

THE ROLE OF THE FAMILY IN CHRONIC VICTIMIZATION BY PEERS

A Dissertation by

Monica S. Brooker

M.A., Wichita State University, 2004

B.A., Wichita State University, 1998

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I have examined the final copy of this Dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Psychology.

James Snyder, Ph.D., Committee Chair

We have read this dissertation
and recommend its acceptance:

Darwin Dorr, Ph.D., Committee Member

Louis Medvene, Ph.D., Committee Member

Elsie Shore, Ph.D., Committee Member

Abiola Dipeolu, Ph.D., Committee Member

Accepted for the College of Liberal Arts and Sciences

William D. Bischoff, Ph.D., Dean

Accepted for the Graduate School

Susan Kovar, Ph.D., Dean

DEDICATION

To my husband, Larry, my daughters, Melissa and Gillian, my son, Mark,
my mother, Rosalie, and in memory of my father, Jim,
for their continual support and encouragement,
unconditional love
and unfathomable understanding.

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ABSTRACT

This study investigated the relationship of family contextual risk factors to the occurrence of victimization of children by peers, as mediated by parental warmth and communication. Family risk factors were derived from parent reports of socio-economic status and family configuration. Parental warmth and communication was derived from observations of parent-child interactions. Victimization was estimated by observed rates at which children were victims of peer verbal and physical aggression at school. The contribution of family risk factors to victimization by peers was examined in an aggregated and disaggregated manner, and as moderated by gender. Neither family risk factors nor parental warmth and communication placed children at a greater risk of victimization. Family contextual risk was negatively associated with parent warmth and communication.

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CHAPTER 1

Introduction

It is a fact of life. Young children eventually come to the age when they need to enter school. Parents generally look upon this life transition as a positive experience. However, for some children, this may not be the case. Reports indicate that many children will be subjected to some type of victimization at school. Juvonen and Graham (2001) cite several surveys suggesting that from 40% to 80% of students report having been victimized at least one time during their childhood. They further state that the circumstances of victimization, culturally and internationally, far outweigh the differences. Yet, these reports indicate that while some children are victimized by their peers only once or twice during their childhood, some children are victimized repeatedly, or chronically.

The literature is filled with articles describing bullies and the characteristics that may lead them to engage in this type of behavior. Personal and family characteristics have been implicated as contributing to bullying behaviors. Additionally, research has indicated that attachment relationships and parenting styles appear to affect bullying behaviors (Smith & Myron-Wilson, 1998). However, the degree to which these same factors are associated with victimization is limited, which is interesting considering the fact that bullying and victimization have a reciprocal relationship.

While many factors have been found to contribute to the development of chronic victimization in children, there is little evidence to identify the precise factors that determine which children will become chronically victimized. Many of the same children who are aggressive become victims, which would lead to the question of whether some of

the same personal and family characteristics, such as attachment relationships and parenting styles may be implicated in the onset and persistent victimization of children.

An exhaustive examination of the causes of victimization is beyond the scope of this review. This research proposes that multiple family contextual risk factors, such as the young mother's age at the birth of her first child, a large number of children in the family, single parenting, the number of marital transitions the child has experienced, the caregiver's level of education, the caregiver's occupation, and family poverty, increase the likelihood of children being chronically victimized by peers at school. Furthermore, this research suggests that the connection between multiple contextual risk factors at home and chronic victimization by peers at school is mediated by low levels of parental warmth and communication.

Chronic Victimization

Victimization has generally been defined as the occurrence of some type of face-to-face confrontation or the attempt at social manipulation of one's relations with others by a third party (Juvonen & Graham, 2001). In addition, these negative interactions must occur repeatedly and persist for the confrontations to be qualified as victimization (Olweus, 1995). Perhaps the most distinguishing aspect of victimization is the inequality of power. The perpetrator of the aggression, or the bully, clearly overpowers the target of the aggression, or the person being victimized. This inequality, or imbalance of power, can take many different forms, including physical characteristics, such as greater physical strength or being older. Other factors that could lead to an imbalance of power include the intelligence level of the child or when a single child, or smaller group of children, is overpowered by a larger group of children.

Children who are chronically victimized have been found to display three general behavioral characteristics (Hodges & Perry, 1999). The first of these characteristics focuses on internalizing behaviors. Many chronically victimized children tend to exhibit internalizing behaviors such as crying easily, anxiousness, social withdrawal, and frequent submission to the demands of the victimizer (Hodges, Malone, & Perry, 1997). The second characteristic focuses on socioeconomic status and the physical attributes of the child, specifically the differences between the aggressor and the victim, such as strength, race, or size. The third and final characteristic focuses on various externalizing behaviors. Many chronic victims tend to exhibit frequent disruptiveness, incompetent aggression, dishonesty, and argumentativeness (Hodges et al., 1997). These externalizing behaviors tend to evoke negative peer reactions.

Chronically victimized children can also be identified by their personality characteristics. In a middle school study, Jensen-Campbell, Adams, Perry, Workman, Furdella, and Egan (2002) found agreeableness, which is one of the Big Five personality dimensions, to be associated with the rate at which children were victimized during the school year. If a child tended to be more agreeable, the amount of victimization over the course of the school year decreased. Additionally, agreeableness was found to moderate the association between behavioral vulnerabilities, as described in the previous paragraph, and victimization. Children who displayed lower levels of agreeableness and increased behavior vulnerabilities were victimized at a higher rate. However, an association was not found between behavior vulnerabilities and victimization when children displayed higher levels of agreeableness.

Children who are persistently victimized have been found to demonstrate lower rates of assertive behaviors, such as attempting to persuade their peers or to initiate social conversation. They also tend to display nonassertive behaviors at higher rates, such as submissiveness to assertive social actions by peers (Schwartz, Dodge, & Coie, 1993). This nonassertive behavior pattern seems to precede the development of chronic victimization as victims tend to “give in” to the perpetrators of aggression (Perry, Williard, & Perry, 1990). Evidence suggests that acquiescence, or a child’s consistent reinforcement of the aggressive actions by peers, not only leads to the child being repeatedly and chronically victimized by the same peer, but it also leads to the child being disliked by most of their other peers as well (Patterson, Littman, & Bricker, 1967).

Olweus (1979) found that individual differences in aggression generally stabilize during the early elementary school developmental period. Perry, Kusel, and Perry (1988) have suggested the elementary school years might be a period during which a stable tendency for children to be victimized by peers also occurs. Snyder, Brooker, Patrick, Snyder, Schrepferman, and Stoolmiller (2003) found individual differences in growth in victimization. Some individual growth trajectories for victimization were characterized by increases and others by decreases, such that a small number of children acquire chronic victimization status, whereas others find the means to cope effectively with peer victimization.

Several studies indicate that victimization is predictive of anxiety, depression, and peer rejection during childhood (Egan & Perry, 1998; Hodges et al., 1997; Olweus, 1992). In addition, victimized children are lonelier, experience poorer school adjustment, and negatively evaluate their own competence (Olweus, 1993; Perry et al., 1988;

Schwartz et al., 1993). Baldry and Farrington (1998) state that the more often a child is victimized, the more the child begins to believe the situation can not be changed and the less likely the child will communicate with someone about their need for help.

Several studies indicate there are different types of victims, including those who are more stereotypically submissive and socially withdrawn (Schwartz, Proctor, & Chien, 2001), and those who are more hostile and have been referred to as bully-victims (Perry et al., 1990). Chronic victims who are prone to exhibiting hostile and aggressive behaviors have been found to be maladjusted, lacking social competence, and are socially rejected by their peers while they are still in school.

Constant victimization leads to the child feeling overwhelmed and debilitated, which can jeopardize coping mechanisms and adjustment to school (Ladd & Ladd, 2001). Espelage, Bosworth, and Simon (2001) indicate that recent events related to violence in schools, including several school shootings, have involved students who claimed to be victims of bullying. Smith and Myron-Wilson (1998) also indicate there are documented cases which implicate chronic victimization as the cause of several suicides in schools. As a result of chronic victimization and exclusion, children may begin to devalue themselves and become so overwhelmed with the state of their relationships that they see suicide as the only alternative (Olweus, 1995).

Chronic victimization by peers has substantial and lasting effects on adjustment. Unfortunately, negative effects of the victimization do not end once the child reaches adulthood. Olweus (1993) has found that victimization in childhood predicts adjustment problems in adulthood, and children who are chronically victimized have been found to be at an even higher risk for later maladjustment. Studies have indicated that some of

these adjustment problems include future criminal behavior and alcohol abuse (Loeber & Dishion, 1983).

It seems clear that interventions are needed to alleviate the frequency and intensity of the victimization that children experience. The assumption that families will take an interest in effectively promoting social competence and preparing their child for future peer relationships is a reasonable one. Haynes-Seman and Baumgarten (1998) suggest that more studies are needed which consider the effects of at-risk parenting and various patterns of parenting attitudes and behaviors on children's future victimization. However, few attempts have explored the connection between family relationships and the experience of victimization.

The Role of Parental Warmth and Communication

The experiences a child has before entering school can have a profound effect on how they conduct themselves once they are in school (Smith & Myron-Wilson, 1998). Erikson (1950) indicated that the experiences children encounter during the first five years of their lives provide crucial underpinnings for the development of, and capacity for, the formation of productive relationships. These experiences have a direct effect on whether children are socially equipped to have positive, intimate relationships during the years they are in school (Coleman, 2003). If parents supply their children with care characterized by empathy and if this care is accompanied by the parents providing the basic needs of the children, then children are more apt to have a positive outlook on the world around them, and the people in it (Haynes-Seman & Baumgarten, 1998).

Parents may truly be considered the mediators between home and the outside world. Rigby (1996) has stated that a combination of forces result in bullying and

victimization. These forces include family experiences as well as the personality and physical traits of the child. Bandura (1986) indicates that the feedback children receive from parents plays a crucial role as to whether children feel socially competent, based on the internal representations children hold about themselves and others. Perry, Hodges, and Egan (2001) state that children may develop a “victim schema” as a direct result of the treatment they receive at home. They may see themselves as being powerless in the situations encountered at home and take that sense of powerlessness with them when they enter into school. Conversely, if given proper guidance, children may believe themselves to be competent and be able to handle the new experiences they encounter (Ladd & Ladd, 1998).

Parents may indirectly influence children’s risk for victimization by their socialization of the child, which in turn prepares the child socially to develop constructive relationships with peers at school. These indirect influences include attachment, effective communication, parental warmth and parental support, and may be considered more globally as parent positive emotion and positive parenting. Other parenting factors make a more direct influence on child victimization, which begin when the child makes the transition to elementary school. These factors include coaching concerning peer relationships, parental monitoring of peer relationships, and open communication between parent and child about peer experiences.

Parental indirect influences.

Attachment theorists suggest that each individual has an internal working model of social relationships, and that the emotional and behavioral responses displayed by a child in social contexts are directly affected by the early emotional experiences of the

child in the family (Bowlby, 1988; Coleman, 2003). Verschueren, Marcoen, and Schoefs (1996) state that children need to believe they deserve care and that they possess the ability to evoke responsive care from others. If children do not experience emotional availability and sensitivity from their primary caregiver, they will not be able to develop adequate relational responses with others.

