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Peer Victimization, Aggression, and Their Co-Occurrence in Middle School: Pathways to Adjustment Problems

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An ethnically diverse sample of 6th-grade students completed peer nomination procedures that were used to create subgroups of students with reputations as victims, aggressors, aggressive victims, and socially adjusted (neither aggressive nor victimized). Self-report data on psychological adjustment, attributions for peer harassment, and perceived school climate were gathered. In addition, homeroom teachers rated participating students on academic engagement and students' grades were collected from school records. Victims reported the most negative self-views, aggressors enjoyed the most positive self-views, and aggressive victims fell between these two groups, although their psychological profile more closely resembled that of victims. However, all three subgroups encountered more school adjustment problems when compared to their socially adjusted classmates. Different pathways to school adjustment problems for aggressors and victims were examined. For victims, characterological self-blame for victimization and psychological maladjustment were the key mediators, whereas for aggressors, the significant pathway was mainly through perceived unfairness of school rules. Analyses by ethnicity revealed that African American boys were most likely to be perceived as aggressive and as aggressive victims and they were doing most poorly in school. Implications for intervention with subgroups of problem behavior youth and the particular vulnerabilities of African American adolescents were discussed.

KEY WORDS: aggresive victim; academic achievement; victim; self-blame.

Media attention and case studies of lethal school shootings, linking violent school behavior to a history of chronic harassment by peers, have heightened public concern about the risks associated with being both target and perpetrator of peer-directed hostility (Leary, Kowalski, Smith, & Phillips, 2003; Verlinden, Herson, & Thomas, 2000). Psychological research has not kept pace with the public's growing concern, for at present rather little is known about youth who are both victimized and aggressive. One reason for the empirical void is that research on peer aggression and victimization generally has comprised two separate literatures, with much more known about the perpetrators of hostility than about their victims. On the aggression side, there is a large literature on the stability of childhood antisocial behavior and its status as a risk factor for later maladjustment, including school failure and delinquency (see review in Coie & Dodge, 1998). Aggression and academic disengagement often go hand-in hand because youth who have externalizing problems also are likely to view the school as unsupportive and its teachers as unfair (e.g., Kuperminc, Leadbeater, Blatt, 2000; Rigby & Slee, 1992). On the victim side, a smaller but growing literature has examined the negative psychological consequences of chronic harassment by peers. A common theme organizing that research is that children and adolescents who are victims of peer harassment are rejected by their peers and they frequently experience internalizing problems, including low self-esteem, loneliness, social anxiety, and depression (see Juvonen & Graham, 2001). The disproportionate focus on aggressors rather than victims in American research, and the tendency to keep the two literatures separate, is striking in contrast to European studies where large-scale studies of *bully/victim* problems have been carried out since the 1970s (see Olweus, 1978).

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Like our European colleagues, we view the peer literatures on both aggression and victimization as complementary in many respects. In its simplest form, hostility by one child toward another entails a dyadic interchange between perpetrator and target. Focusing on only one member of this dyad in the absence of the other therefore provides an incomplete picture of the complex interplay between aggressor and victim status. In addition, although aggressors and victims may fall at different points along a social maladjustment continuum, those placements are more dynamic than static and they are not necessarily mutually exclusive. For example, youth who aggress against others may have a long history of being the targets of others' abuse (as in the school shootings), and some who perceive themselves as victims may be judged as aggressive by their peers. Examining the characteristics of children who fall at one end of the aggressor–victim continuum therefore sheds light on the characteristics of those who tend to reside at the other end of the same continuum.

That kind of integration can also aid our understanding of children who have characteristics of both aggressors and victims. Are they more similar to aggressors, to victims, or do they comprise a distinct subgroup with their own unique pattern of adjustment difficulties? While few in number, most studies that have examined co-occurring problems of aggression and victimization support the notion of a distinct subgroup who display more extreme levels of maladjustment (for a review, see Schwartz, Proctor, & Chien, 2001). For example, the most consistent finding across those studies is that aggressive victims are more rejected by the peer group than are victims or aggressors. In one of few studies that proposed a qualitatively different pattern of adjustment difficulties for the co-occurring group, Schwartz (2000) found that aggressive victims were most troubled by problems in emotion regulation and impulse control.

There is less consensus in the literature about whether the comorbid group also experiences heightened levels of psychological maladjustment. Whereas some investigations report that aggressive victims display the most internalizing symptoms when compared to victims and aggressors (e.g., Haynie et al., 2001; Kumpulainen et al., 1998), other studies report no consistent mean level differences between behavioral subgroups (e.g., Austin & Joseph, 1996; Craig, 1998). In a recent study with middle school students, Juvonen, Graham, and Schuster (2003) found that victims were especially likely to report internalizing symptoms (e.g., depression, social anxiety) and that aggressors were least likely to display these symptoms. Aggressive youth also were perceived as especially popular (i.e., "cool") among their peers, suggesting that peer approval may partly offset psychological adjustment difficulties. Aggressive victims fell between victims and aggressors on internalizing symptoms, but they did not enjoy any of the social benefits of being aggressive because they were overwhelmingly rejected by their peers. Despite these group differences in internalizing symptoms and social status, Juvonen et al. (2003) also documented that all three problem behavior subgroups were rated by their teachers as less academically engaged than their socially adjusted counterparts, with aggressive victims perceived as least engaged.

It may not be surprising that youth with social behavior problems were doing more poorly in school compared to their peers without such problems. Yet, given emerging evidence for distinct psychosocial profiles among victims, aggressors, and aggressive victims, we addressed two questions in the present research. First, are there other psychosocial variables that differ among the subgroups in systematic ways that might be relevant to academic achievement? And second, can these variables aid our understanding of the processes or mediating mechanisms that might explain why each of the behavioral subgroups was doing poorly in school? For youth who have internalizing problems and suffer peer disdain the processes might be different from youth who aggress against others but have relatively positive self-views. We focus on social cognitive variables and processes, or the ways in which individuals interpret their social experiences. Our goal was to shed additional light on aggressive victims (in what ways do their social cognitions resemble aggressors and in what ways are they like victims), and in so doing to map out different pathways to academic difficulties for distinct behavior subgroups.

One pathway to school problems, more pertinent to victims in the present research, might involve psychological maladjustment and its relation to how victims interpret the causes of their harassment. A history of peer abuse and the perception of being singled out might lead a child to ask, "Why me?." We drew on the adult literature on causal explanations for rape (another obvious form of victimization) where a distinction has been made between characterological and behavioral self-blame (Janoff-Bulman, 1979). Characterological self-blame describes attributions that are internal ("it's something about *me*"), stable ("things will always be that way"), and uncontrollable ("there is nothing I can do to change it"). Behavioral self-blame, in contrast, is internal ("it's something that *I* did "), but also unstable ("things do not have to be this way"), and controllable (". . . because I can change my behavior"). The two types of self-blame differ on stability and controllability, two causal dimensions that have disparate consequences for adjustment (see Weiner, 1986). A number of studies have reported that individuals who

make characterological attributions for negative outcomes cope more poorly, feel worse about themselves, and are more depressed than individuals who make behavioral self-attributions (see reviews in Anderson, Miller, Riger, Dill, & Sedikides, 1994; Janoff-Bulman, 1992).

In a prior study with middle school students (Graham & Juvonen, 1998), we documented that victims were more likely than nonvictims to endorse characterological self-blame as the cause of hypothetical peer harassment. That attributional pattern then mediated the relation between victim status and internalizing symptoms. In the present study we elaborated those prior findings to test a more complete model of pathways from victimization to school outcomes, in which the proposed sequence was: victimization → characterological self-blame → psychological maladjustment → school problems. That is, we predicted that students with reputations as victims who blamed themselves for their plight ("it must be *me*") would be more likely to report psychological adjustment problems, and maladjustment, in turn, would be the more proximal determinant of problematic school outcomes.

