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Bully/Victim Profiles' Differential Risk for Worsening Peer Acceptance: The Role of Friendship

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Abstract

Study aims were to: (1) evaluate the association between bully/victim profiles, derived via latent profile analysis (LPA), and changes in peer acceptance from the fall to spring of 7th grade, and (2) investigate the likelihood of friendlessness, and the protective function of mutual friendship, among identified profiles. Participants were 2,587 7th graders; peer nomination and rating-scale data were collected in the fall and spring. Four profiles, including bullies, victims, bully-victims, and uninvolved adolescents, were identified at each time point. Findings showed that for victims, more so than for bullies and uninvolved profiles, acceptance scores worsened over time. Results further revealed that bully-victim and victim profiles included a greater proportion of friendless youth relative to the bully profile, which, in turn, contained a greater proportion of friendless adolescents than the uninvolved profile. Findings also provided evidence for the buffering role of friendship among all bully/victim profiles and among bully-victims especially.

Keywords

bullying; victimization; friendship; peer relationships; latent profile analysis

In early studies of bullying in school, researchers primarily investigated two profiles of youth—bullies, or youth who repeatedly aggress against weaker peers with the intent to

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harm, and victims, the recipients of bullies' aggression (see Olweus, 1978). Recently, however, it became apparent that a classificatory dichotomy comprised of bullies and victims does not effectively characterize all youth involved in bully/victim episodes. The fact that victims may experience harassment by a dominant peer and, at the same time, bully others who have lower status in relation to them (Salmivalli & Peets, 2009) provides one theoretical basis for a bully-victim profile. In fact, a number of investigators have posited and tested hypotheses about the relative risk of youth involved in victimization, bullying, and both forms of peer adversity simultaneously. A discovery that emerged from this work is that bully/victim profiles exhibit variability in their adjustment, including peer relations (e.g., Juvonen, Graham, & Schuster, 2003; O'Brennan, Bradshaw, & Sawyer, 2009; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001; Veenstra et al., 2005). Knowledge on this topic can be extended in three ways.

First, investigators who have studied bully/victim profiles have typically employed theory-driven classification strategies (e.g., standard deviation cut-offs, frequency or percentile criteria) based on the dichotomization of continuous data to create bully, victim, bully-victim, and uninvolved profiles (but see Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008). We aimed to empirically derive bully/victim profiles using latent profile analysis (LPA), a mixture modeling technique that organizes individuals into homogenous profiles based on observed responses to a set of continuous variables. Scholars are increasingly advocating for LPA as a useful approach for partitioning data because of some notable drawbacks associated with traditional methods of classifying participants into extreme groups (e.g., Giang & Graham, 2008; Nylund, Bellmore, Nishina, & Graham, 2007). For example, the practice of designating cut-off scores and frequency or percentile criteria is arbitrary, which increases risk for classification error and, in turn, has the potential to undermine the predictive utility of profiles and/or result in inaccurate prevalence rates. LPA addresses these drawbacks and, also, maximizes flexibility, minimizes measurement error, and produces statistical fit indices that facilitate decisions about the number of profiles and decrease the likelihood of identifying theorized profiles only. In short, the current study has the potential to empirically validate profiles that, to this point, are largely theoretical.

Second, what has been learned to this point concerns within-time (as opposed to across-time) links between bully/victim profiles and peer relations. Accumulated evidence lends support for an association between bully/victim status and peer relationships, but it does not permit inferences about the extent to which bully/victim status *forecasts* longer-term social consequences. Longitudinal studies are needed, therefore, to clarify whether bully/victim status interferes with the development of adaptive peer relations.

Third, an accruing body of evidence supports the perspective that, among youth as a whole, friendship buffers risk for victimization by (1) altering the link between risk factors and victimization, and (2) serving a protective function against the negative consequences associated with victimization (see Bagwell & Schmidt, 2011). It is unknown, however, whether mutual friendship buffers risk for declines in peer acceptance for some profiles of youth more so than others because researchers have yet to evaluate the relative protective function of mutual friendship for differing bully/victim profiles. This study was designed to extend prior research by permitting an evaluation of: (1) the relation between bully/victim

status, derived via LPA, and changes in peer acceptance from the fall to spring of 7th grade, and (2) the likelihood of friendlessness, and the protective function of mutual friendship, among bully/victim profiles. An investigation that addresses these aims has the potential to shed light not only on bully/victim profiles' relative risk for longer-term social consequences but also the relative protective function of friendship.

Victimization and Bullying: Precipitants of Decreases in Peer Acceptance?

The perspective that being disliked by peers increases susceptibility for maladaptation (Ladd, 2005; Parker & Asher, 1987) has impelled investigations into factors that influence acceptance, rejection, and preference by the peer group. Acceptance (and rejection) are defined as the number of strong positive (or negative) links youth have with peer group members, and preference, or relative likeability, is a derivative construct that represents a combination of these two dimensions (Bukowski, Sippola, Hoza, & Newcomb, 2000; Ladd, 2005). Not surprisingly, perhaps, acceptance and rejection, and especially acceptance and preference, appear to be closely related constructs (e.g., $r_s = -.29$ to $-.46$ and $.71$ to $.83$, respectively, in the 3rd through 8th grades; Ettekal & Ladd, 2015). Given the conceptual and empirical overlap between acceptance, rejection, and preference, we review literature related to each of these constructs.

