1999) than children who were adequately supervised by their parent. According to Rubin, et al. (2006), the presence of the mother while children play with peers might influence children to behave in a manner that conforms to parental expectations.

Consultant. Another way in which parents can influence their children's social experiences is by giving verbal advice to children concerning appropriate ways to competently handle peer conflicts, provide strategies for negotiating and managing social challenges, and initiate and maintain positive relationships with peers (Bugental & Happaney, 2002).

Manager of Peer Contact. Parents may also influence their children's social experiences by providing children with opportunities for peer interactions. For example, parents may organize meetings with playmates, enroll their children in a day-care, or encourage their children to participate in extracurricular activities that involve other children (Hart, Hofmann, Edelstein, & Keller, 1997). For instance, children that are enrolled in a day-care or nursery school that emphasize a social curriculum tend to develop social skills earlier than children who remain at home (Howes, Matheson, & Hamilton, 1994). Moreover, mothers who take the initiative in arranging play-group

opportunities for their children have children who themselves initiate peer interactions and are better liked by their peers (Ladd & Hart, 1992). Likewise, mothers who actively provide opportunities for their children to have peer meetings, had preschoolers who were better accepted by their peers (Ladd & Golter, 1988).

Even though direct parental efforts to influence their children's social experiences with peers may serve as a way of enhancing children's social experiences with peers, parental efforts may vary across cultures because each culture ascribes a different degree of importance to the development of the children social skills. According to Harkness and Super (2006) parents hold differing beliefs and expectations about family, children, and themselves across cultures (i.e., parental ethnotheories). These beliefs and expectations translate into differing goals for child rearing and distinct patterns of childhood experiences and prescribe what is important for parents to develop. For example, the Beng of West Africa believe that babies have recently left the afterlife and entered to this world as reincarnated ancestors with desires, memories, and the ability to understand all languages and thus parents interact to them constantly, whereas people in the Micronesian atoll of Ifaluk believe that babies are not able to understand any language, and thus adults do not speak to them (Deloache & Gottlieb, 2000). Therefore, the role that parents play in promoting children's social competence will be mediated by the beliefs that parents holds regarding the importance of developing their children's social interaction skills. Parents of socially competent children tend to believe that they should play an active role in developing their children's social skills (Rubin, Mills, & Rose-Krasnor, 1989). Thus, parents who highly value the development of their children's

social competencies are more likely to get involved in helping their children to develop adequate social skills.

Indirect Influences. Social learning and attachment theories have guided most of the researcher suggesting that children learn behaviors and/or create working models of social relationships from their interactions with their parents, which they use during peer interactions (Contreras & Kerns, 2000; Putallaz & Heflin, 1990). These parental influences are viewed as indirect, because they do not explicitly influence children's social experiences with peers.

Attachment. Several theorists have suggested that individuals hold mental representations or cognitive maps about themselves and other people, which in turn guide their social behavior (Bowlby, 1988b; Bowlby, 1980). Attachment theorists, for instance, propose the concept of internal working models. One of the basic tenets of attachment theory is that children's early experiences with attachment figures, such as caregiver's sensitivity or insensitivity, are internalized and lead to the creation of mental representations or expectations of the social world, which are carried forward into other relationships (Bretherton & Munholland, 1999), including peer relationships.

The literature supports the notion that the quality of attachment between parents and their children predicts quality of adjustment and competent interactions with peers at different development periods (Bost, Vaughn, Washington, Cielinski, & Bradbard, 1998; Denham et al., 2001; Fagot, 1997). For example, infants who are securely attached are more prone to display socially competent behaviors among peers during toddlerhood (Pastor, 1981), preschool (Booth, Rose-Krasnor, & Rubin, 1991) and elementary school

(Elicker, et al., 1992). In contrast, insecurely attached children tend to be less competent (Cohn, 1990), display more negative responses (Fagot, 1997), and hostile behaviors (Burgess, Marshall, Rubin, & Fox, 2003) in the context of peer interactions. Moreover, when compared with children with insecure attachments, securely attached children display more socially competent behaviors among peers (Youngblade & Belsky, 1992), have a larger social network of peers (Bost, et al., 1998), display fewer aggressive behaviors (Cohn, 1990), tend to have a more positive self-image (Verschueren, Marcoen, & Schoefs, 1996), and are rated as more competent and display less behavioral problems by teacher (Erickson, Sroufe, & Egeland, 1985).

Rearing or Parenting Styles. Perhaps the earliest and most recognized research on parenting styles was conducted by Baumrind (1973) who distinguished three parenting styles after examining the data from her study of preschoolers and their parents. These three parenting styles were described as follows:

Authoritarian Parenting. This is a very restrictive and punitive style in which parents expect complete obedience from children without being sensitive of children's conflicting viewpoints.

Authoritative Parenting. This is a controlling but flexible style of parenting in which parents are warm and nurturing toward their children and support child's autonomy while placing limits to children's behaviors when needed.

Permissive Parenting. Permissive parents rarely attempt to place limits or control their children's behaviors and allow their children to freely express their emotions and impulses.

Later, Maccoby and Martin (1983) included a fourth type of parenting style called *uninvolved parenting*, which is characterized by extremely lax and disengaged parents.

According to Rubin, et al. (2006), parenting styles may promote specific child behaviors that mark children for peer acceptance or rejection. For instance, authoritarian parenting styles are negatively associated with peer acceptance (Pearson & Rao, 2003). Overall, researchers agreed that authoritative parenting style relate to positive aspects of development (Steinberg & Silk, 2002). For example, while mothers' use of authoritarian parenting style is associated with children's increment of behavioral problems, the use of authoritative parenting style is associated with less behavioral problems (Querido, Warner, & Eyberg, 2002). Authoritative parents are able to appropriately balance control and autonomy. Then, while still providing the rules and guidance that children need, they give children the opportunity to develop independence (Rueter & Conger, 1995). Also, by providing warmth and being involved, authoritative parents elicit children's willingness to accept parental advices (Sim, 2000). Moreover, associations between authoritative parenting and children's positive developmental outcomes appear to be true for all racial and ethnic groups that have been studied in United States (Glasgow, Dornbusch, Troyer, Steinberg, & Ritter, 1997; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994) and in other cultures as well (Scott, Scott, & McCabe, 1991). For example, the findings of a study conducted in China show that warm and authoritative parenting practices positively predicts children's social competence and peer acceptance, while authoritarian parents tend to have children who display more aggressive behaviors and were more prone to be rejected by their peers (Chen, 1994).

Interactional Styles. To examine the influence of parent-child interaction on children's social experiences with other children, some investigators have concentrated their research on the behavioral interchanges between parent-child that occur during social exchanges, and how these observed patterns of interaction are repeated by children when interacting with peers (Patterson, 2002). Research following an interactional approach is based on the assumption that social competence and skills originate in certain features of the parent-child relationship, face-to-face interactions between parents and their children may provide a context for children to learn, practice, and elaborate their social skills needed to successfully interact with other social partners. For instance, the quality of parent-child interaction is positively associated with children's popularity and acceptance among peers (Parke & Ladd, 1992). Moreover, there is evidence that parental patterns of interactions not only relate to present peer relationships, but also predict children's experiences with peer over time. For example, children of fathers who were responsive toward their children during social exchanges tended to be more popular over the school year than children of fathers who were less responsive (Henggeler, Edwards, Cohen, & Summerville, 1991).