Based on what is known about how aggressive youth construe their causal world, we hypothesized a different pathway from aggression to school difficulties. A robust finding in the childhood aggression literature is that aggressive youth are more likely to attribute peer provocation to the hostile intentions of the provocateur rather than to their own characteristics or behavior (see Coie & Dodge, 1998). If aggressive youth are less likely to endorse attributions that implicate internal, stable, and uncontrollable factors (i.e., characterological self-blame), that tendency could partly explain their relatively positive self-views as reported in Juvonen et al. (2003) and other investigators (e.g., Hymel, Bowker, & Woody, 1993; Zakriski & Coie, 1996). We hypothesize that the vulnerabilities associated with school failure among aggressive youth relate not so much to psychological maladjustment but to school climate and perception of the environment as unsupportive and unfair ("it must be *them*"). A number of recent studies have found that fairness-related climate variables such as perceiving school discipline as harsh or rules as unequally enforced, are more linked to externalizing and/or aggressive behavior than to internalizing and/or victimization (Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Kuperminc et al., 2000; Nanselet al., 2001). Thus we hypothesized that the relationship between having a reputation as aggressive and poor school performance would be mediated by perceived school fairness. More aggression should predict perceiving school rules as unfair and perceived unfairness, in turn, was hypothesized to function as the more proximal determinant of problematic school outcomes.

The Present Study

Sixth-grade participants completed peer nomination procedures that allowed us to identify which students had reputations as aggressors and victims. Participants then completed self-report measures that assessed causal interpretations of hypothetical peer harassment, including characterological and behavioral self-blame; psychological adjustment (e.g., depression, self-esteem), and school climate, such as perceived fairness and safety. Academic achievement data were gathered from both teacher informants and school records.

There were two main goals of the study, each involving a different analytic approach. First, like most prior research that has examined peer aggression and victimization concurrently, we used an individual difference, or person-oriented approach, to examine mean differences on the adjustment variables among subgroups of students identified as aggressors, victims, aggressive victims, and socially adjusted. We were particularly interested in whether aggressive victims were more similar to aggressors or victims on social cognitive measures not previously examined, such as self-blaming attributions and perceptions of school climate. Our second goal utilized a variable-oriented approach to investigate relations between identified variables, with a particular focus on testing different pathways to school problems for youth who differ along a victimization-aggression continuum. For youth more likely to have reputations as victims, we predicted that school adjustment problems would be better explained by characterological self-blame and psychological maladjustment. In contrast, for youth more likely to have reputations as aggressive, we predicted that school problems would be better explained by negative school climate, especially perceived unfairness of its rules. Both person-oriented approaches, focusing on classification into behavioral subgroups, and variable-oriented approaches, focusing on patterns of relations among continuous variables, are useful and complementary if one's goal is to understand individual development as well as developmental process (see, for example, Cairns & Magnusson, 1996; Laursen, Pulkkinen, & Adams, 2002; Masten et al., 1999). To accomplish our goals of understanding both individuals and process in the context of peer aggression and victimization, we used the sixth-grade sample described in Juvonen et al. (2003) but with a more conservative criteria for defining behavioral subgroups, an expanded set of adjustment variables, and a more complex analysis strategy.[4] We know of no prior studies that have examined

[4] Four variables examined in the present research (loneliness, social anxiety, depression, and teacher-rated engagement) also were included

different pathways to school adjustment problems for aggressors and victims in the same analysis and using data from multiple informants.

Our focus was on middle school students because we believe that early adolescence is a particularly appropriate developmental period for research on individuals who have problems with peer relationships. Given their heightened concern about finding their niche and "fitting in," early adolescents could be especially vulnerable to the adjustment problems associated with students who are victims of harassment. And because the transition to middle school poses new academic challenges (Eccles & Midgley, 1989) and greater opportunity for disengagement (e.g., skipping classes), early adolescents might be particularly vulnerable to the adjustment difficulties associated with aggression. Finally, we investigated aggression and victimization in an ethnically diverse sample of early adolescents, mainly Latino and African American students. Those groups, Latinos in particular, have not been well represented in the adolescent peer relations literature. In the absence of a strong empirical base, we adopted an exploratory approach in lieu of testing specific hypotheses about ethnicity and its relation to aggression and victimization.

METHOD

Participants

Participants were 1985 sixth-grade students (904 boys and 1081 girls, M age = 11.5 years) who were taking part in a longitudinal study of peer relations during the middle school years. The data reported in this article were gathered at Wave 1, approximately 2 months after the start of the school year. Participants were recruited in two cohorts. Wave 1 data for Cohort 1 ($n = 1210$) were collected during Fall of the first year of the study and Wave 1 data for Cohort 2 ($n = 775$) were collected 1 year later. According to students' self-reported ethnic affiliation, the sample was 46% Latino ($n = 910$, predominantly Mexican American); 26% African American ($n = 511$); 11% Asian ($n = 212$, predominantly Korean); 9% White ($n = 188$); and 8% who self-identified as biracial or multiracial ($n = 164$). There were approximately equal numbers of boys and girls within each ethnic group. Over 90% of Latino, Asian, and multiracial youth were at least second generation (U.S. born children of immigrants) and all were sufficiently proficient in English to complete written surveys. Eighteen students who did not report their ethnicity on the Wave 1 survey are not included in the sample.

Students were recruited from 11 middle schools in metropolitan Los Angeles, chosen from among those of comparable size in demographically similar low income/working class neighborhoods. Across the 11 schools, student eligibility for free or reduced-price lunch programs ranged from 47 to 87% and all schools qualified for Title I compensatory education funds. Thus, by available indicators, the students were primarily of low socioeconomic status.

Peer Nominations

Aggressor and Victim Status

Peer nomination procedures were used to determine which students had reputations as aggressors and/or victims. Participants were given a roster that contained the names of all the students in their homeroom, arranged alphabetically and by gender. Using that roster, participants were instructed to list the names of up to four students of either gender who fit each of three behavioral descriptions of victimization and three behavioral descriptions of aggression. Two of the victim descriptions portrayed physical and verbal harassment ("gets pushed around," "gets put down or made fun of by others"). A third description depicted indirect or relational victimization ("other kids spread nasty rumors about them") ($\alpha = .87$). Parallel descriptions portrayed aggression ("starts fights or pushes other kids around," "puts other kids down or makes fun of others," "spreads nasty rumors about other kids") ($\alpha = .90$).

Psychological Maladjustment

Loneliness

A 16-item scale developed by Asher and Wheeler (1985) was used to measure loneliness. Students responded on 5-point scales (1 = *not true at all* to 5 = *always true*) to questions such as "I feel alone" and "I have nobody to talk to." Ratings on the 16 items were summed and averaged ($\alpha = .85$ for this sample).

in the Juvonen et al. (2003) study of behavioral subgroups. However, different cutoff scores were used in Juvonen et al. (.50 as opposed to .75 *sd* above or below the standardized mean on peer-nominated aggression and victimizations), five groups (including borderline youth) rather than four groups were created, and there were no tests of relationships between variables. Juvonen et al. also examined peer status variables (i.e., perceived coolness and peer rejection) that were not a part of the present analyses. Thus, there was little conceptual and empirical overlap between the present research and the previous study.

Social Anxiety

Two subscales (12 items) from the Social Anxiety Scale for Adolescents (SAS-A, LaGreca & Lopez, 1998) were used to measure discomfort in social settings. The subscales measure fear of negative evaluation (e.g., "I worry about what others think of me") and social avoidance (e.g., "I'm afraid to invite others to do things with me because they might say no"). Each item is rated on a 5-point scale (1 = *not at all* to 5 = *all the time*). Combining the subscales yielded a 12-item measure with good internal consistency ($\alpha = .82$).

Depression

Ten items that comprise the Short Form of the Children's Depression Inventory (CDI; Kovacs, 1992) were used to assess depressed affect. For each item, respondents were presented with three sentences that describe "how kids might feel" and they chose the sentence that best described how they had been feeling during the past 2 weeks. A sample item was: "I do most things right"; "I do many things wrong"; "I do everything wrong." Item scores ranged from 0 to 2. Those ratings were summed and averaged ($\alpha = .80$).

Low Self-Esteem

The 6-item general subscale of Harter's (1985) Self-Perception Profile for Children (SPPC) was used to assess students' self-esteem. For each item, respondents were presented with two sentences separated by the word "But," with each statement reflecting high or low self-esteem. An example item was: "Some kids are happy with themselves as a person BUT other kids are often *not* happy with themselves." Students chose one of the two alternatives and then indicated whether the selected alternative is *really true for me* or *sort of true for me*. That creates a 4-point scale for each item that was summed and averaged across items, with higher scores representing lower self-esteem ($\alpha = .79$).

