SOCIAL ADJUSTMENT OF MALTREATED CHILDREN: THE
MEDIATING ROLE OF AGGRESSIVE BEHAVIOR

A Thesis
Presented to the
Faculty of
San Diego State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology

by
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Summer 2012
SAN DIEGO STATE UNIVERSITY

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Social Adjustment of Maltreated Children: The Mediating Role of Aggressive Behavior

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ABSTRACT OF THE THESIS

Social Adjustment of Maltreated Children: The Mediating Role of Aggressive Behavior

by

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Master of Arts in Psychology
San Diego State University, 2012

Children who have experienced maltreatment are at risk for a variety of negative outcomes, including various forms of psychopathology, academic failure, and especially, social difficulties with peers. In particular, maltreated children are more likely than non-maltreated children to evidence higher rates of aggressive behaviors and lower levels of social competencies. The aims of the current study were to examine (1) whether young children with a history of maltreatment are more aggressive than their peers and are less-liked by their peers as they enter early elementary school, and (2) if children’s behaviors (e.g., aggression) with peers mediate the relationship between maltreatment and social (peer) acceptance. It is hypothesized that maltreated children would evidence higher teacher ratings of aggressive behavior and be less-liked by their peers. Furthermore, it was expected that ratings of aggressive behavior would serve to mediate the relation between maltreatment and levels of social acceptance.

This study used an existing database of maltreated children in early elementary school for whom there were complete teacher ratings of their aggressive behavior and peer group acceptance. The sample for the current study included 142 young children; 76 children of whom with a history of maltreatment prior to age 4, and 66 children who served as a non-maltreated comparison group. Results revealed that maltreated children were not only more aggressive but also less liked by peers, and that the level of peer-directed aggression mediated the relation between maltreatment history and social acceptance. The findings of this study support prior research indicating a strong relation between aggression behavior and being disliked by peers. The findings from this study also revealed an association between child maltreatment and levels of peer acceptance and that aggressive behavior serves to mediate the relation between early maltreatment and levels of peer acceptance. These findings have implications for social developmental theory and approaches for intervention.

Keywords: child development, maltreatment, subtypes, neglect, physical abuse.
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CHAPTER 1

INTRODUCTION

Social Adjustment of Maltreated Children: The Mediating Role of Aggressive Behavior

The concept of an average expectable environment for promoting normal development proposes that there are species-specific ranges of environmental conditions that cultivate normative developmental processes. Humans, not surprisingly, develop within a “normal path” when living in such average expectable environment. Animals are also born with a built-in ability to engage in the life experience, biologically speaking, and adaptation to the environment is everywhere. Evidence shows that infants and children might be genetically preadapted to respond to a certain range of environmental factors (Scarr, 1992; Scarr, 1993). However, the “normal path” of development might be impeded if the environment is outside of the average expectable range.

The failure of the average expectable environment that is represented by child maltreatment culminates in its effects on children’s ontogenic development. Within ontogenic development, a child’s social competence is affected by early maladaptive family relations such as child maltreatment and is associated with negative developmental outcomes. The negative outcomes are not certain but heterogeneous—depression, substance use, aggression, criminal behavior, and sexual problems are more prevalent among adults who have been abused during childhood than among individuals who are nonmaltreated. However, nearly one fourth of children who are abused show no evidence of long-term symptoms so some children escape the worst outcomes (McGloin & Widom, 2001). Heterogeneity in outcome is theorized to be the result of several factors, including the features of the maltreatment, such as the type, onset, chronicity, and severity of the abuse (Browne & Finkelhor, 1986; Manly, Cicchetti, & Barnett, 1994), as well as characteristics of the perpetrator (Browne & Finkelhor, 1986). Also of importance are the characteristics of the child, including the child’s age, sex, temperament, and mental health (Wolfe, Gentile, & Wolfe, 1989).
For a long time, psychologists tended to explore the mechanisms and processes that interrelate all the factors, in order to provide a more integrated understanding of exactly how the occurrence of maltreatment affects children’s developmental outcomes. In contrast to the researchers who simply examined the effects of maltreatment and tried to establish the causal chain of an individual factor, Belsky first introduced an ecological model to the modern child maltreatment research, which takes all the interactions of multiple factors across numerous contexts into account. The human ecological model recognizes that humans develop in a number of social contexts aside from the immediate family environment, nesting individuals within levels of environmental influence. Families serve as proximal influences on children’s development, followed by peers, their school, and their community, revealing increasingly distal influences. The model also highlighted the importance of transactions between an individual and his or her environment over time; it emphasizes that the individual in the model is not passively influenced by the outside forces but rather actively affects the environment while being affected at the same time.

In applying an ecological theory to the examination of the effects of maltreatment, researchers conceptualize the child’s environment to include the immediate family, the peer group, school setting, neighborhood, and broader community (Stockhammer, Salzinger, Feldman, Mojica, & Primavera, 2001). Influences that are located more proximally to children and the immediate caregiving process can be expected to have a greater impact on their development, whereas more distal influences would be expected to have less pronounced, possibly indirect, effects. The proximity of influences in children’s lives also changes as they develop, such that peer, school, and community contexts gradually gain greater importance with age.

**CHILD MALTREATMENT: DEFINITION**

Child maltreatment is an extremely serious problem in our society; yet there has been a long debate between researchers, lawmakers, and clinicians on what maltreatment is and how it should be defined. Defining maltreatment is difficult for several reasons: the distinction must be made between acceptable parental disciplinary practice and maltreatment (Cicchetti & Lynch, 1995), sometimes the actions of perpetrator differ in severity, the intention of parents differ and is difficult to measure, these factors might all lead to different
levels of negative outcomes. Based on the wide range of challenges faced by researchers, one clearly cannot expect all who study maltreatment to use the same methodology for operationalizing child abuse and neglect. However, all research must be executed with clear operational definitions of maltreatment such that replication may be possible across investigations. Thus, despite the challenges facing maltreatment researchers, widely accepted general definitions were established.