Results from longitudinal studies imply that victimization contributes to increases in peer rejection and low peer acceptance in preadolescence and adolescence (e.g., Hodges & Perry, 1999; Kochel, Ladd, & Rudolph, 2012). The fact that most youth disapprove of bullying (Salmivalli, 2010) suggests that bullying likewise has the potential to elicit peer rejection and low levels of peer acceptance and social preference. Bullies, though, are sometimes perceived popular and other times unpopular (Dijkstra et al., 2008; Peeters, Cillessen, & Scholte, 2010) with the former group being less likely to elicit negative peer evaluations (Peeters et al., 2010).

Studies that focus on peer acceptance among bully/victim profiles of American, Korean, and Dutch samples of youth yield evidence that suggests that bullies are more preferred and less rejected than bully-victims (Juvonen et al., 2003; Shin, 2010; Veenstra et al., 2005). Peer acceptance among victims versus bully-victims and bullies, however, is less clear. Some evidence suggests that victims score more favorably than bully-victims (Juvonen et al., 2003; Shin, 2010; Veenstra et al., 2005). Findings from other studies suggest the reverse is true (Scholte, Overbeek, ten Brink, Rommes, de Kemp, Goossens, & Engels, 2009). With regard to victims' versus bullies' peer rejection, some research indicates that these profiles do not differ (Juvonen et al., 2003; Veenstra et al., 2005), but findings from at least one study imply that victims fare worse than bullies on peer preference (Shin, 2010). All in all, evidence suggests that bully-victims and victims and, to a lesser extent bullies, are at risk for being disliked by peers; however, inconsistent findings across studies, and the fact that studies have yet to focus on the relative *contributions* of bully/victim status to peer acceptance (i.e., across-time linkages), limits the conclusions that can be drawn. Longitudinal studies are needed to clarify bully/victim profiles' relative risk for decreases in peer acceptance and factors that mitigate such risk.

Exploring Mutual Friendship Among Bully/Victim Profiles

Liking appears to be a defining feature of friendship; however, peer acceptance (i.e., relative likeability) reflects a consensus among the peer group whereas friendship, a dyadic relationship, does not. Not surprisingly, therefore, research suggests that liking and friendship are related nevertheless partially distinct relational systems (Bukowski et al., 2000; Ladd, Kochenderfer, & Coleman, 1997). Friendships, and the provisions derived from them, including intimacy, companionship, support, and protection, are influential in adolescents' mastery of key developmental tasks (e.g., identity development, establishing romantic relationships; Bagwell & Schmidt, 2011). The latter provision implies that, though friendships may be developmentally significant for all adolescents, they might be especially so for youth involved in victimization and/or bullying. In view of this, an objective of the current study was to examine bully/victim profiles' relative risk for friendlessness (i.e., lack of involvement in mutual friendship).

Compared to victims and bully-victims, bullies are probably less risky peers with whom to affiliate, in part because they may be less liable to jeopardize peers' social standing. At the same time, bullies are prone to behaviors including aggression, impulsivity, and hostility (Veenstra et al., 2005) that are expected to decrease both their opportunities for developing friendships in the first place and their likelihood of maintaining friendships. It is possible, therefore, that a greater proportion of bullies experience friendlessness compared to youth uninvolved in victimization or bullying. We anticipate, however, that establishing and maintaining mutual friendships might be especially challenging for victims and bully-victims compared to bullies. Victims tend to exhibit a range of interpersonal and intrapersonal problems, including shyness, withdrawal, anxiety, submissiveness, low self-esteem, and insecurity (see Salmivalli & Peets, 2009), and these characteristics are not ideal for attracting or keeping friends. Indeed previous research suggests that highly victimized, relative to nonvictimized, youth have fewer friends (e.g., Scholte et al., 2009). Compared to victims, bully-victims may be at even higher risk for friendlessness. Bully-victims have been characterized as having low levels of self-control and social competence (Haynie et al., 2001) and high levels of externalizing behaviors (Arsenault, Walsh, Trzesniewski, Newcombe, Caspi, & Moffitt., 2006; Kumpulainen et al., 1998) and conduct problems (Juvonen et al., 2003). As such, bully-victims may be less often sought out by peers as friends, and peers may be more apt to refuse their social overtures. In short, bully-victims are unlikely to provide the emotional support and careful balancing of reciprocal interactions that are signatures of good friendships.

Studies focused on the friendships of youth with different bully/victim profiles provide mixed support for the above theoretical perspectives. Findings from investigations of childhood and adolescent samples recruited from the United States, Switzerland, and Korea imply that, compared to victims and bully-victims, bullies are more likely to have mutual friends (O'Brennan et al., 2009; Shin, 2010); moreover, Nansel et al. (2001) reported that, among a representative American sample of 6th through 10th graders, the ability to make friends was positively related to bully status but negatively related to victim status (and not significantly related to bully-victim status). It is unclear how the friendships of bully-victims and victims compare, but findings from several studies suggest that bully-victims' and

victims' friendships do not differ markedly (e.g., in terms of number of friends; O'Brennan et al., 2009; Scholte et al., 2009; Shin, 2010). Research is needed to clarify bully/victim profiles' relative risk for friendlessness.