Self-Blame for Victimization

The instrument developed by Graham and Juvonen (1998) was used to measure self-blaming attributions for hypothetical peer victimization. Participants were presented with two scenarios where they imagined that they were the target of peer harassment at school. One scenario described the respondent as physically threatened by peers seen smoking in the bathroom and the other scenario portrayed the respondent as humiliated in the locker room by classmates who took their uniform. For each vignette, respondents rated on 7-point scales how much they agreed with 32 statements that captured what they might think, feel, and do if the incident actually happened to them. Ratings on the individual items were averaged across the two vignettes. For these analyses, we used the characterological and behavioral self-blame subscales identified by factor analysis in Graham and Juvonen (1998). The characterological subscale was comprised of six items (e.g., "If I were a cooler kid I wouldn't get picked on; "This sort of thing is more likely to happen to me than to other kids") ($\alpha = .82$ in this sample). The behavioral subscale consisted of five items (e.g., "I was at the wrong place at the wrong time"; "I should have been more careful") that also showed good internal consistency ($\alpha = .74$).

Perceived School Climate

Three subscales were adapted from the school climate section of the Effective School Battery (ESB; Gottfredson, 1984). Two 3-item subscales measured students' liking for school (e.g., "I look forward to going to school," $\alpha = .55$) and perceptions of fairness (e.g., "The punishment for breaking school rules is the same no matter who you are," $\alpha = .55$). An 8-item subscale measured perceptions of the school safety (e.g., "How often do you feel safe while in your school building? ($\alpha = .73$). For each item, participants responded using a 5-point scale (1 = *almost never* and 5 = *almost always*). The subscale items were summed and averaged, with higher scores indicating more school dislike, perceived unfairness, and unsafety.

Academic Achievement

Grade Point Average

Students' fall semester grades were obtained from school office records. GPAs for academic subjects were calculated by averaging students' grades across their classes; scores were based on a 5-point scale, with As, Bs, Cs, Ds, and Fs worth 4, 3, 2, 1, and 0 points, respectively.

Teacher-Rated School Engagement

Six items from the Short Form of the Teacher Report of Engagement Questionnaire (TREQ; Wellborn & Connell, 1991) were included to assess the degree to which students were perceived by their teachers as

engaged versus disaffected from school activities. An example item was: "In my class, this student concentrates on doing his/her schoolwork"). Teachers rated students using 4-point scales (1 = *not at all characteristic of this student* to 4 = *very characteristic*). Responses were summed and averaged ($\alpha = .89$).

Procedure

Sixth-grade students were recruited from 99 homerooms distributed across the 11 middle schools. Excluded were self-contained special education classrooms and programs for gifted students. In the eligible homerooms, students took home letters and consent forms in both English and Spanish that explained the study. Students were encouraged to return their consent forms promptly, with a parent's signature either granting or declining permission for their child to participate in the study (there was a place on the form to decline participation). To increase compliance, participants were informed that a raffle would be conducted on the day of data collection for all students who returned consent forms, regardless of whether permission for participation had been granted. In each classroom, the raffle prizes were two 3-ring binders or UCLA baseball hats. That proved to be a successful incentive, as 75% of the students returned their signed parent consent forms (range = 66–93% within homeroom), with 89% of those returned granting permission for participation.

Because all of the participating schools organized their 6th graders in teams or clusters, students spent several periods a day with the same classmates and a small number of teachers. Thus by the time of data collection in the Fall semester, students knew one another well enough to complete the peer nomination procedures and homeroom teachers knew students well enough to complete the ratings of academic engagement.

Questionnaires containing all of the student measures were assembled in booklet form (titled, *Middle School Survey*). Before beginning the survey, participants signed a Student Assent form, assuring them in writing that all responses would be kept confidential. Graduate student researchers working in pairs administered the questionnaires during an extended block period, since the survey usually required about 1 hr to complete. All instructions and questionnaire items were read aloud by one researcher as students followed along and responded on their own questionnaires. The other researcher circulated around the classroom, helping individual students as needed.

RESULTS

Overview

There were two parts to the data analysis, each utilizing either a person-oriented or variable-oriented approach. In the person-oriented analyses, subgroups of victims, aggressors, aggressive victims, and socially adjusted youth were identified based on cutoff scores calculated from the peer nomination data. These analyses examined whether the subgroups varied by gender and ethnicity and then whether there were group differences on the psychological, school climate, and academic adjustment variables. In the second part of the analysis, which used a variable-oriented approach, all of the relevant variables were examined using structural equation modeling (SEM) to test the hypothesized pathways from having a reputation as aggressor or victim to academic adjustment problems. In these analyses, peer nominations of aggression and victimization were treated as continuous predictor variables, rather than categorical variables based on cutoff scores, and all of the study participants were included. We first tested the hypothesized model with all eligible participants and then conducted multigroup analyses to examine gender and ethnicity effects.

Part 1: Analyses of Behavioral Subgroups

Creation of Aggressor/Victim Subgroups

The first step in the analysis was to create behavioral subgroups based on students' standardized peer nominations for being aggressive and victimized. Because of our interest in extreme groups, we used a more conservative cutoff and selection criteria than Juvonen et al. (2003). Students who were .75 *sd* above the mean on aggressive nominations (77th percentile) and at or below the mean of zero on victim nominations (50th percentile) were classified as *aggressors* ($n = 116$). Students whose aggressive and victim nominations were both above the .75 cutoff were classified as *aggressive victims* ($n = 93$). Students whose victim nominations were above .75, but whose aggressor nominations were at or below zero were labeled as *victims* ($n = 151$). A comparison group of *socially adjusted* students ($n = 1115$) were participants whose aggressor and victim nominations both were less than zero. A total of 510 participants (26% of the full sample) could not be classified into one of the above four groups based on our selection criteria. Those borderline cases were not included in subsequent analyses of mean differences on the dependent variables as a function of behavioral subgroup.

Table I. Number and Percentage of Males and Females (Top Panel) and Latino, African American, and Multiethnic Students (Bottom Panel) in Each Behavioral Subgroup

	Behavioral subgroup			
Variable	Aggressors ($n = 116$)	Aggressive victims ($n = 93$)	Victims ($n = 151$)	Socially adjusted ($n = 1115$)
Gender				
Male	72 (62%)	73 (78%)	92 (61%)	399 (36%)
z	3.11	5.20	3.32	−3.73
Female	44 (38%)	20 (22%)	59 (39%)	716 (64%)
z	−2.71	−4.53	−2.90	3.25
Ethnicity				
Latino	43 (37%)	29 (31%)	53 (35%)	558 (50%)
z	−1.46	−2.14	−2.02	1.85
African American	48 (41%)	38 (41%)	42 (28%)	237 (21%)
z	3.60	3.13	0.75	−2.34
Multiethnic	25 (22%)	26 (28%)	56 (37%)	320 (29%)
z	−1.17	−0.17	1.86	−0.16

Note. Numbers in parentheses are percentages within behavioral subgroup, computed separately for gender and ethnicity. Cell z scores that exceed the critical value of 2.58 are significant at $p < .01$. $N = 1475$. Latino $n = 683$ (46% of sample), African American $n = 365$ (25%), Multiethnic $n = 427$ (29%).

Thus, the sample for these analyses consisted of 1,475 students, of which 7.9% had reputations as aggressors, 6.3% as aggressive victims, 10.2% as victims, and 75.6% as socially adjusted. Those percentages are consistent with other research using peer nomination procedures (e.g., Perry, Kusel, & Perry, 1988; Schwartz, 2000).

Behavioral Subgroups by Gender and Ethnicity

The top panel of Table I displays how aggressor and victim status varied among boys ($n = 636$) and girls ($n = 839$). The bottom panel shows the pattern of differences for three ethnic groups. There were sufficient numbers of Latinos ($n = 683$) and African Americans ($n = 365$) to treat these as separate ethnic groups. However, none of the smaller groups of students who self-identified as Asian, White, or multiracial was large enough to be considered separately in the analyses of behavioral subgroups by gender and ethnicity. We therefore combined those respondents into one group labeled as Multiethnic ($n = 427$).[5]

Chi-square was used to test for relationships between groups in separate 4×2 (behavioral subgroup by gender) and 4×3 (behavioral subgroup $\times$ ethnicity) analyses. The association between behavioral status and gender was significant: $\chi^2(3) = 109.55$, $p < .001$. The top panel of Table I shows that boys were more likely than girls to be classified in all three problem behavior subgroups. In contrast, almost twice as many girls than boys were judged to be socially adjusted. Also shown in Table I are the standardized residuals (z scores) reflecting the difference between observed and expected frequencies in each cell (see Wickens, 1989). Positive z scores (i.e., greater than 2.58, $p < .01$) indicate significantly more observed than expected frequencies; that is overnominating classmates as aggressors or victims relative to what would be expected if there was no relationship between gender and behavioral subgroup. Negative z scores reveal fewer observed than expected frequencies (i.e., undernominating). Table I shows that boys tended to be overnominated as aggressors, aggressive victims, and victims and undernominated as socially adjusted. The opposite pattern prevailed for girls.