The current study follows this line of inquiry, especially examining the links between aspect of cohesiveness, autonomy support, control, and imposition on the mother-child interaction and later children's interactions with peers at school.

Autonomy Support vs. Controlling

The concept of autonomy refers to children ability to function as separate individuals who make their own decisions and guide their own behavior within the social

group, thus children are able to maintain healthy relationships without losing the autonomous view of self or differentiation (Bugental & Grusec, 2006; Emde & Buchsbaum, 1990). The development of self-definition or autonomy is considered an important aspect of human functioning (Blatt, 1995; Deci & Ryan, 1991). The process by which autonomy is taught to children has been termed as autonomy support (Clark & Ladd, 2000). Parents who are able to support their children's autonomy may enhance the development of adaptive and socially acceptable interactional patterns in children. For instance, autonomy support in children has been associated with peer acceptance (Clark & Ladd, 2000), increased levels of self-efficacy, assertiveness in social relationships (Denham, Mckinley, Couchoud, & Holt, 1990), adjustment, self-regulation, fewer behavioral problems (Grolnick, et al., 2000), and to prosocially respond to conflicts with peers (Eisenberg & Mussen, 1989). This set of skills may be considered as prerequisites for children's success on establishing and maintaining positive peer relationships (Ladd, 1999; Parke & Ladd, 1992).

In contrast to the positive outcomes associated with autonomy support, controlling patterns of interaction are associated with more negative outcomes. For example, Harrist, Pettit, Dodge, and Bates (1994) reported that children of hostile and controlling mothers experience more difficulties in dealing with peers during preschool and middle childhood. Accordingly, Macdonald and Parke (1984) found that parents' controlling interaction style, especially from fathers, positively correlated with children's aggressiveness with peers during play sessions and negatively correlated with ratings of popularity done by teachers. Moreover, parents' controlling interaction style is associated

with scores of loneliness and depressive symptoms in children (Mcdowell, Parke, & Wang, 2003). This parental interaction style is also associated with negative outcomes in later developmental periods. Controlling behaviors and low autonomy support from parents have been found to reduce the sense of self-determination during adolescence, which in turn may lead to maladjustment (Soenens, Vansteenkiste, Smits, Lowet, & Goossens, 2007).

Cohesiveness vs. Imposition

Putallaz (1987) examined patterns of interactions between first graders and their mothers, finding that mothers who interacted in a more agreeable and positive way with their children, tended to have children of high sociometric status. In contrast, mothers' disagreeable patterns of interaction were negatively associated with sociometric status and peer acceptance. Similarly, other studies have indicated that mothers who are highly disapproving and rejecting of their children input during interaction, are more likely to have children who are aggressive toward other social partners (Eron, 1982; Lefkowitz, Huesmann, Eron, & Walder, 1977), are more likely to be socially rejected (Attili, et al., 2010) and are likely to have poor social skills with externalizing behavioral problems (Pettit, Bates, & Dodge, 1993). Parents of rejected children were more likely to impose their own ideas into the play theme and question children's selection of play themes than parents of popular children (Austin & Lindauer, 1990). Rejecting or overly directive parents may prevent children from developing the needed social skills to initiate, regulate, and maintain social interactions with other children (Parke, et al., 1989). Moreover, evidence suggests that more equal turn-taking pattern of interaction between

mothers and children is associated with higher sociometric status within the peer group (Black & Logan, 1995).

Children's Levels of Responsiveness and Resistance

According to the previous discussion, parents are conceptualized as able to influence, both indirectly and directly their children's social experiences with peers. Although these studies have expanded our understanding of parent-peer linkage, the majority of them have failed to incorporate the role that children's own characteristics or dispositional factors play in what is transferred between these two major socializing spheres. Studies that have incorporated this missing element have mainly focused on the child's temperament (Bates & Pettit, 2007; Putnam, Sanson, & Rothbart, 2002).

Temperament is usually defined as individual's characteristic dispositions, or modes of approaching and reacting emotionally and behaviorally to people and environmental events, which in turn are considered to be the building blocks of adult personality (Caspi & Silva, 1995). Although the concept of temperament is not always defined in the same way, most researchers agree that activity level, negative emotionality, soothability, inhibition, and sociability are important components of temperament (Goldsmith et al., 1987; Rothbart, 1981). Earlier reports of Thomas and Chess (1977) indicated that certain infants' temperaments can be clustered into three different temperamental profiles (i.e. easy, difficult, and slow-to-warm-up temperament). Infants who fall into the easy temperament profile are described as adaptable to new experiences and routines, who are generally in a positive mood, and whose behaviors are regular and predictable. Difficult children, in contrast, tend to be active, irritable, and fussy, and react

intensely to changes in routines and exposure to new situations. Lastly, “slow-to-warm-up” children are generally inactive and moody, and hesitate to accept changes and new experiences.

The concepts of difficult temperament, sociability, inhibition, and activity level deserve particular attention in the study of peer relationships (Rubin, et al., 2006). Sociable children are described as children who respond openly and outgoing to social challenges (Kagan, 1999). In contrast, inhibited children are fearful, timid, and hesitant when facing a social novelty and their emotions arouse easily and are difficult to regulate. Lastly, highly active infants are highly reactive children (i.e. easily aroused) (Rubin, et al., 2006). According to Rothbart, Derryberry, and Hershey (2000), these temperamental characteristics are relatively stable across time and they are associated with certain social behaviors that are characteristic of either rejected or popular children (Rubin, et al., 2006). For example, temperamentally difficult children or emotional reactive are more likely to behave in aggressive and irritable ways in their interactions with peers (Hay, Castle, & Davies, 2000; Lytton, 1990), which in turn may predict peer rejection (Eisenberg, Fabes, Guthrie, & Reiser, 2000). Similarly, behavioral inhibition is associated with shyness and social withdrawal during childhood (Kagan, 1999; Rubin, Burgess, & Hastings, 2002), which in turn may cause inhibited children to be socially rejected and victimized from as early as preschool (Gazelle & Ladd, 2003).

Temperament-related research suggests that children’s own characteristics may evoke distinct parenting styles, behaviors, and parental socialization tactics (Reid, et al., 2002). Most research that focused on direct forms of parental influence on children’s peer

relationships (e.g. parental advice giving, arranging peer meetings) pay little attention to the role that children play in the process (Rubin, et al., 2006). For example, parents may try to enhance children's social experiences by arranging play-group opportunities for their children, yet grouping children does not guarantee interactions, they cannot ensure that children are going to enjoy the social experience or that their children will be accepted by peers. Similarly, parents may advise their children concerning peer problems, but the child has the power to decide whether he or she is going to follow or ignore the advice. Parental attempts to learn more about their children's social experiences with peers may depend on the children's willingness to share this information (Mounts, 2000).

