

LaFontana and Cillessen, 2002; Parkhurst and Hopmeyer, 1998]. As such, while aggressive children may garner a large number of nominations for being disliked, they can also be nominated by their peers as being popular, cool, leaders, and are very well known.

The heterogeneity in the relation of aggression and social status may also be due to the kind of aggression being employed. Proactive aggression is goal-directed and unprovoked, while reactive aggression is impulsive and hostile, and in response to a real or perceived threat [Dodge, 1991]. While proactive aggression is correlated with leadership among peers [Dodge, 1991], reactive aggression is associated with victimization by peers [Poulin and Boivin, 2000; Schwartz et al., 1998]. Further, proactive aggression can be related to peer acceptance, while reactive aggression is related almost exclusively to peer rejection [Dodge et al., 1997; Poulin and Boivin, 2000; Price and Dodge, 1989].

The relationship between social standing and aggressive behavior does not seem as one-dimensional as had been previously thought. The bullying literature too has found considerable heterogeneity in kinds of aggressive children, consistently differentiating between bullies and what have come to be called aggressive victims [Boulton and Underwood, 1992; Pellegrini et al., 1999; Schwartz et al., 1997]. In an interesting parallel with the subgroups identified above, aggressive victims are rated as aggressive and socially marginalized to the point of being isolated in many cases. Their aggression is often in reaction to being picked on by aggressive, dominant—and more popular—peers: the bullies [Olweus, 1993]. As such, aggressive victims are highest on peer reports of both proactive and reactive aggression, followed by bullies, which are also high on both. Victims, on the other hand, tend to be high in reactive aggression alone [Salmivalli and Nieminen, 2002].

These findings imply that not all those involved in bullying are socially marginalized. Indeed, aggressive victims are much more likely to be disliked by nearly all their peers and have very few, if any, friends [Perry et al., 1988]. In contrast, bullies belong to larger peer groups than more prosocial children [Salmivalli et al., 1997], and it has been suggested that bullies' groups may attract members through the appeal of associating with winners. Aggression can also affect social functioning beyond the group. One study of young adolescents found resistance to authority and "toughness" to be defining qualities of popular males [Adler et al., 1992]. Others found that the most influential boys in later elementary classrooms acquired their dominant status by bullying

less physically able peers, provoking fights, and defying teachers' authority [Adler and Adler, 1995, 1996; Adler et al., 1992; Pellegrini, 1995; Pepler et al., 1998].

Aggression can be a strategy for garnering status over both members of one's own group and individuals in the larger social network [Adler and Adler, 1995; Pellegrini and Bartini, 2001]. Aggressive behavior can both help attain prominence through establishing dominance and thus social superiority, and help maintain position through the demotion of others [Adler and Adler, 1995; Atlas and Pepler, 1998; Cairns and Cairns, 1994; Farmer, 2000; Pellegrini, 1995; Salmivalli et al., 1997]. Though such dominant individuals may not be universally (or at all) well-liked, they can be very well-known and considered cool, popular, and influential [Cairns et al., 1988; Estell et al., 2002, 2003; Farmer and Hollowell, 1994; Gest et al., 2001; LaFontana and Cillessen, 2002].

In line with such findings, Sutton and colleagues argue that many bullies are in fact highly socially skilled: they use aggression on specific individuals in specific circumstances, with specific goals in mind, and without alienating peers in general [Sutton et al., 1999a,b]. They also use prosocial behavior if and when this is more effective in garnering and maintaining status. The rebuttal to Sutton and colleagues argued that bullies cannot be popular or socially skilled precisely because prosocial behavior is "the antithesis of bullying" [Crick and Dodge, 1999, p. 130].

While it is true that deviant youth have more hostile exchanges with their friends, there are no differences between aggressive and non-aggressive youth in the amount of prosocial interactions [Dishion et al., 1995]. Further, some bullies have very advanced theories of mind [Sutton et al., 1999c], and high social intelligence [Kaukiainen et al., 2002]. It has been found that while aggression plays an important role in the establishment of dominance, adolescent boys later shift to affiliative behaviors to maintain status [Pellegrini and Bartini, 2001]. Observational work in schoolyards has found parallel results: aggressive students are both more aggressive *and more prosocial* with friends than their non-aggressive counterparts [Pepler et al., 1998].

In short, the idea that bullies are universally socially unskilled, rejected by their peers, and relegated to the margins of the school social structure is not supported by the existing literature. There are a number of factors that may contribute to this heterogeneity. The availability of particular

strategies, including bullying, for attaining social prominence may depend on such contextual factors as peer-group dynamics and classroom-levels beliefs regarding the acceptability of aggressive behavior. Aggressive children have higher ratings of popularity and lower ratings of rejection in classrooms where aggression is more acceptable [Henry et al., 2000]. Aggressive-popular subgroups are also more common in classrooms which have higher overall acceptability of aggression [Estell et al., 2003; Stormshak et al., 1999], and occur more frequently among adolescents in the inner city [Luthar and McMahon, 1996].

However, there are many contexts which have yet to be explored, and very little is known, for example, about how these processes are manifested among impoverished rural minority youth. While past studies have examined rural youth [Pellegrini et al., 1999], this sample was 95% Caucasian. Bullying and victimization have not been studied specifically in impoverished rural minorities. It is unknown whether incidence rates and correlates of bullying would vary in such youth.

As such, the current study sought to examine bullying in an impoverished, rural African-American sample, and was guided by three research questions. The first question was purely descriptive, and regarded the incidence rates of bullying, victimization, and aggressive victimization in this sample. Much of the past work has been done in predominantly Caucasian samples [Olweus, 1993; Pellegrini et al., 1999], and has indicated that bullies make up approximately 14% of the sample, victims 18%, and aggressive victims 5%. Twice as many bullies were male than female in these samples. However, past research has found slightly lower rates of victimization in African Americans [Nansel et al., 2001]. As such, we hypothesized that bullies would be predominantly male, and that the incidence rates would be parallel to, though lower than, those discussed above.