There also was a relationship between behavioral subgroup and ethnicity: $\chi^2(6) = 46.10$, $p < .001$. That relationship was traced to ethnic differences in the two aggressive subgroups. The bottom panel of Table I shows that the number of African American students in those two subgroups was greater than what would be expected by chance. That is, peers tended to overnominate their African American classmates as aggressive ($z = 3.60$) and as aggressive victims ($z = 3.13$). None of the ethnic group frequencies in the victim and socially adjusted groups exceeded chance levels.

Next, we turned to the psychological and school adjustment correlates of behavioral status. Here we asked which psychosocial variables are associated with having

[5] Preliminary analyses using only the Multiethnic sample showed no differences between Asian, Caucasian, and multiracial participants on nominations for aggression and victimization, nor any ethnic group differences within the four behavioral subgroups.

Table II. Mean Differences On the Adjustment Variables as a Function of Behavioral Subgroup

Variable	Aggressors ($n = 116$)	Aggressive victims ($n = 93$)	Victims ($n = 151$)	Socially adjusted ($n = 1115$)	$F(3,1471)^a$	η^2
Maladjustment						
Loneliness	−.23 a	.33 b	.60 b	−.10 a	26.79**	.05
Social Anxiety	−.41 a	.17 b, c	.43 c	.00 b	13.19**	.03
Depression	−.20 a	.22 b, c	.31 c	−.06 a, b	9.27**	.02
Low self-esteem	−.06 a	.11 a, b	.25 b	−.06 a	6.61**	.01
Attributions						
Char. self-blame	−.26 a	.18 b, c	.24 c	−.03 b	11.41**	.02
Beh. self-blame	−.24 a	−.14 a,b	.09 c	.03 b,c	4.01**	.01
School climate						
Dislike	.12	.12	.11	−.04	<1	.00
Unsafety	−.15 a	.47 b	.26 b	−.10 a	11.03**	.02
Unfairness	.25 a	.40 a	−.11 b	−.06 b	3.13*	.01
Achievement						
GPA	−.25 b	−.55 a	−.19 b	.22 c	12.51**	.03
Teacher-rated Engagement	−.49 b	−.82 a	−.23 b	.27 c	35.24**	.07

Note. All variables are standard scores. Row means with different letters are significantly different at $p < .05$ using the Tukey test.
[a]Denominator degrees of freedom vary somewhat for the different univariate analyses because of missing data for some variables.
*$p < .05$. **$p < .01$.

a reputation as aggressor, victim, aggressive victim, or socially adjusted. Sets of dependent variables were examined in a series of 4 × 2 × 3 (behavioral subgroup × gender × ethnicity) multivariate analyses of variance (MANOVA). Before the analyses, all of the variables were converted into standard scores to facilitate the interpretation of differences in measures from multiple informants and with different response scales. Hence, differences among groups indicate their relative standing within the sample. In the analyses that follow, we report the multivariate and univariate main effects of behavioral subgroup for each set of dependent variables. The small number of significant effects of the demographic variables (gender and ethnicity) will be described as the relevant findings are presented. Because of the large number of tests, only multivariate effects greater than .01 are interpreted.[6]

Psychological Maladjustment

MANOVA on the four psychological adjustment outcomes revealed a multivariate main effect of behavioral subgroup: Wilks' $\Lambda = .94$, $F(12, 4050) = 6.87$, $p < .001$, $\eta^2 = .02$. Univariate ANOVAs revealed behavioral subgroup differences on all four adjustment variables. The top panel of Table II displays the means across the four behavioral groups for each psychological variable, the univariate F-test associated with that analysis, and the effect size (η^2). Turning first to comparisons between victims and socially adjusted students in the third and fourth columns, the pattern of group differences replicates prior research. Victims reported significantly more loneliness, social anxiety, depressed affect, and low self-esteem than their well-adjusted peers. Victims also were significantly more impaired than aggressors on all of the variables. Aggressors, in fact, reported the most positive self-views, comparable to that of the socially adjusted group, and they were significantly less anxious than any of the other behavioral subgroups. As the co-occurring group, aggressive victims reported levels of adjustment that fell between those of aggressors and victims. However, the pattern to their self-reports more closely resembled that of victims, with whom they did not differ on any of the variables.

The only significant multivariate effect involving the demographic variables was a gender × ethnicity interaction: Wilks' $\Lambda = .98$, $F(8, 2698) = 2.70$, $p < .01$, $\eta^2 = .01$. Univariate analyses documented this interaction only for loneliness. Among boys, Latinos ($M = .10$) were especially lonely compared to their African American ($M = -.10$) and Multiethnic male counterparts ($M = .02$).

[6] With this large sample, only 3 of 24 cells in the 4 (group) × 2 (gender) × 3 (ethnicity) design had less than 10 subjects. All three small cells involved girls in the three ethnic groups who were classified as aggressive victims: African American $n = 9$, Latina $n = 7$, and Multiethnic $n = 4$. We acknowledge that those cell sizes restricted our ability to detect interactions involving behavioral subgroups.

Self-Blame Attributions

The data on self-blame were generally consistent with the adjustment findings. The multivariate main effect of behavioral subgroup was significant: Wilks' $\Lambda = .97$, $F(6, 2886) = 6.60$, $p < .001$, $\eta^2 = .01$. As shown in the second panel of Table II, victims were more likely than aggressors and socially adjusted students to endorse characterological self-blaming attributions for hypothetical peer harassment, which replicates our previous research (Graham & Juvonen, 1998). Aggressors, in contrast, were least likely to endorse either type of self-blame. Aggressive victims again fell between the two extreme groups. They were relatively high on characterological self-blame, resembling victims, but no different from aggressors and socially adjusted youth on the theoretically more adaptive behavioral self-blame. There were no multivariate main effects or interactions involving gender and ethnicity.

School Climate

There was a multivariate main effect of behavioral subgroup for the three school climate variables: Wilks' $\Lambda = .97$, $F(6, 3514) = 4.61$, $p < .001$, $\eta^2 = .01$. While there was no univariate group effect for school disliking, the third panel of Table II shows that perceived safety and fairness varied as a function of behavioral reputation. The two victim groups felt more unsafe at school than did aggressors and well-adjusted students. However, the two aggressive groups perceived their school rules to be significantly more unfair than did victims and socially adjusted adolescents. Thus, particular kinds of school climate perceptions were related to specific social reputations. Being a victim was related to perceived unsafety, but not unfairness; being aggressive was linked to perceived unfairness, but not unsafety; and being high on victimization and aggression was related to both negative climate variables.

A significant gender effect was traced to the findings that boys disliked school more than girls (M's $= .20$ vs. $-.15$) and they viewed the environment as more unfair (M's $= .09$ vs. $-.09$); Wilks' $\Lambda = .99$, $F(3, 1444) = 3.77$, $p = .01$, $\eta^2 = .01$. A multivariate ethnicity effect was accounted for by the fact that African American youth ($M = .20$) viewed the school rules as more unfair than did Latino ($M = -.05$) and Multiethnic students ($M = -.13$) who did not differ; Wilks' $\Lambda = .98$, $F(6, 2886) = 4.76$, $p < .01$, $\eta^2 = .01$. African American ($M = .11$) and Latino youth ($M = .03$) also perceived their school as more unsafe than did Multiethnic students ($M = -.27$).

Academic Achievement

The bottom panel of Table II reveals that academic achievement varied by subgroup: Wilks' $\Lambda = .94$, $F(6, 2642) = 14.82$, $p < .001$, $\eta^2 = .03$. The socially adjusted group obtained higher grades and was rated by their teachers as more engaged than any of the other three groups. Aggressors and victims did not differ on those academic outcomes. Aggressive victims fared worse than anyone else. Their relative standing on GPA was lower than that of aggressors and victims and they were perceived by teachers to be the most disengaged.