Effective communication between parents and their children builds a secure attachment. Attachment styles tend to remain stable over time and children who have formed a secure attachment with their parents are less likely to be victimized than children who have a history of insecure attachment (Troy & Sroufe, 1987). Children with insecure attachment tend to experience higher levels of victimization when making the transition from home to school.

Children with secure attachment have also been found to display higher levels of sociability than children who experience insecure attachment, the latter of which has been found to be related to peer rejection, withdrawal, and low-self-confidence. Parents who have strong feelings of attachment to their children at an early age may be more likely to be involved in the development of the friendships of their children, which includes getting to know and incorporating their friends in activities with their family (Schreck & Fisher, 2004).

Several studies have found positive associations between an early secure attachment between children and their caregivers and the social competence these children display in relationships with their peers during elementary school (Coleman, 2003). Egan and Perry (1998) conducted a study with third through seventh graders and found that children who saw themselves as higher in social competence experienced

lower levels of victimization. Perry et al. (2001) indicate a relationship exists between certain child-rearing techniques and the behavioral and social-cognitive child characteristics that contribute to children being victimized.

Schreck and Fisher (2004) found that being part of a strong family that embodies emotional warmth and support actually reduces the chances of an adolescent experiencing violent victimization. Likewise, low levels of warmth and supportiveness in parent-child relationships have been found to be related to children feeling more insecure and having difficulty with emotion regulation (Stormshak, Bierman, McMahon, Lengua, & Conduct Problems Prevention Research Group, 2000), which are two factors linked to chronic victimization in children.

Ladd and Ladd (1998) found low responsiveness by the parent to be associated with behaviors that will place children at risk for victimization. Parental responsiveness involves quick, consistent, and relevant responses by the parent to the behavior of their children (Ladd & Ladd, 1998). Children who receive this type of responsiveness develop a sense of mastery and control over their own interpersonal interactions. Responsive parenting also helps children develop a more advanced repertoire of possible scenarios they may face with peers, which will enable them to respond in an effective and appropriate manner. The absence of responsive parenting can actually cause children to develop a sense of anxiety about interacting with others, which has been shown to lead to increased levels of chronic victimization (Hodges et al., 1997). Finnegan (1995) found a mother's lack of responsiveness to be associated with passive behavior in girls, which has been found to be associated with the internalizing behaviors correlated with the experience of peer victimization.

Researchers have suggested that children exposed to high levels of warmth and communication develop negotiation and conflict-resolution skills. These skills ultimately foster the ability of these children to be able to more effectively manage their interpersonal relationships once they enter school. From these findings, it would be reasonable to infer that parental emotional warmth and support would play a crucial part in reducing children's risk for chronic victimization by peers.

Patterson (1982) describes parental warmth and supportive communications, or parental responsiveness, as a reciprocal relationship between the parent and child. Parents are more likely to provide these types of communication when they receive positive reinforcement from their children. Likewise, children are more likely to communicate positively if they receive positive reinforcement from their parents. In addition, Espelage et al. (2001) found that the encouragement of open parent-child communication might be a significant factor in the reduction of bullying behaviors as well.

Olweus (1995) indicates that parents are often unaware of the difficulties their children may be experiencing in school because of a lack of communication with their children. Parents who communicate with their children when they are younger are more likely to continue communicating once their children enter school. However, the nature of parent-child communication changes during this transition.

This is not to say that there are not cases of too much parental warmth. Parents who provide high levels of warmth and involvement with their children, but have low levels of parental control, has been found to negatively impact their children's overall adjustment (Bray & Berger, 1992). In addition, overprotective parenting has been implicated in the development of victimization as well (Bowers, Smith, & Binney, 1994;

Ladd & Ladd, 1998, Olweus, 1978). This overprotective behavior smothers the explorative tendencies of children, which are valued by peers. Therefore, it is important for parents and their children to develop a relationship that involves parental closeness, involvement, and support, without becoming enmeshed.

Parental direct influences.

Prior to school entry, parents are primarily responsible for providing children with the social skills necessary to develop positive peer relationships. However, once children are in school, parents need to supervise peer relationships and experiences, and to intervene or coach when needed.

Olweus (1995) states it is extremely important to create a linked home and school environment characterized by parental warmth and involvement, which would be exemplified by positive interest. Patterson (1986) indicates that this type of involvement includes parental monitoring and playing an active part in the activities of the child both in and out of school. This involvement requires that parents be available to provide the guidance necessary during the development of new peer relationships (Olweus, 1995). This can be accomplished by utilizing a variety of techniques.

One technique is coaching, which allows the parent to help their children develop strategies to deal with peer relationship difficulties. A second technique involves getting to know their friends, which can be accomplished by being involved at the school, getting to know their friends' parents, or by inviting their friends to participate in family activities. These strategies are related to the final technique, which involves utilizing monitoring behaviors both in and out of school. The more a parent knows about their children's friends, the more they know about their children. If independent social and

interpersonal skills are not developed with the cooperation of the parents, children are at a higher risk of being victimized (Baldry & Farrington, 1998).

Rigby (1994) has found that aggressive victims tend to view their families as having low levels of communication and positive affect. Bowers, Smith, and Binney (1994) indicate that aggressive victims believe their parents to be inconsistent in their discipline and monitoring, while passive victims believe their parents to be overly involved and enmeshed. Aggressive victims report lower levels of warmth (Schwartz, Dodge, Pettit, & Bates, 1997) and parental monitoring (Smith & Myron-Wilson, 1998) and the lowest levels of overall family functioning (Rigby, 1993). Schwartz et al. (1997) indicate the home environments of aggressive victims are characterized by a lack of warmth and by parental rejection. Low levels of bonding behaviors between parents and children, which may include a lack of warmth and communication, have been implicated in children's involvement in gangs, whether as a perpetrator or a victim (Maxson, Whitlock, & Klein, 1998).

If parents provide open, positive communication, it is reasonable to assume that the lines of communication between parents and children will remain open. When these lines of communication remain open, children are more likely to come to their parents when they experience difficulties in peer relationships at school. If children are able to talk with their parents about difficulties in peer relationships, then it would seem reasonable that the parent would have a better opportunity to provide guidance and direction to their children. This guidance and direction may, in turn, alleviate some of the difficulties their children may be facing, or at least provide other avenues their children may pursue to address any problems they may experience in their peer relationships.

The Role of Family Contextual Risk Factors

Family context influences the consistency and effectiveness with which parents create family conditions for warmth, responsiveness, and good communication. Some of these family contextual factors may interfere with parenting behaviors that indirectly and directly influence children's social relationships with peers. These risk factors could include: the mother's age at the birth of her first child, a large number of children in the family, single parenting, children's experience of marital transitions, low levels of caregiver's education, the caregiver's low occupational status, and inadequate family income. When children are faced with a multitude of family contextual risk factors that may interfere with parental consistency and effectiveness, they may be at increased risk for chronic victimization. Each of these contextual factors is now be considered in turn.

Mother's age at birth of first child.

Research has shown that maternal childbearing at a young age leads to a multiplicity of problems for the mother and the child (Carlson, 1992). The negative effect of this risk factor increases if the young mother has a lower level of education (Gersten, 1992). Generally, young mothers are inadequately socialized and inexperienced as they tend to have less work experience and may have dropped out of school. Their own lack of skills and maturity limits the amount of personal resources that they bring to parenting. These mothers are less able to offer the child the benefit of knowledge gained from years of experience as an adult and must base their parenting on information they have gleaned from their own parents, which in and of itself may not offer useful or beneficial information. This lack of socialization of the parent makes it difficult to teach social

skills to the child, which Unnever and Cornell (2004) found to be an important factor in peer victimization.

Number of children within the family.

The number of children in the family would seem to affect socialization of children as well, although Stouthamer-Loeber, Loeber, Wei, Farrington, and Wilström (2002) did not find this variable to be a factor in the development of delinquency in boys. It would seem valid to infer that children who have siblings in the home would have been exposed to more social interactions than would an only child. However, the number of children in the family, either large or small, could provide either increase or decrease risk for victimization.

Siblings can be a protective factor for the child if the interactions between them are of a positive nature. These interactions could provide social experiences that would be beneficial to the child. Conversely, if the interactions between the children are of a negative nature, such as being victimized by older siblings, this could lead to the child being taught inappropriate responses to social situations, including bullying behaviors, or becoming extremely withdrawn, both of which have been found to be associated with victimization.

Likewise, children with multiple siblings may experience social difficulties simply because it is extremely difficult for the parent to provide the social skills training needed for all of their children as they may find themselves “spread too thin.” While this variable alone may not increase the risk of victimization, when combined with other risk factors, it may play a part.

Marital transitions.

Early and secure attachments in families have been found to contribute to the ability of children to form, maintain, and experience satisfaction in future relationships (Procidano, 1992). Children whose primary caregiver has had several marital transitions may have difficulty with attachment and developing relationships, especially if the children have experienced several of the transitions. Marital transitions disrupt the family, which in turn disrupts effective parenting. Schreck and Fisher (2004) have reported that family disruption interferes with effective parenting and maintaining and securing a bonded relationship with children. In addition, due to the changing relationships, stepfamilies have been found to experience a lack of closeness and bonding between family members (Bray & Berger, 1992).

This lack of closeness may be due in part to the fact that the majority of single-parents experience some degree of role strain, as they are often solely responsible for the multiple demands of child-rearing. Rollins and Galligan (1978) found that when forced into multiple roles, single parents give priority to the roles of survival such as providing housing and financial necessities, and other roles such as the provision of emotional nurturance are neglected. This role strain is apparent among single parents regardless of their gender; however, there are some differences between single mothers and fathers.

Caregiver's education and occupation.

The level of education an individual attains has a direct effect on the occupation obtained by that individual. Parents who are less educated display less involvement with the educational process of their children than parents who have more education (Grolnick & Ryan, 1992). Individuals who have a lower level of education tend to settle for jobs

offering less desirable schedules, decreased personal satisfaction, and lower income. These lower-level jobs are often on second or third shift, which necessitates time away from the children. Maternal employment ranges from 84% for divorced single mothers to 40% for never-married mothers (Carlson, 1992). Belsky, Lerner, and Spanier (1984) indicate that mothers who are dissatisfied with their employment schedule may exhibit negative feelings toward their children, which places children at risk for poor social adjustment. Undesirable schedules make it extremely difficult for these parents to be sufficiently involved with their children to provide the proper instruction and guidance children need to succeed in peer relationships.

Income.

The total income of the family in relation to the total number of family members supported by that income influences the amount of resources available to the family. Lower socioeconomic status has been referred to as “shorthand for multiple risk factors” (Sameroff, Seifer, Zax, & Barocas, 1987). Economic distress has been found to be related to children’s maladjustment (McLloyd & Wilson, 1990). Olweus (1978) has found that factors, such as wearing glasses and unusual appearance or dress, can cause children to be unpopular, rejected by peers, anxious, and non-assertive. Children who wear clothes that are not in style or are not accepted by peers, such as “hand-me-downs,” are at a higher risk of being ridiculed. While these physical factors may not be the primary cause of victimization, they certainly can lead children to feel less confident and to become more anxious, which has been found to be associated with chronic victimization (Ross, 1996).

