

Correlates of Victimization in Chinese Children's Peer Groups

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This study reports a cross-sectional investigation of the behavioral and academic correlates of victimization in Chinese children's peer groups. The participants were 296 children (161 boys and 135 girls; mean age = 11.5 years) from Tianjin, China. Multi-informant assessments (peer nominations, teacher ratings, and self-reports) of peer victimization, aggression, submissiveness-withdrawal, assertiveness-prosociality, and academic functioning were obtained. Structural equation models indicated that peer victimization was associated with poor academic functioning, submissive-withdrawn behavior, aggression, and low levels of assertive-prosocial behavior. These findings suggest that there is considerable similarity in the social processes underlying peer group victimization across Chinese and Western cultural settings.

Research conducted in Western cultural settings has consistently shown a strong relation between children's social behavior and the frequency with which they are targeted for physical or verbal abuse by their peers (for reviews, see Graham & Juvonen, 1998b; Hawker & Boulton, 2000; Perry, Perry, & Kennedy, 1992; Smith & Brain, 2000). Children who are socially skilled, and engage in high rates of prosocial and assertive behaviors, are at relatively low risk for victimization by peers (Egan & Perry, 1998; Schwartz, Dodge, & Coie, 1993). In contrast, children who are characterized by submissive, inhibited, or withdrawn social behaviors often emerge as persistent victims of peer aggression (Boivin, Hymel, & Bukowski, 1995; Boulton, 1999; Olweus, 1978; Schwartz et al., 1993). Displays of disruptive behavior or dysregulated aggression may also be predictive of maltreatment by peers (Hodges, Malone, & Perry, 1997; Hodges & Perry, 1999; Pope & Bierman, 1999; Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999), at least for a subgroup of victimized children (Schwartz, 2000).

A potential shortcoming of research in this area is that it has been restricted largely to Western contexts. Investigators in Japan have begun to examine *ijime*, a phenomenon that involves harassment of peers by dominant members of a group (see Rittrios-Ellis,

Bellamy, & Shoji, 2000; Morita, Soeda, Soeda, & Taki, 1999). There have also been some more theoretical discussions focusing on the prevalence of bully-victim problems across national settings (e.g., Smith et al., 1999). However, the availability of empirical data regarding the behavioral correlates of peer group victimization in non-Western cultures remains quite limited. Thus, the extent to which findings from investigations conducted in North America and Europe can be generalized to other cultures is unclear.

The current study focuses on victimization in Chinese children's peer groups. We sought to examine the behavioral patterns of children who emerge as frequent victims of bullying within this social context. The Chinese cultural setting was of high interest because the processes predicting positive social outcomes in Chinese peer groups differ along key dimensions from the corresponding processes in Western peer groups (Chen & Rubin, 1992; Chen, Rubin, & Sun, 1992). In addition, Chinese and Western societies appear to diverge with regard to core cultural values and often are considered to be on opposite ends of the individualism-collectivism continuum (Chen, 2000; Triandis, 1995). To the best of our knowledge, this investigation is the first to examine correlates of peer victimization in the Chinese cultural context.

The association between submissive-withdrawn behavioral dispositions and victimization by peers was of particular interest in this investigation. Inhibited social behaviors (i.e., wary, anxious, nonassertive behaviors that are generally accompanied by low rates of social interaction; see Rubin, 1998) are predictive of both social rejection (Hymel, Rubin, Rowden, & LeMare, 1990; Rubin, Chen, & Hymel, 1993) and peer victimization (Boivin et al., 1995; Boulton, 1999; Schwartz et al., 1993) for Western children. However, in Chinese children's peer groups, there may be positive social outcomes associated with some subtypes of behavioral inhibition. Chinese children who are characterized by shy or sensitive dispositions are generally accepted by their peers, particu-

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larly in younger age groups (Rubin, 1998; Schneider, Smith, Poisson, & Kwan, 1997). The most compelling evidence in this regard has emerged from an important series of investigations conducted by Chen and colleagues (Chen & Rubin, 1992; Chen, Rubin, & Li, 1995; Chen et al., 1992). These researchers have demonstrated that in China, shyness–sensitivity (as operationalized by a reputation among peers as sad, shy, or having easily hurt feelings; see Chen et al., 1992) is often associated with acceptance by elementary school peers.

It may be the case that the social values inherent in Chinese society lead to relatively positive attitudes among children toward some classes of social inhibition (Schneider et al., 1997). Although sweeping social changes have occurred in recent decades, Chinese families tend to retain traditional values inherited from the Confucian past that bear on children's development and behavior (Chen, Li, Li, Li, & Liu, 2000; Ho, 1986; Luo, 1996). In contrast to the more individualistic Western cultures, Chinese culture emphasizes group awareness over individual concerns, sensitivity to others, and the minimization of conflict (Chen, 2000). Behaviors that further individual interests or action at the expense of the group are generally discouraged (Bond, 1996; Ho, 1986). The cultivation of these values is thought to result in a harmonious society (Luo, 1996). Accordingly, the primary goals in the socialization of Chinese children are to help them learn self-control, to develop an interdependent sense of self, and to foster cooperative and prosocial behavior (Bond, 1996; Chen et al., 2000). Thus, children may display quiet, shy, or timid behavior as a reflection of a cultural emphasis on self-restraint and behavioral inhibition. Children are also likely to be encouraged or praised for such behaviors by adult authority figures (Chen & Rubin, 1992). As a result, inhibited dispositions are not likely to be predictive of peer rejection in younger Chinese peer groups and are only modestly associated with rejection among older children (Chen et al., 1995).