Current Study Purpose, Objective and Hypothesis

This study is guided by tenets of Social learning theory and the internal working models perspective. According to social learning theory, imitation is one of the most powerful socializations forces (Miller & Dollard, 1941). Thus, children can learn certain ways of interacting by observing and imitating mothers' behavior during social exchanges. For instance, during mother-child interactions, mothers model and support certain ways of interaction that children may imitate when interacting in other relationships (Dunn, 1993). Similarly, internal working models refer to mental representations that children construct about others, themselves, and of their interactions. These mental representations include assumptions or expectations about caregivers which later are generalized to other relationships, including peer relationships (Verschueren, et al., 1996). From this perspective, it may be reasonable to consider that interactional patterns that mothers use during parent-child interactions may be responsible for

expectations that their children develop about relationship with peers. Thus, children's social experiences may be impacted by maternal interactive styles. On the other hand, Belsky (2005) suggests that children differ in their responsiveness or unresponsiveness to social influence. This claim concurs with Caspi, et al. (1988) classification of children's behavioral tendencies or orientations: moving "against", "toward", and "away" others. This study will target only moving "against" and "toward" others because they represent modes of interaction that are conceptually similar to children's characteristics examined in this study. Children with a moving "against" behavioral orientation tend to resist social partners' ideas, instructions, and suggestions. In contrast, Children with a moving "toward" behavioral orientation are more responsive to others. Therefore, mothers' influence will depend on children's behavioral tendencies.

As stated above, the belief that mother's behaviors during interactions with their children might influence children's social experiences outside the family is supported by many theorists and researchers. However, taking into account children's behavioral orientation in the model of transmission makes it plausible to consider that children's level of responsiveness (moving "toward" others) and resistance (moving "against" others) might moderate or mediate the link between the mother-child system and the peer system.

Literature regarding responsiveness has mainly focused on how parents (especially the mother) respond to their children's signals and bids (Kochanska & Aksan, 2004). In contrast, this study conceptualizes the child as an active agent in the process of

socialization, where the impact of mother's social behaviors will depend on children's levels of responsiveness and/or resistance.

In summary, the purpose of this study is to extend past research on the mother-peer linkage by (1) examining the link between aspects of cohesiveness, autonomy support, controlling, and imposition during mother-child interactions and children's social behaviors with peers at school, and (2) examining whether or not children's levels of responsiveness and resistance toward their mothers might have a moderating and/or mediating effect on the extent to which interactive styles are transferred from the family system to the peer system. Therefore, the hypotheses to be tested are:

1. I hypothesize that the patterns of interaction observed during mother-child social exchanges will be associated with children's interactional patterns with peers at school. Specifically, I hypothesize that maternal patterns of interaction characterized by cohesiveness and autonomy support will be associated with children's use of prosocial behaviors during peer interactions at school. Conversely, maternal interactional styles characterized by controlling and imposition would be associated with more negative patterns of children interaction with peers at the dyadic and group level.
2. I also hypothesize that the children's levels of responsiveness or resistance toward their mothers during social interactions will moderate the extent to which maternal interactional styles influence subsequent peer interactions at school. Particularly, I expect that children who are more responsive to their mothers during social exchanges will be more likely to imitate maternal interactional

patterns when interacting with peers. In contrast, children who are more resistant toward their mothers will be less likely to imitate maternal interactional patterns when interacting with peers.

Chapter 3

Methods

This quantitative study entails a secondary analysis of data collected as part of a large longitudinal study, the Write Start Research Project (WSRP), which primary purpose was to investigate the relationship between children's early play interests and interaction patterns and their emergent writing prior to kindergarten entry. All procedures and measurements for this research project were approved by the university's Institution Review Board (IRB).

Recruitment and Settings

The recruitment process occurred in two periods. At the beginning of the WSRP, children were recruited from two urban childcare centers via letters sent home to parents. The participating centers were located in a southeastern U.S. city and provided full-day preschool education and childcare services to mostly African American preschoolers (98%) who came from low-income families and lived in the surrounding areas.

According to Census data, 84% of the population of the area was African American, with 88% of the households headed by women. 50% of the population within one mile of the centers did not complete their high school education, and the average annual income was less than \$5,000. The childcare centers were accredited by the National Association for the Education of Young Children, earned the top rating from the state's department of education, and were locally recognized for providing high-quality childcare. For three years, the centers were implementing a program to support preschoolers' literacy development which was partially funded by the U.S. Department of

Education (Early Reading First grant). The use of the *DLM Early Childhood Express* curriculum was required in the classrooms (Schiller, Clements, Sarama, & Lara-Alecio, 2003).

Mothers were recruited through letters sent home when the study children were in year three of the WSRP. The letters explained the purpose of the research and invited the mothers to participate in a 45 minute problem-solving session with their children at the center.

Participants

The participants for this study were drawn from a pre-existing sample recruited for the WSRP. From the entire sample, mother-child interactional data was only available for 69 participants. Therefore, a subsample of 69 normally developing preschoolers and their mothers were selected for the present study, which represents an approximately 34% of the original sample. At the beginning of the school year, in year three, children (38 male, 31 female) ranged in age from 3 years 2 months to 5 years 4 months ($M=4.41$, $SD=.72$). 57 children were African American, 7 children were White, 1 was Asian, and 4 children were of mixed race. 44 of the children were from a single parent household headed by the mother and 25 lived with both parents. Regarding the mothers, their average amount of years of education was 12.74 ($SD = 1.80$; min = 6, max = 16). Eight of the mothers were full time homemakers and 5 were students. Fifteen of the mothers were employed in service positions, 13 were equipment handlers or laborers, 14 were technicians, 10 were in administrative support or clerical positions, 3 were machine operators, and one was in sales.

Procedures

Data on mother-child and child-child interactions for the current study were collected during the third year of the WSRP.

Mother-Child Session Procedure. Three joint problem-solving tasks were used to capture mothers and children interactional behaviors. The problem solving tasks were designed to create a context in which the child was exposed to a potentially stressful situation and the mother would have to assist the child to solve the problem. Each task lasted approximately 8 minutes. When the mother-child dyad arrived to the center, they were escorted to a quiet room where a research assistant explained the task to the mother and answered her questions. Then, the mother explained the task to her child and helped the child as much as she felt it was appropriate or needed.

The problem-solving session consisted of the following tasks:

Puppet Show. In this task the child was asked to make up a story using any of the 8 hand puppets provided by the research assistant. Each of the puppets represented a different community worker (i.e. rap star, nurse, baker, construction worker, artist, teacher, football and baseball player).

Book Reading Session. In this task mother-child dyads were given several books with a variety of topics (e.g. fantasy, informational, family related). Then, the mother was asked to read with the child as they usually do at home while the session lasted.

Birthday Party. In this task the child was asked to organize a birthday party for a stuffed bear. The mother assisted the child as she/he decided which kind of cake the bear would like to eat at the party, what game the bear would like to play, what gift it would

like to receive, and which of the stuffed animals the bear might like to invite. To complete this task the research assistant provided the participants with pencils/markers, a pad of paper for grocery list, 3 birthday hats, 3 horns, 3 invitations, and 10 stuffed animals.

During each task, the research assistant did not interact with the participants and was seated at a distance where she/he could take notes and complete a structured code sheet without distracting the child from the activity. At the end of the session, mothers received a \$30 Visa gift card and children received a small toy for their participation in the study.

Later, research assistants viewed video tapes of the play session and gave overall ratings or frequency counts to each of the targeted mother and child behaviors (all participating mothers agreed to videotaping). The video tape coding was used as data in this study. Two coders independently coded 25 percent of the data and Pearson's correlations between the coders and a version of Cohen's Kappa appropriate for ratings (Bartko & Carpenter, 1976; Berry & Mielke, 1988) were calculated to determine inter-rater agreement. Cohen's Kappas ranged from .80 to .95.