Child maltreatment has been divided into different categories: (1) sexual abuse, which refers to sexual contact or attempted sexual contact between a caregiver or other responsible adult and a child, for the purposes of the caregiver’s sexual gratification or financial benefit; (2) Physical abuse, in which injuries that have been inflicted on a child by nonaccidental means; (3) Neglect, which is a failure to provide minimum standards of care as well as adequate supervision; (4) Emotional maltreatment which refers to persistent and extreme thwarting of a child’s basic emotional needs. Within these categories, a child can suffer from different levels and/or intensities of maltreatment. To be more specific, operational definitions of maltreatment subtypes with inclusion and exclusion criteria were established by the Maltreatment Classification System (MCS). As an example of MCS definition, physical abuse includes assault in different body regions (e.g., neck, limbs), violent handling of child (e.g., pulling, dragging), choking, burning, and shaking. These types of abuse are rated on a severity scale from 1 to 5, with 1 being no marks and 6 being permanent disability or fatality. Neglect on the other hand is defined in two subcategories: “failure to provide”, and “lack of supervision”. Failure to provide includes lack of food, clothing, shelter, medical attention, and hygiene. Lack of supervision includes not enough attention to the child, to the environment in which they play, and to the substitute care they need. The types of neglect are rated on a severity scale different from the above mentioned physical abuse scale. Each category of neglect is coded into a scale from 1 to 2 (Clothing), 1 to 4 (shelter, hygiene, and substitute care), or 1 to 5 (food, medical, lack of supervision in child, and the environment), and the definition is listed in Modified Maltreatment Classification System (MMCS) (University of North Carolina, 2012).

Also, the onset timing, frequency and chronicity of maltreatment in different subtypes are potential factors that should be noted. Frequency of maltreatment is defined as how often the child is maltreated in a certain period of time, and chronicity refers to how long the
maltreatment persists. The developmental period(s) during which each category of maltreatment occurred, severity of each category, and perpetrator(s) within each category, as well as the relations among these dimensions all needed to be taken into account. In sum, these variables provide a rich portrayal of children’s maltreatment histories, capturing many of the interrelated aspects of their experiences.

**CHILD MALTREATMENT: DEMOGRAPHICS**

With criteria used to define maltreatment addressed, the understanding of epidemiological estimates of child maltreatment is possible. According to the data from the National Child Abuse and Neglect Data System (NCANDS), the overall rate of reported maltreatment (of all types) in 2009 was 10.1 per thousand children, a slightly decreasing rate since 2005. Based on the abuse categories listed previously, data indicated that neglect is the most common maltreatment type, followed by physical, sexual, and psychological (emotional) abuse, respectively. Four-fifths (78.3%) of child maltreatment victims were neglected, 17.8 percent were physically abused, 9.5 percent were sexually abused, 7.6 percent were psychologically maltreated. These percentages add to more than 100.0 percent because a child may have suffered from more than one type of maltreatment. Concerning the characteristics of perpetrators, eighty percent (80.9%) of them were parents, 6.3 percent were relatives other than parents and 4.3 percent were unmarried partners of parents. Perpetrators of an unknown relationship accounted for 2.8 percent and “other” relationship accounted for 3.9 percent. The remaining relationship categories each accounted for less than 1 percent. According the data, nearly two-fifths of victims were maltreated by their mother acting alone. One-fifth of victims were maltreated by their father acting alone. Eighteen percent (18.0%) of victims were maltreated by both parents.

One-third of all FFY 2009 unique victims were younger than 4 years. One-fifth of victims were in the age group 4–7 years. Children younger than 1 year had the highest rate of victimization at 20.6 per 1,000 children of the same age. Victims with the single-year age of 1, 2, or 3 years old had victimization rates of 11.9, 11.3, and 10.6 victims per 1,000 children of those respective ages in the population. In general, the rate and percentage of victimization decreased with age.
CHILD MALTREATMENT: SUBTYPES & OTHER FACTORS

The importance of subtype differences have been highlighted in several studies when the presence of multiple subtypes was assessed concurrently. The deficits in the social development outcome of children who have suffered from different subtypes of maltreatment vary: neglected children are reported to have fewer reciprocated friendships and more conflicts in relationships (Bolger, Patterson, & Kupersmidt, 1998), physically abused children tend to have lower self-esteem, and more peer relationship difficulties, with more frequent and more chronic abuse linked with more severe outcomes (Bolger et al., 1998). Emotionally abused children were less likely to have close, reciprocated relationships with best friends (Bolger et al., 1998). In order to describe maladaptive outcomes, researchers have used the concept of internalizing versus externalizing behaviors. The term “externalizing problems” refers to difficulty with emotional regulation that involves expressing emotions in uncontrolled ways, such as by lashing out in impulsive anger or attacking other people or things. On the other hand, “internalizing problems” refer to difficulty with emotional regulation that involves turning one’s emotional distress inward, as expressed by feeling excessively guilty, ashamed, or worthless (for a review, see Berger, 2008).

Manly, Kim, Rogosch, and Cicchetti (2001) revealed the various developmental outcomes attributed by different subtypes of maltreatment: Neglect was associated to elevated internalizing symptomatology and withdrawal, physical abuse on the other hand was associated to externalizing symptomatology and aggression. Sexually abused children also exhibited more externalizing symptomatology and aggression than did nonmaltreated children, whereas emotional maltreatment generally yielded fewer reports of maladaptive outcomes compared to other maltreatment types. Therefore, it is well established that the category of maltreatment leads to different levels of developmental deficits, and further investigation concerning the covariance between multiple maltreatment risk factors on child development is urgently needed. (Berger, 2008)

Frequently, maltreatment is not an isolated event but rather a chronic experience for children who are maltreated and neglected. Furthermore, children who have been maltreated often experience multiple forms of maltreatment within the time period (Manly et al., 1994). Research has found that within all the factors above mentioned chronicity is a particularly
robust dimension in predicting peer rejection and aggression (Bolger & Patterson, 2001). In addition to chronicity, onset timing of maltreatment is an important factor relating to the impact of children’s experiences on their self-perceptions and relationships with peers. Early onset of maltreatment has been related to impairments in self-concept and has moderated the effect of emotional maltreatment on peer relationships (Bolger et al., 1998). The interaction between severity and frequency of maltreatment has emerged as a significant predictor of maladaptation as well. (Manly et al., 1994)

**Effects of Early Family Experience on Social Development**

Children first acquire skills for interacting with peers within the family. Parents influence children’s peer sociability both directly, through the attempts to influence children’s peer relations, and indirectly, through child-rearing practices and play behaviors (Ladd & Pettit, 2002). There are many ways parents can foster children’s competence— for example, through warmth and sensitivity to children’s needs; by serving as models and reinforcers of mature behavior; by using reasoning and inductive discipline; and by guiding and encouraging children’s mastery of new skills. Many studies show that different child-rearing styles can lead to different types of parent-child relationship. It is known that firm but patient parents tend to have kids who comply more than children of harsh and impatient parents’ children (Stormshak, Bierman, McMahon, & Lenguna, 2000).