A related objective was to examine the possibility that friendship moderates the link between bully/victim profiles and changes in peer acceptance over the course of a school year. To our knowledge, investigators have yet to evaluate the protective function of friendship among bully/victim profiles, and thus, it is unknown whether friendship buffers risk for decreases in peer acceptance for youth involved in victimization alone or in combination with bullying.

Friendship might function as a moderator for at least two reasons. First, a primary function of friendships is to provide a context for developing and practicing social skills—ones that foster positive peer relationships (Hartup, 1992). For reasons described above, such a context may be especially beneficial for victims and bully-victims. Second, having a friend might lead peers to deduce that the youth is likeable, and friendship can provide important links to a larger peer network (Berndt, 2002; Newcomb, Bukowski, & Bagwell, 1999). For example, a friendship might provide a victimized adolescent with an ally who facilitates positive interactions between others in the peer group (e.g., the ally's friends) and the victim. In turn, such interactions have the potential to promote peer acceptance for the victim.

Overview of the Present Study

This study's first aim was to evaluate whether fall bully/victim status, derived via LPA, was associated with changes in peer acceptance from the fall to spring of a school year. We investigated a school-based sample of 7th graders because peer experiences are particularly salient, and have the potential to uniquely influence adjustment, during adolescence (Parker, Rubin, Price, & DeRosier, 1995). On the basis of theory and prior research, we expected to identify bully, victim, bully-victim, and uninvolved profiles. We aimed to do so via LPA, a data-driven classification approach, as a way of providing support for or against the theoretically-derived bully/victim profiles that are the focus of most prior studies. We also expected that bully-victims and victims would be more likely than bullies to experience worsening peer acceptance from the fall to spring. The popularity that characterizes some bullies might render bullies, as a whole, less likely recipients of negative peer evaluation relative to victims and bully-victims who are more likely to occupy lower-status positions in the peer group (Juvonen et al., 2003).

The second aim was to examine the likelihood of friendlessness and the protective function of friendship among bully/victim profiles identified in the fall. For reasons noted above, we anticipated that the bully-victim profile would contain the highest proportion of friendless youth, followed by victim, bully, and then uninvolved profiles. We further expected that friendship would be protective for all bully/victim profiles but especially bully-victims and victims. Specifically, we hypothesized that friendship in the spring would moderate the link between bully/victim profile in the fall and changes in peer acceptance from fall to spring.

Method

Participants

Participants were 2,587 adolescents ($N = 1,343$ girls; 1,244 boys; M age in the fall of 7th grade = 12.28; $SD = .66$). They included targets, or those who were part of a long-term longitudinal study ($n = 414$), and their classmates. Targets' classmates were recruited to complete sociometric measures according to procedures outlined below. Targets were recruited in the fall of 1992 or 1993 ($M_{age} = 5.50$ at the time of recruitment) at kindergarten pre-registration meetings for 16 full-day kindergarten classrooms within three school districts located in urban, suburban, and rural areas in the Midwestern U.S. Ninety-five percent of recruited families agreed to participate. By 7th grade, targets were dispersed throughout 108 classrooms within multiple school districts in the Midwestern, Eastern, and Western U.S. Eighty-four percent of 7th grade targets received written parental consent.

Target and classmate participants reported coming from diverse racial/ethnic backgrounds: 73.4% were European American, 13.5% were African American, 2.1% were Latino/Hispanic, 1.7% were Asian American, and 9.3% were from mixed or other backgrounds or did not respond. Attrition from the fall to spring of 7th grade was less than 8%.

Procedures

Sociometric measures with established reliability and validity (Coie et al., 1982; Parkhurst & Asher, 1992) were collected in the fall (September/October) and spring of 7th grade (April/May). Research staff reviewed the class schedules of targets in the long-term longitudinal study ($n = 414$), and they identified classmates (i.e., potential nominators/raters) who shared at least one class with the long-term longitudinal participants. Following Parkhurst and Asher (1992), 25 to 40 nominators/raters (depending on school size) were selected at random from the pool of identified classmates, and those receiving consent (89.2% on average; 7th grade fall: $M = 21.58$, $SD = 8.31$; 7th grade spring: $M = 22.76$, $SD = 8.45$) completed multiple sociometric measures. Adolescents were instructed to review a roster of classmates and nominate (circle the names of) or rate classmates according to the specific descriptor. To ensure that respondents were knowledgeable about the peers they were nominating/rating, adolescents were instructed to nominate/rate only those classmates they knew well, and all nomination/rating items were scaled to include a response category labeled "don't know this person". Participants received a small gift (e.g., pencil) as a token of appreciation. Study approval was obtained from the Institutional Review Boards at Arizona State University and University of Illinois Urbana-Champaign.

Measures

Bullying and victimization—As a measure of *bullying* behavior at school, adolescents were asked to select any number of classmates "who regularly bully other kids who are unlikely to stand up for themselves." A bullying score was calculated for each adolescent by summing the number of nominations the adolescent received and standardizing within classroom and sex.