There were also gender and ethnicity multivariate main effects for the achievement variables: for gender, Wilks' $\Lambda = .99$, $F(2, 1320) = 4.75$, $p < .01$, $\eta^2 = .01$; and for ethnicity, Wilks' $\Lambda = .96$, $F(4, 2640) = 15.02$, $p < .01$, $\eta^2 = .02$. Boys ($M = -10$) had lower grades than girl ($M = .23$), and African American students ($M = -.37$) were doing more poorly than Latinos ($M = .09$), who in turn had lower grades than multiethnic students ($M = .47$). Boys were also rated by their teachers as less engaged than girls (M's $= -.11$ vs. $.24$) and African American students ($M = -.15$) were rated more poorly than Latino ($M = .16$) and Multiethnic students ($M = .20$) who did not differ.

To summarize, analyses of mean differences on the dependent variables revealed that psychological and school adjustment varied systematically as a function of behavioral subgroup. Victims were consistently more impaired than their socially adjusted counterparts on almost all of the outcomes. Aggressive youth had quite positive self-views on the psychological adjustment variables even compared to the socially adjusted group, although they were doing more poorly in school. Aggressive victims provided the most troubling profile. Their self-views were generally as negative as those of victims and they were doing especially poorly in school. The gender and ethnicity effects for the school climate and achievement outcomes suggested greater vulnerability for boys and for African American youth.

Part 2: Pathways to Academic Difficulties

Using a variable-oriented approach, the second set of analyses focused on relations between variables and presumed intervening process. Here we used SEM with latent variables to test whether the pathways to school adjustment problems might be different for youth who have stronger reputations as the targets of harassment compared to those who have stronger reputations as the perpetrators of harassment. To test the most parsimonious model, we only included those variables that both showed

Table III. Correlations Between Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Victimization	—									
2. Aggression	.27	—								
3. Loneliness	.25	−.04	—							
4. Soc. anxiety	.15	−.11	.51	—						
5. Depression	.16	−.01	.53	.47	—					
6. Low *SE*	.13	−.00	.45	.46	.60	—				
7. Char. *SB*	.14	−.04	.41	.51	.30	.31	—			
8. School unfair	.02	.13	.12	−.02	.13	.16	−.02	—		
9 .GPA	−.20	−.23	−.15	−.02	−.14	−.16	−.14	−.18	—	
10. Engagement	−.27	−.32	−.09	−.00	−.11	−.14	−.03	−.13	.56	—

Note. $N = 1985$. Correlations greater than $\pm .11$ are significant at $p < .01$.

reliable subgroup differences in Part 1 analyses and were related to theoretical predictions (e.g., characterological but not behavioral self-blame, perceived fairness among the school climate variables).[7] The correlations between variables are shown in Table III and the tested model is displayed in Fig. 1. For these analyses, aggressor and victim reputations were treated as continuous variables and the full sample was used, including those youth who had been classified as borderline.

As exogenous or predictor variables, victimization and aggression were hypothesized to be interrelated (e.g., capturing aggressive victims). For victimization, we predicted that there would be both direct effects of victim reputation on school adjustment and indirect effects mediated through characterological self-blame and psychological maladjustment. For aggression, in contrast, we hypothesized that aggressive reputation would have both direct effects on school outcomes and indirect effects that were largely mediated by perceptions of the school climate as unfair.

The model presented in Fig. 1 was tested with SEM using AMOS version 4.0 (Arbuckle & Wothke, 1999). SEM allows for the simultaneous assessment of both measurement and structural models. That is, all factor loadings and regression weights were estimated together. In the model, peer-nominated victimization and aggression were represented as measured variables. School unfairness was represented as a latent variable comprised of the three items of the school unfairness scale that is part of the ESB (Gottfredson, 1984). We set the loading of the item "The school rules are fair" equal to 1.0. Psychological maladjustment was also represented as a latent variable comprised of students' scores on the loneliness, anxiety, depression, and low self-esteem scales. We set the loading of loneliness equal to 1.0, with correlated errors between loneliness, anxiety, and depression and between depression and low self-worth. School adjustment was also represented as a latent variable comprised of students' GPA and their teacher-rated school engagement. We set the loading of GPA equal to 1.0.

The model was tested for all participants who had no missing data on any of the variables included in the model ($n = 1671$; 84% of the sample). This method allowed us to evaluate the statistical significance of both the direct and indirect effects of victimization and aggression on school adjustment. Three criteria were used to evaluate model fit: the chi-square test, the Comparative Fit Index (CFI; Bentler, 1990), and the root mean squared error of approximation (RMSEA; Steiger, 1990). Nonsignificant chi-square values indicate good model fit. However, because chi-square is known to be sensitive to sample size, we also examined the CFI and RMSEA indices of fit. CFI ranges from 0 to 1.00, with values above .95 indicating good fit. RMSEA ranges from 0 to ∞, with values below .08 indicating good fit. Based on these criteria, we judged the overall fit of the model presented in Fig. 1 to be good, $\chi^2(43, N = 1671) = 286.97$, $p < .05$, CFI = .95, RMSEA = .06 [90% Confidence Interval (*CI*) = .05–.07].[8]

[7] Although perceived school unsafety was associated with behavioral subgroup differences (i.e., youth with reputations as victims perceived the school as more unsafe), we had no specific predictions about that variable in tests of relations among variables. In preliminary model testing, perceived unsafety was not reliably associated with school adjustment either directly or indirectly through psychological maladjustment and including that variable in SEM produced poor model fit.

[8] Using full information likelihood (FIML) estimation, we also tested the model using data from all 1985 participants. The results based on FIML estimates yielded by AMOS were similar to those reported above. The fit of the model was χ^2 (43, $N = 1985$) = 322.104, $p < .05$, CFI = .98, RMSEA = .06 (90% *CI* = .05–.06) and the pattern of significant paths was identical.

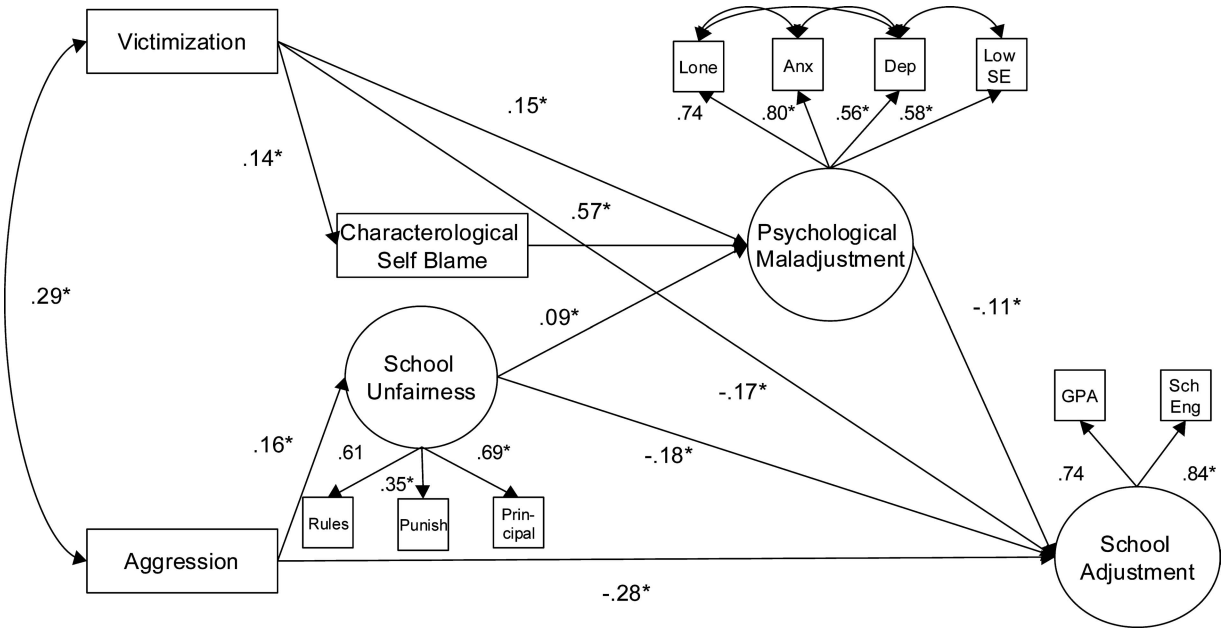

Fig. 1. Structural equation analysis showing different pathways to school adjustment problems.