Dodge, Pettit, and Bates (1994) indicate that aggressive victims tend to have a lower socioeconomic status background. Their families tend to live in poorer

neighborhoods and have increased exposure to negative role models. Hill, Howell, Hawkins, and Battin-Pearson (1999) have reported that children who grow up in socially disadvantaged families without the economic resources necessary for adequate care tend to look to deviant peer groups for acceptance, according to gang theory. This acceptance may require the children becoming involved in hostile interactions, or the children may become the victims of these groups.

Multiple family contextual risk factors have been suggested as potential antecedents for peer victimization (Ladd & Ladd, 1998). Lane (1989) believes that multiple family contextual risk factors, which may include family conditions and social disadvantages, could play an important role in the development of bullying relationships, either as the bully or the victim. Egeland, Sroufe, and Erickson (1983) found that poverty, limited education, and youth of the mother were related to the mother's psychological unavailability to her children. Their children were found to be lower in social competence. Families possessing several of these contextual risk factors may have difficulty adequately socializing children to be prepared for the complexity of the peer relationships they will face when entering the school setting. These factors disrupt, or interfere with, the socialization process.

It should be noted that the presence of one or two of these risk factors does not necessitate negative consequences for the development of a particular child, but the simultaneous occurrence of multiple factors may have detrimental effects on the child (Sameroff et al., 1987; Gersten, 1992). Rutter (1979) found that children as young as two years of age who experience at least four family risk factors had poorer emotional, social, and school adjustment during their adolescent years. Sameroff, Seifer, Barocas, Zax, &

Greenspan (1987) found that the social-emotional competence of four year old children, which was measured by the Rochester Adaptive Behavior Inventory, declines as the number of family risk factors increases. These findings would indicate a child's level of social, emotional, and cognitive functioning is highly affected by the home environment experienced by the child.

Children require consistency and predictability in their lives, both internally and externally, in order to achieve healthy psychological growth, which affects the positive formation of peer relationships. If children do not receive consistent and effective parenting, it would be reasonable to expect they would not obtain the social skills necessary to effectively interact with others. This lack of social skills could impact their perception of their peers and how their peers perceive them, which in turn could have a significant influence on their social status and social behavior with peers (Eisenberg, Guthrie, Fabes, Reiser, Murphy, Holgren, Maszk, & Losoya, 1997).

Hypotheses

The hypotheses for this study were:

1. Children from families exhibiting a higher number of family contextual risk factors will experience higher chronic levels and larger temporal increases in victimization by peers during early elementary school.
2. Children whose parents express lower levels of parental warmth and communication will exhibit higher chronic levels and larger temporal increases in peer victimization during early elementary school.

3. Lower levels of parental warmth and communication will mediate the relationship of multiple family contextual risk factors to higher chronic levels and larger temporal increases in peer victimization during early elementary school.

CHAPTER 2

Method

Participants

The participants in this study were 132 girls and 134 boys, who were a mean age of 5.5 years at the entry of kindergarten, the initial data collection point, and a mean age of 7.3 years at their exit from first grade, the final data collection point. A universal recruiting strategy targeting all kindergarten children ($n = 352$, participation rate = 76%) entering one elementary school was used to obtain the sample over a three consecutive year period. The school served a low socioeconomic neighborhood comprised of both industry and private residences.

The ethnicity of the children was: 71% European American, 19% African American, 5% Hispanic/Latino, 3% Native American, and 2% Asian American. The largest percentage of children (43%) lived with both biological parents. Single parent families, predominantly headed by the mother, made up 28% of the households, while 21% of the families were blended households. The other 7% of families represented a range of family configurations, including adoptive, foster, and grandparental homes. Both parents were employed in 75% of the two parent families, while 9% of the families were without an adult who was employed. The median per capita annual family income was \$8,300 (in 1998 – 2000). Twenty-eight percent of the children and their families had incomes below the poverty line, while 23% of the children and their families had incomes between 100% and 150% of the poverty line. Forty-six percent of the parents had achieved a high school diploma, 34% of the parents had education beyond high school, and the remaining 20% of parents had not received a high school education. The

socioeconomic and demographic characteristics of the children and families who participated in the study were not significantly different from the neighborhood from which they were drawn.

Measures

Measures of the number of family contextual risk factors and of parental warmth and communication were collected during the child’s kindergarten year. Measures of peer victimization were collected in the fall and spring of the child’s kindergarten and first grade years in school. Table 1 identifies each measurement under the proper factor and time of collection to which it applies. Each measure is described fully in the following sections.

Table 1

Time Line for Measures Defining Each Factor/Construct

Factor/Construct	Measures	Time of Collection
Family Contextual Risk Factors		
	Self-report of Demographic Information	kindergarten
Parental Warmth and Communication		
	SPAFF Coding (session 1 and 2 videotapes)	kindergarten
	FPP Coding (session 1 and 2 videotapes)	kindergarten
Peer Victimization		
	Playground Observations	fall and spring kindergarten fall and spring first grade

Family contextual risk factors.

Demographic information was obtained from the primary caregiver of the participating children during recruitment in the fall of the kindergarten school year. Seven factors are used as indices of family contextual risk factors. These factors are: mother's age at the birth of her first child, a large number of children within the family, single parenting, children's experience of marital transitions, low levels of caregiver's education, caregiver's low occupational status, and family income.

The age of the mother at the birth of her first child was defined as a risk factor if the mother was 19 years of age or younger and absent if the mother was 20 years old or older. The number of siblings in the home was defined as a risk factor if there were three or more siblings in the home and absent if there were two or fewer siblings in the home.

Single parenting was defined as a risk factor if the primary caregiver had never been married as of the beginning of the kindergarten school year and absent if the primary caregiver had been married one time. The number of marital transitions the child had experienced was determined to be a risk factor if the child had experienced one or more transitions by the time the child was entering the kindergarten school year and absent if the child did not experience any transitions.

The education level of the primary caregiver was determined to be a risk factor if the caregiver had less than a high school education and absent if the caregiver had a high school education or above. The occupation of the primary caregiver was determined to be a risk factor if the caregiver held a job classified as unskilled labor or unemployed and absent if they were in a job classified as skilled or professional.

The total per capita family income was considered to be a risk factor if it fell below 150% of the poverty level and absent if it fell above 150% of the poverty level.

See Table 2 for an abbreviated explanation of these factors.

Table 2

Determination of Family Contextual Risk Factors

Factor	High Risk	Low Risk
Mother's Age at the Birth of Her First Child	≤ 19 years of age	20 years of age or older
Number of Children in the Home	Three or more	Two or fewer
Single Parent	Yes	No
Number of Marital Transitions Experienced by the Child	One or more	None
Education Level of the Primary Caregiver	< High School Education	High School Education and Above
Occupation of the Primary Caregiver	Unskilled Labor or Unemployed	Skilled or Professional
Total Per Capita Family Income	< 150% Poverty Level	> 150% Poverty Level

The number of family contextual risk factors displayed were added to provide a total number of risk factors per child ($M = 3.51$, $SD = 1.66$).

Parental warmth and communication.

A measure of parental warmth and communication was derived from videotapes obtained of the interaction of the participating child with a primary caregiver on two separate occasions during the kindergarten year. Interaction was sampled for two hours on each occasion, which were separated by a minimum of one week (average length of session separation = 2.3 weeks). The majority of the sessions took place in a room on the university campus. The videotaping equipment was set up in an observation room adjacent to the playroom, which was equipped with a one-way mirror.

The first 20-minutes of both sessions involved structured social activity, which consisted of the child and the caregiver playing novel interactive games while seated at a table. The second 20-minutes of both sessions involved the child and caregiver planning an activity together, whether real or imaginary, and the caregiver obtaining information from the child about school. The third 20-minutes of the first session involved the child and the caregiver engaging in problem solving. The participants were given a list of common problems that caregivers and children have with one another. The caregiver was instructed to allow the child to choose one problem to talk about, followed by the caregiver choosing a problem. This process continued until the 20-minutes were passed. The third 20-minutes of the second session involved a teaching task during which the caregiver was to work on activities the child had been working on at school, i.e. numbers, letters, etc. During the second hour of both sessions, the child and the caregiver were allowed to move throughout the room and engage in free play, which was followed by the reading of a story and cleaning up the room.

The first hour of each parent-child videotape session was coded using a modified version of the Specific Affect Coding System (SPAFF; Gottman, McCoy, Coan, & Collier, 1996). The SPAFF system codes the initiation and conclusion of the behavior of both children and caregivers into one of 19 mutually exclusive and collectively exhaustive categories in real time. Seven discrete emotions are given priority in coding: anger, fear, joy, disgust, contempt, sadness, and humor. Coding is based on observation of facial, physical, and vocal features using a cultural informants approach. Additionally, SPAFF uses ten process codes, which include: domineering, defensiveness, belligerence, validation, stonewalling, criticism, enthusiasm, interest, and threats, in order to identify a set of social communication processes based on verbal content. A neutral code provides the ability to designate any given time period when the target child was engaging in some behavior which the other emotion and process codes did not describe. An additional out-of-view code was used when the facial/frontal characteristics of the target child were not observable. The code assigned was based on the following hierarchy: 1) emotion codes take precedence over process codes, 2) negative codes take precedence over positive codes, 3) contempt takes precedence over all other negative codes, and 4) affection takes precedence over all other positive codes. Coders of the parent videotapes were thoroughly trained prior to the initiation of coding the interactions. Recalibration sessions were held weekly in order to minimize observer drift. The obtained reliability will be described in the results section. For this analysis, only the process code “joy” was used as a measure of parent positive emotion. Mean rate per minute occurrences of parental joy across both sessions of videotaped interactions were calculated and combined to form a measure of parental warmth ($M = 3.14$, $SD = .274$).

Each two hour parent-child videotape session was coded using the Family and Peer Process Code (FPP; Stubbs, Crosby, Forgatch, & Capaldi, 1998). The FPP system captures the behaviors that occur in family interactions and consists of four different dimensions. Three of these dimensions are coded simultaneously: Activity or Withdrawal Qualifier, Content, and Affect. The Activity Qualifier consists of six categories: Work, Play, Read, Eat, Attend, and Unspecified. These categories refer to the setting in which the subject is being observed. The Withdrawal Qualifier determines the presence or absence of behaviors indicative of withdrawal. There are 24 content codes that describe the parent's and child's behavior as it changes over time. Eight of these codes are defined a priori as being positive, nine of the codes are defined as being negative, and seven of the codes are considered neutral in nature. These codes are divided further to reflect verbal, nonverbal, physical, and compliance behaviors. The Affect dimension is recorded with each of the content codes and has six possible ratings, which include Happy, Caring, Neutral, Distressed, Aversive, and Sad. Coders of the parent videotapes were thoroughly trained prior to the initiation of coding the interactions. Recalibration sessions were held weekly in order to minimize observer drift. The obtained reliability will be described in the results section. For this analysis, six of the positive content codes were used as measures of parent positive interaction: positive talk, positive interpersonal, endearment, agree, positive nonverbal, and touch/hold. The alpha coefficient for the first session was $\alpha = .62$ ($M = .593$, $SD = .326$). The alpha coefficient for the second session was $\alpha = .53$ ($M = .618$, $SD = .349$). Mean rate per minute occurrences of the six positive content codes across both sessions of videotaped interactions were calculated and combined into one scale to form a measure of parental communication ($M = .606$, $SD = .303$).

