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PEER INTERACTIONS AMONG ITALIAN PRESCHOOL-AGE CHILDREN:
RELATIONAL AND PHYSICAL AGGRESSION, VICTIMIZATION, AND
SOCIOMETRIC STATUS

by

Shawna Jean Marshall

A thesis submitted to the faculty of

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in partial fulfillment of the requirements for the degree of

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As chair of the candidate's graduate committee, I have read the thesis of Shawna Jean Marshall in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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ABSTRACT

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Master of Science

This study examined social interactions between Italian preschoolers based upon sociometric status groupings. The sample consisted of 267 Italian preschoolers (mean age 64 months) taken from early childhood classrooms in southern Italy. Drawing on previous research, preschoolers' physical and relational aggression and physical and relational victimization as measured by peer nominations were analyzed. Structural equation modeling using *Mplus* was used to test the model, and SPSS 15 was used to run analyses of variance (ANOVAs) to examine the interaction between sociometric status and preschoolers' behaviors toward peers. Findings generally support previous research with American children as well as cross-cultural research regarding physical and relational aggression, victimization, sociability, and sociometric status groupings. Results indicate that popular children displayed high levels of social behavior, low levels of

aggression, and experienced little victimization, while rejected children demonstrated high levels of aggression and victimization and low levels of social behavior. The most striking finding was that controversial children, similar to rejected children, showed high levels of aggression and victimization. Gender differences indicated that boys were more relationally and physically aggressive and victimized than girls, with the exception of controversial status girls.

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Chapter I

Introduction

Among the study of peer relations, there has historically been an increasing concern about aggression and its many subtypes. Overt aggression, or physical aggression, is a type of general aggression which harms others through physical injury or the threat of injury, such as kicking, hitting, or threatening to beat someone up after school (Coie & Dodge, 1998). Generally, studies of childhood aggression have focused mainly on physical aggression to the exclusion of the other subtypes of aggression. Recently, however, Crick and colleagues have addressed relational aggression, a construct that is thought to be more prevalent in and pertinent to girls (Crick & Bigbee, 1998). While boys tend to use physical aggression, the purpose of relational aggression is to damage another's peer relationships, often through means such as social exclusion and spreading rumors (Archer & Coyne, 2005). Victimization has also become increasingly studied among children as researchers begin to understand the implications of aggression. Both physical and relational victimization contribute significantly to an individual's psychological and social maladjustment (Perren & Alsaker, 2006). In this paper, we will examine both physical and relational aggression, as well as physical and relational victimization as these constructs apply in early childhood.

Sociometric Status

A frequently employed measure of children's social adjustment is their standing with peers. Sociometric status ratings, conceptually based on the social preference and social impact of a child, give a unique view as to how well a child is interacting with peers. Social preference is determined by how frequently a child is mentioned by peers as

being liked or disliked. Social impact is determined by the sheer number of nominations received from peers. Using cut-offs based on standardized scores, children are assigned to the following groups: *popular* (receiving many like nominations); *rejected* (receiving many dislike nominations); *controversial* (receiving many like *and* many dislike nominations); *neglected* (receiving few like or dislike nominations); and *average* (children who do not meet criteria for the previous groups) (Nelson, Robinson, & Hart, 2005). Popular children tend to be sociable, while neglected children tend to show withdrawn and reticent behaviors, and are seldom involved in the peer group. Rejected children tend to be physically and relationally aggressive, while controversial children show sociable behaviors and also tend to be relationally aggressive (Newcomb et al., 1993). Statistical analyses show that these are separate categories, each loading on different factors (Coie & Dodge, 1983). Although most research using sociometric status ratings have been on children older than eight, recent studies on relational aggression show that behavioral differences between sociometric status groups are evident as early as preschool, and preschoolers are able to discern the social preference and impact of their peers (Nelson et al., 2005).

There has been little, if any, research to date focusing on the sociometric status of the victims of relational aggression. What has been done suggests that rejected children are likely to be the most physically and/or relationally victimized (Cillessen & Mayeux, 2004). Understanding the sociometric status of victims of relational aggression will increase peer researchers' awareness of behaviors associated with the perpetration of relational aggression as well as relational victimization. As a result, the body of peer

relation literature on relational aggression can be enhanced by adding an understanding of how sociometric status applies to the victims of relational aggression.

Peer Relations Research Among Italian Samples

The procedure of delineating aggression into subtypes, especially relational aggression, is a relatively recent endeavor in the peer relation literature, and little research has addressed this issue in other cultures. As a result, the purpose of the present study was to more closely examine relational and physical aggression, as well as relational and physical victimization, by sociometric status, in Italian preschool-age children. As little peer relation research has been conducted in Italy, information on Italy would be highly valued by many cross-cultural researchers. Additionally, Italy may be an ideal area to study subtypes of aggression to find diverse cultural similarities and differences, since bullying is thought to be more prevalent in Italy than in many other countries (e.g., Norway, England, Spain, or Japan; Genta et al., 1996). It may be that the higher prevalence of aggression is more normative in Italian culture. Based on previous research, it is plausible to expect higher rates of aggression and victimization in Italy than in the United States.