A reliable ($\alpha = .88$ and $.89$ at Time 1 (T1) and Time 2 (T2), respectively) and valid (Ladd & Kochenderfer-Ladd, 2002), four-item peer nomination measure was used to assess *peer victimization* at school. Each item represented a specific form of victimization: (a) verbal (get called bad names by other kids), (b) relational (who other kids gossip about or say bad things about behind their backs), (c) physical (gets hit, pushed, or kicked by other kids), and (d) general (get picked on by other kids). Adolescents were asked to circle the names of an unlimited number of classmates who fit each descriptor; a total victimization score was created for each adolescent by summing his/her scores on the four victimization items and standardizing within classroom and sex. A confirmatory factor analysis (CFA) was conducted on data obtained at T1 and T2 to evaluate the dimensionality of the observed variables and the pattern of factor loadings; results indicated acceptable fit, $\chi^2(df = 18; N = 2,587) = 373.98, p < .05, CFI = .98; RMSEA = .09, SRMR = .03$. This measure was also found to have adequate psychometric properties in previous research that was based on a subset of the present sample in the 4th through 6th grades (Kochel et al., 2012).

Peer acceptance—We used a rating-scale instrument (Asher, Singleton, Tinsley, & Hymel, 1979) as a measure of peer acceptance. Adolescents were presented with a list of their classmates' names and instructed to indicate how much they like to hang out with each classmate by circling a number on a scale that ranged from 1 to 5 (1 = *I don't like to*; 5 = *I like to a lot*). Scores were computed by averaging across raters and standardizing within classroom and sex.

Mutual best friendship—As a measure of *mutual best friendship*, participants were asked to nominate an unlimited number of classmates that they considered to be a "best friend". Participants had a mutual best friendship if the peer they nominated also nominated them. The number of friendships per participant ranged from 0 to 11 ($M = 1.92, SD = 1.59$). We dichotomized mutual friendship such that (0 = *none*, 1 = *at least one mutual best friendship*).

Results

Preliminary Analyses and Data Analytic Strategy

A series of one-way ANOVAs was performed to evaluate differences in boys' versus girls' mean scores on LPA indicators (i.e., victimization, bullying) and peer acceptance. Results from the T1 ANOVAs revealed that boys fared significantly worse ($p < .001$) than girls on bullying, $F(1, 2575) = 432.84, (M = .39, SD = 1.15$ vs. $M = -.36, SD = .60)$; victimization, $F(1, 2556) = 70.13, (M = .17, SD = 1.10$ vs. $M = -.15, SD = .83)$; and peer acceptance, $F(1, 2575) = 42.57, (M = .12, SD = 1.02$ vs. $M = -.13, SD = .91)$. ANOVAs conducted at T2 yielded a similar pattern of findings. Given evidence for sex differences, peer nominations and ratings were standardized within class (i.e., to control for the number of nominators; Coie et al., 1982) and also within sex so that differences on peer acceptance could be attributed to bully/victim status and mutual friendship and not sex differences on LPA indicators. Means on LPA indicators and peer acceptance, therefore, represent the degree to which adolescents scored higher or lower than same-sex classmates.

As seen in Table 1, stability correlations were high. Victimization was modestly correlated with bullying in the positive direction. Correlations between bullying and peer acceptance were modest and negative; victimization was moderately and negatively correlated with peer acceptance. Friendship was modestly and negatively correlated with bullying and victimization.

The total percent of missing data was 1%. LPA was performed in *Mplus* (Muthén & Muthén, 1998–2013) with a maximum likelihood robust estimator (MLR). Model selection was based on indices of comparative model fit (i.e., SS-BIC, Lo-Mendell-Rubin likelihood ratio test (LMR), entropy) and profile interpretability. SS-BIC assigns a sample-size adjusted penalty for each added parameter; lower scores indicate better fit. LMR provides a *p* value that indicates which of two nested models is a better relative fit to the data, and entropy is a measure of classification uncertainty with higher values indicating better classification. As a measure of profile interpretability, we examined parameter estimates per profile for plausible models.

We manually conducted a three-step procedure (see Asparouhov & Muthén, 2013) to identify profiles that were based on victimization and bullying indicators but independent of the distal outcome (peer acceptance) and moderator (mutual friendship). This procedure has been shown to outperform the pseudo-class method (obtained via the auxiliary option in *Mplus*) and, unlike classical three-step approaches, accounts for classification error (Asparouhov & Muthén, 2013). In Step 1, we estimated one- through six-profile models at T1 and T2 to define profile membership and examine consistency in profiles across time based on responses to bullying and victimization measures. To permit an examination of profile membership stability, we employed the *savdata* command to save class probabilities and class membership for the four-profile solution at T1 and T2. In Step 2, we computed measurement error for the most likely class membership for the four-profile solution at T1. In Step 3, we estimated two models (i.e., a distal outcome model and a moderator model) in which we used most likely class membership for the four-profile solution as the indicator variable, fixed measurement error at the probabilities obtained in Step 2, and included peer acceptance as the distal (i.e., T2) outcome while controlling for T1 peer acceptance. For the moderator model, we employed the *knownclass* option in *Mplus* to estimate the model for multiple groups (i.e., 0 = *no mutual friendship*, 1 = *at least one mutual friendship*) and, thus, examine the protective function of mutual friendship at T2. To compare the identified profiles' likelihood of friendlessness at T2, we obtained the number of friended versus friendless youth within each profile via *knownclass* and conducted a series of *z*-tests on proportions.