The second research question focused on how individual-level characteristics relate to bully, victim, and aggressive-victim classification. Following the literature on subtypes of aggressive children in both majority-white [Estell et al., 2003] and diverse samples [Rodkin et al., 2000], we hypothesized that bullies and aggressive victims in this sample would tend to be rated by both teachers and peers as being more aggressive, and teachers would rate bullies as more manipulative (the instruments did not contain a peer-nomination item for being manipulative). Victims, in contrast, would be rated as higher on internalizing behaviors.

The third research question centered around how social status and functioning related to bully/victim classification. Though the work cited above regarding subtypes of aggressive children was conducted with a majority-white sample [Estell et al., 2003], we felt that the existence of subgroups of popular-aggressive children was a general phenomenon, and past negative findings were due more to measures of social status than a true lack of these individuals. As such, we hypothesized that bullies and aggressive victims would both be disliked by many or even most of their peers (i.e., sociometrically controversial or rejected). However, we hypothesized that while aggressive victims would be unpopular and on the periphery of the social network, bullies would be rated as being popular by teachers, nominated as popular by peers, and nuclear in the social network. We also hypothesized that bullies would not be limited to membership in groups composed primarily of aggressive individuals, nor would they belong to non-popular groups. Rather, they would belong to a variety of group types, and have both unaggressive and quite popular associates. Finally, we hypothesized that bullies would often be the leaders of their groups.

METHOD

A multimethod survey design was employed that included teacher-, peer-, and self-report measures. Teacher assessments were used to construct behavioral configurations and to provide teacher information on indices of social adaptation. Peer- and self-reports were used to identify classroom social networks and to assess participants' interpersonal characteristics.

Participants

This study is part of a long-term evaluation of a school violence prevention program that was conducted 2 years earlier, when participants were in elementary school. This program sought to reduce violence through promoting school engagement. However, analyses comparing those in the prevention program and those in the control groups have yielded no reliable differences. As such, the sample is considered as an aggregate. This work took place in two rural counties of a Southern state routinely identified in annual reports as the poorest in that state. Over half of the school-aged children in these counties live in households that are below the national poverty level. Although 40% of the population in these counties is European American,

the student population in the public schools is over 99% African American.

All students in the 18 seventh- and eighth-grade classes of two schools were asked to participate. One school was a self-contained middle school that served only seventh and eighth-grade students. The other was a self-contained middle-school unit housed in a larger secondary school campus. It also served only seventh and eighth grade youth. Those students who themselves agreed to participate, and also returned consent forms signed by their parents, were included in this study. The sample consisted of 419 (161 boys, 258 girls) seventh and eighth-grade adolescents. Girls made up 55% of the population in the two schools, and 61.5% of the sample. Consistent with the public school attendance of these counties and reflecting the school population, over 99% of the participants (i.e., 417 of 419) in this study were African American. The overall participation rate was 80% (419/520) of the entire population in the two schools. This saturated sampling procedure allowed us to view each school as a single social context.

Procedures

Data were collected in the Fall, 2 months after the beginning of the school year. Group administration procedures were used to conduct the survey with participants while their teachers completed the rating forms. Before the administration of the survey, participants were assured their answers would be kept confidential, and they were asked to protect the confidentiality of their responses. Participants were also told they could stop participating at any time. The surveys were conducted in teams that included African American research assistants from the community where the study was being conducted. During the survey, one administrator read the instructions and questions aloud. Additional administrators provided mobile monitoring to ensure that participants were not sharing or comparing answers and assisted students as needed.

For all peer nomination measures, the focus of the probe was at the school level (i.e., participants were told that they could nominate any peer in their school). This was done because the samples in both schools were saturated (i.e., all the classes in the school participated in the study), there was considerable interaction among classes and grades, these were relatively small middle schools, and there was little transience in the school populations (i.e., participants were highly familiar with each other). Also, all peer nominations were made from free

recall (i.e., no class rosters were provided). This was necessary because Social Cognitive Mapping procedures were developed specifically to tap youths' maps of their school social structure from free recall. Further, since the level of analysis was the entire school, rosters would have had to be school-wide, and as such unwieldy.

Measures

Interpersonal competence scale-teacher (ICS-T). The ICS-T is an 18-item questionnaire consisting of seven-point Likert scales that teachers completed for each participant in their class. The ICS-T yields composite scores on six primary subscales: *aggressive* (AGG, composed of "always argues," "gets in trouble," and "always fights," Cronbach's $\alpha = .82$), *popularity* (POP, composed of "popular with boys," "popular with girls," and "lots of friends," $\alpha = .81$), *academic* (ACA, composed of "good at math" and "good at spelling," $\alpha = .71$), *affiliative* (AFF, composed of "always smiles" and "always friendly," $\alpha = .71$), and *olympian* (OLY, composed of "good at sports," "good looking," and "wins a lot," $\alpha = .67$). This scale has been used successfully in diverse (25% African American) [Cairns et al., 1995b] and urban African American [Estell et al., 2002] samples. Three-week test-retest reliability coefficients are moderately high (i.e., .80-.92), and median test-retest r across the factors are .81 for girls and .87 for boys. One-year coefficients are moderately strong (i.e., .40-.50) [Cairns et al., 1995b]. The ICS-T has convergent validity with direct observation, student records (i.e., grades, discipline reports) and peer nomination measures [Cairns and Cairns, 1994; Rodkin et al., 2000], and it has predictive validity over an 8-year period for adult adjustment [Cairns and Cairns, 1994; Mahoney, 2000].

Teacher ratings of social adaptation. A second rating measure was used that focused on specific aspects of social adaptation. Using the same 7-point Likert format of the ICS-T, this measure included seven items: attention problems, class leadership, hyperactive, bullied by peers, manipulates friendships, bullies peers, and participates in extracurricular activities.

Social cognitive maps (SCM). For this measure, participants were asked "Are there some kids in your school who hang around together a lot? Who are they?" Following the procedures developed by Cairns et al. [1985], participants were instructed to list, from free recall, as many groups as they could think of in their school. In addition, they were asked

to circle the individual or individuals who were the leaders of each group, if the group had a leader.