As a result, the present study was designed to not only extend findings from the United States to Italy, but also to add a victimization component. Additionally, few, if any, studies have used sociometric status to characterize the behaviors of Italian preschoolers. All of the above reasons made Italy a viable and potentially rewarding country to extend the understanding of certain subtypes of aggression in cross-cultural contexts.

Age Gaps

While relational aggression has received much attention in recent years, there are still significant gaps in the peer relational aggression literature. The majority of research has been conducted on relational aggression using middle childhood or adolescent samples. Although these studies provide a foundation, it is important to ascertain the veracity of these studies through a systematic evaluation of relational aggression. In order to further the body of literature, it is necessary to extend findings of relational aggression to other age groups, including young children.

In summary, the purpose of the present study was to fill research gaps including peer physical and relational aggression and physical and relational victimization as it relates to sociometric status. To meet this goal and to establish a foundation for this study, a review of the literature will be presented concerning the recent literature regarding sociometric status as it relates to relational and physical aggression and victimization. Research questions will be presented after the review of the literature.

Chapter II

Review of Literature

Sociometric Status

The use of sociometric status to measure social behavior extends from the 1930s to the present, although the ways of describing various sociometric status ratings have evolved over the years (Cillessen & Mayeux, 2004). Currently, sociometric status ratings are conceptually based on the social preference and social impact of a child and are used to create five status categories: average, popular, rejected, neglected, and controversial (Nelson et al., 2005). Despite sociometric status ratings having been used extensively for decades, few studies have examined aggression as it relates to sociometric status, and particularly few have examined the combination of aggression, victimization, and sociometric status. What research has been done, however, warrants consideration.

Sociometric status and physical aggression. Studies that examine sociometric status as it relates to physical aggression have consistently found that rejected children tend to be more physically aggressive than average children (e.g. Milich, Landau, Kilby, & Whitten, 1982). In a classic study, Dodge (1983) examined sociometric status in the context of aggressive and prosocial behaviors. Dodge found that popular children showed low levels of physical aggression and high levels of prosocial behavior, controversial children showed high amounts of both prosocial and aggressive behavior, and rejected children were the most physically aggressive (Dodge, 1983). As a group, rejected children tend to show high levels of aggression, impulsivity, uncooperative behavior, and low levels of prosocial behaviors (Cillessen, van IJzendoorn, van Lieshout, & Hartup, 1992), and tend to be socially awkward and insensitive to group norms (Cillessen &

Mayeux, 2004). Additionally, some evidence suggests that the more aggressive children are, the more rejected they are likely to be (Salmivalli, Kaukiainen, & Lagerspetz, 2000). Rejected boys are most likely to remain rejected one year later, showing some behavioral and sociometric status stability (Cillessen et al., 1992). However, it appears that rejected children have less accurate self-assessments than other children: they tend to minimize both aggressive and victimized experiences, and thus escape some of the loneliness and lowered self-esteem associated with peer rejection (Cillessen & Mayeux, 2004).

Sociometric status and relational aggression. Despite the relatively few studies considering the combination of physical aggression and sociometric status, there are even fewer studies focusing upon relational aggression and sociometric status. One advantage of these studies is that they consider both relational and physical aggression as they relate to sociometric status. For example, in North American middle childhood samples, DeRosier and Thomas (2003) and Crick and Grotpeter (1995) obtained similar findings in that they found that popular children tended to be lowest on both forms of aggression and highest on sociable behavior. In contrast, they also found that rejected children were considered by peers to be among the most physically and relationally aggressive children yet the lowest in their sociable behavior. Furthermore, controversial children were not only found to be as physically and relationally aggressive as rejected children, but also engaged in high levels of sociable behavior. Tomada and Schneider (1997) conducted similar analyses in a middle childhood sample in Italy and found much the same results. Tomada and Schneider's most striking finding is that controversial status children, who enjoy considerable social status with a portion of their peers, engage in a unique mix of aggressive and sociable behaviors.

In addition, other studies have considered how aggression and sociable behavior may combine to predict *peer-perceived popularity*, a measure of social visibility, in adolescence. Peer-perceived popularity is consistent with the traditional notion of popularity in the peer group—those who have significant social impact and status. Peer-perceived popularity contrasts with sociometric popularity, which identifies well-liked children. These two forms of popularity only modestly overlap, thereby demonstrating that many peer-perceived popular children are not universally well-liked. Peer-perceived popular children tend to be nominated as popular, but also as arrogant, dominant, and both relationally and physically aggressive (Cillessen & Mayeux, 2004). According to this research, the most visible and influential children are also aggressive towards their peers, showing that, as one researcher stated, “the often manipulative, Machiavellian nature of perceived-popular children’s social dealings cannot be called socially incompetent if the end result of their behavior – their high status – is taken as a measure of its effectiveness” (Cillessen & Mayeux, 2004, p. 12). It appears that peer-perceived popular children are savvy individuals, possessing social capital that allows them to manipulate their peers without experiencing retaliation. As a result, some scholars are beginning to refer to aggression as potentially adaptive behavior, since it serves these children so well. These findings with perceived-popular children parallel those obtained with controversial status children, and suggest that controversial status children may be similarly inclined in their social behavior.