Latent Profile Analyses

LPA models were estimated by testing a one-profile model followed by models with additional profiles. SS-BIC values revealed that each successive model provided better fit, likely because modeling additional profiles tends to permit better approximations to the data. The differential in SS-BIC from the four- to five- and five- to six-profile models, however, was less compared to the difference between values for models with fewer profiles; thus, improvement in fit became less so for each successive model. LMR produced nonsignificant

p-values for all six models at T1. At T2, the four-profile model was a better fit than the three-profile model, but the five-profile model wasn't a better fit compared to the four-profile model. Entropy was highest (i.e., .90 to .92) for models four through six. All in all, comparative fit indices provide the strongest evidence for the four- through six-profile models; thus, we assessed profile interpretability for these solutions (see Table 2 for means and standard errors of identified profiles). Relative to the five- and six-profile solutions, the four-profile solution, which included victims, bullies, bully-victims, and uninvolved youth, emerged as the most theoretically plausible solution because of consistency in the identified profiles from T1 to T2 (i.e., victims, bullies, bully-victims, and uninvolved youth were identified at each time point) and because of reasonable *ns* per profile.

We conducted a cross-tab analysis in SPSS to evaluate the stability of profile membership from T1 to T2. Results revealed that, of the 291 victims identified at T1, 193 (66.3%) were identified as victims at T2. Of 343 youth who were classified as bullies at T1, 193 (58.6%) were bullies at T2. There were 72 bully-victims at T1, and 42 (58.3%) remained bully-victims at T2. Among the 1881 youth who were classified as uninvolved at T1, 1649 (87.7%) were identified as uninvolved at T2.

Bully/Victim Profile Differences in Peer Acceptance

To test the first aim (i.e., to evaluate the relation between bully/victim status, derived via LPA, and changes in peer acceptance from the fall to spring), we estimated the best-fitting, four-profile model with T2 peer acceptance regressed on T1 peer acceptance. We then evaluated the Wald Test statistic (χ^2) to assess intercept differences in peer acceptance across profiles. T2 peer acceptance intercept scores (interpreted as means) revealed that victims fared the worst (−.48), followed by bully-victims (−.20), bullies (.02), and uninvolved youth (.05). Wald Tests showed that victims experienced greater declines in peer acceptance from T1 to T2 compared to bullies, $\chi^2(1, N=2576) = 10.77, p = .00$, and uninvolved youth, $\chi^2(1, N=2576) = 12.08, p = .00$; further, bully-victims experienced marginally larger decreases in peer acceptance than uninvolved youth, $\chi^2(1, N=2576) = 2.88, p = .09$.

Mutual Friendship Among Bully/Victim Profiles

To compare the identified profiles' likelihood of friendlessness, we conducted a series of *z*-tests on proportions for independent groups (see Table 3 for *ns* per profile at each level of the moderator). Results from *z*-tests showed that there was a significantly ($p < .05$) greater proportion of friendless youth within the victim profile compared to the bully ($z = 6.10$) and uninvolved ($z = 11.51$) profiles; within the bully profile compared to the uninvolved profile ($z = 2.52$); and within the bully-victim profile compared to the bully ($z = 4.47$) and uninvolved ($z = 6.95$) profiles. The bully-victim and victim profiles, therefore, included a greater proportion of friendless youth relative to the bully profile, which, in turn, contained a greater proportion of friendless adolescents than the uninvolved profile.

In the LPA framework, tests of categorical moderator variable effects can be performed via multiple group analysis, which divides the sample into groups based on the moderator (Muthén & Muthén, 1998–2013). To evaluate the moderating role of friendship, we

estimated a multiple group model in which T2 mutual friendship was the grouping variable (i.e., 0=*no mutual friendship*, 1=*at least one mutual friendship*), T2 peer acceptance was the distal outcome, and T1 peer acceptance was the covariate in the four-profile LPA solution at T1. Such permitted a test of the interaction between each bully/victim profile and mutual friendship as a predictor of T2 peer acceptance, controlling for T1 peer acceptance. To interpret interactions, we conducted a series of Wald Tests (see Table 3). Results showed, first, that for all bully/victim profiles, friendless compared to friended youth fared significantly worse on peer acceptance. Such provides evidence for the moderating role of friendship for bullies, victims, bully-victims, and uninvolved youth. Second, mean difference scores on peer acceptance between friendless and friended youth were .58 (bully-victims), .39 (victims), .34 (bullies), and .24 (uninvolved youth); therefore, mutual friendship appears to be especially profitable for bully-victims and less so for youth uninvolved in victimization and bullying.

Summary

LPA resulted in the identification of bullies, victims, uninvolved youth, and bully-victims at T1 and T2; contrasts on profiles showed that victims fared worse than bullies and uninvolved youth on peer acceptance. Analyses further revealed that mutual friendship was a moderator of peer acceptance for all bully/victim profiles and that, relative to bully and uninvolved profiles, bully-victim and victim profiles included a greater proportion of friendless youth.