Attachment theory is the theoretical framework that has been most commonly applied to the study of child maltreatment because of its focus on the importance of the parent-child attachment relationship as a prototype for later relationships. Using the principles of attachment theory, researchers have been able to develop a greater understanding of the negative outcomes commonly found for maltreated children. One such outcome, problematic social development, which may be the most commonly noted characteristic of maltreated children, is the focus of the present investigation. The child’s “internal working model” of self, other, and relationships also develops through the attachment relationship (Bowlby, 1969; Bowlby, 1973; Bowlby, 1980). That is, “an infant who experiences a secure attachment relationship is thought to internalize a sense of others as available and of the self as worthy of attention and care” (Mueller & Silverman, 1989). The child may then approach
later interactions with peers with the expectation that they will be enjoyable and that others will be responsive to them.

Parents who are abusive or neglectful of their child’s needs provide an extreme form of unresponsive and insensitive caretaking that inevitably interferes with the child’s achievement of positive, secure family relationships early on. As a result, maltreated children commonly form insecure attachment relationships with their caregivers (For a review, see Riggs, 2010). Because of the relationship between security of attachment and the development of social competence, maltreated children are at risk for having difficulties in later social interactions with peers. In addition, children who are maltreated are often raised in chaotic and disorganized home environments with few social supports outside the family (Cicchetti, 1996). Consequently, they are likely to suffer from social isolation as well as poor attachment. A lack of contact with others prevents these children from having the opportunity to develop social interaction skills through experience, making interactions with peers even more challenging.

**Effects of Child Maltreatment on Social Development**

Previous research has shown that maltreated children are viewed as being less socially competent and are likely to have greater difficulty initiating and maintaining relationships (Bolger et al., 1998). Specifically, poor parenting in maltreating families relates to difficulty in maltreated children’s attachment relationships and maladaptive representations of caregivers that therefore are associated with difficulties in peer relationships (Shields, Ryan, & Cicchetti, 2001). Clearly, positive family relationships and secure attachment to caregivers are associated with adaptive, competent peer relationships, whereas dysfunctional family relationships and insecure attachment relationships are associated with maladaptive and less competent peer relationships (Cicchetti, Lynch, Shonk, & Manly, 1992).

In comparison with their nonmaltreated agemates, children who experienced maltreatment during infancy–toddlerhood were nonetheless found to have significantly more externalizing symptoms and to be perceived as more aggressive and less cooperative by their peers (Manly et al., 2001). Moreover, the severity of emotional maltreatment and/or neglect experienced in infancy–toddlerhood predicted middle childhood externalizing symptoms, aggressiveness as perceived by adults and peers, lower ego control, and lower ego resilience.
even after the severity of all other types of maltreatment occurring subsequently were considered. Thus, this very early maltreatment signifies extreme risk for later successful adaptation (Manly et al., 2001). Maltreated children had more behavior problems and were more aggressive, more withdrawn, and less cooperative compare to their nonmaltreated counterparts (Bolger & Patterson, 2001). These behavior and personality problems displayed by maltreated children are over and above the impact of poverty. Aforementioned factors are all important to the evaluation of impact of child maltreatment regardless of poverty level.

Evidence also showed that when the maltreatment happened during preschool age, victims suffered from worsened social skills to communicate with peers (Alessandri, 1991), which may have resulted in increased anger, anxiety, and self-doubt (Crittenden, 1992). Children who have not had their needs attended and responded to sensitively may be less likely to develop the capacity to respond to the needs of others with empathy since the preschool period is one in which children are developing early perspective-taking and empathy skills (Crittenden, 1992). It is also noted that maltreatment onset in infancy-toddlerhood or preschool was related to more maladaptive functioning than onset during the school-age period (Manly et al., 2001). When we combine the finding with the fact that more than half of maltreatment happened before the age of 7, it is particularly important for us to put the research emphasis on the children who have been maltreated at an early age.

When contrasting normal children to maltreated children, there is variability in experience and outcome for both groups. However, previous research has showed that the outcome of maltreatment on child development varies significantly (Salzinger, 1999), and this heterogeneity results from the interaction of many factors such as the features of the maltreatment, perpetrator, and the characteristics of the child. Moreover, researchers have begun to consider how the socioeconomic and physical environments in which the child functions may influence his or her experience of child maltreatment (Gephart, 1997). Children’s ecological contexts may serve as risk factors for experiencing child abuse and neglect. Contextual factors, including being from low socioeconomic household, having several closely spaced siblings, and living in an impoverished community have been noted as additional risk factors for being maltreated (Cicchetti, Toth, & Rogosch, 2000). Furthermore, researchers have heightened interest in understanding how the various contexts in which children live may influence the effects of maltreatment when it has already occurred.
Effects of School Experience on Social Development

While family relationships are critical to cognitive and social development, school is enormously important in promoting academic and social skills. Attendance in elementary school provides a period in development where peers are influential and relationships among children are central. Social competence is advanced through cooperative play and also observed through social networks. Schools provide more chance for children to experience learning. This includes the learning of knowledge, reasoning, problem solving, and social/moral understanding. Research looking at schools as complex social systems—teachers, peers, school setting—all these components combined provide important insights.

During the school years, children’s understanding of friendship becomes more complex and psychologically based. Friendship has become a mutually agreed-on relationship in which children like each other’s personal qualities and respond to one another’s needs and desires. Since friendship is now a matter of both children wanting to be with each other, getting it started takes more effort than before. At this period, peer acceptance becomes an important issue for children and their social development. Peer acceptance refers to likability—the extent to which a child is viewed by a group of friends or classmates, as a worthy social partner. It differs from friendship in that it is not a mutual relationship. Rather, it is a one-sided perspective, involving the group’s view of an individual. In spite of the distinctiveness between friendship and peer acceptance, there are some social skills that contribute to friendship which also enhance peer acceptance.

Consequently, better accepted children have more friends and more positive relationships with them (Gest, Graham-Bermann, & Hartup, 2001). As with friendship, peer acceptance contributes uniquely to children’s adjustment.

Through the lens of peer acceptance, children could be divided into four categories: popular children, rejected children, controversial children, and neglected children. Basically the definition of each category is their reported likability through peer nomination. Generally speaking, popular children are those who get many positive votes; rejected children are those who get many disliked votes; controversial children are those who get a large number of both positive and negative votes; neglected children are seldom chosen, either positively or negatively.
A great deal of past research has shown that maltreated children are at higher risk of being rejected by their peers than the nonmaltreated counterparts (Bolger et al., 1998; Salzinger, Feldman, Ng-Mak, Mojica, & Stockhammer, 2001). For example, Dodge, Pettit, and Bates (1994) demonstrated in their 5-year (kindergarten to 4th grade) longitudinal study of children who were assessed for physical maltreatment in their first 5 years of life. Classmates had less preference for maltreated children than other children in every year of the study, and problems escalated over time. Rogosch and Cicchetti (1994) also found that teachers perceived maltreated children, particularly physically abused children, as lower in social competence and social acceptance and higher in externalizing behavior problems. Peers were more likely to actively withdraw from or reject maltreated children as well.