If behavioral inhibition is not strongly associated with peer rejection in Chinese peer groups, will withdrawn–submissive children still be at high risk for victimization by peers? For Western children, peer rejection appears to be an important mediating mechanism between social withdrawal and bullying by peers (Boivin et al., 1995). However, in the Chinese setting, inhibited children (as identified by scales assessing shyness–sensitivity; Chen et al., 1992) are not actively disliked by their peers and, therefore, may be unlikely to emerge as targets of peer abuse. Moreover, in China, some forms of inhibition may be associated with other social competencies (e.g., leadership; Chen et al., 1995) that minimize risk for maltreatment by peers.

An important issue to consider is that inhibited behavior may not be a unitary phenomenon. Investigations conducted in Western children's peer groups have provided preliminary evidence for a more differentiated view of this class of social behaviors (Asendorpf, 1990; Rubin & Mills, 1988). Some children seem to be characterized by anxious forms of social avoidance, whereas other children isolate themselves because of a more passive disinterest in social interaction (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). The anxious–withdrawn dimensions of inhibition are likely to be most strongly associated with negative peer group outcomes for Western children (Harrist, Zaia, Bates, Dodge, & Pettit, 1997), although these distinctions may become less relevant over the course of development (Coplan et al., 1994). Research conducted in China has also produced some limited evidence that there are

partially independent subtypes of inhibition, at least in younger children's peer groups (Hart, Yang, et al., 2000). Thus, withdrawn–submissive tendencies could be predictive of rejection and victimization by peers even though other subtypes of inhibition are associated with more positive social outcomes.

Withdrawn–submissive behavior could also be linked to peer victimization through mechanisms other than rejection. For example, these behavioral tendencies might influence peer beliefs regarding a child's vulnerability to victimization (Perry, Williard, & Perry, 1990; Schwartz, Dodge, et al., 1998). In Western settings, children tend to target peers who reward aggressors with passive or submissive responses (Patterson, Littman, & Bricker, 1967). As a result, a child who frequently responds to coercive overtures with submission is at high risk for emergence as a persistent victim of bullying (Schwartz et al., 1993). Attitudes toward behavioral inhibition may be relatively positive in the Chinese cultural context, but withdrawn–submissive behavior could still signal peers that a child will not offer an effective defense against potential aggressors.

Although there may be cultural variation in the social outcomes associated with some subtypes of behavioral inhibition, we expected that there would be consistency across settings with regard to other classes of children's behavioral functioning. Past research conducted in China and in other non-Western societies suggests that prosocial, assertive, and socially competent behaviors are well evaluated across varying cultural contexts (Farver & Lee-Shin, 1997; Farver & Wimbarti, 1995; Whiting & Edwards, 1988). Likewise, aggression and disruptive behaviors seem to be predictive of negative peer group attitudes across cultures (Chen, 2000; Schneider et al., 1997), at least in early and middle childhood (Graham & Juvonen, 1998b). In the current investigation with Chinese children, we predicted that prosocial–assertive behavior would be negatively associated with peer victimization, whereas aggression would be positively associated with victimization.

For each of these classes of social behavior, we considered the mediating role of social acceptance/rejection by peers. As described above, several researchers have suggested that the links between maladaptive behavioral styles and victimization in the peer group are mediated by social acceptance/rejection (Boivin et al., 1995). Aggressive or inhibited behavioral styles that are unfavorably evaluated by the peer group can result in disliking by peers (Coie, Dodge, & Kupersmidt, 1990). Negative social attitudes may, in turn, be manifested in subsequent maltreatment by peers (Boivin et al., 1995; Olson, 1992). In the present investigation, we examined these hypothesized mediating processes in the Chinese setting.

As a complement to this focus on the behavioral correlates of victimization, we also considered relations between academic functioning and bullying by peers. Perhaps because of a strong cultural emphasis on achievement (Crystal et al., 1994; Stevenson et al., 1990; Sun & Xu, 1987), academic competence is an important predictor of outcomes in Chinese children's peer groups (McCall, Beach, & Lau, 2000). Therefore, Chinese children who perform poorly in school may be likely to experience rejection and bullying by peers. Research conducted in Western settings suggests that there may also be an association between academic difficulties and victimization because the stress associated with persistent negative treatment by peers leads to academic failure or

other forms of school maladjustment (Juvonen, Nishina, & Graham, 2000; Kochenderfer & Ladd, 1996).

A final area of investigation was the potential moderating role of gender. Gender differences in the form and function of aggression (Crick & Grotpeter, 1995) and in the social processes that increase children's risk for victimization by peers (Schwartz et al., 1999) have recently been the focus of increased empirical investigation in Western samples. However, relatively little is known about the influence of gender within the Chinese cultural context. There is some preliminary evidence that in Chinese children's peer groups, behavioral inhibition is more closely associated with negative social outcomes for girls than for boys (Chen et al., 1995), but further investigation of this issue is clearly warranted.

The Current Study

The research questions described above were addressed in a sample of elementary school children (fifth and sixth grades) recruited from an urban area of mainland China. Middle childhood is the developmental period during which individual differences in aggression (Eron, 1987; Olweus, 1979), and perhaps bullying by peers (Perry, Kusel, & Perry, 1988), stabilize in Western children's peer groups. A multi-informant data collection approach was used, with assessments from peer and teacher informants as well as self-reports. Although relevant measures have been carefully validated in Chinese settings by previous researchers (Chen et al., 1992), we chose to develop new assessments to focus more narrowly on aspects of children's social, behavioral, and academic adjustment that have been specifically linked to the phenomenon of peer victimization by previous researchers. For example, we included items designed to tap the dimensions of inhibition (i.e., submissiveness-withdrawal) that are most strongly predictive of maltreatment by peers in Western samples (Schwartz et al., 1993).

Method

Participants

Participants were 296 children (161 boys and 135 girls) recruited from a primary school in Tianjin, China. Located in the northeast region of the country, Tianjin is one of the five major industrial cities in China. The school had three fifth-grade and three sixth-grade classes, each of which included approximately 50 students. All six classes participated in this study. However, 8 of 304 children in these classrooms either were absent during the data collection or chose not to take part in the study. The mean age of participating children was 11.5 years ($SD = 0.7$).