Discussion

Study results shed light on the relative risk statuses of bully/victim profiles and, in turn, contribute to theory and prior research in four key ways. First, our use of LPA, an empirically-driven strategy for partitioning data, enables us to confirm the existence of theoretical bully/victim subtypes and leads to an improved understanding of profile prevalence rates, which have lacked consistency across studies. Second, unlike most previous research, this study's short-term longitudinal design permits inferences about the relative social *consequences* of bully, victim, bully-victim, and uninvolved status. Third, as far as we know, this investigation is the first that yields evidence about the protective function of mutual friendship among bully/victim profiles. Such evidence invokes a fourth contribution of this research: an empirical foundation on which to develop process explanations for why bully-victims might profit most from friendship.

Bully/Victim Profile Classification

Consistent with expectations, LPA resulted in the identification of four profiles in the fall and spring of 7th grade. Adolescents who evidenced low levels of victimization but high levels of bullying were classified as bullies, victims earned high victimization but low bullying scores, bully-victims scored high on victimization and bullying, and youth were uninvolved if their victimization and bullying scores were low. Bullies comprised 13% and 14% of youth in the fall and spring respectively, 11% (fall) and 12% (spring) of adolescents were classified as victims, and the bully-victim profile included 3% of youth in the fall and spring. These rates approximate the pattern of prevalence rates reported within some but not

all past studies. For example, consistent with our findings, some researchers (e.g., Arseneault et al., 2006; Nansel et al., 2001; Scholte et al., 2009; Shin, 2010) have reported that, apart from uninvolved youth, bullies comprise the greatest proportion of the sample (i.e., between 9 and 13%), followed by victims (i.e., between 10 and 14%), and bully-victims (i.e., between 3 and 6%). Others, however, reported somewhat different estimates, (e.g., bully-victims comprised a greater proportion—between 10 and 13%—of the sample; O'Brennan et al., 2009; Veenstra et al., 2005).

Inconsistencies in prevalence rates across studies probably stem from the use of theoretically-driven classification strategies (e.g., standard deviation cut-offs), which produce prevalence rates that are an artifact of arbitrary cut-offs (e.g., .50 versus 1.00 standard deviations above the sample mean). Our empirically-driven classificatory approach (i.e., LPA) bolsters the credibility of prevalence estimates reported here, and so does the fact that we observed consistency in profile proportions across two points in time (i.e., the fall and spring of 7th grade). In short, this study provides compelling evidence that bullies are more prevalent than victims which, in turn, are more prevalent than bully-victims. Such findings have the potential to play an important role in the development of bullying interventions.

Bully/Victim Profiles' Differential Risk for Decreases in Peer Acceptance

This study's results provide evidence that bully/victim status is *prognostic* of worsening peer acceptance and that such adversity differs as a function of profile. Compared to bullies and uninvolved youth, victims experienced greater declines in peer acceptance from fall to spring; moreover, bully-victims fared marginally worse than uninvolved youth on changes in peer acceptance. The finding that victims and bully-victims appear to be especially susceptible to decrements in peer acceptance over the course of a school year is consistent with findings reported within other studies (e.g., Juvonen et al., 2003; Scholte et al., 2009; Shin, 2010; Veenstra et al., 2005). What distinguishes our findings from those reported previously is that we evaluated bully/victim profiles' relative risk for *changes* (i.e., decreases) in peer acceptance. Such facilitates inferences about potential processes accounting for victims' and bully-victims' deteriorating peer group relations.

One such inference is that, early in the school year, adolescents within victim and bully-victim profiles behave in ways that cause them to develop reputations, which, in turn, contribute to worsening peer group relations. We obtained evidence for the moderate stability of victim and bully-victim profiles, which provides preliminary support for this perspective. Another inference is that, relative to bullies (Juvonen et al., 2003), bully-victims' deficits in self-control and social competence (e.g., Haynie et al., 2001) make them less effective aggressors; that is, their aggression fails to elevate, or perhaps even compromises, their social status. Consistent with this logic, we found that bully-victims, but not bullies, were less accepted than youth uninvolved in victimization or bullying; moreover, bullies scored about 1.5 *SDs* above the mean on bullying, but bully-victims scored a full *SD* higher than bullies. The fact that bully-victims, compared to bullies, evidenced extreme bullying scores implies either that bully-victims are indeed less socially

competent and demonstrate less self-control *or* peers are less apt to perceive bullies' aggression or to regard it as such. These inferences, and others, require empirical attention.

The Role of Mutual Best Friendship

Results reinforce and extend research on the buffering role of friendship by suggesting that friendship is less likely for bully-victims compared to youth within other bully/victim profiles but that friendship is especially profitable for bully-victims when it does occur. An examination of profiles' relative likelihood for friendlessness revealed at least two important findings. First, nearly half of adolescents identified as victims and bully-victims did not participate in a mutual friendship, compared to only 15% of uninvolved youth. Characteristics associated with being a victim (e.g., insecurity, submissiveness; Salmivalli & Peets, 2009) likely make it difficult for victims to create a welcoming context in which friendships can develop and/or offer the companionship and support needed to maintain friendship (Bagwell & Schmidt, 2011). Similarly, research suggests that bully-victims exhibit poor communication and conflict resolution skills (Haynie et al., 2001), which might prevent bully-victims from engaging in the intimate exchanges that are especially relevant for adolescent friends.