Child's Social Behaviors Procedure. In order to capture children's social experiences at school, children were observed in their preschool classrooms during indoor and outdoor activities (e.g. free play, learning center choice time, and group time). An observational coding system based on frequency counts and 3-point ratings scale was employed to record children's social interaction behaviors at school. This observational coding system was developed by Neitzel to assess children's social interactions in

classrooms and was based on selected items from several preexisting teacher and self-report questionnaires which measure young children's social skills and peer interactions ((Barnett, 1991; Fantuzzo et al., 1995; Fukada, Fukada, & Hicks, 1997; Masten, Morison, & Pellegrini, 1985; Williams & Schaller, 1993).

Classroom observations were spread throughout the school year. Each child was observed 1-2 days per week for 20 days during the first semester (September to December) and for 12 days during the second semester (January through March). During classroom visits, each child was observed for five minute intervals 2-3 times per classroom visit. Thus, a total of approximately 80 intervals or 6 ½ hours of data were collected per child. During focal-child observations, the observer captured the context of the child's play, materials used by the child, type of activity, and the child's peer interactions. The start and completion of the 5-minute observation interval was prompted by an audio-cassette player with headset and audio-taped cue. After observing the child for five minutes, the researcher also rated on 3-point scales the characteristic features of the child's play activities and peer interactions. During the observations, the researcher did not interact with the child and was seated at a distance so that she did not distract the child from his/her routine behaviors and at the same time could still see the child's play and hear his/her conversations.

To assess the inter-coder agreement for the observational coding system, a second rater was used for 25% of the classroom observations spaced equally across the school year. The two coders observed together and independently rated the child's social behaviors after the 5-minutes observations. Pearson's correlations between the two coders

and a version of Cohen's Kappa appropriate for ratings (Bartko & Carpenter, 1976; Berry & Mielke, 1988) were calculated to determine inter-rater agreement. Cohen's Kappas ranged from .84 to .97.

Codes and Definitions

Parent Interaction Behaviors. Maternal behaviors were assessed during observations of the mother-child interactions in three joint problem-solving tasks. The behaviors assessed included: cohesiveness, autonomy support, imposition, and directive-control variables.

Cohesiveness. Three codes (cohesiveness, collaboration, and agreement) were averaged to create the cohesiveness composite score. Each of these codes was measured using a 3-point rating scale (1= single occurrence or low-intensity, 2= 2-3 occurrences or moderate-intensity, and 3= high intensity or more than 4 occurrences). *Cohesiveness* assessed the overall synchrony of the mother-child relationship. Cohesiveness included mother's behaviors such as smiling, affection, sensitivity, and level of participation when the child pretended during the tasks. *Collaboration* assessed the degree in which the mother provided assistance to the child during the problem-solving tasks. *Agreement* assessed the mother's level of agreement with respect of the child's input (e.g. "I think that is a good idea").

Autonomy Support. Three codes were averaged to create the composite score called autonomy support (elicit input, responsive "turn", and follow lead). Each of these codes was measured using frequency counts. *Elicit input* assessed the instances in which the mother encouraged the child to make suggestions during the tasks (e.g. "what book

should we read first?”). *Responsive “turn”* assessed the instances in which the mother answered the child’s questions. *Follow lead* was measured assessed the instances in which the mother adjusted to the child’s opinions, perspectives, and decisions during the problem-solving tasks (“is this the way you want it?”).

Imposition. Three codes were standardized and averaged to create the composite score called imposition (imposition, disapproval, and reject/refuse). *Imposition* was measured using frequency counts and assessed the instances in which the mother verbally or nonverbally imposed or interrupted her child’s attempts to accomplish the task. *Disapproval* was measured using a 3-point rating scale and assessed the mother’s level of disapprobation with respect of the child’s input during the activity (e.g. “I don’t think that’s a good idea”). *Reject/refuse* was measured using frequency counts and assessed the instances in which the mother verbally rejected the child’s inputs or child’s behaviors in a negative way (e.g. if you don’t stop acting like a baby you are not going to able to finish). It was also coded when the mother rejected nonverbally the child’s behaviors or inputs (e.g. frowns).

Directive Control. This code was measured using a 3-point rating scale (1= single occurrence or low-intensity, 2= 2-3 occurrences or moderate- intensity, and 3= high intensity or more than 4 occurrences) and assessed the degree in which the mother directs or controls the child’s actions to carry out the assigned tasks in accord to the mother’s opinion.

Child Responsiveness/Resistance. Children responsiveness and resistance was coded during parent-child interactions while participating in the three problem-solving

tasks. These variables were measured using a 3-point rating scale (1= single occurrence or low-intensity, 2= 2-3 occurrences or moderate- intensity, and 3= high intensity or more than 4 occurrences)

Responsiveness. This code assessed the degree to which the child's was responsive to the mother's instructions and suggestions. Responsiveness was coded every time the child responded positively to the mother including verbally (e.g. answering questions, following parental suggestions) or nonverbally (e.g. smiling or laughing in respond to parent's smiles or jokes) responses.

Resistance. Two codes were averaged to create this composite score (passive resistance and active resistance). This composite score assessed the degree to which the child was resistant toward the mother's inputs during the tasks. Resistance was coded every time the child resisted the mother's suggestions either verbally (e.g. "No, I like using this one") or nonverbally (e.g. the child ignores parent's suggestion and continue doing what she/he is doing).

Peer Interaction Behaviors. Six aspects of children's social interactions were chosen for the current study: social invitations, peer solicitations, control, dominance, leadership, and prosocial skills. While all these variables were used to describe our sample of children, only four variables (Control, dominance, leadership, and prosocial behaviors) were incorporated in the hypothesized models.

Social Invitations. This code was measured using a 3-point rating scale (0= no occurrence, 1= single occurrence or low-intensity, and 2= repeated occurrence or high intensity) and indicated how often the child initiated social interaction with a peer or

attempted to engage others in what she/he was doing (e.g. “Do you want to play with me?”).

Peer Solicitations. This code was also measured using a 3-point rating scale (0= no occurrence, 1= single occurrence or low-intensity, and 2= repeated occurrence or high intensity) and indicated the degree to which the child was invited or asked to join a conversation or play by a peer.

Control. This code was measured using frequency counts and assessed the instances in which the child displays controlling behaviors toward peers. For example, the child enforces rules with peers, breaks routines/rules, interrupts or distracts others from their activities, and uses imperative statements toward peers to make them perform or not to perform an action (e.g. “stop doing that”).

Dominance. This code was measured using frequency counts and was used to assess the instances in which the child displays coercive behavior toward peers. For example, the child monopolizes materials, hits/pushes/pinches other peers, takes toys/objects away from a peer, and forces entry into play area.

Leadership. This code was measured using frequency counts and assessed the instances in which the child assumes a leadership role during play interactions with peers. For example, the child assigns roles to others during play activity (“you’ll be the policeman”), facilitates the group’s goals, and suggests the play theme or activity.

Prosocial. This code was measured using frequency counts and was used to assess the instances in which the child displayed prosocial behaviors toward peers. Prosocial behavior is crucial in gaining acceptance among peers (Denham, et al., 1990;

Ladd, Price, & Hart, 1988) and sharing and helping are the most typical forms of prosocial behavior observed among preschoolers (Babcock, Hartle, & Lamme, 1995). Thus, this code includes behavior such as helping other children, cooperating, sharing, taking turns, being able to take other children's needs and feelings into consideration, comforting a child who is upset, and contributing to settle disputes peacefully.