Because children could opt not to complete any item, there were missing values on some questionnaires. In addition, information on academic performance (i.e., test scores) was not available for 10 of the children who were new to the school ($n = 286$ for the analyses of academic functioning).

Verbal parental consent was obtained for all participating children.¹ Parents were informed of the study's goals and procedures by their child's teacher or by a research assistant associated with the project. They were also told that they could choose, without negative consequences or a penalty of any kind, not to allow their child to participate and that participation was not part of regular school assignments. In addition, the research assistant was available to parents throughout the data collection and could answer questions about the project.

Procedure

Data were collected with teacher rating scales, a peer nomination inventory, and a self-report questionnaire. All measures were developed using

items culled from the existing bully-victim literature. The measures were pilot tested extensively in two North American cities (Schwartz, 1995, 2000; Schwartz & Proctor, 2000) and were translated and back-translated by a paid language consultant who was native to the region of China where the study was conducted. The translations were reviewed for accuracy and cultural appropriateness by Lei Chang, who is also native to the region.

Peer nominations were collected with an inventory that contained 16 items assessing social behavior, aggression, victimization by peers, and social acceptance/rejection. Children were asked to nominate up to three peers who fit each of the descriptors. We used a relatively small number of items because of the limited availability of classroom time. However, peer nomination assessments yield highly reliable indices even when single-item scales are used (Coie, Terry, Lenox, Lochman, & Hyman, 1995).

The children also completed My Day at School, a self-report questionnaire that taps children's experiences with victimization and bullying (all items from this device are listed in Table 2). Ratings were completed on a 4-point scale ranging from *never* (1) to *almost every day* (4).

The self-report and peer nomination measures were group-administered to the children in a classroom-based session approximately 1 hour in length. The administration was conducted by a trained research assistant who was not affiliated with the school. The research assistant read standardized instructions and also read each of the items aloud.

In addition, teachers (with the assistance of teacher's aides) completed the Social Behavior Rating Scale. This newly developed device contains 46 descriptors of children's social behavior, victimization by peers, aggression, academic functioning, and social acceptance/rejection. The accuracy of each descriptor is rated on a 5-point scale ranging from *almost never true of the child to almost always true of the child*. Teachers were given a stipend for completing the questionnaires and for assisting in the consent procedures.

Teacher ratings of children's academic functioning were complemented with additional data collected through review of school records. We obtained children's scores on mathematics and Chinese-language examinations for the school year in which the project was conducted as well as for the preceding 2 years.

Details regarding the specific constructs assessed by the measures are presented in the following sections.

Social Behavior

Submissiveness-withdrawal. Eight teacher rating items were used to assess this dimension of children's social interactional styles (derived from Schwartz, 2000). We had initially conceptualized submissiveness and withdrawal as distinct, but related, aspects of internalizing behavior (Harist et al., 1997) and included four items assessing each construct. However, a principal-components analysis of the eight items failed to yield a coherent two-factor structure. Accordingly, we generated a submissiveness-withdrawal summary variable from the mean across the combined eight items ($\alpha = .75$; see Table 1).

A peer nomination item, "kids who like to play alone . . . these are kids who would rather be alone than be with other kids," was also used to index

¹ Schools in China act in guardianship for children during the course of the school day and, accordingly, do not obtain written parental permission before involving children in special activities. For this reason, the concept of a "parental permission slip" does not exist within this cultural context. To remain consistent with local practices, and to present information about the project to parents in a form that was easily understood, we adopted a verbal consent procedure. Because parents in this culture tend to have frequent contact with their child's school, it was also viable to have direct interaction with all parents before data were collected.

Table 1
 Summary of Principal-Components Analyses of Submissive-Withdrawn and Assertive-Prosocial Teacher Rating Items

Item	Loading
Submissive-withdrawn	
Timid or shy.	.73
Avoids social contact with peers.	.76
Likes to play alone.	.75
Isolates self.	.56
Cries or withdraws when teased or threatened.	.54
Overly submissive.	.82
Gives in easily to demands or requests from peers.	.31
Gets bossed around by peers.	.32
Variance explained: 40%	
Assertive-prosocial	
Helpful to peers.	.84
Good leader.	.79
Initiates social contact with peers.	.81
Friendly toward other children.	.64
Shares with peers.	.79
Assertive and stands up for self without using aggression.	.89
Variance explained: 64%	

Note. All items are teacher ratings from the Social Behavior Rating Scale.

withdrawn behavior.² The total number of nominations each child received for this item was summed and standardized within class. The correlation between the peer nomination and teacher rating scores was .47 ($p \leq .0001$).

Assertiveness-prosociality. Six teacher rating items were used to assess assertive-prosocial tendencies ($\alpha = .88$; see Schwartz, 2000). As shown in Table 1, a principal-components analysis conducted with the items yielded a single-factor solution (i.e., one factor with an eigenvalue greater than 1.0), with all loadings greater than .50. In addition, two peer nomination items were used ("can stand up for self without hitting, fighting, or getting angry" and "is a good leader"; $\alpha = .63$). The correlation between the mean of the six teacher rating items and the total nominations received across the two peer nomination items (standardized within class) was .43 ($p \leq .0001$).