Second, we found that friendlessness in victim and bully-victim profiles exceeded that of the bully profile (by about 25 to 30%), which, in turn, surpassed that of the uninvolved profile (by about five percent). To our knowledge, we are the first to investigate the likelihood of friendlessness among bully/victim profiles. Our study results lend support for the perspective that bullies, although they might be no worse off than uninvolved youth when it comes to peer acceptance, are not all together exempt from peer relationship difficulties, as evidenced by their small but significantly higher likelihood of friendlessness compared to uninvolved youth. Perhaps the fact that bullies tend to affiliate with other aggressive youth (Salmivalli & Peets, 2009; Shin, 2010) somewhat limits their number of potential friends.

Moderation analyses revealed that for all profiles, friended youth fared better than friendless youth on peer acceptance. A comparison of friended versus friendless adolescents' peer acceptance scores within each bully/victim profile, however, revealed an interesting finding: bully-victims were particularly likely to profit from participation in a mutual friendship. Research suggests that friendships provide youth with unique opportunities to develop and rehearse their social skills (Hartup, 1992), which, in turn, has the potential to increase their likeability. Such opportunities may be especially relevant for bully-victims compared to bullies, uninvolved youth, and perhaps even victims. Bully-victims appear to be particularly "unlikeable", perhaps owing to their low levels of prosocial behavior (Arseneault et al., 2006) and social competence (Haynie et al., 2001); thus, it is conceivable that bully-victims stand to gain the most from a context that has the potential to promote the development of social competencies. In short, it is possible that friendship enables bully-victims, more so than other profiles of youth, to acquire and/or maintain acceptance within the peer group.

Limitations and Future Research

This study has some limitations. First, findings advance knowledge about bully/victim profiles' risk for decrements in peer acceptance. Other domains of adjustment were not

investigated here. There is, however, a growing body of research on the behavioral (e.g., Arseneault et al., 2006), psychological (Barker et al., 2008) and familial (Veenstra et al., 2005) risk statuses of bully/victim profiles. Second, unlike most research on bully/victim profiles (for exceptions see Nansel et al. 2001; Scholte et al., 2009), our study incorporated a bullying criterion that reflects a power differential between perpetrator and victim—a feature of bullying that distinguishes it from aggression more generally (e.g., Salmivalli & Peets, 2009); however, we employed a single-item measure to index bullying. Given that bullying is multidimensional (e.g., physical, verbal, relational; Salmivalli & Peets, 2009), investigators should identify instruments that not only discriminate between aggression and bullying but also index the multiple dimensions of bullying. A multidimensional, compared to single-item, bullying measure has the potential to result in the identification of more bullies and bully-victims (e.g., if it prompts respondents to more carefully consider a broad range of bullying behaviors) and/or permit an analysis of dimensions of bullying that are more or less related to peer acceptance.

Third, only peer-reports were available to index classification criteria (i.e., victimization, bullying). From middle childhood on, peer reports are highly reliable given that scores come from many peer informants who observe the focal adolescent in multiple contexts (Salmivalli & Peets, 2009); however, combining data from multiple informants may be the most comprehensive approach (e.g., Ladd & Kochenderfer-Ladd, 2002). Fourth, it is not clear whether findings obtained among this sample of predominantly European Americans generalize to samples within other countries and cultures, such as those that are collectivist (as opposed to individualistic). Knowledge on the topic is limited, but there is at least some evidence for differences in bullying and victimization in eastern versus western cultures (e.g., Koo, Kwak, & Smith, 2007). Fifth, though we focused on the presence versus absence of friendship, other friendship domains, such as quality and friend characteristics, warrant attention (Bagwell & Schmidt, 2011). It is possible, for example, that the protective function of friendship is contingent upon friend characteristics for some bully/victim profiles more so than others. Perhaps it is especially important for a victim's friend to be of good social standing (or at least nonvictimized) if he or she is to buffer the victim's risk for decreases in peer acceptance. In addition, it may be that high-quality friendships are more likely to be protective than are ones low in quality.

Conclusion and Implications

LPA resulted in the identification of bullies, victims, bully-victims, and uninvolved youth in the fall and spring of 7th grade, and contrasts on profiles revealed that, for victims, more so than for bullies and uninvolved adolescents, peer acceptance scores worsened from the fall to spring of 7th grade. Results also provided evidence for the buffering role of mutual friendship and showed that the proportion of friendlessness in the bully-victim and victim profiles did not differ but exceeded that of the bully profile, which, in turn, surpassed that of uninvolved youth.

Results have applied implications related to the development of friendship interventions and the individualization of social skills training programs for adolescents fitting specific bully/victim profiles. Scholars have long recognized friendship's contribution to multiple domains

of adjustment (Bagwell & Schmidt, 2011). Findings from our investigation reinforce and extend this perspective by showing, first, that having a mutual friend has positive implications for adolescents' peer acceptance regardless of bully/victim profile. Second, it appears that friendship is especially likely to profit the peer group relations of adolescents characterized as bully-victims (who, incidentally, are more likely to be friendless relative to youth within bully and uninvolved profiles). Despite evidence obtained here and elsewhere that suggests that "friendship matters" (see Bagwell & Schmidt, 2011), peer relationship interventions tend to focus exclusively or primarily on promoting positive peer group relations rather than friendship experiences; as a result, there is a shortage of data that speak to the efficacy of friendship intervention efforts (Asher, Parker, & Walker, 1996; Bagwell & Schmidt, 2011). Study findings support the utility of designing interventions with the specific aim of helping adolescents make and keep friends. Given that bully-victims might benefit most from such interventions, and because they possess characteristics that presumably decrease their opportunities for developing and maintaining friendships, access to such interventions should, perhaps, be prioritized for this profile of adolescents.