To identify distinct groups within the school social network, the SCM data were analyzed following the procedures outlined by Cairns and colleagues [Cairns and Cairns, 1994; Cairns et al., 1995a]. SCM procedures have been used extensively in research on school social networks in a variety of populations [e.g., Cairns et al., 1988; Estell et al., 2002; Farmer and Hollowell, 1994; Leung, 1996; Rodkin et al., 2000; Xie et al., 1999]. Three-week test–retest reliability coefficients indicate high short-term stability of children’s peer groups (i.e., 90% of groups maintain a majority of their members over this period) [Cairns et al., 1995a]. Further, the results of SCM analyses match observed affiliations [Cairns and Cairns, 1994; Cairns et al., 1985].

A total of 42 male groups were identified with a range of 2–16 members. The mean group size for boys was 4.95. A total of 59 female groups were identified with a range of 2–13 members. The mean group size for girls was 4.75. These means and ranges are consistent with those of other studies of late elementary and middle-school peer groups [Bagwell et al., 2000; Cairns et al., 1988; Farmer and Hollowell, 1994; Xie et al., 1999].

Information from the SCM analysis was also used to calculate social network centrality. Network centrality emerges from the dual consideration of group and individual prominence, and is based on the number of nominations relative to the whole network [Cairns and Cairns, 1994; Cairns et al., 1995a]. Nuclear members (70% or higher of the nominations of most nominated members of the group) of Nuclear groups (70% or higher of the nominations of most nominated groups) are Nuclear to the network. Secondary members (30–70% of the nominations of most nominated members of the group) of Nuclear groups and Nuclear and Secondary members of Secondary groups (30–70% of the nominations of most nominated groups) are Secondary to the network. All others with nominations are peripheral to the network. Students not identified as belonging to any group are considered isolated.

Peer interpersonal assessments. Peer interpersonal assessments were used to determine classmates’ perceptions of peers’ social and behavioral characteristics. Students were asked to nominate, from free recall, up to three peers who best fit descriptors for 16 items. They were told during the testing procedures that they could nominate the same person for more than one item, they did not

need to fill all three blanks if they did not know three people who fit an item, they could bypass an item if they felt that they did not know anyone at all who fit that particular item, and that they could nominate themselves. For analyses using these items, however, all self-nominations were removed from consideration, making these peer nominations exclusively.

The items were: Cooperative (Here is someone who is really good to have as part of your group, because this person is agreeable and cooperates—pitches in, shares, and gives everyone a turn); Disruptive (This person has a way of upsetting everything when he or she gets into a group—does not share and tries to get everyone to do things their way); Acts shy (This person acts very shy with other kids. It’s hard to get to know this person); Starts fights (This person starts fights. This person says mean things to other kids or pushes them, or hits them); Seeks help (This person is always looking for help, asks for help even before trying very hard); Leader (This person gets chosen by the others as the leader. Other people like to have this person in charge); Athletic (This person is very good at many outdoor games and sports); Gets in trouble (This person doesn’t follow the rules, doesn’t pay attention, and talks back to the teacher); Good student (This person makes good grades, usually knows the right answer, and works hard in class); Cool (This person is really cool. Just about everybody in school knows this person); Sad (This person often seems sad); Starts rumors (This person gossips and says things about others. This person is good at causing people to get mad at each other); Popular (Some kids are very popular with their peers. That is, many classmates like to play with them or do things with them); Picked on (This person is picked on by others); Friendly (This person is usually friendly to others); Bully (This person is always hurting or picking on others). Past studies using these measures have indicated 3-week test–retest reliability with individual items ranged from .72 to .93. These items are identical with or similar to peer assessment used by other investigators [e.g., Cantrell and Prinz, 1985; Coie et al., 1982; Masten et al., 1985], and have proven reliability and validity in diverse samples [Coie et al., 1982; Masten et al., 1985].

The total number of nominations participants received for each peer assessment item was divided by the total number of possible nominators (i.e., all participants in the school). Because the denominator was the total number of participants in each school, the resulting proportions were small. In order to make mean differences clearer, these proportions

were linearly transformed by multiplying them by 1,000.

A factor analysis of 14 items (“bully” and “picked on” were excluded) yielded a four-factor solution consisting of aggression (Cronbach’s $\alpha = .83$; consists of “disruptive,” “starts fights,” “gets in trouble,” and “starts rumors”), prosocial ($\alpha = .79$; consists of “cooperative,” “good student,” and “friendly”), social prominence ($\alpha = .85$; consists of “leader,” “athletic,” “cool,” and “popular”), and internalizing ($\alpha = .39$; consists of “acts shy,” “seeks help,” and “sad”).

Sociometric status. Following the procedures outlined by Coie et al. [1982], participants were asked “name the three classmates you like most” and “name the three classmates you like least.” All sociometric nominations were done from free recall. Sociometric status was calculated following the methodology described by Coie et al. [1982].

Classification Procedures

Bully/victim classification. Bully/victim classification was determined based on both teacher (“bullies peers” and “bullied by peers”) and peer (“bully” and “picked on”) ratings. Past methodological research found that peer and teacher ratings of bullying are correlated, and both parallel observations of bullying behavior [Pellegrini and Bartini, 2000]. *z*-Scores were calculated within-sex for each of the teacher measures, since frequency and type (physical or social/relational) of aggressive behaviors differ between males and females. In order to take advantage of the multiple data sources available in this study to increase convergent validity, individuals were classified as bullies if they had both a positive *z*-score on the teacher ratings of bullying and were nominated as a bully by any of their peers. Similarly, individuals were classified as victims if they had a positive *z*-score on teacher ratings of being bullied, and were nominated as being picked on by any of their peers. Finally, individuals who met the criteria as both bullies and victims were classified as aggressive victims. All other individuals (i.e., those who met neither criterion) were classified as neither bullies nor victims.

Peer-group types. Peer groups identified by the SCM analysis were classified according to the aggression and popularity level of their constituent members. Participants were classified according to their peer-nominated aggression and social prominence factor scores. A participant was classified as popular or aggressive if their score on the peer-nomination factor was greater than or equal to 5.0.

This resulted in 24.4% (63/258) of girls and 30.4% (49/161) of boys being classified as aggressive, and 30.6% (79/258) of girls and 27.3% (44/161) of boys being classified as popular.