Aggression. Consistent with past research conducted across diverse cultural contexts (e.g., Boulton, Bucci, & Hawker, 1999; Hart, Nelson, Robinson, Olsen, & McNeily-Choque, 1998; Österman et al., 1998), our measures included items designed to tap multiple subtypes of aggression. We focused on physical and verbal forms of overt aggression (see Björkqvist, 1994; Boulton & Hawker, 1997) that seek to directly cause damage to the well-being of others (i.e., verbal insults, threats, hitting, pushing, and other acts of physical aggression; Olson, 1992) as well as more indirect subtypes of aggression (Lagerspetz, Björkqvist, & Peltonen, 1988; Salmivalli, Kaukiainen, & Lagerspetz, 2000). We also considered relational (Crick & Grotpeter, 1995) forms of aggression that harm others by causing damage to relationships and social status (i.e., exclusion, spreading rumors, and withdrawal of affection; McNeily-Choque, Hart, Robinson, Nelson, & Olsen, 1996). As shown in Table 2, we used eight teacher rating items ($\alpha = .91$), four peer nomination items ($\alpha = .89$), and five self-report items ($\alpha = .68$). A series of principal-components analyses, conducted separately within each data source, consistently yielded single-factor solutions (based on the criterion of an eigenvalue greater than 1.0).³ Previous investigators have reported partially distinct factors for separate subtypes of aggression (Crick & Grotpeter, 1995; Hart, Nelson, et al.,

2000). However, our measures were not optimized for discriminating between specific subtypes of aggression but, instead, were designed to provide a broad assessment of aggressive behavior. For later analysis, we generated separate aggression summary variables from the mean of the eight teacher items, the mean of the five self-report items, and the total number of nominations received across the four peer nomination items (standardized within class).

The correlation between the teacher rating and peer nomination scores was .62 ($p \leq .0001$). The self-report score, in turn, was modestly correlated with the peer nomination ($r = .30, p \leq .0001$) and teacher rating ($r = .20, p \leq .0001$) scores. Previous investigators have reported similar patterns of interinformant agreement in Western samples (Ledingham, Younger, Schwartzman, & Bergeron, 1982).

Academic Functioning

Three teacher rating items assessed children's global academic functioning ("child's academic performance is excellent," "child is a good student," and "child has difficulties with schoolwork" [reverse coded]; $\alpha = .91$). As described earlier, we also obtained math and language exam scores for the fall and spring semesters across 3 years (six exam scores; $\alpha = .90$ for agreement across the language scores; $\alpha = .94$ for agreement across the math scores). The maximum number of points on each test was 100, with 60 points considered passing. The correlation between the mean math and language scores was .85 ($p \leq .0001$). The correlations between the teacher rating of academic performance and the math and language scores were .68 ($p \leq .0001$) and .66 ($p \leq .0001$), respectively.

Social Outcomes

Social acceptance/rejection. The teacher rating scale contained one item assessing liking by peers ("well liked by peers") and one item assessing disliking ("disliked by other children"). The correlation between these items was $-.76$ ($p \leq .0001$). A teacher rating of social acceptance/rejection was generated from the mean of the liking and reverse-coded disliking items.

In addition, children were asked to nominate the three peers whom they liked most in their classroom and the three peers whom they liked least. The total number of nominations received by each child for each of these two items was then calculated and standardized within class. A social preference score was generated from the standardized difference between the "like most" and "like least" scores (Coie, Dodge, & Coppotelli, 1982). The correlation between the social preference score and the teacher rating of social acceptance/rejection was .47 ($p \leq .0001$).

² The peer nomination inventory also included an item that assessed submissive responses to conflict initiations: "kids who cry or get upset when other kids bother them." However, this item was dropped from the study because it correlated only modestly with peer nominations for withdrawal and teacher-rated submissiveness-withdrawal.

³ As part of an ongoing investigation of the social adjustment of children in economically stressed inner-city neighborhoods (see Schwartz, 2000; Schwartz & Proctor, 2000), we pilot tested the aggression and victimization items in a sample of 302 elementary school children from Los Angeles, California (mean age = 9.8 years; 145 boys and 157 girls) who were for the most part members of ethnic/racial minority groups. A series of principal-components analyses conducted within this new data set yielded a pattern that was consistent with the findings for our Chinese sample. For both aggression and victimization, single-factor solutions emerged across informants. Thus, there is some evidence that a unidimensional structure for the aggression and victimization scales is a measurement property and is not specific to the Chinese cultural context.

Peer victimization. In assessing peer victimization, we adopted a measurement strategy that was similar to the approach described above for aggression. We included scales that tap multiple subtypes of peer victim-

Table 2
Summary of Principal-Components Analyses of Aggression and Victimization Scales

Data source and item	Loading
Aggression	
Self-report	
How often do you bully or pick on another kid?	.61
How often do you tease or make fun of another kid?	.75
How often do you hit or push another kid?	.72
How often do you gossip or say mean things about another kid?	.71
How often do you try to hurt another kid's feelings by leaving them out of play?	.55
Variance explained: 45%	
Peer nomination	
Kids who start fights.	.89
Kids who hit or push other kids.	.91
Kids who gossip or say mean things about other kids.	.85
Kids who try to exclude other kids from play to hurt their feelings.	.80
Variance explained: 75%	
Teacher rating	
Taunts or teases other children.	.81
Threatens or bullies other children.	.85
Starts fights by hitting or pushing other children.	.87
Uses force to obtain other children's possessions.	.78
Starts arguments with other children.	.69
Tries to get other children to stop playing with a peer.	.80
Tries to hurt other children's feelings by excluding them.	.77
Gossips or says mean things about other children.	.75
Variance explained: 63%	
Victimization	
Self-report	
How often do other kids tease or make fun of you?	.73
How often do other kids bully or pick on you?	.75
How often do other kids hit or push you?	.71
How often do other kids gossip or say mean things about you?	.71
How often do other kids hurt your feelings by excluding you?	.70
Variance explained: 52%	
Peer nomination	
Kids who get hit or pushed by other kids.	.88
Kids who get picked on or teased by other kids.	.95
Kids who have mean things said about them by other kids.	.79
Kids who get excluded from play.	.87
Variance explained: 78%	
Teacher rating	
Other children hit or push this child.	.83
Other children tease or make fun of this child.	.83
Other children pick on this child.	.84
Other children gossip or say mean things about this child.	.78
Other children ignore this child to be mean.	.79
Other children try to hurt this child's feelings by excluding him or her.	.77
Variance explained: 65%	

Note. The self-report items are from the My Day at School questionnaire, and the teacher rating items are from the Social Behavior Rating Scale.

ization. We attempted to assess indirect and relational victimization as well as more overt verbal and physical behaviors. We included six teacher rating items ($\alpha = .89$), four peer nomination items ($\alpha = .90$), and five self-report items (from My Day at School; $\alpha = .77$). As shown in Table 2, principal-components analyses (conducted within informant) consistently yielded single-factor solutions (based on an eigenvalue greater than 1.0). Again, however, it should be emphasized that our measures were designed to provide broad coverage of the phenomena of interest and were not optimized for discriminating between subtypes.