Sociometric status and victimization. In addition to the research on aggression, a few studies have examined victimization within the context of sociometric status. Although we may see aggression being used in adaptive ways by controversial children,

studies consistently indicate that aggressive children are rejected by their peers (e.g. Goossens, Olthof, & Dekker, 2006; Warden & Mackinnon, 2003) and that most aggressive children experience victimization as a result of their behavior (Ray, Cohen, Secrist, & Duncan, 1997). Consistently, researchers find that in middle childhood, rejected children are most likely to be physically, verbally, and relationally victimized (e.g. Ray et al., 1997; Bjorkvist et al., 2001; Warden & Mackinnon, 2003; DeRosier & Thomas, 2003; Cillessen & Mayeux, 2004; Salmivalli et al., 1996). In contrast, popular children are seldom rejected by their peers, perhaps because they are viewed as initiators, verbally fluent, engaging in their behavior, and socially capable by their peers (Adams & Roopnarine, 1994). The victimization status of controversial children, however, has not been directly assessed in any study of which we are aware. Given controversial children's enhanced social status, they likely do not experience significant victimization, but this hypothesis is currently untested.

Sociometric status and behavioral correlated in preschool children. The studies of sociometric status and subtypes of aggression and victimization described above have been conducted with middle childhood or adolescent samples. To our knowledge, few studies have considered these associations with preschool samples. There is evidence, however, that preschoolers are capable of identifying age-appropriate relational and physical forms of aggression among peers. For example, Hart and colleagues (1998) found relational and physical aggression among Russian preschoolers, as reported by teachers and parents, while Crick and colleagues (1997) found relational and physical aggression among an American sample of preschoolers. Using both teacher and peer informants, Crick et al. (1997) also found that preschoolers were able to identify

relationally and physically aggressive behaviors among their peers. Additionally, Crick and colleagues (1999), using teacher reports, examined relational and physical victimization within a preschool sample. Although Crick et al. (1999) found that peer victimization occurred within the preschool sample, no research has relied on peers as informants for relational and physical victimization within the peer group. Additionally, although each of the studies mentioned examined physical and relational aggression or victimization, none used sociometric status to measure behavior and peer acceptance. As a result, one of the foci of this study is to use peer reports to identify relational and physical aggression and victimization within a preschool sample. To date, one study conducted by Nelson et al. (2005) has examined preschoolers' ability to correctly identify peer perpetrators of aggression using sociometric status. Nelson et al. (2005) found that rejected and controversial children demonstrated high levels of relational aggression, with popular children exhibiting high levels of sociable behavior and low levels of aggression (Nelson et al., 2005), which supports what has been found among middle childhood and adolescent samples. Although Nelson et al.'s (2005) study has added considerably to the research literature, it lacked the examination of relational and physical victimization that will be an integral part of the present study.

In summary, sociometric status has long been fruitful in examining behavioral predictions of peer acceptance. However, because of the scarcity of research combining aggression and victimization with sociometric status, further investigation is needed, particularly with preschool-age children. Accordingly, a study examining the interactions between physical and relational aggression, victimization, and sociometric status in a preschool sample has yet to be done. Additionally, although it is clear that relational and

physical aggression exists among Italian middle-school children, additional research is needed to identify unique interactions among preschoolers. As a result, the purpose of this study is to examine the combination of physical and relational aggression and victimization in the context of sociometric status among Italian preschool-age children. We expect to find that rejected children will be high on aggressive behavior, high on victimization, and low on sociable behaviors. Second, we anticipate that controversial children will have high levels of aggression, low levels of victimization, and high levels of sociability. Third, we expect to find that popular children will demonstrate few aggressive and more sociable behaviors, and to experience little peer victimization. Based on the importance of gender in relational and physical aggression (e.g. Crick & Bigbee, 1998; Archer & Coyne, 2005), we will also consider in our analyses how gender contributes to aggression, victimization, and sociometric status.

Chapter III

Method

Participants

Participants included 267 children (133 boys, 134 girls) affiliated with 13 early childhood classrooms in four schools located in an urban moderate-sized community in Southern Italy. The 13 classrooms had a mean of 20 children (range = 16 to 26). The children had a mean age of 64.04 months (girls = 63.31, $SD = 8.87$; boys = 64.78, $SD = 8.65$). The cultural background and ethnicity of the participants was very homogeneous with all but two children being indigenous Italians, and 87% of the children coming from two-parent intact families. In addition, 9% of the children's mothers had attended some college while 49% of the fathers had attended some college. The administrators of the cooperating schools did not allow the investigators to obtain financial or occupational information from the parents (deemed to be too personal); however, the school administrators maintained that the majority of their students came from family backgrounds that would be considered as Italian middle-class.

The mean participation rate of children from each classroom involved in the research was 98% (range = 90% to 100%). Parental consent as well as child assent was obtained for each participant in the study. Parents were assured of confidentiality and were informed that their children could choose not to participate in the study at any time. No remuneration for participation was given to the children.