Data Analysis Overview

Data analysis was carried out in a series of steps. First, preliminary analyses were conducted to provide descriptive information about children's and mothers' interaction behaviors during the problem-solving activities and about children's social interactions with peers during classroom observations. Also, each variable was examined to ensure that the assumptions associated with general linear model analyses (normality, linearity, and homogeneity of variance) were met. In addition to the preliminary analyses, multivariate analysis of variance (MANOVA) was conducted to determine whether children's behaviors differed as a function of the child's gender. Results indicated no significant differences in child behaviors due to child's gender during the mother-child interaction or during interactions with peers. Therefore, boys and girls were examined together in further analyses. Next, two hypothesized model of relations among mother interaction behaviors, child's levels of responsiveness and resistance, and child's social behaviors with peers were compared and described using path analysis. By following these steps, the results of this study offer a detailed account of the roles that mother as well as children interactional behaviors play in children's social experiences outside the family, specifically with peers.

Chapter 4

Results

Mother and Child's Interaction Behaviors

Frequencies, ranges, means, and standard deviations were obtained using SPSS for each of the interaction variables selected for the mothers (cohesiveness, imposition, support of child autonomy, and controlling) and for the children (responsiveness and resistance) during the problem-solving tasks (see Table 1).

Table 1. Descriptive statistics of mother-child variables

	N	Mean	Median	Mode	SD	Range
Cohesiveness	69	2.12	2.1	3	.84	.00-3.00
Imposition	69	.0061	-0.24	-0.51	.83	-.51-3.54
Child autonomy	69	4.19	3.71	3.57	1.15	2.00-8.67
Directive/control	69	1.51	1.5	1	.59	.00-3.00
Responsiveness	69	2.29	2.25	3	.63	.00-3.00
Resistance	69	1.11	1	1	.34	.00-2.25

Overall, mothers and children tended to display positive interaction behaviors. Mother interactions tended to be moderate to high in cohesiveness ($M=2.12$, $SD=.84$), with more than half of the mothers (78%) falling in the moderate to high range (2.00-3.00 on a 3-point scale). Similarly, mothers tended to provide moderate support for their child's autonomy ($M= 4.19$, $SD=1.15$), with more than half of them (61%) providing moderate to high support for their children's autonomy (4 or more instances in an 8 minutes interval). Typically, mothers in the sample were moderately low in control ($M=1.51$, $SD=.59$). More than half of the mothers (65%) were rated low to moderately low in control, with 39% of them falling in the lowest range (.00-1.00 on a 3-point scale).

Similarly, mothers were on average moderately low in impositions ($M=.006$, $SD= .83$).

90% of the mothers were low to moderately low in impositions.

Regarding the child interaction behaviors, on average children displayed low levels of resistance behaviors ($M=1.11$, $SD=.34$), with 71% of them falling in the lowest range (.00-1.00 on a 3-point scale). Also, children tended to be responsive toward their mothers ($M=2.29$, $SD=.63$), with 84% of them rated moderate to high in responsive behaviors (2.00-3.00 on a 3-point scale).

In addition, an examination of simple bivariate correlations (Table 2) revealed that mothers who were higher in cohesiveness also tended to be higher in supporting their child's autonomy ($r=.40$, $p < .01$). On the other hand, children who were more responsive tended to be less resistant ($r= -.35$, $p < .01$). Bivariate correlations also revealed that mothers who were higher in cohesiveness had more responsive ($r=.65$, $p < .01$) and less resistant ($r=-.37$, $p < .01$) children. Similarly, mothers who were more supportive of their children's autonomy were more likely to have more responsive children ($r=.42$, $p < .01$).

Child's Interaction Behaviors with Peers at School

Frequencies, ranges, means, and standard deviations were obtained using SSPS for each of the selected child's interaction behaviors with peer at school (control, dominance, leadership, prosocial, social bids, and invitations) (see Table 3).

In general, the children of the sample were socially active at school. They regularly extended social invitations to their peers ($M=.98$, $SD= .36$; range= .00 – 1.75) and they usually received solicitations to interact from their peers ($M=1.32$, $SD= .36$; range= .00 - .2.0). Also, children displayed lower level of controlling behaviors toward

Table 2. Correlations among mother's interaction behaviors and children's levels of responsiveness and resistance variables

		Cohesiveness	Imposition	Child autonomy	Directive control	Responsiveness	Resistance
Cohesiveness	Pearson Correlation	1					
	Sig. (2-tailed)						
Imposition	Pearson Correlation	-0.09	1				
	Sig. (2-tailed)	0.45					
Child autonomy	Pearson Correlation	.40**	-0.08	1			
	Sig. (2-tailed)	0.00	0.49				
Directive control	Pearson Correlation	-0.09	0.11	-0.05	1		
	Sig. (2-tailed)	0.46	0.38	0.67			
Responsiveness	Pearson Correlation	.65**	-0.19	.42**	-0.09	1	
	Sig. (2-tailed)	0.00	0.12	0	0.44		
Resistance	Pearson Correlation	-.37**	-0.04	-0.14	0.16	-.35**	1
	Sig. (2-tailed)	0.00	0.76	0.24	0.18	0.00	

** . Correlation is significant at the 0.01 level (2-tailed).

their peers ($M = .55$, $SD = .73$). More specifically, 91% of the children were low to moderately low in control (1 or less instances in 5 minutes interval). Likewise, the majority of the children (96%) tended to be low to moderately low in dominance ($M = .69$, $SD = .85$). More than half of the children (75%) were low to moderately low in leadership ($M = .81$, $SD = .92$) and the majority on them (83%) were low to moderately low in prosocial behaviors ($M = .92$, $SD = .90$).

Table 3. Descriptive statistics of children's social behaviors with peers variables

	N	Mean	Median	Mode	SD	Range
Peer Solicitations	69	1.32	1.33	1.5	.36	.00-2.00
Invitations	69	.98	1	1	.36	.00-1.75
Control	69	.55	.30	0	.73	.00-2.73
Dominance	69	.69	.27	0	.85	.00-2.73
Leadership	69	.81	.60	0	.88	.00-4.50
Prosocial	69	.92	.60	0	.90	.00-4.00

An examination of simple bivariate correlations (Table 4) among child-peer variables revealed that children who were high in leadership tended to display more prosocial behaviors ($r = .70$, $p < .01$). Children who more often extended social invitations tended to be leaders among peers ($r = .66$, $p < .01$), display more prosocial behaviors ($r = .84$, $p < .01$), and be less dominant among their peers ($r = -.28$, $p < .05$). In contrast, children who were more dominant toward their peers tended to display less prosocial behaviors ($r = -.34$, $p < .01$). Likewise, children who displayed more controlling behaviors toward their peers were also more likely to be more dominant in their interactions ($r = .49$, $p < .01$).

Table 4. Correlations among children's social behaviors with peers variables

		Control	Dominance	Leadership	Prosocial	Peer Solicitations	Invitations
Control	Pearson Correlation	1					
	Sig. (2-tailed)						
Dominance	Pearson Correlation	.49**	1				
	Sig. (2-tailed)	.00					
Leadership	Pearson Correlation	.18	-.23	1			
	Sig. (2-tailed)	.13	.06				
Prosocial	Pearson Correlation	-.10	-.34**	.70**	1		
	Sig. (2-tailed)	.42	.00	.00			
Peer Solicitations	Pearson Correlation	-.07	.02	-.11	.13	1	
	Sig. (2-tailed)	.58	.86	.37	.28		
Invitations	Pearson Correlation	-.06	-.28*	.66**	.84**	.10	1
	Sig. (2-tailed)	.63	.02	.00	.00	.40	

*. Correlation is significant at the 0.05 level (2-tailed).