The correlation between the mean of the teacher rating items and the total number of nominations received across the four peer nomination items (standardized within class) was .49 ($p \leq .0001$). In addition, the mean self-report score was modestly correlated with the peer nomination ($r = .40, p \leq .0001$) and teacher rating ($r = .33, p \leq .0001$) scores. Similar agreement statistics have also been reported by previous investigators (Graham & Juvonen, 1998a; Perry et al., 1988).

Results

Overview

We used structural equation modeling (SEM) to examine relations between the behavioral and academic predictor variables and victimization in the peer group. These latent variable models were specified in the AMOS statistical package (Arbuckle & Wothke, 1999). We relied on the diagnostic procedures contained in this program (derived from McDonald & Krane, 1977), and careful examination of model parameters, in order to assess identification and stability. To improve the fit of the models, we allowed error terms to correlate within data source as guided by modification indices.

To evaluate the models, we considered indices assessing a number of distinct aspects of model fit (Kline, 1998), including the comparative fit index (CFI; Bentler, 1990), the chi-square statistic, the root mean square residual error of approximation (RMSEA), and the standardized root mean squared residual (SRMR). The CFI is an index that compares the specified model to a model in which all variables are assumed to be uncorrelated (i.e., the null model). The CFI ranges from 0 to 1, with values greater than .95 generally considered indicative of adequate fit. The chi-square is a statistical test of "badness of fit," with significant values suggesting that a model does not replicate the underlying covariance structure. The RMSEA is an index that is unbiased by model complexity. Browne and Cudek (1993) suggested that an RMSEA value of .08 or less indicates acceptable model fit. The SRMR is the standardized average of the covariance residuals (i.e., the difference between the observed covariances and the predicted covariances). SRMR values of .10 or lower are indicative of acceptable fit. Each of these indices is described in greater detail by Kline (1998).

Relations Between Social Behavior and Peer Group Victimization

We began by conducting a SEM analysis examining the relations between children's social behavior and peer group victimization. This specified model included three latent exogenous variables: *aggression*, *assertive-prosocial behavior*, and *submissive-withdrawn behavior*. Each of these latent variables was indicated by the relevant peer nomination and teacher rating scores. The aggression latent variable was also indicated by the

self-report score. The model contained one endogenous variable, *peer victimization*, which was indicated by the self-report, peer nomination, and teacher rating scores for victimization. Peer victimization was predicted simultaneously by the three social behavior latent variables.

This model fit the data acceptably well (see Table 3). As depicted in Figure 1, all factor loadings were significant and of modest to moderate magnitude. In addition, each of the paths linking the predictor variables (i.e., associations among the social behavior variables) was significant. There were also significant paths between each of the social behavior latent variables and peer victimization. Most notably, there was a significant positive association between submissive-withdrawn behavior and victimization.

The Mediating Role of Social Acceptance/Rejection

Next, we examined our hypotheses regarding the mediating role of social acceptance/rejection in the relation between social behavior and victimization by peers. We evaluated these hypotheses using criteria specified by Baron and Kenny (1986). Specifically, we required that the mediator be significantly associated with the predictor and the outcome, that the predictor be significantly associated with the outcome, and that the presence of the mediator significantly reduce the strength of the association between the predictor and the outcome.

Because we had difficulty specifying stable latent-variable models that included the mediational pathways, we relied on multiple regression as an alternative strategy. To facilitate these analyses, we generated composite variables from linear combinations of the teacher rating and peer nomination scores. The variables were first standardized so that all distributions were on the same scale. We then calculated the mean of the relevant teacher rating and peer nomination scores for the three classes of social behavior (i.e., withdrawal, aggression, and assertiveness), social acceptance/rejection,⁴ and peer victimization.

Following calculation of the composite variables, we conducted a multiple regression analysis to examine the relation between children's behavior and social acceptance/rejection by peers. Acceptance/rejection was predicted from the composite variables for withdrawal, aggression, and assertiveness (all terms entered into the model simultaneously). The overall model was significant, $F(3, 292) = 223.7, p < .0001$, and the behavior variables accounted for 69.7% of the variance in social acceptance/rejection. There were independent effects for each of the variables: $\beta = -.52, p < .0001, sr^2 = .22$ for aggression; $\beta = .57, p < .0001, sr^2 = .29$ for assertiveness; and $\beta = -.21, p < .0001, sr^2 = .03$ for withdrawal

(sr^2 is the squared semi-partial correlation coefficient, the percentage of variance in the outcome that is accounted for uniquely by the parameter). The negative association between withdrawal and social acceptance/rejection is particularly noteworthy, although the magnitude of the effect was relatively modest.

A bivariate correlation indicated that social acceptance/rejection was also significantly correlated with peer victimization ($r = -.63, p < .0001$). Thus, consistent with the criteria proposed by past investigators (Baron & Kenny, 1986; Holmbeck, 1997), there were significant relations between the mediator and each of the predictors and between the mediator and the outcome.