Measures

Peer behavior nominations. A peer behavior nominations procedure was followed in each classroom which was adapted from picture-board nomination procedures

developed in other studies with young children (e.g., Asher & Hymel, 1981; Cassidy & Asher, 1992; Crick et al., 1997). Photographs of all children in any given classroom were placed on a picture board, and each subject was shown these photographs and asked to identify the child in each picture. Subjects were then asked to nominate (point to) up to five classmates of either sex that they viewed as demonstrating certain sociable behaviors, relationally aggressive behaviors, and physically aggressive behaviors. In addition, subjects were also asked to identify which classmates were victims of relational and physical aggression and which classmates socially intervened in certain behaviors. The peer behavior nomination questions consisted of 27 items: 4 relational aggression items (e.g., “This child says, ‘I’m not going to be your friend anymore’ when angry”), 4 relational victimization items (e.g., “Other children say, ‘I’m not going to be your friend anymore’ to this child”), 4 physical aggression items (e.g., “This child starts physical fights with other children”), 4 physical aggression victimization items (e.g., “Other children start physical fights with this child”), 3 sociability items (e.g., “This child has many friends”), and 3 proactive intervention items (e.g., “This child tries to play with someone who is alone”). See Table 1 for a complete list of the items used. The order of presentation of these 27 items was counter balanced so that 50% of the children were asked the questions in a reverse order to reduce measurement error. Items in each of the domains (see Table 1 for a description of these items), originally adapted from work of Crick and colleagues (1997), have demonstrated reliability in previous research (McNeilly-Choque et al., 1996; Nelson, et al., 2005). The number of nominations each child received for the above categories was standardized within each class and subsequently used for analysis as dependent variables.

Peer sociometric assessments. The sociometric assessment was conducted in each classroom following a similar procedure used in the peer behavior nominations described above. Each participant was shown the photographs of their peers on the classroom picture board and asked to nominate up to five classmates they like to play with (positive nominations) and up to five classmates they do not like to play with (negative nominations). Although preschool-age children often prefer same-sex play companions (e.g. Fabes, Martin, & Hanish, 2003) research has shown that this age group nominates peers of the opposite sex when given the choice in sociometric nomination procedure (Wu, Hart, Draper, & Olsen, 2001). As a result, responses from both males and females were used to create sociometric scores in this study.

The sum of the positive nominations each subject received from his/her peers was used to create Liking (L) scores. The sum of the negative nominations was used to create Disliking (D) scores. The L and D scores were standardized within each class, and were then used to compute a Social Impact (SI) score (sum of L and D scores) and a Social Preference (SP) score (L minus D) for each child. Based on these scores (again standardized within classroom), and following a formula developed by Coie and Dodge (1982), children were classified into one of five sociometric status groups as follows: (a) Popular ($SP > 1.0$; $Dz < 0$; $Lz > 0$), (b) Average ($SP > -.5$ and $SP < .5$), (c) Neglected ($SI < -.10$; $Lz < 0$; $Dz < 0$), (d) Rejected ($SP < -1.$; $Dz > 0$; $Lz < 0$), (e) Controversial ($SI > 1.0$; $Lz > 0$; $D > 0$). Children who did not fit into any category were included in the *average* category (see Coie & Dodge, 1983 for the rationale). The results of categorizing subjects into the five sociometric groups were as follows (percentages reflect the full sample of 266 children): for boys; average (42%), popular (12%), neglected (8%), rejected (18%),

and controversial (20%); and for girls: average (52%), popular (14%), neglected (22%), rejected (8%), and controversial (4%).

Chapter IV

Results

Construct Validity in Italy

Since the items comprising the peer behavior nominations domains were developed in English, all items were successfully forward- and back-translated by Italian linguists who were fluent in both Italian and English. Translators received assistance from the investigators for clarifications if there were difficult-to-translate items. These procedures assured that the items were *conceptually equivalent*, meaning that they would be similarly understood by Italian children and U.S children even though they may carry somewhat different psychological meanings (see Berry, 1989; Hart et al., 1998).

Confirmatory Factor Analysis

The first two hypotheses examined in this study deal with emic/etic issues (culture general vs. culture specific). To further address typical emic and etic issues when importing U.S. measures into the Italian culture the first part of our analysis was to use structural equation modeling/confirmatory factor analysis (CFA) to assess the measurement fit of the constructs with the Italian children. To answer hypothesis 1 (if Italian preschool children could discriminate between relational aggression, relational victimization, physical aggression, and physical victimization as separate constructs), and hypothesis 2 (do the aggression and victimization constructs apply to Italian preschool children), a CFA procedure was first used to analyze the distinctiveness of these components. In particular, a single-group CFA was used to estimate the measurement of the peer nomination constructs. The measurement model of the five behavioral constructs (sociability, physical aggression, relational aggression, physical victimization, relational

victimization) obtained from peer nominations was carried out with the *Mplus* statistical program.

Table 2 shows the items and factor loadings for each of the five behavioral constructs: relational aggression, physical aggression, sociability, physical victimization, and relational victimization. The magnitude of the standardized factor loadings and goodness of fit indices (chi-square = 304.86, $p < .001$, TLI = .94, CFI = .95, RMSEA = .04) indicate that the constructs are measured fairly well. Thus, the first two hypotheses were supported: Italian children can discriminate between constructs, and the constructs apply to Italian preschoolers.