Coder impressions measuring the caregiver's expression of parental teaching skills with the child were obtained from the Family Peer Process Code (FPP; Stubbs et al., 1998) and a modified version of the Specific Affect Coding System (SPAFF; Gottman et al., 1996) across the two hours of videotaped interactions on both occasions during the child's Kindergarten year. For this analysis, six impression ratings were used as measures of parent teaching skills in this analysis: parent's approach was consistent, parent's approach included positive reinforcement, parent provided only as much assistance as the child needed, parent's approach included doing the task for the child (reverse scored), parent's approach included use of threats of punishment to motivate (reverse scored), and parent's approach included using a lot of directives (reverse scored). These impressions were all rated on a 5-point Likert scale where 1 = "never" and 5 = "always." The alpha coefficient for the first session was $\alpha = .63$ (mean z-scores, $M = .00$, $SD = .54$). The alpha coefficient for the second session was $\alpha = .72$ (mean z-scores, $M = .00$, $SD = .59$). Scores from both sessions were averaged to create an additional measure of parental communication.

Items measuring positive parenting were obtained from the coder impressions of the 2 hour parent-child interactions on both occasions during the child's Kindergarten year. The impressions evaluated positive, warm parent behaviors during the sessions. For this analysis, four items were combined: "was attentive, focused," "was respectful, caring," "was happy, excited," and "was affectionate and warm," which are all rated on a 5-point Likert scale where 1 = "never" and 5 = "always." The alpha coefficient for the first session was $\alpha = .86$ ($M = 3.60$, $SD = .57$). The alpha coefficient for the second

session was $\alpha = .83$ ($M = 3.55$, $SD = .71$). Scores from both sessions were averaged to create an additional measure of parental warmth.

Playground observations of peer victimization.

A playground behavior coding system developed by Weiss, Dodge, Bates, and Pettit (1992) was modified to assess the child participants' behavior on the school playground. This behavior coding system categorizes the behaviors of children into seven mutually exclusive and collectively exhaustive categories in consecutive 10-second intervals. When coding the child's behavior, the decision entails determining whether the child is engaged in a social activity, or in a non-social or solitary activity. When the child engaged in a social activity, a rank order hierarchy of three codes was utilized. The priority behavior code is Negative Interaction, which is comprised of verbal and physical aggression. These forms of aggression may co-occur during any one ten-second interval. Rough Play is the next behavior code, which involves lower intensity physical contact between peers. The final category of social activity is Positive Interaction. This category includes interactions that are positive or neutral in nature.

Non-social, or solitary, activities are coded in one of four categories: Solitary Focused (child playing alone in constructive and goal directed fashion), Solitary Unfocused (child being alone and the behavior lacks a clear focus), Parallel Play (child engages in an activity that "mirrors," or mimics, another child's play), and Other (child behavior does not fit any other category, or the child is in time out). These categories are not in a rank order hierarchy. The decision of which of the non-social codes to use is based solely upon which code is most indicative of the child's behavior during the

majority of each 10-second interval of the observation. Non-social codes are used only if none of the social activity codes occurred.

The behavior coding system also specifies peers' behaviors toward the target child. The categories coding peer behaviors toward the target child are: Object of Verbal Aggression (aversive non-physical aggressive behavior, verbal insults, threats, non-verbal gestures, face-to-face teasing, etc.) and Object of Physical Aggression (attempted or actual hitting, kicking, spitting, etc.). These categories were used in this analysis to determine the rates at which children were victimized by peers.

Playground Observations were conducted during the fall and spring of both the kindergarten and first grade school years. Each child was observed on six different occasions each in the fall and spring of the kindergarten school year and on four different occasions each in the fall and spring of the first grade school year. For each observation, the behavior of the child was coded for 5 consecutive minutes, which were broken down into 30 – 10-second intervals. Greater than 95% of the observations of one specific child were conducted on different days. The rate-per-minute scores for victimization by verbal and physical aggression were calculated for each occasion for which a child was the target of observation.

Coders of playground behavior were thoroughly trained prior to the collection of data. Initial training involved detailed instruction about the coding system. This training was followed by testing on verbal and modeled examples of behaviors for a fictitious target child. Videotapes were then coded for content relevant to the coding system, followed by the observation of live playground behavior that was sequentially more complex and challenging. Training was completed when a minimum Kappa of .70 was

reached between each coder and the master coder. Each coder was retrained prior to each data collection point in order to assure reliability in coding behavior. Biweekly recalibration sessions were held in order to minimize observer drift. Observer reliability was measured on 10% of all observations. Eleven different coders, whose involvement level varied greatly, collected data across the assessment points. Two of the coders, one of whom was the master coder, collected data across all assessment points. Coders were assigned children on observation dates in a quasi-random fashion, based on coder and child availability. The obtained reliability is described in the results section.

During recess, usually the noon recess, the coder would first identify the target child to be observed. The behavior of the target child was recorded for 5 minutes on a Playground Observation sheet, which consisted of 30 – 10-second blocks of time. The blocks of time were measured using a stopwatch, which was used to indicate the end of the interval. The coder then circled the appropriate category that best described the behavior of the child for the previous 10 seconds. The categories were recorded rapidly, thereby allowing the intervals to be roughly adjacent. Coders would specifically position themselves so that they were able to clearly see and hear the social exchanges between the child and their peers and/or teachers. If the child was not visible or relatively near to the coder, the observation was interrupted until these criteria could be met.

Children's reactivity was minimized in three ways. First, practice-coding sessions were conducted so the children could acclimate to the presence of the coders. Second, the coders were non-responsive toward the children, except in extreme circumstances when a child was in danger. Finally, the coders were trained to terminate the observation

when the child under observation demonstrated sustained behavioral reactivity for more than 1 minute, such as running away or whispering.

The observations were conducted on the school playground, which was approximately the size of two football fields with a fence enclosure, divided into two discrete sections. Playground equipment for each section consisted of two- to four-sets of swings, jungle gyms, and teeter-totters, all of which were surrounded by sand where the children dug and played, and by a large grassy area. Normally, two kindergarten or first grade classes, or approximately 50 children, were on each section of the playground at one time. Each group of children was typically supervised by two untrained, adult paraprofessionals or volunteers, who were located at different places on the playground. Peer interaction was relatively free of constraints from adults. Therefore, the child interactions with peers were largely determined by children's interests, their relationships with each other, and the responses they provided each other.

CHAPTER 3

Results

A series of statistical analyses were performed to examine whether multiple family contextual risk factors increase the likelihood of children being chronically victimized by peers on the playground, and the degree to which the association of family contextual risk factors with chronic victimization by peers was mediated by low levels of parental warmth and communication. These analyses include both descriptive statistics and structural equation modeling (SEM) using the AMOS program (Arbuckle, 1999). To investigate the hypotheses of the study, structural equation modeling was utilized to test the proposed theoretical model. Structural equation modeling can assess whether inferences about causality are consistent with the data, although it cannot prove causal relations among variables. Additionally, SEM simultaneously estimates both the measurement and structural models when investigating relationships among latent variables without the confounding effects of measurement error.

Victimization

Initial analysis of trait victimization indicated skewed data which were a result of the presence of several outliers who were the object of verbal and/or physical aggression at excessive rates. The rate per minute of verbal and/or physical victimization by peers for each of the four developmental periods ranged from .00 to 2.50. However, the mean rate of victimization during the four developmental periods ranged from .43 to .56 and the mean rate across the four developmental periods combined was .49, or an average of about twice every four minutes. The distribution of rate per minute of victimization across developmental periods is shown in Figure 1.

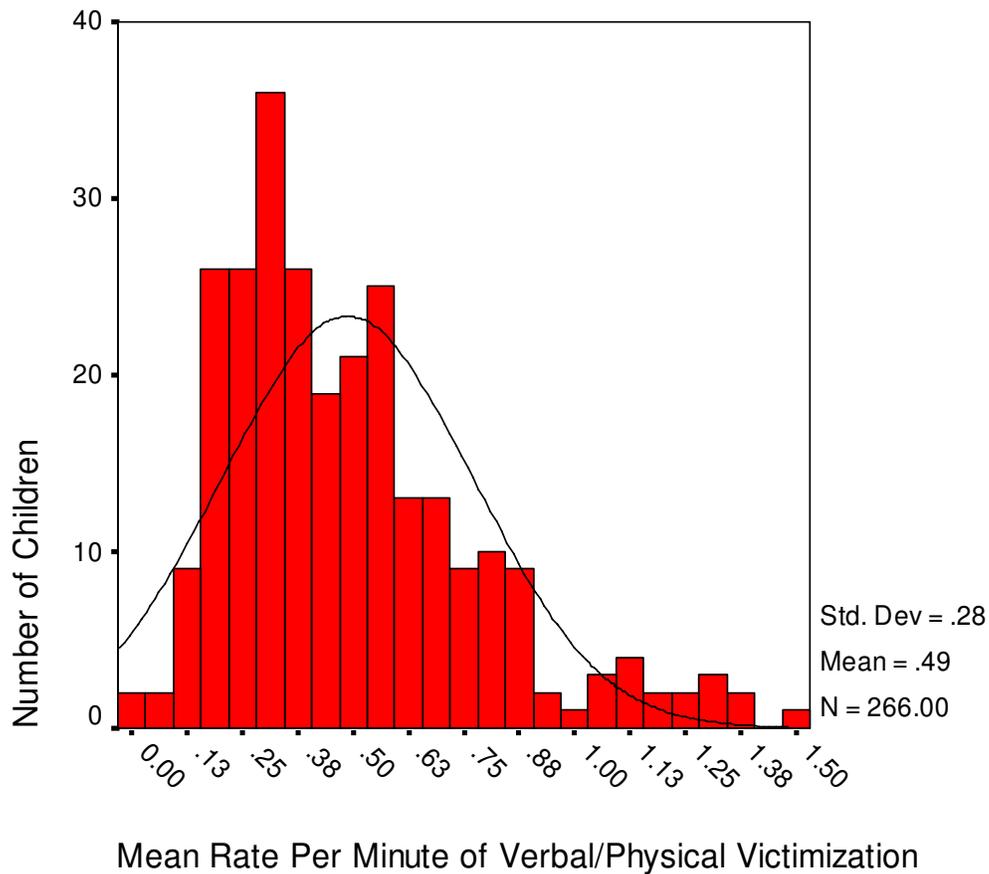


Figure 1. Mean Observed Rates Per Minute of Victimization by Verbal/Physical Aggression Across Developmental Points Prior to Transformation

Given the scatter of scores in the distribution, proceeding with the analyses utilizing these data in their current form could have provided inaccurate results. Therefore, square root transformations were performed to reduce the skewness of the data.