Peer-group types were a function of the proportion of aggressive and popular members in the group. Within each behavior, four group types were identified. For the example of aggressive-group type, zero-aggressive groups had no aggressive members. Non-aggressive groups had 1 or 2 aggressive members, but more than half were non-aggressive. Aggressive groups had 1 or 2 non-aggressive members, but more than half were aggressive. Mixed groups had at least three aggressive and three non-aggressive members (for groups of six or more), or had exactly 50% of each (for dyads and four-member groups). Identical criteria, but with popularity and not aggression, were made for popularity-group type.

RESULTS

The analyses presented below follow the order of research questions. First is an analysis of the incidence of bullying and victimization in this sample by gender, using a simple χ^2 analysis. Second, the teacher-rated and peer-nominated characteristics of bullies, victims, aggressive victims, and those not involved in bullying is investigated using a MANOVA with follow-up ANOVAs and *t*-tests. The social status of these individuals, as measured in a variety of dimensions and by both teachers and peers was examined third, using both the MANOVA described above and χ^2 analyses for sociometric status (a categorical measure). Finally, to what kind of group the various kinds of participants belonged, as well as group leadership, is analyzed using primarily categorical (χ^2) analyses.

Incidence Rates of Bully Classifications

This section addresses the first research question, regarding a simple description of the incidence of bullying in this sample as an aggregate and by gender. The classification scheme yielded 49 bullies (11.7% of the valid sample), 56 victims (13.4%), 15 aggressive victims (3.6%), and 299 individuals who were neither bullies nor victims (71.4% of the valid sample). In males, there were 29 bullies (18.0%), 22 victims (13.7%), 10 aggressive victims (6.2%), and 100 neither bullies nor victims (62.1%). In females, there were 20 bullies (7.8%), 34 victims (13.2%), 5 aggressive victims (1.9%), and 199 neither bullies nor victims (77.1%). Sex and bully classification

were related ($\chi^2_{(3, n=419)} = 17.13, P < .001$). Exact tests revealed that boys were more likely to be classified as bullies (Fisher's Exact Probability $< .01$) and aggressive victims (Fisher's Exact Probability $< .05$), and therefore less likely to be classified as neither bullies nor victims (Fisher's Exact Probability $< .001$), than girls. There was no gender difference on rates of victimization.

Individual Correlates of Bully Classifications

MANOVA results and sex-related differences. A MANOVA examined the effects of sex, bully classification, and the sex by bully classification interaction on all continuous measures. The results of this MANOVA and the associated univariate ANOVAS are shown in Table I. There were significant multivariate effects for both sex and bully classification, but not for a sex by bully classification interaction. While there was a single univariate interaction for teacher-rated popularity (see right column of Table I), the lack of a multivariate interaction effect makes this result questionable, and likely the result of Type I error. As such, all results are discussed for sex and bully classification separately.

As shown in Table I, there were significant differences between males and females only on the

TABLE I. Multivariate and Univariate Analyses of Variance by Sex and Bully Classification

Variable	F ratios		
	Sex	Bully	Sex × Bully
<i>Multivariate</i>	1.70*	3.71***	1.04
<i>Univariate</i>			
ICST Agg. (t)	2.25	23.25***	.25
ICST Pop. (t)	.01	11.00***	2.77*
ICST Aca. (t)	4.92*	3.98**	1.96
ICST Aff. (t)	2.87	5.94***	1.97
ICST Oly. (t)	1.31	2.99*	2.11
Atten. Prob. (t)	.50	8.14***	.83
Leader (t)	.38	1.08	1.29
Hyperactive (t)	.18	7.10***	.79
Manipulates (t)	.61	17.22***	.20
Extra-Curr. (t)	.08	2.61	1.21
Aggression (p)	5.55*	13.07***	2.48
Social Prom. (p)	.64	2.15	.42
Prosocial (p)	.27	4.65**	.65
Internalizing (p)	.72	2.03	.92
Group leader (p)	1.40	3.94**	.08

Note: Multivariate df: sex = (15, 347); bully = (45, 317); sex-bully = (45, 317).

Univariate df: sex = (1, 354), bully = (3, 354) and sex × bully = (3, 354).

* $P < .05$.

** $P < .01$.

*** $P < .001$.

TABLE II. Means of Continuous Measures by Sex

	Male	Female
ICST Agg. (t)	3.16 (1.57)	2.55 (1.48)
ICST Pop. (t)	4.90 (1.24)	5.12 (1.31)
ICST Aca. (t)	4.01 (1.56)*	4.77 (1.37)
ICST Aff. (t)	5.55 (1.30)	5.50 (1.37)
ICST Oly. (t)	4.35 (1.07)	4.52 (1.21)
Atten. Prob. (t)	3.84 (2.08)	2.97 (1.92)
Leader (t)	3.48 (1.85)	3.98 (1.92)
Hyperactive (t)	3.12 (1.99)	2.58 (1.82)
Manipulates (t)	2.75 (1.65)	2.68 (1.66)
Extra-Curr. (t)	3.95 (1.97)	4.32 (1.86)
Aggression (p)	7.39 (17.76)*	3.87 (5.85)
Social Prom. (p)	6.87 (16.78)	5.18 (8.40)
Prosocial (p)	4.70 (7.36)	8.53 (10.74)
Internalizing (p)	4.11 (5.59)	4.16 (7.63)
Group leader (p)	.83 (1.75)	1.10 (2.01)

Note: (t) = teacher-reported measure; (p) = peer-nomination measure.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

ICS-T academics factor and on the peer-nominated aggression factor. As seen in Table II, females had significantly higher teacher ratings of academics than males, and males had significantly higher peer nominations for aggression than females.

Individual correlates of bully classifications. Differences among bully classification categories on both teacher ratings and peer nominations of a variety of individual characteristics and behaviors will be examined first. As shown in Table I, bully classification related to teacher ratings of aggression, academics, affiliative, olympian, problems paying attention, being hyperactive, and manipulating friendships. Bully classification was also related to peer nominations for aggression and prosocial behavior.