**.. Correlation is significant at the 0.01 level (2-tailed).

Bivariate correlations among child-peer and mother-child interactional behaviors (see Table 5) revealed that mothers who were more supportive of their child's autonomy tended to have children who displayed more prosocial behaviors ($r=.46, p < .01$) and were more likely to display a leadership role among their peers ($r=.30, p < .05$).

Similarly, mothers who were higher in cohesiveness tended to have children who were higher in prosocial behaviors ($r=.48, p < .01$) and leadership among their peers ($r=.45, p < .01$). On the other hand, mothers who were higher in controlling behaviors during mother-child interactions were more likely to have children who were higher in control ($r=.54, p < .01$), dominance ($r=.24, p < .05$), and leadership ($r=.24, p < .05$). Mothers who were higher in imposition tended to have children who were higher in control ($r=.26, p < .05$) and dominance ($r=.58, p < .01$) with less prosocial behaviors ($r=-.35, p < .01$).

Bivariate correlations also revealed that children who were more responsive toward their mother were more likely to display prosocial behaviors toward their peers ($r=.52, p < .01$), have a leadership role among peers ($r=.45, p < .01$) and be less dominant with their peers ($r=-.27, p < .05$)

Path Analyses to Test Model Predicting Child's Interaction Behaviors with Peers

It was hypothesized that mother and child's social behaviors during problem-solving interactions would predict children's subsequent social interactions with peers. Particularly, it was hypothesized that children's levels of responsiveness and resistance would mediate the relations between mother interaction behaviors and children later social behaviors with peers. Path analysis was selected to explore the relations among mother-child behaviors and child behavior with peers, because path coefficients indicate

Table 5. Correlations among child-peer and mother-child interactional behaviors variables

		Responsiveness	Resistance	Cohesiveness	Imposition	Child autonomy	Direct control
Control	Pearson Correlation	-.07	-.24	-.08	.26*	-.05	.54**
	Sig. (2-tailed)	.58	.05	.50	.03	.69	.00
Dominance	Pearson Correlation	-.27*	-.16	-.20	.58**	-.10	.24*
	Sig. (2-tailed)	.02	.19	.08	.00	.41	.05
Leadership	Pearson Correlation	.45**	-.04	.45**	-.23	.30*	.24*
	Sig. (2-tailed)	.00	.70	.00	.05	.01	.05
Prosocial	Pearson Correlation	.52**	-.08	.48**	-.35**	.46**	.05
	Sig. (2-tailed)	.00	.50	.00	.00	.00	.64

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

the unique relation between any two variables after considering statistically the effects of other variables in the model (Duncan, 1975). In addition, path analysis is useful when it is suspected that the relations between variables may be mediated or moderated by a variable or a set of variables (Hoyle & Smith, 1994).

Two models of relations among variables were tested. The results of a model in which characteristics of the mother-child interaction have only indirect effects on children's social interactions with peers was compared to the results of a full model, in which characteristics of the mother-child interaction have both, direct and indirect effects on subsequent children's interactions with peers. Standard model fitting procedures utilizing maximum likelihood estimation were performed using LISREL 8.2 (Jöreskog & Sörbom, 1999). Goodness of fit χ^2 statistic was employed to test the overall fit of each of the hypothesized models. The results from the analyses of the models indicated that the indirect effects model was not a good fit to the data. In contrast, Chi-square analysis indicated that the full model (direct and indirect effects) was a good fit, $\chi^2 (n = 69) = 2.79, p = .98$. This result indicated that the link between mother interaction behaviors and children's social behaviors with peers is best understood by considering direct as well as indirect influences. Therefore, in the following section, I will describe and interpret the results of analyses of the full model.

Full Model of Child's Interactions with Peers

The best representation of the data was obtained with the full model, in which it was assumed that mother behaviors have direct and indirect effects on children's interactions with peers ($\chi^2 (n = 69) = 2.79, p = .98$). The goodness of fit index (GFI) was

estimated at .99. The adjusted goodness of fit index (AGFI), which does not consider the number of estimated parameters relative to sample size, was .97, being higher than the minimum of .90 suggested in the literature (Hu & Bentler, 1999; Sorbom & Joreskog, 1982). The obtained AGFI of .97 supports the conclusion that the hypothesized model had a good fit with the observed data. The root mean square error of approximation (RMSEA), which measures the discrepancy in model fit per degree of freedom, was .01. A RMSEA value $< .05$ provides additional indication that the overall model fits well with the data (Byrne, 1998; Hu & Bentler, 1999; Sorbom & Joreskog, 1982). The root mean square residual (RMR), a measure of the average differences between the actual and the estimated sample variances and covariances, was .02 being less than the maximum of .05 suggested in the literature (Byrne, 1998; Sorbom & Joreskog, 1982). Also, the comparative fit index was 1.00, which is higher than the minimum of .90 required for a good-fitting model (Bentler, 1995).

The fit of each of the components of the full model was evaluated by examining the path coefficients (see Fig. 1). Differences were noted in the magnitude of path coefficients compared to original bivariate correlations, which is an indication of the potential presence of interactions (Falk & Miller, 1992). The possible interactions among mother and child behavior variables in relation to children's peer behaviors were therefore tested. Through a series of analyses via hierarchical regression equations, the mediating effects of child characteristics (child's responsiveness and resistance) were examined for those mother behavior variables that presented a significant change in the magnitude of path coefficients (from the path analyses) with respect to the original