Descriptive statistics for the rate per minute of victimization summed across object of physical and object of verbal aggression are provided in Table 3. Table 3 indicates that, on average, children were the object of verbal and/or physical aggression

approximately once every 2 minutes. The rates of both types of victimization remained relatively steady from observation to observation and from fall to spring of the kindergarten school year, with a decrease in the fall of first grade and an increase from fall to spring of first grade. These rates per minute were used as indicators of the victimization construct.

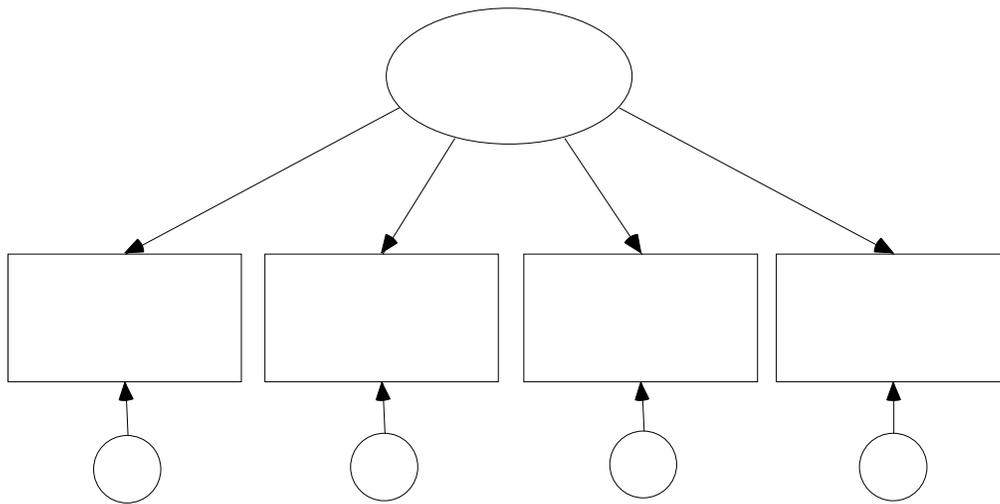
Table 3: Observed Rates Per Minute of Victimization by Verbal/Physical Aggression

	Kindergarten		First Grade	
	Fall	Spring	Fall	Spring
Observation 1	.47 (.41)	.52 (.43)	.46 (.43)	.58 (.44)
Observation 2	.45 (.41)	.52 (.45)	.50 (.47)	.59 (.47)
Observation 3	.50 (.45)	.51 (.45)	.47 (.43)	.64 (.50)
Observation 4	.59 (.47)	.55 (.47)	.50 (.48)	.53 (.46)
Observation 5	.59 (.50)	.55 (.49)		
Observation 6	.55 (.49)	.53 (.42)		

Note: Standard deviations are in parentheses.

The transformed observation data were then fit to a linear growth model of chronic victimization during kindergarten and first grade years. However, the model could not be fit to the data. The lack of successful fit appeared to be due to non-significant slope variance or a lack of individual differences in change in victimization by peers during kindergarten and first grade.

Therefore, an alternate model eliminating slope (or growth) was tested, focusing strictly on trait victimization or the consistency of victimization during kindergarten and first grade. Trait victimization was determined by analyzing the average rates at which children were subjected to verbal and physical aggression by their peers on the playground during their fall kindergarten to spring first grade years. The trait model fit the data moderately well. The chi-square fit statistic for the trait model was $\chi^2(5, N = 267) = 14.64, p = .012, RMSEA = .079; CFI = .906$ (See Figure 1). Data from each of the developmental points loaded significantly ($p < .001$) on trait victimization (Fall Kindergarten; $b = .60$; Spring Kindergarten; $b = .61$; Fall First Grade; $b = .50$; Spring First Grade; $b = .61$). Mean levels of trait victimization by peer verbal and physical aggression on the playground during kindergarten and first grade were significantly different from zero, indicating that measurable verbal and physical victimization was experienced by children ($M = .49, C.R. = 21.95, p < .001$). In addition, significant variance in trait victimization by peers was observed (Variance = .05, $C.R. = 6.41, p < .001$), indicating substantial individual differences in rates of verbal and physical victimization by peers during kindergarten and first grade.



* $p < .001$

Figure 2. Verbal and physical trait victimization by peer aggression during kindergarten and first grade.

Parental Warmth and Communication

A series of correlations were calculated to explore the relationships among the factors used to define the Parental Warmth and Communication construct. The correlations for Positive Parenting, Parent Positive Emotion, Parent Teaching Skill, and Parent Positive Interaction are presented in Table 4. Table 4 indicates that the factors were reliably inter-correlated.

Table 4: Correlations of Factors of Parental Warmth and Communication Construct

	Positive Parenting	Parent Positive Emotion	Parent Teaching Skill	Parent Positive Interaction
Positive Parenting		.49**	.59**	.51**
Parent Positive Emotion			.31**	.34**
Parent Teaching Skill				.34**
Parent Positive Interaction				

** Correlation is significant at the 0.01 level.

The measures of positive parenting, parent positive emotion, parent teaching skill, and parent positive interaction were derived from observation of parent-child interaction on two separate occasions. The data from these two occasions were averaged and transformed to z-scores. The z-scores were then used as indicators to define the construct for parental warmth and communication. The construct fit the data well: $\chi^2(2, N = 267) = 1.22, p = .543, RMSEA = .001; CFI = 1.00$ (See Figure 2). Positive parenting loaded significantly on parental warmth and communication ($b = .93$), as did parent positive emotion ($b = .54$), parent teaching skill ($b = .65$), and parent positive interaction ($b = .55$). Three of the indicators were freely estimated and loaded significantly on the construct (Positive Parenting; C.R. = 7.51; Positive Emotion; C.R. = 6.38; and Parent Teaching Skill; C.R. = 7.34), and the construct of parental warmth and communication demonstrated significant variance (Variance = .30, C.R. = 4.16, $p < .001$).

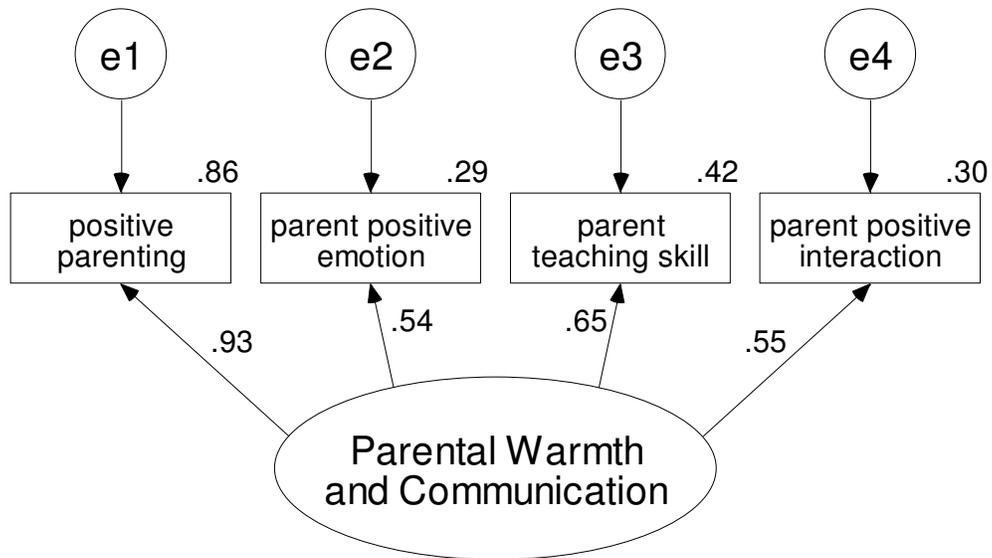


Figure 3: Parental Warmth and Communication Construct

Family Contextual Risk Factors

An observed variable consisting of the sum of the number of family contextual risk factors was created and used to determine whether children who are exposed to a larger number of family contextual risk factors are at greater risk for chronic victimization. The prevalence of family contextual risk factors, including the mother's age at the birth of her first child, three or more children in the family, single parenting, children's experience of one or more marital transitions, low levels of caregiver's education, the caregiver's low skill occupation, and low family income, are presented in Table 5. These data indicate considerable prevalence of family contextual risk factors in this sample, providing adequate family variability to test the hypothesized model.

Table 5: Total Prevalence of Family Contextual Risk Factors

	Present	Absent
Mother's Age at the Birth of Her First Child < 20	87	150
Number of Children in the Home \geq 3	54	207
Single Parent	73	187
Number of Marital Transitions Experienced by the Child \geq 1	49	155
Education Level of the Primary Caregiver < High School	43	217
Occupation of the Primary Caregiver = Low Skill	110	145
Total Per Capita Family Income < 150% Poverty Level	85	168
Total Number of Families with Multiple Family Contextual Risk Factors	161	100

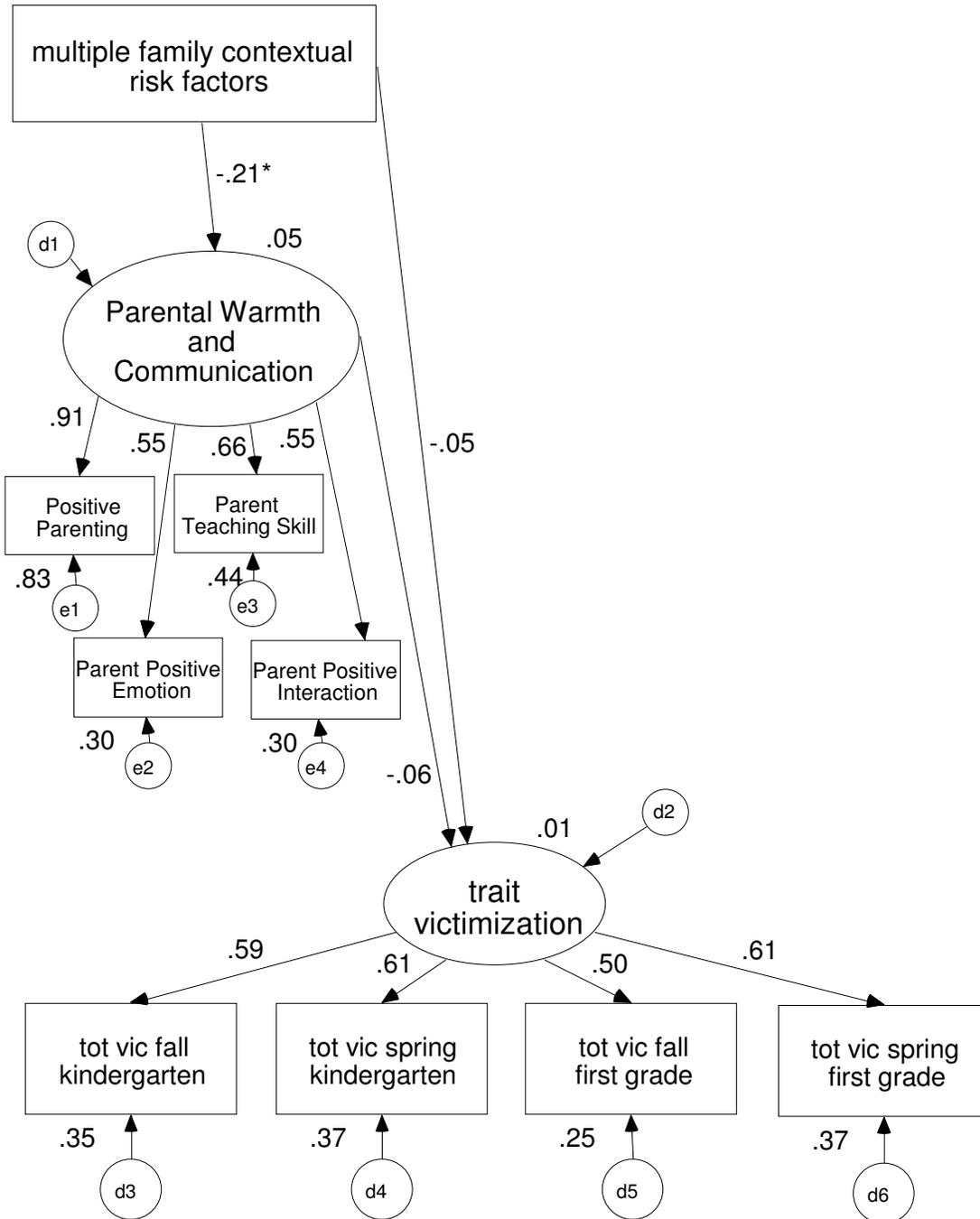
Hypotheses Testing

The hypotheses for this study were:

1. Children in families exhibiting a higher number of family contextual risk factors will experience higher chronic levels and larger temporal increases in victimization of the children by peers during early elementary school.
2. Children whose parents express lower levels of parental warmth and communication will exhibit higher chronic levels and larger temporal increases in peer victimization during early elementary school.
3. Lower levels of parental warmth and communication will mediate the relationship of multiple family contextual risk factors to higher chronic levels and larger temporal increases in peer victimization during early elementary school.

It should be noted that tests of the hypotheses in relation to growth in victimization could not be evaluated because no such growth was observed in the data. The relationship of family contextual risk factors and parental warmth and communication to trait victimization was examined. The overall fit of this model to the data was $\chi^2(28, N = 267) = 43.31, p < .03, RMSEA = .042; CFI = .953$ (See Figure 3). A significant relationship was found between the total number of family contextual risk factors and parental warmth and communication ($b = -.21, C.R. = -2.90, p = .004$). This negative relationship suggests that the accumulation of multiple family contextual risk factors is associated with lower parental warmth and communication. However, trait victimization was not significantly related to multiple family contextual risk factors ($b = -.05, C.R. = -0.65, p = .51$) or to parental warmth and communication ($b = -.06, C.R. = -0.68, p = .50$). These findings indicate that factors related to the home environment do not have a significant

association with the victimization of children by peers on the playground during kindergarten and first grade. This model does not support any of the hypotheses.



* $p < .01$

Figure 4. The Relationship of parental warmth and communication and family contextual risk factors to trait victimization during kindergarten and first grade.

Disaggregation of Family Contextual Risk Factors

Although the hypotheses were not supported by the findings, further analyses were used to explore relationships that may have been obscured by the aggregation of family contextual risk factors. Family contextual risk factors are not necessarily correlated. Therefore, some empirical relationships may have been hidden, or overlooked, in the previous analyses. Models were tested to examine the relationship of each of the family contextual risk factors and parental warmth and communication to trait victimization during kindergarten and first grade. It is recognized that the analyses are post hoc and that multiple tests may lead to Type II error, or the determination that the null hypothesis is true when it is actually false. In addition, statistical corrections for chance level agreement were not utilized.

The analyses examined each of the family contextual risk factors individually within the initially proposed model. For example, the relationships of the mother's age at the birth of her first child and parental warmth and communication to trait victimization were examined. A significant relationship was found between the mother's age at the birth of her first child and parental warmth and communication ($b = -.22$, $C.R. = -2.90$, $p = .004$) (See Table 6). This suggests that the younger a mother is at the birth of her first child, the less parental warmth and communication she offers to her child. However, no significant relationship was found between mother's age at the birth of her first child ($b = .04$, $C.R. = 0.52$, $p = .60$) or parental warmth and communication ($b = -.05$, $C.R. = -0.54$, $p = .58$) to trait victimization in this model (See second row in Table 6).

Similar models were tested, incorporating each of the remaining family contextual risk factors one at a time. Significant relationships were found between parental warmth

and communication and two additional individual family contextual risk factors, single parenting ($b = -.29$, $C.R. = -3.87$, $p < .001$) and low family income ($b = -.25$, $C.R. = -3.30$, $p < .001$) (See fourth row, first column and eighth row, first column, respectively, in Table 6). These findings suggest that single parent families and families with lower family incomes have lower levels of parental warmth and communication.

The only individual family contextual risk factor that had an even marginally significant relationship with trait victimization was the number of children in the home ($b = -.14$, $C.R. = -1.75$, $p = .08$) (See third row, second column in Table 6). This relationship would indicate that a child with more siblings would be less likely to be victimized during interaction with peers. Additional findings from this analysis are shown in Table 6.

Table 6: Standardized Estimates of the Relationship of Family Contextual Risk Factors to Trait Victimization

	RF ^a to PWC ^b	RF ^a to TV ^c	PWC ^b to TV ^c	PWC ^b R ²	TV ^c R ²
All Risk Factors	-.21**	-.05	-.06	.05	.01
Mother's Age at the Birth of Her First Child	-.22**	.04	-.05	.05	.01
Number of Children in the Home ≥ 3	.07	-.14*	-.06	.01	.02
Single Parent	-.29***	-.08	-.09	.09	.01
Number of Marital Transitions Experienced by the Child ≥ 1	-.07	.07	-.06	.00	.01
Education Level of the Primary Caregiver < High School	.05	-.02	-.06	.00	.00
Occupation of the Primary Caregiver = Low Skill	-.07	.04	-.06	.01	.01
Total Per Capita Family Income < 150% Poverty Level	-.25***	-.07	-.07	.06	.01

^a RF = Risk Factor

^b PWC = Parental Warmth and Communication

^c TV = Trait Victimization

* Relationship significant at the $p < .15$ level.

** Relationship significant at the $p < .01$ level.

*** Relationship significant at the $p < .001$ level.

Disaggregation by Gender

It may also be that the relation of family contextual risk factors and parental warmth and communication to peer victimization may be different for boys and girls.

Therefore, the relationships of multiple family contextual risk factors and parental

warmth and communication to trait victimization during kindergarten and first grade were examined separately for boys and girls. The overall fit of this model to the data was $\chi^2(56, N = 267) = 57.15, p = .432, RMSEA = .009; CFI = .996$ (See Figures 4 for boys and 5 for girls). For boys, no significant relationship was found between cumulative multiple family contextual risk factors and parental warmth and communication ($b = .00, C.R. = .003, p = .99$). This would indicate that for boys, family contextual risk factors do not affect the level of parental warmth and communication, which is different than the significant relationship in the original model where boys and girls were combined. Due to this difference, one would suspect that cumulative family contextual risk factors would be associated with parental warmth and communication for girls. Trait victimization was not significantly related to multiple family contextual risk factors ($b = -.08, C.R. = -0.70, p = .48$) or to parental warmth and communication ($b = .06, C.R. = 0.43, p = .67$) for boys. These findings indicate that the home environment experienced by boys does not have a significant association with their victimization by peers on the playground during kindergarten and first grade. This is consistent with the findings of the original model.