Bivariate Correlations

Because previous literature suggests that gender may be related to aggression subtypes, we next looked at patterns of intercorrelation by child gender. A series of bivariate Pearson's correlations was computed between all behavioral constructs for boys and girls individually. As can be seen from Table 2, the majority of peer reports of behavior were correlated, though magnitudes of the correlations varied considerably from moderate ($r = .23$) to moderately-high ($r = .77$). Table 2 reveals that the strongest correlations are between relational and physical aggression, especially for boys. A substantial correlation between these aggression subtypes is expected, given that they represent different forms of the overall construct of childhood aggression. Correlations of this magnitude for these Italian children are consistent with previous studies in other cultures examining the association between physical and relational aggression (Crick et al., 1999; Hart et al., 1998).

As can also be seen from Table 2, there appeared to be some significant differences in the correlational patterns by sex of child which deserve attention. Fisher's r to z tests were computed for each set of correlations and the most relevant findings are noted here. First, a modest significant positive correlation ($r = .23$) between girls' sociability and physical victimization was obtained. No such correlation was found for boys, and the correlation for girls was significantly greater ($z = 1.65, p = .05$). Otherwise, sociability was uncorrelated with aggression and victimization for both boys and girls. In contrast, aggression and victimization subtypes were all significantly correlated for boys and girls, and the correlations for boys were always significantly higher. For example, relational aggression was more highly correlated with relational or physical victimization for Italian preschool boys ($z = 2.89, p < .01$; $z = 2.80, p < .01$, respectively). In addition, physical aggression was more frequently associated with either relational victimization or physical victimization in boys ($z = 3.03, p < .01$; $z = 3.01, p < .01$, respectively). Finally, victimization subtypes were also more highly correlated in boys ($z = 2.34, p < .01$), as were the aggression subtypes ($z = 3.91, p < .001$).

Social Behaviors by Sociometric Status and Sex of Child

To answer hypothesis 3 (assessing sex of child and child and sociometric status differences as well as possible interaction effects for Italian preschool children's behaviors), a series of 2 (Sex of Child: boys, girls) X 5 (Sociometric Status: average, popular, neglected, rejected, controversial) analyses of variance (ANOVA) was conducted using the study's five peer behavior nomination constructs as dependent variables. Given an unequal n design, the following analyses are based on a General Linear Model procedure which uses comparisons of the unweighted means (estimated

marginal means). Table 3 details the means relating to interpretation of the main effect for sociometric status for each ANOVA. The effect sizes (*Cohen's d*) for the comparison of the respective sociometric extreme group with the average group are given in order to allow comparison with the analogous effect sizes reported by Newcomb et al. (1993). Consistent with the pattern for the means, positive values for *d* are consistent with higher levels of the behavior or peer reputation variable for the extreme sociometric status group as compared to the average group. In addition, Table 4 provides the separate sociometric group means by sex of child to facilitate interpretation of the Sex of Child X Sociometric Status interactions obtained in some of the ANOVAs described below.

Sociability. The ANOVA using sociability as the dependent variable yielded a main effect for sociometric status, $F(4, 266) = 8.11, p < .001$. As can be seen in Table 3, popular children were nominated more than any other status group for sociability. All other effects were not significantly different

Physical aggression. The ANOVA using physical aggression as the dependent variable yielded a main effect for sociometric status, $F(4, 266) = 11.01, p < .001$. As can be seen in Table 3, rejected and controversial children were nominated significantly more than all other status groups for physical aggression. A significant main effect for sex of child, $F(1, 266) = 21.58, p < .001$ was obtained, with boys ($M = .38, SD = .80$) being nominated significantly more often than girls ($M = -.15, SD = 1.04$). In addition, a significant sex X sociometric status interaction was also obtained $F(4, 266) = 3.05, p < .05$, and simple effects analyses were conducted by sex of child in order to document gender differences in the pattern of findings (see Table 4). Results showed rejected and controversial boys did not differ significantly in their high levels of physical aggression.

In contrast, controversial girls outpaced even their rejected counterparts in their levels of physical aggression. Furthermore, analysis of gender differences within each status group shows boys to be higher than girls in their physical aggression in every sociometric group except controversial status, where no gender difference was evident.

Relational aggression. The ANOVA using relational aggression as the dependent variable yielded a main effect for sociometric status, $F(4, 266) = 8.08, p < .001$. As seen in Table 3, rejected and controversial children were nominated more often for relational aggression than all other status groups. A significant main effect for sex of child, $F(1, 266) = 9.83, p < .01$ was obtained, with boys ($M = .25, SD = .70$) being nominated significantly more often than girls ($M = -.06, SD = .93$).

Physical victimization. The ANOVA using physical victimization as the dependent variable yielded a main effect for sociometric status, $F(4, 266) = 7.95, p < .001$. As can be seen in Table 3, controversial and rejected children were more likely to be nominated than all other status groups as recipients of physical victimization. A significant main effect for sex of child $F(1, 266) = 10.44, p = .001$ was obtained, with boys ($M = .22, SD = .69$) being nominated significantly more often than girls ($M = -.08, SD = .81$).