As shown in Table III, post-hoc Tukey's tests indicated that individuals classified as neither bullies nor victims had significantly lower teacher ratings of aggression than bullies, victims, or aggressive victims. Further, bullies had significantly higher ICS-T aggression scores than victims. Bullies, victims, and aggressive victims all had significantly lower teacher ratings of academics than those classified as neither bullies nor victims. Victims had reliably lower ICS-T affiliative and olympian scores than individuals classified as neither bullies nor victims. Both bullies and victims had significantly higher ratings of attention problems than those classified as neither bullies nor victims. Individuals classified as neither bullies nor victims had reliably lower ratings of being hyperactive and

TABLE III. Means of Continuous Measures by Bully Classification

	Not bullies or victims	Bullies	Victims	Aggressive victims
ICST Agg. (t)	2.40 (1.38) ^{a,b,c}	4.24 (1.62) ^b	3.33 (1.24)	3.98 (1.56)
ICST Pop. (t)	5.26 (1.23) ^{b,c}	4.81 (1.36)	4.18 (1.07)	4.36 (1.30)
ICST Aca. (t)	4.68 (1.50) ^{a,b,c}	4.08 (1.32)	3.91 (1.33)	3.39 (1.21)
ICST Aff. (t)	5.70 (1.29) ^b	5.14 (1.55)	4.92 (1.27)	5.20 (1.07)
ICST Oly. (t)	4.58 (1.14) ^b	4.29 (1.23)	4.00 (1.06)	4.02 (1.07)
Atten. Prob. (t)	2.95 (1.97) ^{a,b}	4.58 (2.12)	4.00 (1.60)	4.13 (1.96)
Leader (t)	3.92 (1.96)	3.56 (1.91)	3.48 (1.58)	2.86 (1.29)
Hyperactive (t)	2.48 (1.87) ^{a,b,c}	3.58 (1.89)	3.32 (1.68)	4.60 (1.30)
Manipulates (t)	2.38 (1.62) ^{a,b,c}	3.93 (1.18)	3.21 (1.52)	3.93 (1.16)
Extra-Curr. (t)	4.35 (1.97)	3.73 (1.72)	3.55 (1.57)	4.13 (1.64)
Aggression (p)	3.44 (6.96) ^a	15.82 (23.33) ^{b,c}	4.84 (14.89)	7.52 (9.18)
Social Prom. (p)	6.56 (13.99)	6.22 (8.52)	1.69 (2.09)	5.48 (4.65)
Prosocial (p)	8.46 (11.01) ^{a,b}	3.10 (3.55)	3.65 (3.79)	4.72 (3.28)
Internalizing (p)	3.98 (6.88)	3.06 (3.76)	6.16 (9.14)	3.26 (4.37)
Group leader (p)	.98 (1.13) ^a	1.78 (2.44) ^b	.43 (0.81)	.87 (1.97)

Note: (t) = teacher-reported measure; (p) = peer-nomination measure; Standard deviations in parentheses.

^aSignificantly different from bullies.

^bSignificantly different from victims.

^cSignificantly different from aggressive victims.

manipulating friendships than bullies, victims, or aggressive victims. Bullies had significantly more peer nominations for aggression than all others, and individuals classified as neither bullies nor victims had reliably more peer nominations for prosocial behavior than bullies and victims.

Social Correlates of Bully Classification

This section addresses the social correlates of bullying and victimization. It begins by examining the relationship between four measures of social standing—teacher-rated popularity, peer nominations of perceived popularity, sociometric status, and social network centrality—and bully classification. Then the kinds of groups to which bullies, victims, aggressive victims, and others belong is analyzed. Finally, group leadership is then explored, both in terms of general likelihood of being a leader, as well as what kinds of groups various individuals are leaders.

The univariate ANOVAs which probed the MANOVAS discussed above indicated that bully classification was related to teacher ratings—but not peer nominations—of popularity. As shown in Table III, individuals classified as neither bullies nor victims had significantly higher teacher ratings of popularity than victims and aggressive victims.

Sociometric status and bully classification. Sociometric status related to bully classification in both boys ($\chi^2_{(12,n=161)} = 35.65, P < .001$), and girls ($\chi^2_{(12,n=258)} = 26.18, P < .01$). Exact tests

revealed that boys classified as neither bullies nor victims were less likely to be sociometrically rejected (9 of 100, or 9.0%, of these boys; Fisher's Exact Probability $< .01$), and more likely to be sociometrically average (41 of 100, or 41.0%, of these boys; Fisher's Exact Probability $< .05$) than expected by chance. Further, male bullies tended to be rejected (9 of 29, or 31.0%; Fisher's Exact Probability $< .05$), and not neglected (5 of 29, or 17.2%; Fisher's Exact Probability $< .05$), while victimized boys tended to be rejected (8 of 22, or 36.4%; Fisher's Exact Probability $< .01$) and not average (2 of 22, or 9.1%; Fisher's Exact Probability $< .01$).

Girls classified as neither bullies nor victims were significantly more likely to be sociometrically popular (54 of 199, or 27.1%; Fisher's Exact Probability $< .05$), and less likely to be rejected (12 of 199, or 6.0%; Fisher's Exact Probability $< .01$) than expected. Female bullies tended to be either rejected (5 of 20, or 25.0%; Fisher's Exact Probability $< .05$) or controversial (6 of 20, or 30.0%; Fisher's Exact Probability $< .05$), and not average (3 of 20, or 15.0%; Fisher's Exact Probability $< .05$). Finally, victimized girls were significantly more likely than expected by chance to be rejected (7 of 34, or 20.6%; Fisher's Exact Probability $< .05$).

Network centrality and bully classification. Individuals' centrality in the network related to bully classification in both boys ($\chi^2_{(6,n=129)} = 16.27, P < .05$) and girls ($\chi^2_{(6,n=241)} = 16.12, P < .05$). Exact tests revealed that male bullies tended to be secondary more often than expected by chance

(20 of 26, or 76.9%; Fisher's Exact Probability <.01), and not peripheral (4 of 26, or 15.4%; Fisher's Exact Probability <.001), while victimized boys had the opposite pattern. They tended to be peripheral (11 of 15, or 73.3%; Fisher's Exact Probability <.05) and not secondary (4 of 15, or 26.7%; Fisher's Exact Probability <.05). Female bullies tended to be nuclear (5 of 18, or 27.8%; Fisher's Exact Probability <.05), while victimized girls tended to be peripheral (16 of 28, or 57.1%; Fisher's Exact Probability <.01) and not nuclear (0 of 28, or 0%; Fisher's Exact Probability <.05).