Next, we conducted a hierarchical regression analysis with peer victimization predicted from withdrawal, aggression, and assertiveness (entered simultaneously at Step 1) and social acceptance/rejection (entered at Step 2). Table 4 summarizes the results of these analyses. As shown, each of the predictor variables was significantly associated with peer victimization at Step 1, before entry of social acceptance/rejection into the models. In contrast, only the effect for withdrawal remained significant at Step 2, after entry of social acceptance/rejection. The effects for aggression and assertiveness were reduced to near zero values on this step (the nonsignificant positive regression parameter for assertiveness at Step 2 appears to be the result of a "suppressor" effect reflecting multicollinearity in the model).

We then examined the drop in variance accounted for by each predictor variable at Step 2 using Sobel's (1988) procedure to calculate the standard error of the indirect effect of behavior on victimization through social acceptance/rejection. Analysis of an indirect effect is mathematically equivalent to a test of reduction in

⁴ We chose to use a two-dimensional index of social acceptance/rejection (incorporating information about both liking and disliking by peers) instead of a single dimensional index (incorporating information only about liking or only about disliking by peers) to remain consistent with past research in this area (i.e., Boivin et al., 1995; Schwartz et al., 1999). However, for exploratory purposes, we conducted separate analyses predicting composite disliking and liking scores (i.e., the mean of the relevant teacher and peer nomination variables) from the behavior scores. The three behavior variables accounted for 55% of the variance in the composite disliking score, with independent effects for aggression ($\beta = .62, p < .0001, sr^2 = .31$), assertiveness ($\beta = -.36, p < .0001, sr^2 = .11$), and withdrawal ($\beta = .20, p < .0001, sr^2 = .03$). Similarly, the behavior variables accounted for 67% of the variance in the composite liking score, with independent effects for aggression ($\beta = -.33, p < .0001, sr^2 = .09$), assertiveness ($\beta = .68, p < .0001, sr^2 = .41$), and withdrawal ($\beta = -.17, p < .0001, sr^2 = .02$). We also replicated the regression models presented in the article using the peer nomination variables instead of the multi-informant composite variables. The three peer nomination behavior variables accounted for 57% of the variance in social preference, with independent effects for aggression ($\beta = -.58, p < .0001, sr^2 = .32$), assertiveness ($\beta = .47, p < .0001, sr^2 = .22$), and withdrawal ($\beta = -.29, p < .0001, sr^2 = .08$). Likewise, the behavior variables accounted for 35% of the variance in the peer nomination victimization score, with independent effects for aggression ($\beta = .20, p < .0001, sr^2 = .04$), assertiveness ($\beta = -.10, p < .05, sr^2 = .01$), and withdrawal ($\beta = .57, p < .0001, sr^2 = .32$). Social preference accounted for nearly all of the variance in victimization scores predicted by aggression ($\beta = -.03, ns, sr^2 = .00$) and assertiveness ($\beta = .09, ns, sr^2 = .00$). However, the peer nomination score for withdrawal predicted victimization independent of social preference ($\beta = .46, p < .0001, sr^2 = .17$).

Table 3
Summary of Model Fit Indices

Model	χ^2	df	χ^2/df	CFI	SRMR	RMSEA
Figure 1	29.64	19	1.56	.99	.03	.04
Figure 2	3.74	2	1.87	.99	.05	.05

Note. CFI = Bentler's (1990) comparative fit index; SRMR = standardized root mean squared residual; RMSEA = root mean square residual error of approximation. Chi-square statistics are nonsignificant. See Kline (1998) for details regarding these fit indices.

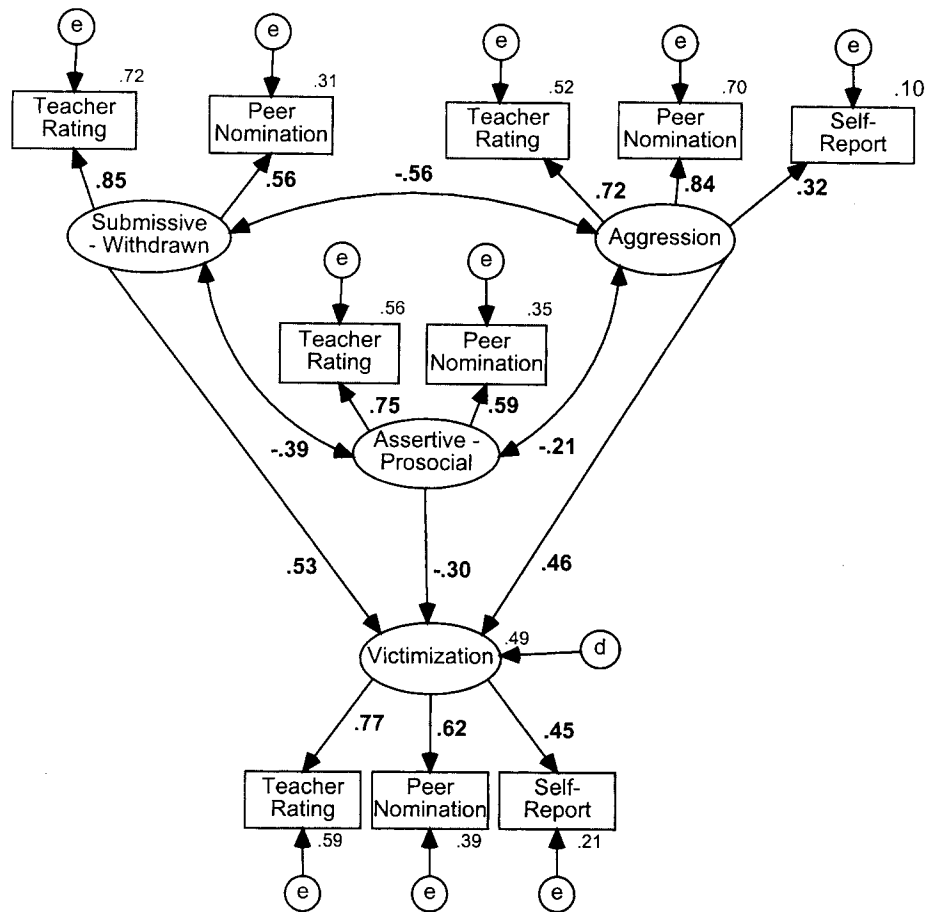


Figure 1. Measurement model examining relations between children's social behavior and victimization by peers. Standardized path coefficients and factor loadings in boldface are significant at $p \leq .05$. Correlations between error terms are not illustrated. See text for details regarding model fit. e = error; d = disturbance.