**THE MEDIATING ROLE OF AGGRESSIVE BEHAVIOR**

In the previous studies, maltreated children evidence heightened levels of both verbal and physical aggression in peer interaction, and this aggressiveness is particularly prominent among physically abused children (Hoffman-Plotkin & Twentyman, 1984). Not only are maltreated children more aggressive, but also aberrant patterns of social behavior have been detected. Maltreated children tend to respond aggressively to both friendly initiations as well as to distress in peers and to intermingle attacking and comforting behaviors (Howes & Eldridge, 1985).

Although parent–child interactions set the stage for the formation of peer relationships, children’s peer relationships are often more direct outcomes of their social behaviors and related competencies. Children who lack social competence by demonstrating aggression or low prosocial behaviors are more likely to be actively disliked by classmates. The lack of social skills in these children is often hypothesized to originate partly from a lack of opportunities to acquire appropriate skills within the home (Dodge, Pettit, Bates, & Valente, 1995). This suggests that children’s own behaviors when interacting with peers act as the mechanism or mediator that account for the links between maltreatment by parents in the home and children’s standing with their peers.

There is evidence that children’s behaviors in the classroom are associated with peer standing and maltreatment. Specifically, aggression, such as hitting or name-calling, has been associated with negative peer status. Children who engage in physical/verbal aggression
often show impulsive and disruptive behavior when dealing with peers, which often results in dislike and avoidance by others. Studies have shown that 40–50% of rejected children are physically aggressive (Rubin, Bukowski, & Parker, 1998). The fact that children’s behaviors with peers follow from their experiences at home makes understanding the possible mediating role of aggression in the association between child maltreatment history and social acceptance critical.

**Research Objectives**

In the present investigation, the primary goals are to address the effects of maltreatment history on children’s social behaviors, specifically their aggressive behaviors, and on children’s social acceptance, specifically their peer likeability. Also, since children’s behavior especially aggressive behavior could have a mediating effect on the association between maltreatment history and their peer likeability, the examination of whether aggressive behavior serve as a mediator will be performed as presented in the model (see Figure 1).

![Figure 1. Mediating model of maltreatment on peer liking.](image)

To specify, the current study will determine if there is an effect of maltreatment history on (1) peer liking score, and (2) aggressive behavior. Subsequently, the possible mediating role of aggressive behavior will be addressed only when the previous effects are established, which is indicated in the model by alternating the existing direct pathway (1) from maltreatment history to peer liking to the indirect pathway (2+3) from maltreatment history through (2) aggressive behavior to (3) peer liking.
HYPOTHESES

Based on the research objectives we drew from literature, there are 5 primary hypotheses in the current study:

1. Compared to their classmates, children with a history of maltreatment will be more aggressive.

2. Physically abused children will perform more aggressive behavior than both neglected and control groups.

3. Compared to their classmates, children with a history of maltreatment will be less liked by their peers.

4. Children who were more aggressive will be rated as less liked.

5. Aggressive behaviors will be examined as potential mediators of the association between maltreatment history and peer likeability. Specifically, children’s aggressive behavior will mediate the association between maltreatment history and peer liking score.
CHAPTER 2

METHOD

PARTICIPANTS

This study used archival data from the Child Friendship Project (Keil & Price, 2009; Price & Glad, 2003). The sample from this study consisted of 142 kindergarten and first grade children of mixed ethnicities, some of whom had experienced some form of maltreatment. Children in the sample were between the ages of 4 and 7, with an average age of 5.4 years old. The ethnic breakdown of the sample was 50.7% Caucasian, 23.9% African American, 16.2% Latino, 4.9% multiracial, 2.8% half African American/half Hispanic, and 1 Vietnamese or Native American (see Figure 2). The maltreatment sample included 76 children who were either neglected or physically abused and neglected. Sixty-six non-maltreated children represented the comparison group. Maltreated children were identified through the county social service agency’s reports of having experienced at least one substantiated incidence of maltreatment within the year prior to the study.

![Ethnicity (N=142) chart]

**Figure 2. Ethnicity of sample.**

The comparison group was recruited from fliers advertised throughout the neighborhoods in which families in the maltreatment group resided, as well as from welfare offices, libraries, and other public places. Fliers advertised interest in examining social
adjustment of children in kindergarten and first grade. Families interested in participating who had prior involvement with social services were excluded from the study. Descriptive information of background characteristics is provided in Table 1.

### Table 1. Descriptive Information of Background Characteristics

<table>
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<th>Neglected</th>
<th>Physical Abused</th>
<th>Comparison</th>
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<tbody>
<tr>
<td>Male</td>
<td>23</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>14</td>
<td>33</td>
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<tr>
<td>Totals (N=142)</td>
<td>48</td>
<td>28</td>
<td>66</td>
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Case file information was then coded by type of maltreatment using the classification system developed by Barnett, which determines guidelines for what constitutes specific subtypes of maltreatment (i.e. physical, neglect, sexual, etc.), as well as other qualitative characteristics. The cases were coded as having either substantiated or unsubstantiated cases of maltreatment. Cases of neglect included failure to provide, and lack of supervision. Maltreated children had been removed from biological parent’s home at least once but had all been returned to live with at least one biological parent for a minimum of 6 months prior to data collection.

### PROCEDURE

After receiving a list of those maltreating families that met the study’s criteria, a letter was mailed to their homes. Families were then contacted by phone to ask them to participate in the study and to set up a home interview. Interviews were scheduled over the phone for those eligible comparison families who responded to flyers. Trained graduate and advanced undergraduate students went to the homes of those families agreeing to participate and administered numerous parental and child measures for the larger longitudinal study. For purposes of this study, the demographic questionnaire filled out by the parent was used, and at this time, the parent was asked for the child’s current school and teacher name. Interviewers and comparison families were blind to the nature of the maltreatment hypotheses.

Letters were then sent to the principals of the subjects’ schools asking for permission to contact the teacher. After receiving the principal’s permission, each subjects’ classroom
teacher (who were all females) was mailed a consent form and the Taxonomy of Problematic situations measure. Measures were not mailed until the child was a student of the teacher for at least six months of the school year. Once the teacher completed the measure, she returned it in the mail. Teachers were paid $15.00 for completing this measure (as well as three additional measures for the larger study). Teachers and principals were blind as to the nature of the maltreatment hypotheses.
CHAPTER 3

MEASURES

MALTREATMENT CLASSIFICATION SYSTEM

Case files were coded by the degree of evidence for maltreatment, the time period of maltreatment incident(s), the source of the first report, a description of the first report, a description of the incident by the social worker, family members involved, the suspected perpetrator, and a description of services rendered to the families for each incident.