Aggressive-group type and bully classification. As shown in Table IV, aggressive-group type related to bully classification in both boys ($\chi^2_{(12, n=132)} = 30.37, P < .01$), and girls ($\chi^2_{(12, n=201)} = 24.48, P < .05$). Exact tests revealed that boys classified as neither bullies nor victims were less likely to be in aggressive groups (14 of 82, or 17.1%, of these boys; Fisher's Exact Probability <.001) than expected by chance, and while only 23.2% (19 of 82) of these boys were in zero-aggressive groups, this was 19 of the 20 individuals in such groups (Fisher's Exact Probability <.001). Further, male bullies tended to belong to aggressive groups (12 of 23, 52.2%; Fisher's Exact Probability <.01), and not zero-aggressive groups (0 of 23, 0%; Fisher's Exact Probability <.05), while victimized boys did not belong to mixed groups (0 of 17, 0%; Fisher's Exact Probability <.01).

Girls classified as neither bullies nor victims tended to be in zero-aggressive groups (61 of 158, or 38.6%; Fisher's Exact Probability <.05), and not isolated (6 of 158, or 3.8%; Fisher's Exact Probability <.01). Victimized girls, on the other hand,

had a relatively high rate of isolation (6 of 23, or 26.1%; Fisher's Exact Probability <.01).

Popularity-group type and bully classification. As shown in Table V, popularity-group type related to bully classification in girls ($\chi^2_{(12, n=227)} = 24.77, P < .05$) but not boys ($\chi^2_{(12, n=132)} = 14.74, P = .26$). While only 48 of 179, or 26.8%, of girls classified as neither bullies nor victims were in non-popular groups, this was 48 of the 53 total members of these groups (Fisher's Exact Probability <.01). Further, only 6 of 179 (3.4%) of these girls were isolated (Fisher's Exact Probability <.01). Victimized girls, on the other hand, tended to be isolated (6 of 29, or 20.7%; Fisher's Exact Probability <.01), and not in non-popular groups (2 of 29, or 6.9%; Fisher's Exact Probability <.05).

Group leadership and bully classification. We examined group leadership in two ways: as a continuous variable (total number of leadership nominations that each person received in the SCM procedure) and as a categorical variable (the individual or individuals with the highest number of leader nominations in each group were designated as that group's leader). As shown in Table I, an ANOVA which probed the omnibus MANOVA indicated that the raw number of leader nominations related to bully classification. As shown in Table III, post-hoc Tukey's tests revealed that bullies had significantly more leader nominations on average than victims individuals classified as neither bullies nor victims. Aggressive victims did not differ reliably from any other group.

Since members of oft-nominated groups had more chances of being nominated as leaders, the total number of leader nominations was to a certain

TABLE IV. Bully Classification by Aggressive Group Type

Bully classification	Aggressive group type				
	Zero Agg.	Non-Agg.	Agg.	Mixed	Isolates
<i>Males</i>					
Neither	19 (23.2%)	11 (13.4%)	14 (17.1%)	26 (22.4%)	12 (14.6%)
Bullies	0 (0%)	2 (8.7%)	12 (52.2%)	7 (30.4%)	2 (8.7%)
Victims	1 (5.9%)	4 (23.5%)	7 (41.2%)	0 (0%)	5 (29.4%)
Agg-Vic.	0 (0%)	1 (10.0%)	5 (50.0%)	3 (30.0%)	1 (10.0%)
<i>Females</i>					
Neither	61 (38.6%)	41 (25.9%)	22 (13.9%)	28 (17.7%)	6 (3.8%)
Bullies	3 (18.8%)	4 (25.0%)	4 (25.0%)	3 (18.8%)	2 (12.5%)
Victims	5 (21.7%)	4 (17.4%)	6 (26.1%)	2 (8.7%)	6 (26.1%)
Agg-Vic.	1 (25.0%)	2 (50.0%)	1 (25.0%)	0 (0%)	0 (0%)

Note: row percentages in parentheses.
 Males: $\chi^2_{(12, n=132)} = 30.37, P < .01$.
 Females: $\chi^2_{(12, n=201)} = 24.48, P < .05$.

TABLE V. Bully Classification by Popularity Group Type

Bully classification	Popularity group type				
	Zero Pop.	Non-Pop.	Pop.	Mixed	Isolates
<i>Males</i>					
Neither	28 (33.7%)	4 (4.8%)	17 (20.5%)	22 (26.5%)	12 (14.5%)
Bullies	8 (38.1%)	1 (4.8%)	4 (19.0%)	6 (28.6%)	2 (9.5%)
Victims	11 (61.1%)	0 (0%)	2 (11.1%)	0 (0%)	5 (27.8%)
Agg-Vic.	5 (50.0%)	1 (10.0%)	0 (0%)	3 (30.0%)	1 (10.0%)
<i>Females</i>					
Neither	52 (29.1%)	48 (26.8%)	25 (14.0%)	48 (26.8%)	6 (3.4%)
Bullies	4 (28.6%)	3 (21.4%)	1 (7.1%)	4 (28.6%)	2 (14.3%)
Victims	13 (44.8%)	2 (6.9%)	2 (6.9%)	6 (20.7%)	6 (20.7%)
Agg-Vic.	3 (60.0%)	0 (0%)	1 (20.0%)	1 (20.0%)	0 (0%)

Note: row percentages in parentheses.

Males: $\chi^2_{(12, n=132)} = 14.74, P = .26$.