Relational victimization. The ANOVA using relational victimization as the dependent variable yielded a main effect for sociometric status, $F(4, 266) = 14.07, p < .001$. As can be seen in Table 3, controversial and rejected children were nominated more than average children for victims of relational aggression. In addition, a significant sex X sociometric status interaction was also obtained $F(4, 266) = 3.57, p < .01$, and simple effects analyses were conducted by sex of child in order to document gender differences

in the pattern of findings (see Table 4). Results showed rejected and controversial boys did not differ significantly in their high levels of relational victimization. In contrast, controversial girls again were significantly higher than their rejected counterparts in their levels of relational victimization. In addition, the controversial status group was the only sociometric group with significant gender differences, with girls demonstrating more relational victimization than boys.

Chapter V

Discussion

The primary goal of this study was to contribute to the peer relational literature base through the unique addition of victimization, sociometric status, and a distinctive sample of Italian preschool-age children. Results of this study add significantly to prior research that has been conducted within the peer relations research domain, as well as contributing in areas that have not been previously studied, including the interaction between subtypes of aggression, victimization, and sociometric status.

Sociometric Status

Based on research previously discussed, we expected rejected children to display high levels of aggressive and victimized behaviors and low levels of sociable behaviors. As expected, rejected children did display high amounts of both aggressive and victimized behaviors and few sociable behaviors. This is consistent with prior research showing that in middle childhood, rejected children are most likely to be physically and relationally aggressive (Cillessen & Mayeux, 2004) and physically, verbally, and relationally victimized (e.g. Ray et al., 1997; Bjorkvist et al., 2001; Warden & Mackinnon, 2003; DeRosier & Thomas, 2003; Cillessen & Mayeux, 2004; Salmivalli et al., 1996). It is also consistent with research documenting physical and relational aggression among preschool-age children (Nelson et al., 2005). The present study extends previous research by demonstrating that physical and relational victimization for rejected children begins as early as preschool, with implications for the necessity of early preventions and interventions.

Additionally, our second hypothesis, that popular children would demonstrate high amounts of social behavior and low levels of aggression and victimization, was confirmed. Specifically, popular children showed the lowest amounts of physical or relational aggression, experienced the least amount of relational or physical victimization, and displayed the most social behavior of any of the sociometric status groups. This behavioral pattern extends previous research by illustrating that behaviors correlated with popular sociometric status in middle childhood and adolescence, including low levels of aggression and high levels of sociability, also apply to preschool-age children. This study also complements the current literature on popular children with a relational and physical victimization component. Additionally, the findings from this study were consistent with the picture that has been previously shown: children who are less aggressive and well liked by the majority of their peers tend to be less victimized (e.g. Cillessen & Mayeux, 2004).

Our third hypothesis, that controversial children would demonstrate high levels of both aggression and sociable behavior and experience low amounts of victimization, was only partially supported. We anticipated this finding because it corresponded with previous research in middle childhood and adolescent samples. Consistent with our hypothesis, controversial children were lower than only popular children in their levels of social behaviors, and were just as high as rejected children on both their physical and relational aggression. In this way, our prediction was correct. However, we did not anticipate such high levels of victimization among controversial children: controversial children were just as highly physically victimized as rejected children, and were more relationally victimized than any other sociometric group. While previous research with

middle childhood and adolescent samples has clearly shown that rejected children are victimized by their peers as a result of their aggressive behavior, controversial children have not shown this pattern. As a result, it has been theorized that controversial children escape victimization because of their social prominence and popularity with a portion of their peers. However, the present findings contradict this theorized explanation by suggesting that aggressive children, at least in preschool, regardless of their social status and/or perceived popularity, may not be immune to victimization from their peers.

Although the finding that controversial children are victimized was unexpected, there may be some plausible explanations. First, the pattern of high levels of aggression and victimization within the same sociometric group supports emerging research regarding bully/victims - children who are both the bullies and the victims of relational or physical bullying (e.g. Marini, Dane, Bosacki, & YLC-CURA, 2006). While bully/victims tend to make up only a small subset of children in Western samples (Perren & Alsaker, 2006), it may be that the incidence of bully/victimization is more prevalent in an Italian sample, since both aggression and victimization are thought to be shown more in Italian culture than in many other cultures or areas (Genta et al., 1996; Tomada & Schneider, 1997). Bully/victims, similar to controversial status children, are often socially active, display high amounts of aggression, and are highly rejected by at least a portion of their peers (Boulton & Smith, 1994; Pellegrini, Bartini, & Brooks, 1999; Perren & Alsaker, 2006). Although it is not clear how much these constructs overlap, it may be that controversial children also experience bully/victim status.

It also may be that rejected and controversial children are victimized because of their status; other children have less empathy for them, or may feel that rejected and

controversial children in some way deserve to be victimized. Rejected and controversial Italian children may aggress on other children within their own status grouping because they feel that they are competing for attention and social prominence, and so attempt to undermine other “contenders” through relational and physical aggression. Previous research has found that relationally aggressive girls tend to aggress on others within their peer group to maintain control and power (e.g. Crick & Grotpeter, 1995; Owens, Shute, & Slee, 2000). This may lead to both aggression and victimization within sociometric status groupings. Future research should examine the sociometric status of both the aggressor and the victims to more clearly examine these possibilities.