Each report in the case file that was classified as either “substantiated” (i.e. confirmed evidence of maltreatment) or “unsubstantiated” (i.e., strong suspicion of maltreatment) was coded according to the presence or absence of each subtype of maltreatment. Reports for which there was no real suspicion (i.e. “unfounded”) were not coded. One primary coder who was accustomed to procedures and classifications of the department of social services coded the case information. A second coder assessed reliability of coding on 18% of the overall cases. Cohen’s kappa statistic was calculated for each subtype of abuse. The kappa values for the different subtypes of maltreatment were as follows: .97 for physical abuse, .98 for failure to provide, and .96 for lack of supervision. The latter two categories were combined to represent general neglect.

TEACHER RATINGS OF SOCIOMETRIC STATUS

This instrument was developed to simulate peer sociometric nominations for students for whom such nominations were unobtainable. They are asked to imagine that each class member responds by nominating three other classmates who fit the descriptor.

They then rank the target child as:

1. Top 15% (one of the kids with the most nominations)
2. Top 50% (more than the average)
3. Right in the middle (average)
4. Bottom 50% (less than the average)
5. Bottom 15% (fewer nominations than most other would get)
Next, Z-scores were calculated by assigning a Z-score commensurate with the percentile ranking given by the teacher:

1.  $Z = 1.44$
2.  $Z = .455$
3.  $Z = 0$
4.  $Z = -.455$
5.  $Z = -1.44$

**SOCIAL PROBLEMS**

In order to measure social behavioral problems, a widely used measure for the assessment of children’s social skill deficits was administered. The Taxonomy of Problematic Situations Questionnaire or TOPS (Dodge, 1985) was filled out by each subject teacher. Teachers were asked to rate how much of a problem each situation presented for the child on a scale from 1 to 5, with 1 = never a problem; 2 = rarely a problem; 3 = sometimes a problem; 4 = usually a problem; and 5 = almost always a problem.

Six problematic behavior types have been included: (a) Peer group entry (i.e. when a child attempts to initiate inclusion into a group); (b) Response to peer provocation (i.e. when a child responds to an ambiguous provocation by a peer); (c) Response to failure (i.e. when a child loses a game against a peer); (d) Response to Success (i.e. when a child has won a game against a peer); (e) Social norms (i.e. when a child is expected to share a toy with a peer); and (f) Teacher expectations (i.e. when a teacher has established classroom social norms).

In order to assess aggressive behaviors of maltreated children, two subscales, composed of 8 items each, were added to the TOPS including: (a) Proactive Aggression (i.e. this child uses physical force or threatens to use force in order to dominate other kids) (see Table 2); (b) Reactive Aggression (i.e. when a peer accidentally hurts this child, such as by bumping into him or her, he or she overreacts with anger and fighting) (see Table 3). For the current study the two categories of aggression were combined to create a general aggression score by summing the total score of Proactive and Reactive Aggression items. The Cronbach Alpha coefficient for the Reactive aggression scale was .96, for the Proactive scale it was .93, and for the total combined scale it was .97. Thus, the aggression scale possessed high internal consistency.
### Table 2. Proactive Aggression Items in TOPS

<table>
<thead>
<tr>
<th>Proactive Aggression Items in TOPS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This child will perform mean tricks on other children and then laugh afterwards.</td>
</tr>
<tr>
<td>This child gets other kids to gang up on a peer that he or she does not like.</td>
</tr>
<tr>
<td>This child belittles peers in an attempt to look good.</td>
</tr>
<tr>
<td>This child threatens or bullies others in order to get his or her own way.</td>
</tr>
<tr>
<td>This child takes the possessions of others and uses force (or threatens to use force) if the peer attempts to retrieve the possessions.</td>
</tr>
<tr>
<td>This child uses physical force (or threatens to use force) in order to dominate other kids.</td>
</tr>
<tr>
<td>This child initiates taunting and making fun of other children.</td>
</tr>
<tr>
<td>This child coerces other children into doing things for him or her.</td>
</tr>
</tbody>
</table>

### Table 3. Reactive Aggression Items in TOPS

<table>
<thead>
<tr>
<th>Reactive Aggression Items in TOPS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a peer takes an object from this child, he or she gets angry and will use force to retrieve the object.</td>
</tr>
<tr>
<td>When a peer accidentally hurts this child (such as by bumping into him or her), he or she overreacts with anger and fighting.</td>
</tr>
<tr>
<td>When a peer ignores this child, he or she gets angry and either threatens the peer or strikes out at the peer.</td>
</tr>
<tr>
<td>When a peer refuses to play with this child, this child gets angry and threatens the peer.</td>
</tr>
<tr>
<td>When this child has been teased or threatened, he or she gets angry easily and strikes back.</td>
</tr>
<tr>
<td>When this child makes a request of a peer and the peer refuses, this child gets angry and either threatens the peer or strikes out at the peer.</td>
</tr>
<tr>
<td>When a peer refuses to play with this child, he or she gets angry and either threatens the peer or strikes out at the peer.</td>
</tr>
<tr>
<td>When a peer expresses anger at this child.</td>
</tr>
</tbody>
</table>
PLANNED ANALYSES

To address the hypotheses of this investigation, Analyses of Variance (ANOVA) were used to test for differences between maltreated and non-maltreated children and differences between subtypes of maltreatment. In determining the relationship between social behavior and peer status, correlation and regression were used to examine the relation between aggressive behavior and levels of peer social acceptance. To examine the role of aggressive behavior in mediating the relation between maltreatment and levels of social acceptance, a series of multiple regression analyses were performed, following the recommendations of Baron and Kenny (1986).
CHAPTER 4

RESULTS

EFFECT OF MALTREATMENT HISTORY ON AGGRESSIVE BEHAVIOR

To investigate the association of maltreatment history and expressed aggressive behavior, an ANOVA test with aggressive behavior score as the dependent variable and maltreatment history as the independent variable was performed. Univariate analyses revealed a significant effect of maltreatment history on aggressive behavior scores \[F (2,141) = 9.070, p<.001\]. That is, compared to the comparison group, maltreated children performed significantly more aggressive behaviors. Also, pairwise comparisons showed that the physically abused group was rated significantly more aggressive than the neglected group \((p<.05)\), and the control group \((p<.001)\). The results showed that physically abused children performed more aggressive behaviors in school. However, the difference between neglected children and control group was not significant \((p=.072, \text{ns})\), which indicates that children who suffered from the history of neglect did not act more aggressively than non-maltreated children (see Figure 3).