variance accounted for by the predictor after entry of the mediator (MacKinnon & Dwyer, 1993). There were significant indirect effects for each of the predictor variables: $t(295) = 7.04, p < .0001$ for aggression; $t(295) = -7.35, p < .0001$ for assertiveness; and $t(295) = 4.31, p < .001$ for withdrawal. These findings indicate that entry of social acceptance/rejection into the model significantly decreased the variance in victimization predicted by each of the behavior variables. It should be emphasized, however, that social acceptance/rejection did not fully account for the predictive association between withdrawal and peer victimization (as indicated by the significant regression parameter for withdrawal at Step 2). It appears that there was only partial mediation for this dimension of children's social behavior.

Relations Between Academic Functioning and Victimization by Peers

We also specified a latent-variable model to examine the relation between victimization in the peer group and academic functioning (see Figure 2). This model included two variables: *peer victimization*, indicated by the peer nomination and teacher rating scores for victimization,⁵ and *academic functioning*, indicated by

the teacher rating of global academic functioning, the mean of the six mathematics test scores, and the mean of the six language test scores. The fit of this model was acceptable (see Table 3), and all factor loadings were significant and of modest magnitude. As hypothesized, there was a strong negative association between academic functioning and peer victimization.

Gender Differences

We conducted a series of t tests to examine gender differences on each of the predictor and outcome variables. To minimize inflation of Type I error rates, we evaluated the significance of these analyses using the relatively conservative critical value of .005. As shown in Table 5, boys had higher aggression scores

⁵ We initially specified a version of this model using the self-report score for victimization as an observed indicator on the peer victimization latent variable, but the model fit was poor (CFI = .973, RMSEA = .113, SRMR = .212). We chose to respecify the model without the self-report score because the factor loading for the self-report score was relatively low (.44). As discussed above, fit for the revised model was much stronger.

Table 4
Summary of Regression Analyses Examining Mediation

Step	Variables in the model	β	sr^2	R^2
1	Withdrawal	.487	.182**	.386**
	Assertiveness	-.234	.048**	
	Aggression	.399	.129**	
2	Social acceptance/rejection	-.603	.110**	.497**
	Withdrawal	.373	.091**	
	Assertiveness	.112	.006	
	Aggression	.084	.003	

Note. Variables were generated from linear composites of the relevant teacher rating and peer nomination scores. All variables were entered simultaneously at each step in the model. sr^2 is the squared semi-partial correlation coefficient, the percentage of variance in peer victimization accounted for uniquely by each parameter. R^2 is the percentage of variance in peer victimization accounted for by all variables in the model at each step.

** $p \leq .001$.

across informants than did girls. On the other hand, compared with boys, girls had higher scores on the indicators of academic functioning and social acceptance and received marginally higher teacher rating scores for assertive-prosocial and submissive-withdrawn behavior.

On the basis of the principal-components analyses presented above, we conceptualized aggression and victimization as unidimensional constructs and examined summary scores collapsed across subtypes. However, for exploratory purposes, we also conducted analyses with the items separated into overt and relational/indirect scales (for teacher and peer informants). For both the teacher rating and peer nomination variables, boys had higher scores than girls across all aggression subtypes (see Table 5). In contrast, there were no significant gender differences on any of the peer victimization variables.

Next, we respecified the SEM analyses presented above as multiple-group models, with gender as the grouping variable. We then conducted nested analyses, comparing models with paths constrained to be equal across gender groups to models with paths free to vary across gender. No significant differences in model fit emerged, suggesting that similar models are appropriate for both girls and boys (although a finding of "no differences" does not provide a strong basis for conclusions).

Discussion

In this investigation we sought to extend the existing literature on frequently bullied children by examining the social processes underlying bullying in Chinese children's peer groups. Although the correlates of peer group victimization have been explored in previous studies, past bully-victim researchers have focused almost exclusively on Western settings. To the best of our knowledge, this project is the first to consider this phenomenon within the Chinese cultural context.

Behavioral Correlates of Peer Victimization in Chinese Children's Peer Groups

Our results indicate that there is considerable correspondence in the behavioral correlates of peer group victimization across Chi-

nese and Western settings. We found that Chinese children who engage in high rates of either submissive-withdrawn social behavior or disruptive aggressive behavior tend to be targets of peer group victimization. In contrast, children who are characterized by more prosocial-assertive tendencies are relatively unlikely to experience maltreatment by peers. Research conducted in North American and European settings has yielded a similar pattern of findings (see Perry et al., 1992).