SEM also indicated that both the measurement and structural models were strong. The indicator loadings for each latent variable and all path coefficients were statistically significant ($p < .05$). As illustrated in Fig. 1, victimization predicted more characterological self blame ($\beta = .14$), more psychological maladjustment ($\beta = .16$), and less school adjustment ($\beta = -.17$). Moreover, characterological self-blame predicted increased psychological maladjustment ($\beta = .57$) and psychological maladjustment predicted poor school adjustment ($\beta = -.11$). Not only were the paths between each construct statistically reliable, but the indirect effect of victimization on school adjustment through characterological self-blame and/or psychological maladjustment was also reliable (standardized coefficient for indirect effect of victimization on school adjustment $= -.03$, $p < .01$). The indirect effect of victimization on psychological maladjustment through characterological self-blame was also significant (standardized indirect effect $= .08$, $p < .05$).

Aggression was associated with greater perceptions of school unfairness ($\beta = .16$), and poorer school adjustment ($\beta = -.28$). The perception that school rules and punishments were unfair was associated with greater psychological maladjustment ($\beta = .09$) and poorer school adjustment ($\beta = -.18$). Moreover, the indirect effect of aggression on school adjustment was significant, (standardized indirect effect $= -.03$, $p < .05$) as was the indirect effect of aggression on psychological maladjustment that was mediated through unfairness (standardized indirect effect $= .04$, $p < .05$).

Together, the pattern displayed in Fig. 1 indicates that victimization and aggression are each associated with one another, as well as both directly and indirectly associated with poor school adjustment. These indirect effects, however, are accounted for by different mediators: through characterological self-blame and psychological maladjustment for victimization and through perceptions of unfairness and psychological maladjustment for aggression.

Multigroup Analyses

We performed two sets of multigroup analyses to test whether our model fit the data equally for boys compared to girls and for each of the five ethnic groups represented in our study (Latino, African American, Caucasian, Asian, and Multiracial). We followed the procedure outlined by Loehlin (1992) to compare groups. In this procedure, a baseline model (i.e., a multigroup model with no equality constraints) is established and used in comparison to models with cross-group constraints. Models with cross-group constraints that do not fit the data as well as the baseline model are rejected since they indicate that particular conditions do not apply equally to each of the groups tested in the model.

We followed the same set of steps for both the gender and ethnicity multigroup analyses. First, we fit our model

displayed in Fig. 1 to the data for each group (e.g., boys and girls) simultaneously without any cross-group constraints. Next, to test for measurement invariance across groups, we evaluated a model that constrained the factor loadings of our latent variables to be equal across groups and compared it to the model tested in Step 1 with a chi-square difference test. When no difference in the fit of the models was revealed, we concluded that there were no reliable differences in the measurement models between groups. In Step 3, we tested for invariant path coefficients by constraining the structural paths to be equal across groups and comparing the fit of this model with that yielded in Step 2. Both sets of multigroup analyses indicated that specific path coefficients varied slightly between groups. These specific findings are discussed below.

The final gender multigroup model, $\chi^2(99, N \text{ boys} = 753, N \text{ girls} = 918) = 345.54$, $p < .05$, CFI = .95, RMSEA = .04 (90% *CI* = .03–.04), yielded three differences between boys and girls. The covariance between victimization and aggression was stronger for boys ($B = .34$) than for girls ($B = .13$), the direct association between victimization and school adjustment was not significant for boys but it was for girls ($B = -.22$), and the direct association between aggression and school adjustment was stronger for boys ($B = -.22$) than it was for girls ($B = -.17$). All other path coefficients and loadings were equal for boys and girls.

The final ethnicity multigroup model, $\chi^2(275, N \text{ Latinos} = 765, N \text{ African Americans} = 430, N \text{ Caucasians} = 159, N \text{ Asians} = 183, N \text{ Multiethnic} = 134) = 568.99$, $p < .05$, CFI = .94, RMSEA = .03 (90% *CI* = .02–.03), yielded only four differences between all five ethnic groups. These effects involved nonsystematic ethnic differences in the strengths of some paths rather than differences in relations among variables.[9] Overall, the multigroup analyses suggest that both the measurement and structural models shown in Fig. 1 fit the data for both boys and girls across the five ethnic groups that comprised this sample.

[9] The association between victimization and psychological maladjustment was stronger for Caucasians ($B = .26$) than any other students ($B = .10$) and the association between aggression and school adjustment was stronger for Asians ($B = -.37$) than for other students ($B = -.18$). The final two differences occurred between Multiethnic students and students of all other ethnic groups. Specifically, the covariance between victimization and aggression was not significant for bi/multiracial youth, although it was for all other ethnic groups (covariance = .25), and the association between perceptions of school unfairness and school adjustment was stronger for bi/multiracial students ($B = -.31$) than for other students ($B = -.09$). All other path coefficients and loadings were equal across ethnic groups.

DISCUSSION

Being the target of peer harassment, the perpetrator of that harassment, or having characteristics of both can place students at risk for many kinds of adjustment difficulties. Some of those adjustment challenges relate to self-appraisals, whereas others can be linked to one's social status among peers. Still other consequences involve achievement outcomes like academic engagement and grades. The findings presented here suggest that early adolescent victims, aggressors, and aggressive victims are each vulnerable to particular types of adjustment problems. Distinguishing among subgroups in the same study is therefore useful to capture a fuller range of behavioral profiles along an aggressor–victim continuum and the unique challenges of each subgroup.

Adolescents with reputations as victims in our research endorsed the most negative self-views. They were relatively more lonely, socially anxious, depressed, and low in self-esteem. Replicating previous research (Graham & Juvonen, 1998), we documented that a particular pattern of self-blame for harassment partly accounted for those maladaptive self-views. Victims, moreso than aggressors, attributed harassment experiences to characterological self-blame. From an attributional perspective, characterological self-blame is internal and therefore reflects on the self; it is stable and therefore leads to an expectation that harassment will be chronic; and it is uncontrollable, which suggests that there is no response in one's repertoire to minimize future harassment. Behavioral self-blame has been shown to be less maladaptive in the coping literature (Anderson et al., 1994) and in the present study, that attributional tendency did not differ as much between behavioral groups.

Characterological self-blame also played a pivotal role in our hypothesized model that tested the pathways from peer victimization to school problems. Ours is one of few studies in the peer harassment literature to test a specific model of the mediating mechanisms that link peer harassment to school adjustment difficulties. We believe that peer harassment, self-blame, and their associated toll on mental health can undermine self-confidence and deplete the cognitive resources needed to do well in school (e.g., Baumeister, Twenge, & Nuss, 2002; Cole, Peeke, Dolezal, Murray, & Canzoniero, 1999). In turn, victimized youth may find subtle ways to disengage, such as by avoiding school altogether (Juvonen, Nishina, & Graham, 2000).

In contrast to victims, aggressive youth appeared to have the fewest psychological adjustment difficulties. Their self-views were just as positive as those of their socially adjusted classmates and they were the least anxious

of any group. In previous research with this sample (Juvonen et al., 2003) youth with reputations as aggressive also enjoyed a unique kind of social status in that they were perceived by their peers as particularly "cool." Perceived coolness implies popularity (notoriety?) as well as having characteristics that are admired by peers. Because an important developmental task of early adolescence is the search for autonomy and independence, the rebelliousness and nonconformity of aggressive youth may allow them to achieve a privileged, although short-lived, position in the status hierarchy as more conforming peers attempt to mimic their antisocial tendencies (e.g., Moffitt, 1993). Our sample of primarily ethnic minority youth was also growing up in economically disadvantaged urban contexts. Luthar and McMahon (1996) have proposed that inner city minority adolescents might place a high value on aggression as a survival and coping mechanism for dealing with the vagaries of urban life. Thus, both the developmentally salient tasks of early adolescence and the unique circumstances of urban ethnic minority youth can partly explain why aggression at this age can have positive psychological consequences.