To estimate the influence of maltreatment on peer acceptance, an ANOVA test was conducted with peer likeability as the dependent variable and maltreatment history as the independent variable. Univariate analyses revealed a significant effect of maltreatment history on children's peer acceptance \[F(2,141)=7.140, p<.01\]. Compared to the non-maltreated comparison group, neglected and physically abused children were less liked, that is to say maltreated children were less accepted by peers. In the pairwise comparison test, the difference between the neglected group and the physically abused group was not significant \([p=.177, \text{ns}]\). The results indicate that maltreated children are less liked by peers in school regardless of which type of maltreatment they experienced.

In order to investigate the association between aggressive behavior and peer likeability, a correlation analyses was performed. A moderately negative relationship was found significant between aggressive behavior and net peer liking score \([r=-.611, p<.01]\),
Figure 3. Effect of maltreatment history on peer likeability.

which suggests that the more aggressive children are the less they are liked by their peers. In order to further understand the relationship between aggressive behavior and peer liking scores we utilized linear regression analyses, which revealed that the effect of aggressive behavior contributed to lower peer liking scores \([F(1, 141)=83.3, p<.001]\). Aggressive behavior served as a significant factor in predicting peer likeability in school. The strong negative association between aggression and peer likeability indicates that children who are more aggressive are less liked by their peers (see Figure 4).

The purpose of current study was to investigate the social adjustment of maltreated children at school so the factors influence peer likeability were our highest interest. As we found in above mentioned results, maltreatment history is associated with lower peer likeability and aggression also plays a significant role in children’s peer acceptance.
In order to investigate the possible mediating role of aggression, a four-step multiple regression modeling method described by Baron and Kenny (1986) was used to test aggression as a possible mediator influencing the association between peer liking score and maltreatment history. The first step was to perform a regression analysis examining the association between the initial variable (maltreatment history) and the outcome variable (peer liking score). In the regression model where maltreatment history served as independent variable and peer liking score as dependent variable, maltreatment history accounted for 9% of the variance in peer liking score, \[ F(1, 141) = 14.208, p < .001 \], which is consistent with our finding from ANOVA performed earlier, showing that maltreatment history plays an important role in predicting peer likeability.

Next, the regression model with maltreatment history as independent variable and aggression as dependent variable was performed in order to examine the relationship between the initial variable (MH) and the mediator (AB). The result revealed that maltreatment history is a strong predictor of aggression, \[ F(1, 141) = 17.661, p < .001 \].

In step 3, the association between the mediator (AB) and the outcome variable (PA) was performed utilizing the regression model with aggressive behavior as independent
variable and peer liking score as dependent variable. However, it was critical to first control for the effect from our initial variable (MH) in order to prevent the possibility that the association between the mediator and the outcome variable was caused by the initial variable. The result showed that aggressive behavior was a strong predictor to peer liking score controlling for maltreatment history, \[ F(1, 141) = 65.894, p < .001 \]. This confirmed that the mediator was strongly associated with both the initial variable (maltreatment history), and the outcome variable (peer liking score) controlling for the effect of the initial variable.

The last step was to look back at the initial model with maltreatment history as independent variable and peer liking score as dependent variable. However, this time, the effect of the mediator (aggressive behavior) was controlled for to test if it accounted for a critical amount of variability, thus decreasing the significance of maltreatment history as a predictor. In other words, the regression model performed in Step 4 was with maltreatment history as independent variable and peer liking score as dependent variable, controlling for the effect of aggressive behavior. As expected, maltreatment history was no longer significantly associated with peer liking score \[ F(1, 141) = 2.497, p = .116, \text{ns} \], while children’s aggressive behavior was associated with peer likeability, indicating aggressive behavior served as a mediating variable in explaining one way maltreatment can lead to lower peer likeability. To demonstrate the effect of the mediator it is critical to note that the variance in peer liking score explained by maltreatment history was decreased from 9% (in Step 1) to 1% (in Step 4). Whereas the mediator, aggressive behavior, a significant predictor, accounted for 29% of the variance in peer likeability, \[ F(1, 141) = 65.894, p < .001 \]. More specifically, findings showed that maltreatment had a significant indirect association with peer likeability via children’s aggressive behaviors.

**THE EFFECT OF MALTREATMENT SUBTYPES**

In order to test if the mediating role of aggressive behavior only happens with one subtype of maltreated children, the above mentioned analyses were performed by isolating either the physically abused group or the neglected group to compare with the control group. These results demonstrated that both analyses result in the same pattern as before with aggressive behavior mediating the association between maltreatment history and peer liking score. As mentioned earlier, even though there were group differences between neglected
children and comparison group children on peer liking score \( F (1,113) = 6.566, p<.05 \), there were no differences found between neglected children and control group on aggressive behavior \( F (1, 113) = 3.773, \text{ ns} \). However, surprisingly when we tested the regression model where peer liking score served as the dependent variable, and with maltreatment history (in this case, neglected or control) and aggressive behavior both served as independent variables controlling for each other, aggressive behavior become a significant predictor \( F (1, 113) = 47.271, p<.001 \), whereas maltreatment history become insignificant \( F (1,113) =3.079, \text{ ns} \). The mediating role of aggressive behavior appears to remain in the comparison of each subgroup of maltreated children, which support the hypotheses that aggressive behavior mediates the association of maltreatment history and peer liking score.
CHAPTER 5

DISCUSSION

The findings of this investigation offer evidence that the experience of child maltreatment is related to aggression and social maladjustment. The results support the hypothesis that maltreated children were significantly more aggressive, and less liked. In addition, children’s aggressive behaviors mediated the association between maltreatment and being liked or disliked by others, suggesting that maltreated children engaged in more aggressive behaviors with their peers, which, in turn, lead to being disliked by their classmates.

In the current study maltreatment history is strongly associated with more aggression, which is consistent with previous studies that showed that maltreated children engaged in more aggressive behaviors in school, heightened levels of aggressive behavior therefore accounted substantially for the increased risk of peer rejection (Bolger & Patterson, 2001; Salzinger et al., 2001). These findings are cause for concern, particularly in light of evidence that aggression and peer rejection are significant predictors of subsequent adjustment problems, including psychopathology, delinquency and criminality, and low educational attainment (Kupersmidt, Coie, & Dodge, 1990). In particular, research suggests that aggression and peer rejection in combination are especially potent predictors of later problems. The present findings contribute to knowledge in this area by identifying maltreatment by parents or caregivers as a significant predictor of both high levels of aggression and peer rejection.