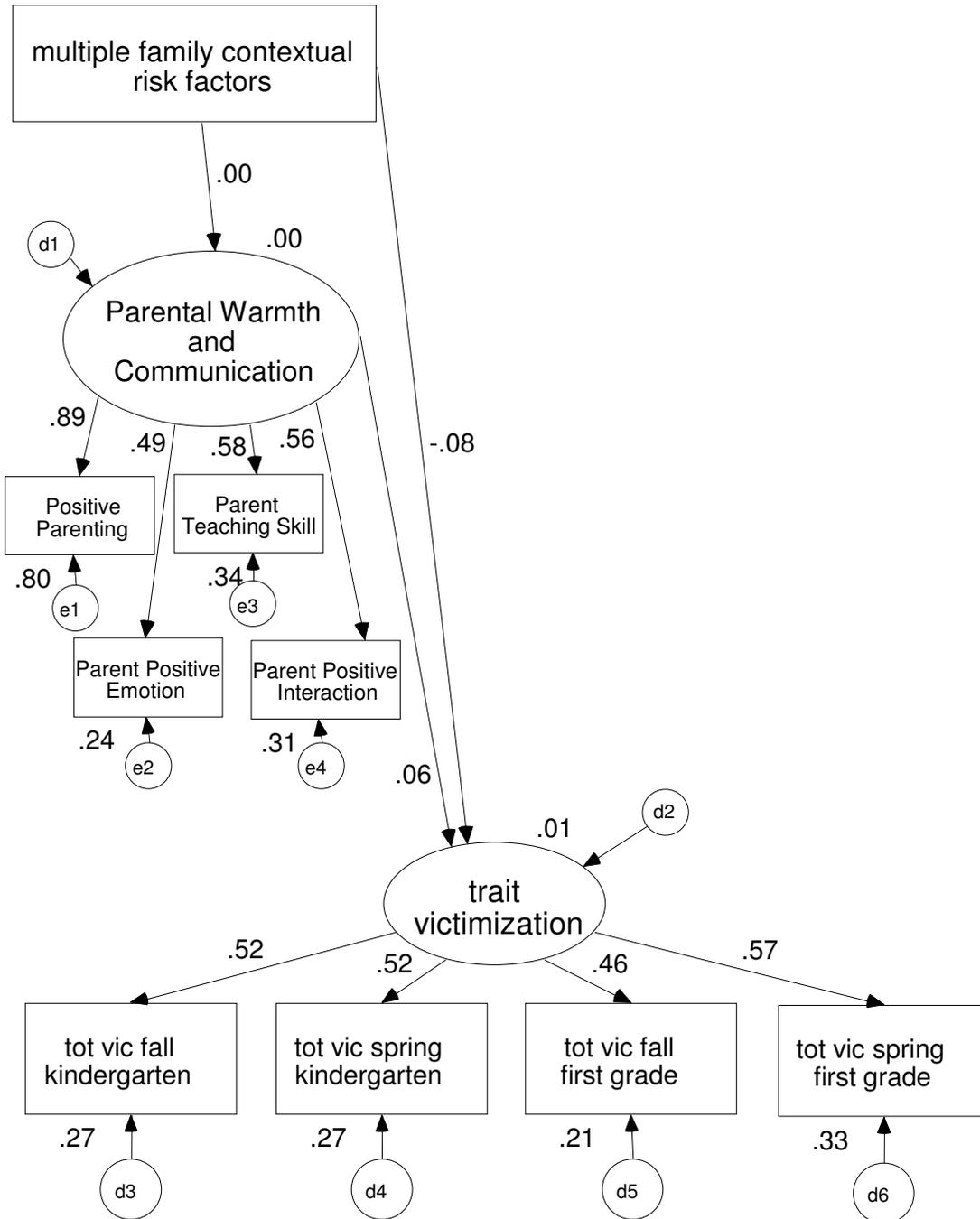
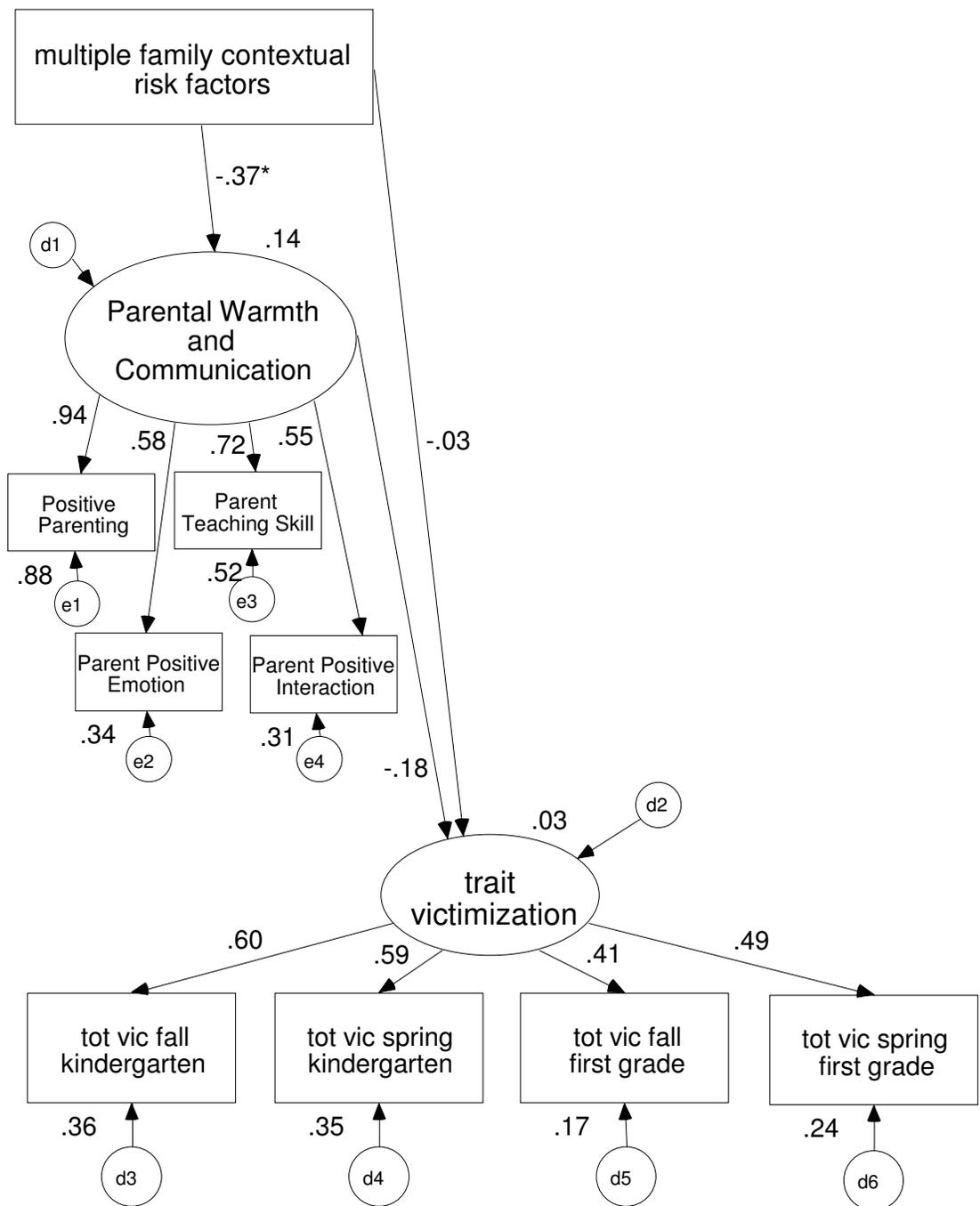


Figure 5. The Relationship of parental warmth and communication and family contextual risk factors to trait victimization during kindergarten and first grade for boys.

The relationship of cumulative family contextual risk factors and parental warmth and communication to trait victimization during kindergarten and first grade for girls was then examined. A significant relationship was found between multiple family contextual risk factors and parental warmth and communication for girls ($b = -.37$, $C.R. = -3.47$, $p < .001$). This indicates that for girls, a larger number of family contextual risk factors is negatively associated with parental warmth and communication, which is consistent with the findings of the original model where boys and girls were combined. There are significant gender differences ($C.R. = -2.37$) in the relationship of family contextual risk factors to parental warmth and communication. The relationship is powerful for girls, but is not apparent for boys. For girls trait victimization was unrelated to multiple family contextual risk factors ($b = -.03$, $C.R. = -0.21$, $p = .83$) or to parental warmth and communication ($b = -.18$, $C.R. = -1.26$, $p = .21$). This indicates that the home environment experienced by girls does not have a significant effect on their victimization by peers on the playground during kindergarten and first grade. This is consistent with the findings of the original model.



* $p < .001$

Figure 6. The Relationship of parental warmth and communication and family contextual risk factors to trait victimization during kindergarten and first grade for girls.

Disaggregation by Gender and Family Contextual Risk Factors

The prior analyses of individual family contextual risk factors suggest some specificity in the relationship of these factors to parental warmth and communication and trait victimization. Likewise, prior analyses suggest significant gender differences (C.R. = -2.37) regarding the association of cumulative family contextual risk factors with parental warmth and communication. Therefore, the final analyses involved double disaggregation in which the relationships of each individual family contextual risk factor and parental warmth and communication to trait victimization were examined separately by child gender. For example, the manner in which gender affects the relationships of the mother's age at the birth of her first child and parental warmth and communication to trait victimization was examined.

A significant relationship was found between the mother's age at the birth of her first child and parental warmth and communication for girls ($b = -.28$, C.R. = -2.61, $p = .009$), but not for boys ($b = -.16$, C.R. = -1.48, $p = .14$) (See second row in Table 7). This suggests that for girls, the younger a mother is at the birth of her first child, the less parental warmth and communication the mother displays toward her daughter. However, the association of the mother's age at the birth of her first child with parental warmth and communication was not significantly different for boys and girls. In addition, the relationships of trait victimization to the mother's age at the birth of her first child (Boys; $b = .14$, C.R. = 1.14, $p = .26$; Girls; $b = .00$, C.R. = -.005, $p = .99$) or to parental warmth and communication (Boys; $b = .09$, C.R. = 0.62, $p = .54$; Girls; $b = -.17$, C.R. = -1.26, $p = .21$) were not significant for boys or for girls (See second row in Table 7). Likewise, no

significant gender differences were found for the relation of trait victimization to the mother's age at the birth of her first child or to parental warmth and communication.

These analyses by gender were continued by examining each of the remaining family contextual risk factors individually. Significant relationships were found between parental warmth and communication and three additional individual family contextual risk factors, the number of children in the home (Boys; $b = .22$, $C.R. = 2.03$, $p = .04$), single parenting (Boys; $b = -.31$, $C.R. = -2.78$, $p = .006$; Girls; $b = -.27$, $C.R. = -2.62$, $p = .009$) and low family income (Girls; $b = -.44$, $C.R. = -3.90$, $p < .001$) (See third row, first column, fourth row, first and second columns, and eighth row, second column, respectively, in Table 7). These findings suggest that for boys, families with three or more children in the home have higher levels of parental warmth and communication, while single parent families have lower levels of parental warmth and communication. For girls, single parent families and families with lower incomes have lower levels of parental warmth and communication. The relationship of parental warmth and communication to the number of children in the home ($C.R. = -1.97$) was greater for boys than girls, and to low family income ($C.R. = -2.38$) was greater for girls than boys. Only three of the individual risk factors were found to have significant or marginally significant relationships with trait victimization when gender was introduced. The first factor was the number of children in the home (Boys; $b = -.29$, $C.R. = -2.43$, $p = .015$). This relationship indicates that boys with more siblings are less likely to be victimized by peers. The second factor was whether the child resided within a single parent family (Boys; $b = -.28$, $C.R. = -2.24$, $p = .03$). This relationship indicates that boys in single parent families are less likely to be victimized by peers. The third factor was the number

of marital transitions experienced by the child (Girls; $b = .24$, $C.R. = 1.96$, $p = .05$). This relationship indicates that girls who experienced multiple marital transitions are more likely to be victimized by peers. However, only the relationship of trait victimization to single parent family exhibited a significant gender difference ($C.R. = 1.98$). (See the effects for these three risk factors in the third row, third column; fourth row, third column; and fifth row, fourth column, respectively, in Table 7). Additional findings from this analysis are found in Table 7.

Table 7: Standardized Estimates of the Relationship of Family Contextual Risk Factors to Trait Victimization by Gender

	RF ^a to PWC ^b		RF ^a to TV ^c		PWC ^b to TV ^c		PWC ^b R ²		TV ^c R ²	
	B	G	B	G	B	G	B	G	B	G
All Risk Factors	.00	-.37****	-.08	-.03	.06	-.18	.00	.14	.01	.03
Mother's Age at the Birth of Her First Child	-.16	-.28***	.14	.00	.09	-.17	.03	.08	.02	.03
Number of Children in the Home ≥ 3	.22**	-.07	-.29**	-.09	.12	-.18	.05	.00	.09	.04
Single Parent	-.31***	-.27***	-.28*	.03	-.03	-.18	.10	.07	.08	.03
Number of Marital Transitions Experienced by the Child ≥ 1	.11	-.19	.01	.24*	.05	-.15	.01	.04	.00	.10
Education Level of the Primary Caregiver < High School	.09	.04	.09	.03	.05	-.18	.01	.00	.01	.04
Occupation of the Primary Caregiver = Low Skill	.02	-.15	.04	.08	.06	-.17	.00	.02	.01	.04
Total Per Capita Family Income < 150% Poverty Level	-.05	-.44****	-.05	-.14	.06	-.22	.00	.19	.01	.04

^a RF = Risk Factor

^b PWC = Parental Warmth and Communication

^c TV = Trait Victimization

^d B = Boys

^e G = Girls

* Relationship significant at the $p < .10$ level.

** Relationship significant at the $p < .05$ level.

*** Relationship significant at the $p < .01$ level.

**** Relationship significant at the $p < .001$ level.

CHAPTER 4

Discussion

The current study examined the relationship of multiple family contextual risk factors to trait victimization as mediated by parental warmth and communication during kindergarten and first grade. It was expected children in the sample who experienced multiple family contextual risk factors and low levels of parental warmth and communication would be subjected to higher levels and more growth in victimization by peers on the school playground. In addition, the relationship of family contextual risk factors to victimization by peers was expected to be mediated by parental warmth and communication. However, these hypotheses were not supported.

Tests of linear growth models indicated a lack of significant slope variance, suggesting the absence of individual differences in change in victimization by peers from fall kindergarten to spring first grade. Rather than a growth model, the data were more accurately accounted for by a trait or chronic model of victimization, reflecting the consistency or average levels with which children were victimized by peers during kindergarten and first grade. The theoretical model was also not supported. Neither the aggregate of family contextual risk factors nor parental warmth and communication were reliably related to trait victimization. These results would indicate that multiple family contextual risk factors experienced at home are not associated with the consistency of victimization by peers on the playground during elementary school, regardless of the amount of parental warmth and communication provided at home.