Gender Differences

Findings suggested that children who were perpetrators of physical aggression differed significantly by gender. Specifically, consistent with previous research (e.g. Archer, 2004), boys were more likely than girls to be perpetrators of physical aggression if they were in the average, popular, neglected, or rejected category. However, in the current sample, controversial girls demonstrated just as much physical aggression as boys, showing much higher levels of physical aggression than the other girls. Although girls tend to be more rejected for physical aggression than for relational aggression (Archer & Coyne, 2005), this finding indicates that at least a subset of girls was able to display high levels of physical aggression and still be liked by a portion of their peers. It is also highly unusual for girls in American samples to demonstrate as much aggression as boys, which may indicate a difference between Italian and American samples of preschoolers. However, there were very few controversial girls in the current sample ($n = 5$), which may indicate that this type of behavior is extreme. Additionally, as a result of

small sample size, this finding may be a result of measurement error. Further research is needed to validate these findings.

Relationally aggressive children also differed by gender and controversial status. All other groups demonstrated no significant gender difference for relational aggression, but controversial status boys displayed significantly higher levels of relational aggression than girls. This finding is inconsistent with previous research, which suggests that girls in general tend to be more relationally aggressive than boys (e.g. Nelson et al., 2005; Crick & Grotpeter, 1995). While the finding that girls demonstrate more relational aggression than boys is fairly robust, some studies show mixed results. For example, David and Kistner (2000), and Tomada and Schneider (1997), using peer nominations and teacher reports in a middle-childhood samples, found that boys displayed more relational aggression than girls. The results from the present study generally support the pattern of girls being more relationally aggressive than boys, with the exception of controversial status boys, which indicates that at least a subset of boys are able to display high levels of relational aggression and still be liked by a portion of their peers. It is unusual for boys to demonstrate as much relational aggression as girls, since boys are typically more rejected for displaying non-gender normative aggression than for displaying gender normative aggression (i.e. physical aggression for boys) (Crick, 1997). Further research is needed to validate these findings.

Additionally, the present study suggests that preschool-age boys are more likely to experience victimization than girls, and that when boys are victims of either relational or physical aggression, they are more likely to be a victim of the other subtype of aggression. Prior research suggests that children may be victimized as a result of their

behavior, specifically for demonstrating aggressive behavior (Cillessen & Mayoux, 2004; Salmivalli et al., 2000; Goossens et al., 2006; Ray et al., 1997; Warden & Mackinnon, 2003;). Since boys demonstrate higher levels of each behavior than girls, including aggression, it is reasonable that boys would be more likely to be victimized as a result of their behavior. Controversial and rejected children were the most likely to be both aggressive and victimized, and as these categories are primarily composed of boys, it is reasonable that boys would be more likely to be victimized. Additionally, since the same children (rejected and controversial status groups) compose the majority of victimized children, it would be logical that there would be a high correlation between victimization subtypes.

Limitations

The current study was not without limitations. First, the study lacked multiple informants to ensure validity of the current measures. However, although we did not have multiple informants to validate the accuracy of preschool peer nominations, we were able to statistically verify the reliability of the responses given by testing invariance across competing models. Complete invariance was found between the models, which allowed for assurance of the validity of preschool peer nominations. Additionally, while peer nominations regarding some behaviors have been shown to be somewhat less reliable than teacher or parent reports (Archer & Coyne, 2005), there are mixed results. For example, for behaviors such as aggression and victimization, which often occur out of sight of adults, peer nominations have been shown to be more valid than teacher or parent reports (Archer & Coyne, 2005). Another limitation of the current study was that it used only cross-sectional measures, which limits our ability to fully understand the dynamics

that occur over time. Future research should replicate current findings using longitudinal studies with multiple informants. Finally, although the sample size was comparable to other studies (e.g. Nelson, et al., 2005; Tomada & Schneider, 1997), a larger and more diverse sample may be more optimal in facilitating an accurate understanding of Italian preschool-age children. Specifically, a larger sample size would enable larger sociometric groups, especially after subdividing into gender. These larger groups would allow for more robust findings and greater generalization to other samples.

Future Directions and Conclusions

The primary focus of future research should be on replicating victimization findings in a United States sample to see if U.S. children also recognize relationally and physically victimized children as being of the rejected and controversial status. Since this is the first time that relational victimization has been examined with a preschool age group, it is important to see if these findings will extend to other cultures, particularly the United States, since this is where most research on relational aggression has been conducted.

In addition to being the first study to look at Italian preschool-age children, this study has advanced our understanding in three other ways: First, this study indicates that Italian children view relational and physical aggression similarly to other cultures that have been previously examined. Second, this study additionally identified that boys are more likely to be both the perpetrators and victims of all subtypes of aggression and victimization examined. Finally, and most importantly, this study identifies controversial and rejected children as both perpetrators and victims of relational and physical aggression while confirming previous research showing that controversial children are

more relationally aggressive than average children (Nelson et al., 2005). Future research should take these contributions into consideration and continue in similar directions.