Why would abuse, neglect, or both lead to increases in children’s aggressive behavior and rejection by peers? One potentially important mechanism is through parent–child interactions that encourage children’s coercive behavior while failing to promote their prosocial skills. As documented by Patterson and colleagues (Patterson, 1995), parents’ failure to use appropriately contingent and nonphysical discipline is an important predictor of children’s subsequent coercive and antisocial behavior. By definition, abuse and neglect constitute patterns of parenting that are harsh and punitive, as well as unresponsive to
children’s behavior and to their developmental needs. Thus, both abuse and neglect are likely to contribute to children’s propensity to use coercive, aggressive behaviors in their interactions with others, which may in turn contribute to them becoming disliked and rejected by peers.

The continuities in relationship disturbances from the family to the peer group at school indicate that maltreated children, particularly those who are aggressive, are in jeopardy of ongoing interpersonal adjustment problems. Parker and Asher (1987) have reviewed research supporting the connection between peer rejection and aggression and later maladjustment, particularly dropping out of school and criminality. The present research supports the role of family relationship disturbances as a source contributing to this pathway leading to later maladjustment. The continuity in relationship problems of maltreated children evolving in both the family and peer context may also contribute to risk for forming later unstable marital relationships and repeating dysfunctional patterns of childrearing (Crittenden, Partridge, & Claussen, 1991). The interpersonal difficulties evidenced in both family and peer relations and what they bode for future relationships call attention to the need for intervention services for maltreated children in order to prevent an escalating course of failure in relationships and maladjustment.

In addition, the subcategories in child maltreatment also play a role in the effect as noted in previous studies (Manly et al., 1994; Manley et al., 2001), physically abused children perform more aggressive behaviors compared to neglected children. The existing literature suggests that children’s reaction to perceptions of anger and aggression may contribute to their use of aggressive strategies. Physically abused children may be less likely to learn nonviolent methods for resolving conflict, and they may be imitating aggressive responses through modeling (Dodge et al., 1994). In a study with older children, Dodge et al. (1995) found that not only were physically abused children 4 times more likely to manifest clinically elevated levels of externalizing symptomatology but they also exhibited deficits in social information processing that explained the relationship between physical abuse and externalizing behavior. Physically abused children have been shown to be hypervigilant to hostile stimuli, more likely to employ hostile attributions to others, and more likely to respond aggressively in ambiguous situations (Dodge et al., 1995). Specifically, the
association between maltreatment and aggression is even stronger when the child is physically abused.

It has also been suggested in previous studies that experiencing maltreatment early in life was predictive of impaired emotional regulation (Bolger & Patterson, 2001). The findings converge with prior research showing additive effects of multiple maltreatment types on detrimental effects of maltreatment occurring early in life on later behavioral/psychological adjustment (Kaplow & Widom, 2007). The association from maltreatment history through heightened aggressive behavior to worsened social likeability might result from the cognitive defect of maltreated children in their emotional regulation process. Adding emotion regulation in the model could lead to further understanding of maltreatment and its influences on maltreated children’s later social adjustment.

It is suggested by Kim and Cicchetti (2010) that children who were maltreated during infancy and toddlerhood are more likely to develop insecure attachment relationships with their caregivers compared to those who were maltreated during preschool or older age. They claimed that insecure attachment relationships with caregivers will lead to difficulties with emotion regulation, which may in turn place the youngsters in pathways to behavioral maladjustment and problematic peer relations.

The significance of the onset timing of maltreatment in child development is highlighted by Keiley, Howe, Dodge, Bates and Pettit (2001) who found that early maltreated children are rated higher in externalizing and internalizing behavior problems, regardless of teacher or mother rating, than either the later or nonmaltreated children. The early onset of maltreatment also shows stable patterns of externalizing and internalizing behavior problems over time. Children who were maltreated early performed more problematic behaviors over each of the 9 years in the study than those who were maltreated later or not maltreated. A more complex picture emerges about the developmental trajectory of early and late maltreated children, which emphasizes the further investigation of onset timing as a risk factor in the association between maltreatment history and child development.

As mentioned earlier, from a social learning perspective, our findings suggest that the home environments of children who have experienced physical abuse are different from those that experienced only neglect, which may, in turn, account for differences in patterns of social information processing. Support for this explanation can be found in the literature
examining the characteristics of abusive and neglectful homes. Bousha and Twentyman
(1984) found that physically-abusive mothers attributed more negative intentions to their
children, and used significantly higher rates of verbal aggression as compared to both
neglectful and comparison mothers. Thus, the social interactions in these physically-abusive
families are characterized by a great deal of coercion and hostility towards others.

Although the current study did not detect the link between the experience of neglect
and aggression, it has been found by Manly et al. (2001) that neglected children display
higher externalizing symptomatology and aggression than do nonmaltreated children.
Combined with the effect of aggressive behavior as a mediator between maltreatment and
lower peer acceptance, it is critical in the future to further address the mediating role of
children’s behavior. From an attachment theory perspective, neglected children, whose needs
have not been met consistently, are likely to have formed representational models of their
relationships as unlikely to meet their needs and of themselves as unlovable (Rogosch &
Cicchetti, 1994; Shields, Ryan, & Cicchetti, 2001). Their neglect experiences may have
resulted in less nurturing, need-fulfilling interactions from others and therefore led to a
failure to communicate in an effective way. Aggressive and antisocial responses have been
documented for maltreated children (Patterson, 1995) which may in turn result in worsened
peer acceptance as well.

There is also research indicating that neglectful mothers have the lowest overall rates
of interaction with their children when compared to both physically-abusive and comparison
mothers (Bousha & Twentyman, 1984). Thus, the deficiency of interaction in these families
suggests that there is no consistent or adaptive interaction style being modeled for neglected
children. Furthermore, Manly et al. (2001) revealed that neglected children performed
elevated internalizing symptomatology and withdrawal as well. The same association
between neglect and withdrawal behavior has been found in various studies (Anthonysamy &
Zimmer-Gembeck, 2007; Bolger & Patterson, 2001). The association between withdrawal in
children and peer rejection is also found in previous studies, but this finding has generally
been found among older children (Coie, Dodge, & Kupersmidt, 1990). Rubin (1982) found
that withdrawn preschoolers and kindergarteners did not appear to be rejected by their peers.
However, by late childhood (about age 10–13), withdrawal becomes less acceptable and is
increasingly correlated with rejection (Younger, Gentile, & Burgess, 1993). To sum up, the
possible link between neglect, withdrawn behavior and peer rejection could be an alternative pathway revealing how child maltreatment influences children’s social adjustment. Although the mediating role of aggressive behavior was found in the current study, adding withdrawn behavior into the mediating model seems reasonable as the difference between physically abused children and neglected children was noted in various studies (Anthonysamy & Zimmer-Gembeck, 2007; Manly et al., 2001). The possibility of distinct cognitive structure within children who suffered from different types of maltreatment could be buried in their different behavioral symptomatology.