Females: $\chi^2_{(12, n=227)} = 24.77, P < .05$.

extent redundant with the analysis of social network centrality: those nominated most often (and thus are most central) are more likely to have many leadership nominations. Further, it may be misleading since the leader of a nuclear (and thus highly nominated) group might have, for example, eight leader nominations, while another member of the same group might have one or two leader nominations. In this case, the first individual is clearly the leader of the group, since they have four times as many leader nominations as any other member. However, the leader of a peripheral (and thus infrequently named) group might have only two nominations, since the group was only nominated twice. As such, the leader of a peripheral group might have as many leader nominations as a decidedly secondary member of a more central group. To address this possibility, a categorical analysis was performed such that individuals were dichotomously classified as leaders of their group or not. The criterion for classification was that an individual had to have at least twice as many leader nominations as anyone else in the group to be designated as that group's leader. In actuality, most groups had a very clear pattern: in, for example, a secondary group, one member would have four or five leader nominations, and no one else in the group would have more than one nomination. In more peripheral groups, the leader might have only one or two nominations, but no one else had any leader nominations at all. In one case, in a nuclear female group, two individuals were designated as leaders: one girl had 12 nominations, the other 11, and no other group member had more than two.

Being designated leader of one's group was related to bully classification in boys ($\chi^2_{(3, n=149)} = 9.99$,

$P < .01$), but not girls ($\chi^2_{(3, n=255)} = 6.37, P = .10$). Exact tests revealed that male bullies tended to be leaders more often than expected by chance (11 of 28, or 39.3%, of bullies were leaders; Fisher's Exact Probability $< .01$), while victims were leaders less often than expected (only 1 of 20, or 5%, was a leader; Fisher's Exact Probability $< .05$). Boys classified as neither bullies nor victims (17 of 91, or 18.7%) and aggressive victims (1 of 10, or 10.0%) were leaders at chance levels.

DISCUSSION

The first hypothesis was that bullies would constitute approximately 14%, victims 18%, and aggressive victims 5% of the sample. Further, we expected that males would be twice as likely to be bullies compared to females. This hypothesis was largely confirmed, though the incidence of bullying and both kinds of victimization were slightly lower than expected. The expected gender difference was present, with boys in this sample over 2.3 times as likely to be classified as bullies than females. On the whole, the incidence rates of bullying were similar to past research with other samples [Olweus, 1993; Pellegrini et al., 1999], and very consistent with African American samples [Nansel et al., 2001]. Interestingly, in this sample the boys specifically had nearly identical rates of bullying as have been found in past research on African Americans [Nansel et al., 2001], while the girls were much less likely to be bullies. The literature to date has consistently found that 30–40% of children are involved in bullying, as some form of aggressors or victims. The consistency of these findings across samples underscores the

pervasive nature of this phenomenon, and the need for further study and preventative efforts in all populations.

The second hypothesis was that bullies would be rated as aggressive and manipulative, aggressive victims would be aggressive, and victims higher on internalizing behaviors. This hypothesis was somewhat confirmed. Teachers rated bullies, victims, and aggressive victims as aggressive and manipulative compared to individuals who were neither bullies nor victims. Bullies were also reliably higher in teacher-rated aggression than victims. Peers nominated bullies as more aggressive than aggressive victims, victims, or those not involved in bullying.

Bullies, victims, and aggressive victims are all rated as aggressive, while varying on the form of aggression [Pellegrini et al., 1999; Salmivalli and Nieminen, 2002]. Bullies and bully victims are both reactively and proactively aggressive, while victims are exclusively reactively aggressive. Since we did not differentiate such forms of aggression, it might be expected that all three groups would be rated as equally aggressive in our sample. This was not the case: victims were not rated as aggressive as bullies. Perhaps victims in our sample were less likely to retaliate when tormented by bullies.

The third hypothesis was that bullies would be rated by teachers and peers as popular and highly integrated into their social network, but would not be well-liked (i.e., they would be sociometrically rejected). Aggressive victims were expected to be considered unpopular, peripheral to the network or isolated from it, and also disliked. Finally, we expected victims to be unpopular and not especially liked nor disliked (i.e., sociometrically average or neglected). This was partially confirmed, but with a slight gender difference on the categorical measures. Both victims and aggressive victims were significantly lower than those classified as neither bullies nor victims on teacher ratings of popularity. Bullies, on the other hand, did not differ reliably from those individuals. While the differences were not reliable due to large variances, bullies and those not involved in bullying had much higher peer nominations of social prominence than victims. Male bullies were well-integrated, though not highly salient (i.e., they were secondary) in the social network, and were sociometrically rejected (disliked). Female bullies were sociometrically rejected (disliked) or controversial (both liked and disliked), but were nuclear to the social network (very salient). Both male and female victims were sociometrically rejected and peripheral to or isolated from the social network.

On the whole, these findings were in line with the past literature: aggressive individuals were highly disliked, which fits with over two decades of research on sociometric rejection [Rubin et al., 1998]. However, there were parallels with a growing body of recent research indicating that some highly aggressive individuals are quite socially integrated, and even considered popular [Cillessen et al., 1992; Estell et al., 2002, 2003; Rodkin et al., 2000; Stormshak et al., 1999].

Though bullies are certainly not synonymous with the aggressive-popular individuals found in these studies, they are clearly not as socially marginalized as previously thought. Salmivalli and Nieminen [2002] found specifically that while aggressive victims were almost universally proactively and reactively aggressive, there were subsets of bullies who were proactive, reactive, or both. Given that reactive aggression is associated with social marginalization, while proactive aggression is more compatible with popularity and peer acceptance [Dodge et al., 1997; Pellegrini and Bartini, 2001; Pellegrini et al., 1999; Poulin and Boivin, 2000; Price and Dodge, 1989], this may explain why some bullies are socially integrated, while aggressive victims and victims are more likely to be marginalized. In fact, the subset of proactively aggressive bullies may very well show considerable overlap with the aggressive-popular individuals discussed above. This further underscores the need to examine social support for aggression [Farmer, 2000] and viewing social status beyond likeability when assessing its relation to aggression [Cairns et al., 1988; Estell et al., 2003; LaFontana and Cillessen, 2002; Parkhurst and Hopmeyer, 1998].

The final hypothesis was that bullies would not be limited to aggressive and unpopular social groups, and would tend to be leaders of their groups. This was partially confirmed. While neither male nor female bullies were limited to low-popularity groups, male bullies did tend to belong to aggressive groups specifically. Further, while male bullies were more likely than other kinds of boys to be leaders of their groups, they were especially likely to be leaders of aggressive groups.