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Tables

Table 1. *Standardized factor loadings of the peer nomination constructs*

| <u>Factor</u> | <u>Items from Peer Nominations</u> | <u>Loading</u> |
|---------------------------------|---|----------------|
| Sociable | | |
| | Has many friends | 0.45 |
| | Is fun to pretend things with | 0.70 |
| | Is fun to talk to | 0.83 |
| Relational Aggression | | |
| | Says “I will not to be your friend any more” when angry | 0.55 |
| | Won’t listen to someone when angry | 0.70 |
| | Tells others not to play unless they do what everyone wants | 0.59 |
| | Whispers mean things about others | 0.74 |
| | Will not let some kids play with them | 0.57 |
| | Says, “Don’t play with that kid,” or “You can’t play with us” when angry | 0.66 |
| Relational Victimization | | |
| | Gets told by others they can not be their friend | 0.55 |
| | Gets told, “You can’t play with us unless you do what we want” | 0.52 |
| | When others are mad they will not listen this child | 0.65 |
| | Has mean things whispered about them | 0.57 |
| | Gets left out of play activities | 0.62 |
| Physical Aggression | | |
| | Grabs toys or things away from others | 0.78 |
| | Pushes other kids out of the way | 0.88 |
| | Starts physical fights with others | 0.73 |
| | Hits, kicks, or punches other children | 0.87 |
| Physical Victimization | | |
| | Gets toys or things grabbed from them | 0.43 |
| | Gets pushed out of the way by others | 0.47 |
| | Other children start fights with this kid | 0.55 |
| | Gets hit, kicked, or punched by other children | 0.60 |

Table 2. *Intercorrelations between the peer nomination constructs*

| | Sociability | Rel Aggress | Rel Victim | Phys Aggress | Phys Victim |
|--------------|------------------|------------------|----------------------|----------------------|----------------------|
| Sociability | B 1.00 G 1.00 | B .01 G .00 | B -.02 G .10 | B -.13 G -.15 | B .03 G .23** |
| Rel Aggress | | B 1.00 G 1.00 | B .70*** G .47*** | B .77*** G .49*** | B .59*** G .32*** |
| Rel Victim | | | B 1.00 G 1.00 | B .69*** G .44*** | B .59*** G .37*** |
| Phys Aggress | | | | B 1.00 G 1.00 | B .60*** G .31*** |
| Phys Victim | | | | | B 1.00 G 1.00 |

* $p < .05$; ** $p < .01$; *** $p < .001$

^B = Boys; N = 133

^G = Girls; N = 134

Table 3
Peer Nomination Means and Standard Deviations for Peer Behaviors, by Sociometric Status

| Peer Nominations | Sociometric Status | | | | |
|--------------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| | Average | Popular | Neglected | Rejected | Controversial |
| Sociability | .03 ^b | .55 ^c | -.22 ^{ab} | -.40 ^a | -.05 ^{ab} |
| (SD) | (.67) | (.70) | (.82) | (.77) | (.96) |
| <i>Effect Size</i> | | -.76 | .33 | .60 | .10 |
| Physical Aggression | -.22 ^a | -.02 ^a | -.29 ^a | .50 ^b | .61 ^b |
| (SD) | (.67) | (.70) | (.82) | (.77) | (.96) |
| <i>Effect Size</i> | | -.29 | .01 | -1.0 | -1.0 |
| Relational Aggression | -.13 ^a | -.06 ^a | -.23 ^a | .29 ^b | .59 ^b |
| (SD) | (.61) | (.61) | (.71) | (.65) | (.85) |
| <i>Effect Size</i> | | -.06 | .08 | -.32 | -.44 |
| Physical Victimization | -.09 ^a | -.05 ^a | -.30 ^a | .25 ^b | .54 ^b |
| (SD) | (.56) | (.58) | (.63) | (.59) | (.79) |
| <i>Effect Size</i> | | -.07 | .35 | -.59 | -.92 |
| Relational Victimization | -.10 ^a | -.16 ^a | -.32 ^a | .37 ^b | .78 ^c |
| (SD) | (.56) | (.58) | (.70) | (.65) | (.79) |
| <i>Effect Size</i> | | .05 | .17 | -.36 | .54 |

Note. ^{abc} Means in the same row not sharing a superscript differ at $p < .05$ using Fisher's LSD test.

Table 4

Means and Standard Deviations for Gender by Sociometric Status Interaction Effects

| | Sociometric Status Group | | | | |
|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| | Average | Popular | Neglected | Rejected | Controversial |
| Physical Aggression | | | | | |
| Boys | -.05 ^a (.44) | .35 ^{ab} (.72) | -.12 ^a (.35) | 1.09 ^c (1.22) | .62 ^{bc} (.94) |
| Girls | -.39 ^a (.50) | -.39 ^{ab} (.72) | -.46 ^a (.33) | -.09 ^b (1.26) | .60 ^c (.92) |
| Relational Victimization | | | | | |
| Boys | -.01 ^a (.92) | -.10 ^a (1.72) | -.33 ^a (2.18) | .64 ^b (1.38) | .40 ^b (1.26) |
| Girls | -.19 ^{ab} (.81) | -.23 ^{ab} (1.62) | -.32 ^a (1.27) | .09 ^b (2.08) | 1.16 ^c (3.00) |

Notes. ^{abc} Means in the same row not sharing a superscript differ at $p < .05$ using Fisher's LSD test. Standard deviations are listed in parentheses following each mean.