Results also lend credibility to the contention that bully-victim and especially victim status are especially prognostic of peer group relationship adversity. Such implies that, in addition to friendship interventions, youth with bully-victim and victim characteristics might profit from interventions that decrease peer rejection and promote peer group acceptance and social preference (e.g., social skills training; see Bierman, 2003). Given, however, the unique social experiences associated with being a bully-victim or victim, it is conceivable that the efficacy of social skills training would be enhanced if the training targeted social experiences that are especially relevant to victims and bully-victims.

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Highlights

- Latent profile analysis yielded bully, victim, bully-victim, and uninvolved profiles.
- Victims' and bully-victims' peer acceptance scores worsened from fall to spring.
- Bully-victim and victim profiles were most likely to be friendless.
- Friendship appears to provide a buffering role for bully-victims especially.

Table 1

Bivariate Correlations, Raw Means, and Standard Deviations

Variable	1	2	3	4	5	6	M	SD
1. T1 Victimization	--						6.82	9.62
2. T2 Victimization	.84	--					10.97	12.35
3. T1 Bullying	.21	.19	--				2.16	3.33
4. T2 Bullying	.17	.23	.66	--			2.25	3.35
5. T2 Mutual friendship	-.29	-.27	-.08	-.07	--		N/A	N/A
6. T1 Peer acceptance	-.59	-.55	-.13	-.09	.46	--	2.49	.62
7. T2 Peer acceptance	-.58	-.56	-.12	-.11	.51	.85	2.43	.62

Note. $N = 2,357$. T1 = 7th grade fall. T2 = 7th grade spring. (0= no mutual friendship. 1= at least one mutual friendship). All correlations are significant at $p < .05$. Coefficients in bold represent stabilities.

Table 2
Estimated Means and Standard Errors for Victimization and Bullying: LPA Models with 4 – 6 Profiles

	Fall of 7 th grade						Spring of 7 th grade					
	N	Victimization			Bullying		N	Victimization			Bullying	
		M	SE	M	SE	M		SE	M	SE	M	SE
Four-profile solution												
Bullies	343 (13%)	-.05	.04	1.57	.09		366 (14%)	.00	.04	1.59	.08	
Victims	291 (11%)	1.86	.10	-.20	.06		299 (12%)	1.84	.08	-.29	.04	
Uninvolved	1881 (73%)	-.37	.02	-.38	.02		1837 (71%)	-.38	.02	-.38	.02	
Bully-victims	72 (3%)	1.94	.18	2.47	.23		85 (3%)	2.12	.15	2.18	.16	
Five-profile solution												
Bullies	324 (13%)	-.08	.04	1.61	.08		416 (16%)	-.04	.04	1.22	.12	
Victims	349 (13%)	1.24	.12	-.26	.05		286 (11%)	1.84	.08	-.35	.05	
Uninvolved	1765 (68%)	-.44	.02	-.37	.02		1745 (67%)	-.39	.02	-.44	.02	
Bully-victims	77 (3%)	1.88	.11	2.40	.18		84 (3%)	2.20	.13	1.95	.20	
Victims (high)	72 (3%)	2.91	.24	.01	.12		N/A					
Bullies (high)		N/A					56 (2%)	.27	.25	2.88	.37	
Six-profile solution												
Bullies	368 (14%)	-.11	.04	1.22	.07		394 (15%)	-.08	.04	1.21	.12	
Victims	322 (13%)	1.28	.11	-.35	.05		276 (11%)	1.26	.11	-.34	.05	
Uninvolved	1698 (66%)	-.45	.02	-.43	.02		1676 (65%)	-.45	.02	-.44	.02	
Bully-victims	81 (3%)	2.05	.10	2.02	.24		95 (4%)	2.06	.12	2.05	.15	
Victims (high)	60 (2%)	2.99	.25	-.06	.17		89 (3%)	2.72	.18	-.21	.10	
Bullies (high)	58 (2%)	.21	.12	2.89	.16		57 (2%)	.14	.15	2.80	.35	

Table 3

Comparison of Time 2 Peer Acceptance Intercept Scores Based on the Four-Profile Multiple Group LPA at Time 1 with Mutual Friendship at Time 2 as the Grouping Variable

	<i>N</i>	%	Intercept	Wald Test	<i>p</i>
Bullies	322			18.05	.00
Friendless	61	18.94 ^b	-.27		
Friended	261		.07		
Victims	278			3.80	.05
Friendless	116	41.73 ^a	-.66		
Friended	162		-.27		
Uninvolved	1761			23.73	.00
Friendless	239	13.57 ^c	-.15		
Friended	1522		.09		
Bully-victims	65			8.51	.00
Friendless	29	44.62 ^a	-.68		
Friended	36		-.10		

Note. For all Wald Tests, *df* = 1. Differing subscripts within the % column indicate significant differences in proportions at *p* < .05.