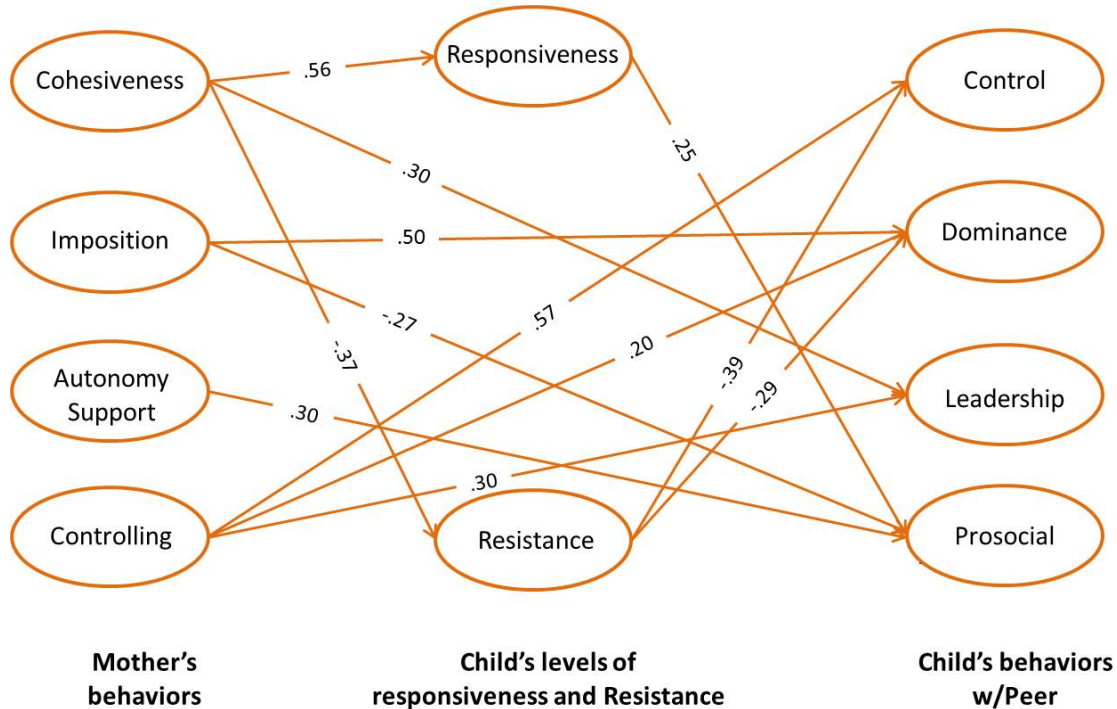


Fig. 1 Path coefficients of the direct and indirect model of associations

bivariate correlation between mother behaviors and children social behaviors with peers. The child characteristics were entered into the equation in the first step and the mother behavior variables were inputted in the second step of each regression equation. A mediating effect is said to exist if the mother variables no longer explain the variance in child social behaviors with peers after controlling for child characteristics (Baron & Kenny, 1986; Holmbeck, 1997). Results indicated that the mother's behaviors as well as the child characteristics contributed uniquely to children interaction behaviors with peers. Therefore, a series of hierarchical regression equations were conducted to explore the possibility of non-additive or moderation effects (whether the effect of mother interaction behaviors differed as a function of child characteristics). Main effects variables (mother and/or child behaviors) were inputted in the first step of the regression equation and the

interaction term was entered in the second step (Berry & Feldman, 1985; Lewis-Beck, 1980). A significant non-additive effect is indicated by a sizable change in R^2 between the two steps (Pedhazur & Kerlinger, 1982). In order to interpret the meaning of confirmed interactions with children's social behaviors with peers, low and high groups for each of the main-effect variables were created using mean splits and plots of interactions. In addition, follow-up tests of the interaction were conducted using a procedure described by Aiken and West (1991). For each group, the strength of the relation was tested to determine whether it was statistically significant. The results of the analyses of the model component and the post-hoc follow-up are presented below.

Mother Interaction Behaviors and Child's Responsiveness and Resistance.

The first section of the model was examined using squared multiple correlations to determine the amount of covariance between mother behavior variables and each of the child characteristics. Cohesiveness, imposition, autonomy support, and directive-control were associated with 47% and 16% of the variance in children's responsiveness and resistant behavior, respectively. Specifically, cohesiveness was related positively to children's responsiveness ($\beta = .56, p < .05$) and negatively to children's resistance ($\beta = -.37, p < .05$).

Mother Interaction Behaviors, Child's Responsiveness and Resistance, and Peer Interaction Behaviors. Squared multiple correlations for the full structural model were examined to determine the amount of variance in children's peer interaction behaviors that was explained by the hypothesized relations with child characteristics and mother interaction behaviors. Mother interaction behaviors and child characteristics

explained 46%, 47%, 38%, and 47% of the variance in children's control, dominance, leadership, and prosocial behavior with peers, respectively.

Controlling behavior with peers. Mother's directive-control behavior was positively related to children controlling behaviors with peers ($\beta = .57, p < .05$). Children's resistance was negatively related to controlling behaviors with peers ($\beta = -.39, p < .05$).

Dominant behavior with peers. Mother's Imposition and mother's directive-control were positively related to children dominant behaviors with peers ($\beta = .50$ and $\beta = .20$, respectively, $p < .05$). Child's resistance was related negatively to children's dominant behaviors ($\beta = -.29, p < .05$).

Leadership with Peers. Mother's cohesiveness and directive-control behaviors were related positively to children's leadership among peers ($\beta = .30$ and $\beta = .30$, respectively, $p < .05$). On the other hand, differences were observed in the magnitude of path coefficients with respect to the original bivariate correlation between mother's autonomy support and children's level of leadership among peers. An examination of bivariate correlations indicated that mother's level of autonomy support was significantly related to children's leadership among peers (Table 5). However, when considered in the model along with children's levels of responsiveness and resistance during mother-child interactions, the relation between mother's levels of autonomy support and child's leadership was no longer significant. Consequently, the presence of possible mediating and moderating effects was tested. Follow up analyses confirmed the presence of non-additive effects for mother's autonomy support behavior and child's responsiveness and

resistance ($\Delta R^2 = .05, t = 2.15, p < .05$ and $\Delta R^2 = .12, t = 3.00, p = .003$, respectively), that is, the effect of mother's autonomy support on children's leadership was moderated by either the child's responsiveness or resistance toward mothers. Children with high levels of responsiveness toward their mothers' efforts to support their autonomy were more likely to be leaders among peers ($\beta = .42, p = .05$). Children's level of resistance toward their mothers' efforts to support their autonomy was inversely associated with children's leadership among peers. Children with low level of resistance toward their mothers were more likely to be leaders among peers ($\beta = .45, p = .05$).

Prosocial behavior with peers. While mothers' imposition behaviors were related negatively to prosocial behaviors, mothers' autonomy supports behaviors were related positively to children's prosocial behaviors with peers ($\beta = -.27$ and $\beta = .30$, respectively, $p < .05$). Child's responsiveness was related positively to children's prosocial behaviors ($\beta = .25, p < .05$). On the other hand, differences in the magnitude of path coefficients compared to the original bivariate correlations for mothers' cohesiveness behaviors to children's prosocial behaviors were noted. An examination of bivariate correlations indicated that mothers' levels of cohesiveness behaviors were significantly related to children's prosocial behaviors with peers (Table 5). However, when considered in the model along with children's levels of responsiveness and resistance during mother-child interactions, the relation between mother's levels of cohesiveness and child's prosocial behaviors was no longer significantly related. As before, the presence of possible mediating and moderating effects was tested. Follow up analyses confirmed the presence of a non-additive effect for mother's cohesiveness and child's responsiveness ($\Delta R^2 = .10$,

$t = 3.03, p = .004$). Therefore, it appeared that child's levels of responsiveness toward mothers may moderate the effects of mother's cohesiveness in relation to child's prosocial behaviors with peers. Specifically, children with high level of responsiveness toward their mothers' cohesiveness behaviors were more likely to display prosocial behaviors among peers ($\beta = .54, p = .05$). In contrast, children's level of resistance toward their mothers was not significantly associated with children's prosocial behaviors with peers.

Chapter 5

Discussion and Conclusions

The purpose of this short-term longitudinal study was to: a) examine the associations between mother's interaction behaviors and children's later social behaviors with peers at school, b) explore the mediating or moderating effect that children's levels of responsiveness and resistance toward their mothers may have on the extent to which mother-child interaction styles might influence child's social experiences with other children.

According to social learning theory, children can learn certain ways of interacting by observing and imitating others (Bandura & Walters, 1963). Children may learn certain social behaviors while interacting with their mothers, and then imitate these social behaviors when forming new relationships at school. The results of this study supported the hypothesis that mother-child interaction styles do influence other social systems, and that children may use these maternal patterns of interaction when interacting with peers. Results indicated that mothers who were higher in cohesiveness and autonomy support tended to have children who displayed more positive behaviors during interactions with peers. Conversely, mothers who were more controlling and rejecting in their interactions were more likely to have children who displayed less positive interactions behaviors with other children. These findings are consistent with previous studies (Attili, 2010; Macdonald & Parke, 1984, Pettit et al., 1993; Putallaz, 1987).