The lack of relationship of family contextual risk factors and parental warmth and communication to victimization found in these analyses is not consistent with previous

research. Previous research has found that parental warmth and communication are related to victimization. This relationship has been demonstrated using measures of attachment (Bowlby, 1988; Coleman, 2003, Verschueren et al., 1996), effective communication (Espelage et al., 2001; Patterson, 1982; Troy & Sroufe, 1987), parental warmth (Schreck & Fisher, 2004; Stormshak et al. & Conduct Problems Prevention Research Group, 2000), and parental support (Ladd & Ladd, 1998). These aspects of parenting have been interpreted as having an indirect influence on peer victimization by increasing children's social skills.

The relationship of parental warmth and communication to victimization has also been demonstrated in previous research using measures of more direct parental influences, such as coaching concerning peer relationships (Baldry & Farrington, 1998), parental monitoring of peer relationships (Bowers et al., 1994; Patterson, 1986), and open communication between parent and child about peer experiences (Maxson et al., 1998; Rigby, 1994). Such parental involvement more directly builds children's social confidence and promotes their ability to manage difficulties in relationships with others, including both siblings and peers, thereby decreasing the likelihood of victimization.

Likewise, previous research has documented a relationship between family context and peer victimization. The experience of negative family context has been hypothesized to be directly associated with victimization (Ladd & Ladd, 1998; Lane, 1989). Family conditions, such as single parenting and family disruptions, and social disadvantages may determine whether children become involved in aggressive peer relationships, either as the bully or the victim. Gang theory has suggested that children who grow up in socially disadvantaged families without the economic resources

necessary for adequate care tend to look toward these groups for acceptance (Hill et al., 1999). This acceptance may require that these children become involved in hostile interactions or become victims of these groups. Multiple family contextual risk factors have also been found to be indirectly associated with victimization via the impact of those factors on children's emotional, social and school adjustment (Rutter, 1979), social competence (Sameroff et al., 1987) and social skills (Eisenberg et al., 1997). As the number of family contextual risk factors increases, the ability of the child to adjust to new surroundings and interactions with new peers at the transition to elementary school decreases.

Several methodological characteristics of the current study may account for the findings that are inconsistent with previous research. Observational measures were used to assess parental warmth and communication and peer victimization. Previous research has more often relied on self-report or other more global and subjective measures completed by the child, such as peer nominations. These measures tend to be more summative and retrospective and depend on the perception of the salience of the events to the child. The use of direct observation of individuals' behavior in experimental and natural surroundings has been found to be a reliable method of obtaining data, and is less subject to halo and other forms of bias, and precluded shared method variance as a potential explanation of the observed empirical relationships in this study. Therefore, the inconsistencies with previous research are not likely due to the use of measures lacking in reliability and validity. However, the measures used in this and previous studies do not assess victimization and parental warmth and communication in an identical fashion.

Another factor that may have resulted in the findings inconsistent with those from previous research lies in the degree to which the sample of families and children used in this study are representative of the general population. As described previously, the sample is primarily Caucasian and comes from a low socioeconomic neighborhood and from one school in one midwest city. While these characteristics were representative of the location in which the study was conducted, findings from families and children used in this specific study may not be generalizable to the broader population.

The findings in this study may not be consistent with previous research because peer victimization on the playground was assessed at a micro-event level. This resulted in high prevalence estimates of victimization, including forms and occurrences that are simply not very salient to the children involved. However, the estimated prevalence based on observation is likely quite accurate. Several factors may influence the substantial prevalence of peer victimization on the playground. Children coming into kindergarten are at a developmental stage in which they are still learning that physical aggression is not an appropriate behavior. While adults are generally present on the playground, their presence is may have little effect on rates of aggression and victimization as the appropriate degree of supervision or the contingencies necessary to deter aggression and victimization are not often provided. In addition, when a large number of students with similar at-risk backgrounds are placed together in the same school, the prevalence of aggression and victimization are likely to be increased as a result of contagion-like processes.

Finally, the results may indicate that a direct relationship of multiple family contextual risk factors and parental warmth and communication to chronic victimization

simply does not exist. Adequate tests of hypotheses by applying structural models to longitudinal, correlational data depend on including all of the relevant variables in the model. It may be that parental warmth and communication has only an indirect effect on peer victimization. This suggests that additional variables, which represent such an indirect effect, need to be included in the model. These additional, mediating variables may include child social skills and competence such that the impact of parenting on peer victimization depends on the degree to which the child can effectively relate to peers. Similarly, high levels of child aggression and disruptive behavior, which may be associated with less than adequate parenting, may also serve as a mediator. In a similar fashion, the relationship of family risk factors to victimization may also be mediated by variables that were not included in the models tested in this study. For example, previous research has found a relationship between lower socioeconomic status and a child experiencing less confidence and increased anxiety, both of which have been found to be linked to victimization (Ross, 1996). Likewise, prior research has indicated a relationship between the mother's age at the birth of her first child and a child displaying social skills deficits, which has also been found to be related to victimization (Unnever & Cornell, 2004).

The current study has several strengths. First, the use of peer playground observations in the present study provided a more accurate measurement of chronic victimization than is available by more global reports from teachers, parents, or children. These observations do not rely on recall, retrospection, or the subjective perception of the salience of the event. Instead, direct observation provides direct counts of the verbal and aggressive behaviors and victimization actually experienced by children in a playground

setting as they occur. Second, the use of parent-child videotapes provides data concerning parental interactions with their children as they occur in the natural environment. This direct observation is likely more accurate measure of parent-child relationship quality than reports provided by parents or teachers. Third, the longitudinal design provided a measure of chronic victimization as it occurs across multiple occasions over time. Finally, the at-risk community sample increases the likelihood the results will be generalizable to other samples as it reflects a full range of child adjustment and peer relations.

Post hoc analyses were conducted to determine if more specific relationships conditional on gender and type of family contextual risk factor would be evident. Statistical corrections for chance level agreement were not utilized and consequently the results from these analyses should be interpreted with caution. However, the examination of the relationship of each family contextual risk factor individually to victimization provided results similar to those found when examining family risk factors as an aggregate. These results were somewhat surprising considering past research indicates reliable indirect relationships between specific individual family contextual risk factors and victimization.

Although gender was not initially considered as one of the hypothesized primary variables in this study, some significant gender-specific effects were observed. The occurrence of a significant negative relationship between higher family contextual risk factors and levels of parental warmth and communication for girls, but not for boys, is important information. This indicates that relationships between girls and their parents

appear to be more disrupted by adverse family circumstances. These findings provide evidence that parenting interventions may need to be tailored according to child gender.

Additionally, a number of gender-specific associations of individual family contextual risk factors to parent warmth and communication were found. Warmth and communication were diminished by single parenting for both boys and girls, and by low income and young age of the mother at the birth of the first child for girls only. In general, these results indicate that as family resources are diminished by low income, parental maturation, or by marital transitions, the quality of the parent-child relationship is reduced. This is consistent with previous research (Carlson, 1992; Rollins & Galligan, 1978). While some of these specific contextual risks may vary according to child gender, the post hoc nature of these analyses and the multiple tests used to examine these relationships precludes any strong interpretation by gender beyond the notion that girls may be more affected by family disadvantage. In addition, statistical corrections for chance level agreement were not utilized.

Three family risk factors were found to be marginally or modestly related to trait victimization when these relationships were disaggregated by gender. The number of children in the home was found to have a significant negative relationship to victimization for boys. Boys' exposure to and involvement in multiple sibling relationships may increase the likelihood of rough play and aggression in the home, particularly when those relationships involve at least one male child. The higher incidence of rough play and aggression in the home may provide instrumental skills that make boys less vulnerable to victimization by peers on the school playground.

The relationship between victimization by peers and single parenting was significant only for boys, and different than that for girls. Previous research suggests that boys are more likely to respond to divorce and other marital transitions with increasing aggressiveness and girls with increasing internalizing problems. Similar to having more siblings, the net influence of such increased aggressiveness may actually decrease the likelihood that boys will be vulnerable targets for peer aggression.

The final significant relationship was the positive association between victimization by peers and the number of marital transitions experienced by girls, but not by boys. This relationship indicates that the higher the number of marital transitions experience by girls, the more likely these girls are to be victimized. Girls are more likely to respond to divorce and other marital transitions with internalizing problems such as sadness, anxiety, and social withdrawal. These emotional and behavioral responses, when carried over into the peer setting, may increase girls' vulnerability to being bullied. Additionally, girls are relationship oriented. Repeated family disruptions may interfere with their ability to trust others enough, to build high quality relationships, and to develop adequate social skills. Therefore, when approached by peers, girls' reactions may be more guarded. This guardedness or lack of engagement and reciprocity may be interpreted as negative by their peers and could potentially lead to victimization.

The major findings of this study may be summarized as follows. When data for boys and girls were combined, children in families with multiple adverse contextual risk factors experienced decreased levels of parental warmth and communication. However, when the data were disaggregated by gender, adverse family contexts appeared to primarily have a negative association with parental warmth and communication only for

girls. In no analysis did parent warmth and communication have a direct association with peer victimization. Family adversity and lack of resources appeared to be associated with peer victimization in gender-specific ways, increasing risk for girls but decreasing it for boys. However, these post-hoc effects must be interpreted cautiously and require replication.

Most surprisingly, the results indicate that parental warmth and communication may not mediate the relationship between multiple or individual family contextual risk factors and chronic victimization, nor have a direct effect on such victimization. However, these findings should not discourage further research into this area as peer victimization continues to be a problem that affects many children (Juvonen & Graham, 2001). In the current community sample, children were found to be chronically victimized at a substantial rate of approximately once every 2 minutes. The elementary school years have been found to be a period during which a stable tendency to be victimized by peers is developed (Perry et al., 1988; Snyder et al., 2003). The observation of high rates of victimization of kindergarten children provides evidence that this type of behavior is a problem that needs to be addressed. The family as well as the peer environment may be an important venue for interventions to address this problem.

Children who are chronically victimized tend to respond either passively or aggressively to their aggressors (Schwartz et al., 1997). Such response styles may directly affect the reaction of the aggressor. These response styles may be learned during family as well as peer interaction. Further research to identify how the family influences children's response styles to challenging peer situations is needed. The hypothesis about the family origin of peer victimization would suggest that children may learn social-

relational styles that actually facilitate negative interactions with peers, and these styles may be associated with victimization as well as with aggression in the peer environment. That is, the search for family antecedents to peer victimization may need to focus on much more specific mechanisms than global warmth and communication, and may need to be specific in terms of child gender and family contextual adversity. While significant relationships were found between some of the family contextual risk factors and trait victimization, replication of these findings are needed. Parents' more effective monitoring of peer interactions at school, both in the classroom and on the playground, may decrease the incidence of victimization. In addition, parent training focused on decreasing harsh and coercive discipline may also reduce the acquisition of relationship styles by children which contribute to peer bullying and victimization.

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