Despite their positive self-views and acceptance by peers, aggressive youth were just as much at risk for school problems as victims. Aggressors were most likely to perceive the school rules as unfair and that perception predicted low GPA and teacher ratings of disengagement. Because many aggressive youth acquire reputations as troublemakers in school, they have frequent encounters with authority figures whose disciplinary actions can be (mis)interpreted as unfair treatment. As the environment comes to be perceived as more hostile, academic disengagement becomes a more attractive alternative. In our tested model, some of the pathway from perceptions of unfairness by aggressors to academic problems also was mediated by psychological maladjustment. We believe that an unsupportive environment and its associated toll on mental health can deplete the motivational resources needed to *want* to do well in school. Research in other domains supports a relationship between perceived fairness and subsequent behavior that is consistent with the present results. For example, when people question the fairness of the justice system, they often lose faith in its legitimacy and that loss of faith, in turn, can lead to more deviant behavior (e.g., Schneider, 1990; Tyler, 1990).

Aggressive victims were a unique behavioral subgroup. While falling between victims and aggressors on all of the psychological variables, the comorbid group endorsed characterological self-blame *and* they judged the school rules as unfair—two possibly distinct risk factors to psychological maladjustment and academic problems. Consistent with this notion of multiple risk, the aggressive victims in our research perceived the school as an unsafe place and their academic achievement was the lowest of all behavioral subgroups. Juvonen et al. (2003) documented that aggressive victims were the most rejected of all the behavioral subgroups and they were not perceived as cool. Thus the comorbid group also never enjoyed any of the social benefits of having a reputation as aggressive in early adolescence. Other researchers have described the characteristics of aggressive victims that might particularly elicit disdain from peers. For example, Perry et al. (1988) hypothesized that they often annoy or provoke stronger and more aggressive peers, while picking on their weaker classmates. Schwartz (2000) documented that their impulsivity and poorly regulated affect elicit anger among teachers as well as peers. Considering all of the adjustment outcomes examined here, we agree with other recent analyses concluding that aggressive victims may be the most troubled and vulnerable of the behavioral subgroups (e.g., Nansel et al., 2001; Schwartz et al., 2001; Unnever, 2005).

Limitation of the Study

There are a number of limitations of this study that we acknowledge. First, we highlighted the importance of causal interpretations of harassment for predicting actual behavior (i.e., school outcomes), but our attributional measure involves hypothetical judgments about imagined peer intimidation. Thus we asked about the *possibility* that even aggressive and socially adjusted youth might have encounters with peer harassment (a common experience in many contemporary schools) and the *likelihood* that particular causal inferences would affect psychological adjustment and school behavior if certain conditions were present. We do not claim that these inferences map perfectly on to the way real-world thoughts, feelings, and behavior unfold. Nonetheless, we believe that role playing methods have heuristic value when the researcher's goal is to test new models of thinking–feeling–behavior sequences.

A second limitation concerns the magnitude of the findings in the analyses of behavioral subgroups. Effect sizes were admittedly modest, although quite consistent across variables. In addition, because boys were so overrepresented in the problem behavior subgroups, even with our large sample, we may not have had adequate power to detect interactions between subgroup, gender, and ethnicity. That gender discrepancy remains a challenge for studies of antisocial behavior that wish to include both boys and girls. Third, and related to gender, we did not distinguish overt from relational forms

of victimization and aggression in our peer nomination measures, despite the fact that relational aggression has been more associated with girls in some research (e.g., Crick & Grotpeter, 1996). With our sample of urban, largely ethnic minority early adolescents, overt and relational nominations for aggression and victimization were highly intercorrelated and both were more prevalent in boys. Fourth, we tested intervening process with cross-sectional data gathered at a single time point. Thus, we acknowledge that stronger tests of process models involving temporal ordering of variables will require longitudinal analyses.

Implications for Intervention

The above limitations notwithstanding, we believe that our framework examining both groups of individuals with different psychosocial profiles and the different processes through which adjustment problems can arise has useful implications for both treatment and preventive intervention. For victims, the present findings highlight the need to alter maladaptive thoughts about the causes of harassment. What more adaptive attribution might replace characterological self-blame? In some cases change efforts might target behavioral self-blame ("e.g., "I was in the wrong place at the wrong time"), if that self-ascription is assumed to be unstable and controllable. The goal would be to help victimized youth to recognize that there are responses in their repertoire to prevent future encounters with harassing peers. External attributions also can be adaptive because they protect self-esteem (Weiner, 1986). Knowing that others are also victims or that there are some aggressive youth who randomly single out unsuspecting targets can help lessen the tendency to conclude that, "It must be *me*" (Nishina & Juvonen, 2005). The notion of altering dysfunctional causal thoughts to produce changes in behavior has produced a rich empirical literature on attribution therapy in educational and clinical settings (see review in Forsterling, 1990). There is no reason why the guiding assumption of that research cannot be applied to alleviating the plight of victims of harassment.

Aggressive youth, in contrast, probably do not need interventions designed to bolster their self-esteem or other self-appraisals. We think there is now enough evidence to conclude, as did Baumeister, Smart, and Boden (1996) in adult research, that aggressive early adolescents do not suffer from low self-esteem. Where they appear to be more vulnerable is in their perceptions of others. It is well documented that aggressive youth have a low threshhold to assume that other people acted with hostile intent, particularly in ambiguous situations (Coie & Dodge, 1998). Some of the known strategies for helping those youth to better handle peer conflict might therefore be useful. For example, teaching aggressive students to recognize when provocations are accidental rather than intended has proven to be an effective intervention (Hudley & Graham, 1993). As a general social cognitive skill, learning to more accurately infer others' intentions might foster improved relations between aggressive youth and school authority figures as well as raise their threshhold for questioning the fairness of school rules.

For aggressive victims, who experience the most academic difficulties, there appear to be multiple risks and multiple pathways to school problems. Such youth would therefore benefit from both intervention strategies suggested above. Because they are so rejected by peers, aggressive victims might also profit from learning self-presentation strategies that help them manage the impressions that others have of them. We know from other research that mastering the skills of strategic account giving (e.g., knowing when to apologize or express remorse) can improve the behavior of aggressive youth who are also disengaged from school (Graham, Taylor, & Dolland, 2003).

Of course, none of these individual focused intervention approaches by itself can adequately address the problem of aggression and victimization, which is a schoolwide concern requiring a whole school approach. For example, the peer group needs to learn to be less tolerant of bullying behavior and to recognize that the high status enjoyed by aggressors could indirectly reinforce their antisocial tendencies. At the same time, peers should be prompted to acknowledge the plight of victims, show greater empathy, and be willing to come to their aid. School personnel, including teachers and administrators, will need to do their part to foster a school climate where students feel that they are safe and that they are treated fairly.

Ethnicity, Victimization, and Aggression

We did not have a strong theoretical or empirical basis for predicting ethnic differences in the relations between variables examined here, and indeed the multigroup SEM showed few effects of that variable. However, we want to call attention to some of the ethnicity findings that emerged in the analyses of behavioral subgroups. Those findings remind us of the broader social context in which adolescents of color live and the multiple challenges that they often face.

There were no significant ethnic group differences among youth with reputations as victims; nor was ethnicity related to any of the psychological adjustment variables linked to victimization. In some ways that is comforting. Peer harassment in schools such as ours transcended race and cultural divides, and no one ethnic group appeared to be more vulnerable than any other. Elsewhere, we have argued that context variables like the ethnic composition of schools and classrooms might be more important than ethnicity per se in understanding the consequences of peer harassment (Bellmore, Witkow, Graham, & Juvonen, 2004; Graham & Juvonen, 2002).

The ethnic pattern for aggression, however, was different and in some ways more troubling. African American participants, especially boys, were more likely to have reputations as aggressors and as aggressive victims. Why might African American youth disproportionately fall in the aggressive groups? We used reputational measures of aggression and victimization, which reflect agreement or consensus among peers about the relative standing of individuals on a behavior compared to others in the larger group. That consensus is subject to any of the biases or judgment errors that are associated with making inferences about others. On the one hand, it might well be that African American students in the sample actually engaged in more aggressive behavior than did members of the other ethnic groups or that their negative exchanges with peers were more salient. On the other hand, some forms of ritualized teasing that have prosocial (group bonding) functions within African American culture, like "playin the dozens" and "signifyin," might be interpreted incorrectly by others as verbal harassment (e.g., Boxer, 1997). And racial stereotypes that associate being Black with violence and hostility are pervasive enough in this culture that perceivers may unknowingly attribute ambiguous behavior by African American youth to aggressive rather than benign intent (e.g., Devine, 1989; Graham & Lowery, 2004). In other analyses with this sample, we found that teachers also perceived African American boys as more aggressive than their peers from other ethnic groups and that these boys were more likely to be suspended from school (Markoe, 2003).