Two hypothesized models of associations between mothers' interaction behaviors and children's behaviors with peers were compared and tested. The aim of comparing

these two models using goodness of fit was to determine whether or not links between mothers' social behaviors during mother-child interactions and children's social behaviors with peers was better understood by considering only indirect associations or direct and indirect associations together. Results indicated that the full model (direct and indirect associations) was a better representation of the relationship between mothers' interaction behaviors and children's social behaviors with peers at school. The proposed full model of relations supported the direct relationship between the mothers' interaction behaviors and the children's social behaviors with peers found in previous studies (Attili, et al., 2010; Pettit, et al., 1993; Putallaz, 1987). At the same time, this model of relations also supported an indirect path of relationship via the own child's levels of responsiveness and resistance, which have received little attention in the literature.

When examining the role that children's levels of responsiveness and resistance plays on the extent to which interactive styles observed during mother-child interactions are influential for the child-peer system, the results of hierarchical regression equations suggested that children's levels of responsiveness and resistance toward their mothers have a moderating effect on the link between certain mother's interaction behaviors and child's peer interactions. For instance, results indicated that children's levels of responsiveness toward their mothers moderated the association between mother's cohesiveness behaviors and children's prosocial behaviors with peers. It seems that children with a more engaging style of interaction with their mothers (i.e. high responsive children) are more likely to benefit from the warmth, sensitivity, collaboration, and agreement that mothers provide during mother-child social exchanges and to use these

positive social behaviors when interacting with peers. Thus, children's high levels of responsiveness increased the likelihood of children's use of prosocial behaviors with peers. These findings are particularly important, because children's prosocial behaviors have been extensively associated with children's success on establishing and maintaining positive peer relationships (Ladd, 1999) and higher sociometric status within the peer group (Black & Logan, 1995) which in turn is likely to serve as a buffer against isolation and peer victimization (Coleman, 2003). The results also indicated that children's levels of responsiveness and resistance to their mothers modified the relation between mothers' levels of autonomy and children's leadership within the peer group. Children who were highly responsive and low in resistance toward their mothers during mother-child interactions were more likely to be leaders among peers. One of the implications of these findings is for researchers to incorporate children's levels of responsiveness and resistance into their model when examining the links between these two major socializing spheres, and to consider the role of the child in carrying forward what the mother is giving during mother-child social interchanges.

The establishment of associations between positive parent-child interactions and positive child-peer interactions has been usually more difficult than establishing the link of negative parental interactive styles with negative child-peer interactions (Fagot, 1997; Gottman & Levenson, 1986). Thus, the moderating effects found in the present study may serve as an explanation of the difficulty of establishing a link between mothers' positive social behaviors and children's positive social behaviors when the moderating role that children's levels of responsiveness and resistance may play on the strength of

the association is not considered, and it may also explain the path for those children that do not benefit from positive maternal social behaviors such as cohesiveness and autonomy support. On the other hand, the question of whether or not children's levels of responsiveness and resistance play a moderating role between less positive maternal interactions and less positive children interactions with peers remains to be addressed in future research.

One striking finding of this study was that the mother's cohesive behavior was the only maternal behavior that was directly link to children's levels of responsiveness and resistance. A plausible explanation may be that the construct of cohesiveness assessed in this study is conceptually similar to the terms attunement, dyadic synchrony (Harrist, 1994; Mize,1997; Lindsey, 2008), or emotional reciprocity (Carson & Parke, 1996) used in the attachment literature. The problem-solving tasks used to assess mother-child interaction behaviors were designed to create a potentially frustrating situation for the child and the child had the opportunity to take or ignore the suggestions offered by the mother. At the same time, these activities create a context in which mothers might be more prompt to use directive control behaviors to prevent their children from going off the tasks. Therefore, it was possible to capture the overall synchrony of the mother-child relationships, how well the mother read her child and could offer help when the child needed. A synchronous interaction between the mother and the child has been linked with children's social skills (Lindsey, 2008), peer relationships (Mize and Pettit, 1997), and it has been found to contribute to the developmental adjustment of children (Lindsey, 1997). Mother-child synchrony might enhance children's social experiences with other

children by creating a context in which the child can practice adequate turn-taking style of responses, which might be helpful in relationships that are more symmetrical like the one formed with a similar-age classmate. One implication of this finding is that it supports the importance of mothers' cohesiveness (i.e. synchrony) in early childhood, which might be perhaps more salient than other maternal interaction behaviors.

In addition, it must be recognized that the dynamic of a relationship involves two individuals; the proposed model of relationships supported the inclusion of children as active agents in shaping the mother-child relationship. The findings of this study corroborate those of previous research suggesting that the mother-child relationship is a dynamic process whereby both social partners co-create the relationship and mutually influence one another (Kuczynski, 2003). For instance, it was found that levels of mothers' cohesiveness related positively to children's responsiveness and negatively to children's resistance. As mentioned above, most researchers agreed that the mother as well as the child contribute to their relationship. Therefore, when designing and implementing early childhood programs that focus on young children experiencing difficulties in the social domain, it should be considered the importance of the mutual reciprocity or synchrony between the mother and the child and that both partners contribute to the dynamic of the relationship. Thus, interventions that are directed only to one social partner (the mother or the child) may be only partially effective. If the dynamic of the relationship between the mother and the child is not improved, it may be possible that the dynamic of children's relationships with peers will not improve as well. On the

other hand, this study did not address which partner played the primary role in setting the style of the relationship and this inquiry remains open for future research.

In summary, the current study extends previous research on the link between mother-child and child-peer relationship in several ways. First, this study offers a rich portrait of children's and mothers' patterns of interaction during mother-child interactions and children's social interactions with other children. Also, it provided a novel model of direct and indirect relations between mother's interactional behaviors and children's social behavior with peers. The findings of this study also highlighted the importance of synchrony in the relationship between the mother and the child and supported the bidirectional nature of the relationship. Moreover, the present study contributes to the literature by considering the moderating role that young children's levels of responsiveness and resistance play on the relations between maternal interaction behaviors and children's social behaviors with peers, which have received little attention in prior studies. This study stimulates further research following this line of inquiry. For instance, it might be interesting to examine the links found in the present study in multiple contexts in which the child is functioning. The effects of a classroom setting on children's interactions behaviors cannot be ignored. In school, children's social behaviors might be restrained by teachers. For example, teachers may promote children's acquisition of socially competent behaviors and instruct them about strategies for managing peer problems in a desirable manner, which may ameliorate influences that maternal behaviors may have on children interaction behaviors. Therefore, findings

should be interpreted within the context in which children's interaction behaviors with peers were assessed.

On the other hand, even though the results of this study are evocative and the model of direct and indirect relations is a good representation of the data, there are some limitations that need to be discussed. The first limitation has to do with the issue of causality. Because path analysis is based on correlational findings, it does not provide sufficient base to infer causality. Even though it is tempting to attribute causal processes to the results of the model, the analyses of this study are exploratory in nature and the results should be interpreted with caution. Lastly, the size of the sample was relatively small. However, in this study children were observed for an extensive period of time (1 school year) making it possible to assess their social experiences with peer in school in depth which in turn may compensate for limitations that a relatively small sample's size may bring.

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Vita

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