Additional research is clearly needed in order to answer the question of whether different maltreatment types result in unique processing patterns and in what social situations. At present there is insufficient knowledge regarding similarities and differences in the developmental sequelae of children who have experienced different forms of maltreatment.

**THE MEDIATING ROLE OF AGGRESSIVE BEHAVIORS**

The findings of current study confirmed the hypothesis that the association between maltreatment history and peer likeability is mediated by aggressive behaviors these children perform. Considering the heterogeneity of negative outcomes of child maltreatment, the social behaviors potentially might lead to impaired later social adjustment such as being more aggressive, more withdrawn, or less cooperative (Manly et al., 1994); aggressive behavior could be the critical social behavior affecting social adjustment. That is to say, when evaluating the possible development of certain maltreated children, aggression might be the critical factor indicating the likelihood of permanent impaired social adjustment despite what kind of maltreatment he/she suffered from.

As noted, aggression does not account for all the variability in the current study, which leads us to think about other social behaviors that could be added to our current model. The association between other possible factors in child maltreatment such as frequency, chronicity, and onset timing and the later social adjustment might need to be examined including aggressive behaviors as a possible mediator to better understand the mechanism of destructive influences of child maltreatment. The better we understand how child
maltreatment is linked to aggressive behavior, the more possible it is to develop a functional intervention pointing to the key factor influencing social maladjustment.

**LIMITATIONS**

From the methodological perspective, some limitations might be noted in the current study. First, the number of participants in the physically abused group is rather small, therefore, we were not able to compare more variables due to lack of power. Second, although the regression models we utilized to test mediation are described in many texts and often used (Baron & Kenny, 1986), this approach has some limitations, including the possibility of low power to detect effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). However, results supported our meditational hypotheses and were generally consistent with previous research with cross-sectional studies of similar age (Anthonysamy & Zimmer-Gembeck, 2007) and older children (e.g., Bolger & Patterson, 2001). Also, Anthonysamy and Zimmer-Gembeck (2007) has found in their study that maltreatment was associated with teacher reports of peer acceptance, but not with child reports from classmates, which is the reason only teacher ratings of peer likeability were used in the current study. It is suggested that teacher reported likeability is associated with a history of maltreatment via children’s behaviors with their classmates.

Moreover, it was found in previous studies that mother ratings are also a reliable way to evaluate the social behavior problems the children perform. Keiley et al. (2001) revealed in their investigation that regardless of the rating system the association between maltreated children and their social behavior problems is significant, but they also found inconsistency between teacher ratings and mother ratings of externalizing behavior problems. It is noteworthy that in the study they failed to present who the perpetrators were to the maltreated children and thus leave us with the possibility that mothers were the perpetrators so their rating of social behavior problems might be biased as a confounding to their other variables.

However, the direct self-report data from the children and the indirect data from the mothers might introduce certain perspective that are different from the teacher rating data (Anthonysamy & Zimmer-Gembeck, 2007; Keiley et al., 2001); comparing different sources of data might yield to new insight to our interest. Also we should bear in mind that in the
current study teacher rating data are used in the two outcome variables (aggression and peer likeability) so that inevitably means there is shared variance result from the rater that does not result from the actual association between aggression and likeability, which weakens the validity of this investigation.

**FUTURE DIRECTION AND IMPLICATIONS**

 Given the conclusion that children with a history of maltreatment are at risk for many social and cognitive problems, and that reactions from their peers are likely due to the maltreated children’s own heightened aggression, intervention programs are warranted as earlier suggested. Further, since possible reasons for their heightened aggression include the modeling of their own families’ behavior patterns, interventions may be more effective if directed at the parents as well as the children themselves. Perhaps programs in the social services area could be developed within a family therapy model where the circular nature of parent to child behavior is highlighted. As is often found, teaching the parents can sometimes affect children’s behavior even more than teaching the children directly. This study has provided further evidence of the complexity of abusive relationships and warrants a holistic approach to treatment.

 Based on the approach of social learning theory, providing new role models and offering more appropriate coping strategies might allow maltreated children to establish a whole new dynamic of social interaction, thus better adapting to the school system, and eliminating the potential of deleterious outcomes in their future social adjustment. From this perspective, the use of foster families in our child welfare system could be a possible way to help maltreated children. The current study brings new motivation to enhance the efficacy of current intervention and new insights to developing holistic therapy.

 As found in recent developed intervention methods, family-focused interventions may prove valuable both because they have the potential to address multiple problems in a structured way, and because the sustainability of treatment gains is highly contingent on the ecological context. There have been few rigorous evaluations, and more research is needed in this area. However, recent evidence suggests that an adapted form of multi-systemic therapy may prove effective for families where physical abuse or neglect of older children occurs (Swenson, Schaeffer, Henggeler, Faldowski, & Mayhew, 2010).
Detecting the mediating role of aggression in the association between child maltreatment and decreased social likeability inspires the intervention method focusing on children’s behavior in coping with problematic social situation. It is suggested that peer coping skills training (PCST) had a positive impact on social skills in socially withdrawn children, including those who have experienced maltreatment, and these skills were maintained at a two-month follow-up (Prinz, Blechman, & Dumas 1994). However, further investigation of the impact on other aspects of the children's mental health is needed to determine whether this intervention might improve other outcomes, particularly in the longer term.

The above mentioned intervention methods are all evaluated as rigorous and a further integrated intervention includes the foster care system, which is named Multidimensional Treatment Foster Care (MTFC). MTFC is designed to deliver intensive support to maltreated children, their foster caregivers and birth or adoptive parents. This therapeutic foster care program is based on social learning theory and incorporates parent training and consultation for foster parents, parent training for birth parents and individual therapy for children who have experienced maltreatment. In various evaluation of MTFC we consistently found positive outcomes (for a review, see Gold & Healey, 2012) which converge with the finding of current study, specifically, reduced delinquency in later life.

**CONCLUSION**

With the corroboration of other research, it is safe to say the current study provides convincing results that reveal the association between Child Maltreatment and Social Acceptance using Aggression at school as a mediator. From this work, a more complex ecological picture of the development of maltreated children can be drawn by adding other social behavioral factors and environmental factors to further complete the model. The new insights serve as an anchor for future research and as an explicit target for developing interventions focused on the particular patterns of social behaviors in maltreated children.
REFERENCES