Surely the achievement problems of African American youth are not fully explained by being perceived as aggressive or as both aggressive and victimized in the eyes of others. But the findings do underscore the particular vulnerabilities of African American boys who must cope with the dual stressors of academic challenge and negative stereotypes about their group. Those stressors can have long-term effects on mental health that override any short-term social benefits of being perceived as aggressive.

REFERENCES

Anderson, C., Miller, R., Riger, A., Dill, J., & Sedikides, C. (1994). Behavioral and characterological attributional styles as predictors of depression and loneliness: Review, refinement, and test. *Journal of Personality and Social Psychology*, *66,* 549–558.

Arbuckle, J., & Wothke, W. (1999). *Amos 4.0 Users Guide*. Chicago: SmallWaters.

Asher, S., & Wheeler, V. (1985). Children's loneliness: A comparison of neglected and rejected peer status. *Journal of Consulting and Clinical Psychology*, *53,* 500–505.

Austin, S., & Joseph, S. (1996). Assessment of bully/victim problems in 8 to 11 year-olds. *British Journal of Educational Psychology*, *66,* 447–456.

Baumeister, R., Smart, L., & Boden, J. (1996). Relations of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, *103,* 5–33.

Baumeister, R., Twenge, J., & Nuss, C. (2002). Effects of socials exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, *83,* 817–827.

Bellmore, A., Witkow, M., Graham, S., & Juvonen, J. (2004). Beyond the individual: The impact of ethnic diversity and behavioral norms on victims' adjustment. *Developmental Psychology*, *40,* 1159–1172.

Bentler, P. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107,* 238–246.

Boxer, D. (1997). From bonding to biting: Conversational joking and identity display. *Journal of Pragmatics*, *27,* 275–294.

Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety. *Journal of Educational Psychology*, *95,* 570–588.

Cairns, R., & Magnusson, D. (1996). Developmental science: Toward a united framework. In R. Cairns, G. Elder, & E. Costello (Eds.), *Developmental science* (pp. 7–30). New York: Cambridge University Press.

Coie, J., & Dodge, K. (1998). Aggression and antisocial behavior. In N. Eisenberg (Ed.), *Handbook of child psychology* (Vol. 3, 5th ed., pp. 779–862). New York: Wiley.

Cole, D., Peeke, L., Dolezal, S., Murray, N., & Canzoniero, A. (1999). A longitudinal study of negative affect and self-perceived competence in young adolescents. *Journal of Personality and Social Psychology*,*77,* 851–862.

Craig, W. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences*, *24,* 123–130.

Crick, N., & Grotpeter, J. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology*, *8,* 367–380.

Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, *56,* 5–18.

Eccles, J., & Midgley, C. (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents. In R. Ames & C. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 139–181). New York: Academic.

Forsterling, F. (1990). Attributional therapies. In S. Graham & V. Folkes (Eds.), *Attribution theory: Applications to achievement, mental health, and interpersonal conflict*. Hillsdale, NJ: Erlbaum.

Gottfredson, G. (1984). *Effective school battery*. Marriottsville, MD: Gottfredson Association.

Graham, S., & Juvonen, J. (1998). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology*, *34,* 587–599.

Graham, S., & Juvonen, J. (2002). Ethnicity, peer harassment, and adjustment in middle school: An exploratory study. *Journal of Early Adolescence*, *22,* 173–199.

Graham, S., & Lowery, B. (2004). Priming unconscious racial stereotypes about juvenile offenders. *Law and Human Behavior*, *28*, 483–504.

Graham, S., Taylor, A., & Dolland, C. (2003). A motivation intervention for at-risk youth. In F. Salili & R. Hoosain (Eds.), *Teaching, learning, and motivation in a multicultural context* (pp. 91–115). Greenwich, CT.: Information Age .

Harter, S. (1985). *The self-perception profile for children: Revision of the perceived competence scale for children, manual*. Denver, CO: University of Denver.

Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., et al. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *Journal of Early Adolescence*, *21,* 29–49.

Hudley, C., & Graham, S. (1993). An attributional intervention to reduce peer-directed aggression among African American boys. *Child Development*, *64,* 124–138.

Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer and self-perceptions in multiple domains. *Child Development*, *64,* 879–896.

Janoff-Bulman, R. (1979). Characterological and behavioral self-blame: Inquires into depression and rape. *Journal of Personality and Social Psychology*, *37,* 1798–1809.

Janoff-Bulman, R. (1992). *Shattered assumptions: Toward a new psychology of trauma*. New York: Free .

Juvonen, J., & Graham, S. (2001). *Peer harassment in school: The plight of the vulnerable and victimized*. New York: Guilford .

Juvonen, J., Graham, S., & Schuster, M. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics*, *112,* 1231–1237.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology*, *92,* 349–359.

Kovacs, M. (1992). *Children's depression inventory*. North Tonawanda, NY: Multi-Health Systems.

Kumpulainen, K., Rasanen, E., Henttonen, I., Almqvist, F., Kresanov, K., Linna, S., et al. (1998). Bullying and psychiatric symptoms among elementary school-age children. *Child Abuse and Neglect*, *22,* 705–717.

Kuperminc, G., Leadbeater, B., & Blatt, S. (2000). School social climate and individual differences in vulnerability to psychopathology among middle school students. *Journal of School Psychology*, *39,* 141–159.

LaGreca, A., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Psychology*, *26,* 83–94.

Laursen, B., Pulkkinen, L., & Adams, R. (2002). The antecedents and correlates of agreeableness in adulthood. *Developmental Psychology*, *38,* 592–603.

Leary, M., Kowalski, R., Smith, L., & Phillips, S. (2003). Teasing, rejection, and violence: Case studies of the school shootings. *Aggressive Behavior*, *29,* 202–214.

Loehlin, J. (1992). *Latent variable models: An introduction to factor, path, and structural analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

Luthar, S. S., & McMahon, T. J. (1996). Peer reputation among inner-city adolescents: Structure and correlates. *Journal of Research on Adolescence*, *6,* 581–603.

Markoe, S. (2003). *Why do some students displaying disruptive behavior incur suspensions, while others do not? Perceived school climate as a possible buffer*. Unpublished Master's thesis, University of California, Los Angeles.

Masten, A., Hubbard, J., Gest, S., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology*, *11,* 143–169.

Moffitt, T. (1993). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, *100,* 674–701.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *JAMA*, 2094-2100.

Nishina, A., & Juvonen, J. (2005). Daily reports of negative affect and peer harassment in middle school. *Child Development*, *76,* 435–450.

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, DC: Hemisphere .

Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology*, *24,* 807–814.

Rigby, K., & Slee, P. T. (1992). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *Journal of Social Psychology*, *133,* 33–42.

Schneider, A. (1990). *Deterrence and juvenile crime*. New York: Springer-Verlag.

Schwartz, D. (2000). Subtypes of victims and aggressors in children's peer groups. *Journal of Abnormal Child Psychology*, *28,* 181–192.

Schwartz, D., Proctor, L. J., & Chien, D. H. (2001). The aggressive victim of bullying: Emotional and behavioral dysregulation as a pathway to victimization by peers. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 147–174). New York: Guilford .

Steiger, J. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, *25,* 173–180.

Tyler, T. (1990). *Why people obey the law*. New Haven, CT: Yale University Press.

Unnever, J. (2005). Bullies, aggressive victims, and victims: Are they distinct groups?. *Aggressive Behavior*, *31,* 153–171.

Verlinden, S., Hersen, M., & Thomas, J. (2000). Risk factors in school shootings. *Clinical Psychology Review*, *20,* 3–56.

Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.

Wellborn, J., & Connell, J. (1991). *Students' achievement relevant actions in the classroom: A self-report measure of student motivation in school*. Unpublished manuscript. University of Rochester, Rochester, NY.

Wickens, T. (1989). *Multiway contingency tables analysis for the social sciences*. Hillsdale, NJ: Erlbaum.

Zakriski, A. L., & Coie, J. D. (1996). A comparison of aggressive-rejected and nonaggressive-rejected children's interpretations of self-directed and other-directed rejection. *Child Development*, *67,* 1048–1070.