This was consistent with past findings that highly aggressive individuals belong to, and can be the leaders of, groups of similarly aggressive individuals [Cairns et al., 1988; Rubin et al., 1998]. Indeed, it has been argued that aggressive students are limited in their affiliations exclusively to other aggressive individuals, and that the subsequent groups may be marginalized by the rest of the social network [Bagwell et al., 2000; Bierman et al., 1999]. However,

recent investigations have found that aggressive individuals are not limited to associating with other aggressive individuals [Bagwell et al., 2000; Estell et al., 2002, 2003]. Nor do they universally persist in using aggression once affiliations are established [Pellegrini and Bartini, 2001]. Similarly, in the current study almost a third of male bullies were in mixed groups, and two were in non-aggressive groups, while female bullies had virtually equal probability of being in zero-aggressive, non-aggressive, aggressive, and mixed groups. Further, popularity-group type was not related to bully classification, and bullies were not confined to marginalized groups (victims, in fact, were more likely to be relegated to such groups).

It was especially interesting to note the relative lack of gender differences in this sample in the correlates of aggression. Boys were more likely to be bullies, girls tended to be rated by teachers as higher in academics, and boys rated by peers as more aggressive. However, there were no statistical interactions between gender and bully classification, indicating that regardless of the base levels of these behaviors, the relationship to bullying was similar across genders. Further, even on the separately conducted categorical analyses, both genders had similar results. The only real difference was with group leadership.

This relative lack of gender differences is unexpected. Past research has indicated that girls are more likely to use relational aggression, and at earlier ages [Björkqvist et al., 1992; Cairns et al., 1989; Crick et al., 1996; Lagerspetz et al., 1988]. As such, though similar in other characteristics, perhaps the female bullies were using more relational aggression, and male bullies more overt aggression. Only one peer item, "starts rumors," measured relational aggression; all others assessed overt aggression. Post-hoc analyses of this one item yielded a main effect for bully classification, where bullies were significantly higher than victims and those not involved in bullying, but there was neither a main effect for sex nor an interaction between sex and bully classification. The similarity between boys and girls on the relationship between aggression and bullying apparently represents the same forms of aggression. This is a distinction between this sample and past studies: the female bullies in this sample, though fewer in number and proportion than their male counterparts, were using the same forms of overt physical and verbal aggression as male bullies.

There are several limitations to the current work. First and foremost, a central argument of this paper is that peer support for aggressive and bullying

behavior may be a key aspect of its origin and maintenance. And while it was true that bullies were not socially marginalized, we had no direct measure of peer-group values regarding aggression and victimization. Such a measure would be a more direct measure of true support for, rather than mere tolerance of, these behaviors. Further, difference in such values may go far in explaining different incidence rates across populations. As such, future work examining peer group values should be conducted, ideally in a variety of samples encompassing individuals diverse in terms of their racial, socioeconomic, and residential (urban, suburban, rural) backgrounds.

Further, while the findings here are broadly consistent with other survey and ethnographic research, some of the methods and procedures differ from those used in other studies of bullying and aggression, and make some comparisons difficult. Specifically, the fact that this study used a middle-school sample forced some difference in the procedures and methods used. In elementary school, the social context is typically a self-contained classroom. Past studies examining elementary school children have therefore used the classroom as the unit of analysis. However, in middle school, the social context becomes much broader. Students change classes from period to period, and typically do not have all the same peers in each class. To accurately assess the social dynamics in such settings, it is necessary to view the entire school as the relevant social context and to use saturated sampling techniques. For this reason, the present study used the school rather than the classroom as the social unit boundary for the peer-generated data.

Because the school was used as the unit of analysis, these scores should not be directly compared in absolute terms with those from studies where the class is the unit of analysis. However, this in no way compromises the validity of these scores. On the contrary, this method was a highly effective way to identify bullies as well as youth who were prominent in the social structure on specific characteristics.

Overall, these findings indicate that the literature regarding heterogeneity in kinds of aggressive individuals may inform the bully literature and vice versa. Social-skills training may reduce aggression in aggressive-marginalized individuals and protecting individuals against victimization by promoting social integration. Aggressive-popular individuals may require broader classroom and social-network level interventions aimed at disrupting the social

dynamics which support their behavior [Farmer, 2000].

The current findings support the view that some bullies are socially integrated in the classroom social structure, are solid members of peer groups, and can have relatively high social status. This is consistent with the view that some bullies may be very socially skilled [Sutton et al., 1999a,b]. Yet the debate remains about why individuals with significant social skills would choose to use aggressive and coercive behaviors with others, and how such behavior can be regarded as socially competent. If social competence is defined as internalizing the goals of being friendly, prosocial, and well-liked, then aggression and bullying are by definition incompetent [Arsenio and Lemerise, 2001].

However, it has been argued that social competence is best defined as successfully navigating the social context on the way to achieving individual goals—whatever those goals may be [Sutton et al., 2001]. If this latter definition is accepted, then aggression and bullying can certainly be associated with such competence, since aggression can lead to both admiration (peer-perceived popularity, coolness) and control of resources (leadership, taking what one wants), if not being specifically liked (i.e., sociometric popularity).

This definition differentiates between social skills and social goals, which may be extremely useful for both theory and intervention. In those cases where simple social-skills training fails to change behavior even when the lessons appear to have been learned, practitioners may instead want to focus on changing social goals. Ignoring the distinction between possessing prosocial skills and having the desire to use them across times and contexts limits the efficacy of prevention and intervention efforts.

In conclusion, bullying and aggression in school are complex issues. There is a need to consider both the individual characteristics which contribute to conflicts and victimization, as well as how social dynamics support bullying and in some cases constrain victims' ability to move to less vulnerable positions. Though much remains to be studied, it is clear at least that unidimensional interventions aimed at reducing aggression may not be universally effective: different processes appear to be at work in bullies and aggressive victims in the maintenance of aggressive behavior, and these processes may vary across populations and contexts. Continued work on these issues with diverse samples is vital to increasing the efficacy of intervention and prevention efforts.

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