The moderately strong association between submissiveness-withdrawal and victimization by peers may appear somewhat surprising in light of the existing research on the social development of Chinese children. Past researchers have concluded that behavioral inhibition is associated with positive social adjustment in Chinese children's peer groups. Most notably, Chen and colleagues have shown that, in China, shy-sensitive children are generally accepted by their peers (Chen & Rubin, 1992; Chen et al., 1992). As these investigators have argued, traditional Chinese cultural values emphasize behavioral restraint, so that quiet, timid, or shy behavior is unlikely to predict social rejection in the peer group. Nonetheless, we found that Chinese children who are

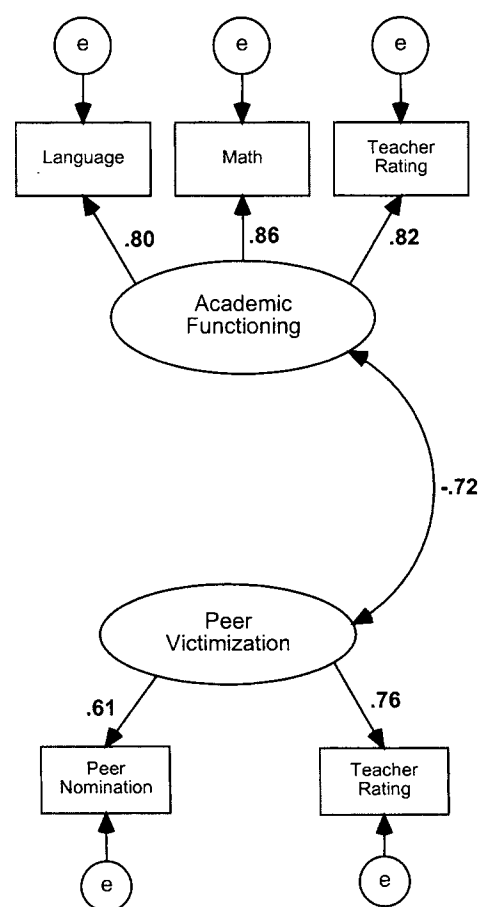


Figure 2. Measurement model examining relations between children's academic functioning and victimization by peers. Standardized path coefficients and factor loadings in boldface are significant at $p \leq .05$. Correlations between error terms are not illustrated. See text for details regarding model fit. e = error.

Table 5
Means and Standard Deviations of Predictor and Outcome Scores by Gender

Construct	Boys (<i>n</i> = 161)		Girls (<i>n</i> = 135)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Submissiveness-withdrawal					
Peer nomination	-0.03	1.0	0.03	1.0	-0.59
Teacher rating	2.17	0.7	2.34	0.6	-2.24†
Assertiveness-prosociability					
Peer nomination	0.07	0.9	-0.06	0.9	1.12
Teacher rating	2.99	1.0	3.24	1.0	-2.27†
Aggression					
Self-report	1.73	0.4	1.50	0.3	5.04***
Peer nomination	0.28	1.2	-0.35	0.3	6.19***
Overt	0.31	1.2	-0.41	0.1	7.40***
Relational/indirect	0.16	1.7	-0.18	0.7	3.10*
Teacher rating	1.86	0.9	1.42	0.5	5.40***
Overt	1.91	0.9	1.39	0.5	6.42***
Relational/indirect	1.79	0.9	1.49	0.7	3.11*
Academic functioning					
Teacher rating	3.19	1.2	3.81	1.1	-4.75***
Chinese language score (0-100)	83.43	6.3	86.98	5.4	-5.15***
Math score (0-100)	83.54	12.1	88.70	8.3	-4.25***
Social acceptance/rejection					
Peer nomination	-0.15	1.1	0.18	0.8	-2.89*
Teacher rating	3.48	1.1	3.92	2.0	-3.63***
Peer victimization					
Self-report	1.99	0.5	1.94	0.6	0.74
Peer nomination	0.04	0.9	-0.08	1.0	1.12
Overt	0.10	1.0	-0.16	0.8	2.48†
Relational/indirect	-0.03	0.9	0.03	1.0	-0.62
Teacher rating	1.65	0.8	1.49	0.7	1.87
Overt	1.61	0.8	1.46	0.7	1.76
Relational/indirect	1.69	0.9	1.52	0.7	1.89

Note. Peer nomination scores are standardized within class; teacher ratings ranged from 1 to 5; and self-reports ranged from 1 to 4. Significance levels were evaluated at a relatively conservative critical level of .005 in order to maintain experimentwise error rates. *T* values are adjusted for unequal variance across gender groups (see SAS Institute Inc., 1999).

† Marginally significant at $p \leq .05$. * $p \leq .005$. ** $p \leq .001$. *** $p \leq .0005$.

characterized by withdrawn or submissive tendencies are not well liked by their peers and tend to be frequent victims of bullying.

A multidimensional conceptualization of inhibition could help to explain the seemingly disparate findings across studies (Hart, Yang, et al., 2000). Past research on the peer relationships of Chinese children has emphasized shy or sensitive aspects of social behavior (e.g., Chen et al., 1992). In contrast, we focused on submissiveness and anxious avoidance of social interaction. These are behavioral tendencies that typify passive-anxious subgroups of withdrawn children (e.g., Coplan et al., 1994; Harrist et al., 1997; Rubin & Mills, 1988) and have been shown to be predictive of victimization in Western peer groups (Boivin et al., 1995; Boulton, 1999; Schwartz et al., 1993). It may be that shyness-sensitivity and submissiveness-withdrawal can best be conceptualized as distinct dimensions of inhibition that have different social meanings in Chinese children's peer groups (Hart, Yang, et al., 2000). Consistent with predominant Chinese cultural values, a shy disposition could function to facilitate interdependent functioning within the group social context. In contrast, more overtly withdrawn behaviors, by definition, decrease interaction with peers and might be incompatible with a collectivistic orientation.

Recent research has provided some preliminary evidence that multiple subtypes of inhibition can be reliably identified in the

Chinese setting. In a study conducted with Chinese preschool children, Hart, Yang, et al. (2000) were able to demonstrate acceptable fit for a confirmatory model that incorporated separate factors for passive-anxious behaviors (i.e., "reticence") and for more adaptive dimensions of inhibition (i.e., "solitary-passive"). These researchers found that only the passive-anxious factor was associated with low social acceptance despite very strong correlations among the identified subtypes. Although little is known about the underlying factor structure for older children in China, Hart, Yang et al.'s findings do underscore the need to consider a more differentiated view of inhibition in this cultural context.

Another reason that the relation between submissiveness-withdrawal and rejection by peers may be relatively weak is that these interactive styles do not represent a powerful violation of cultural norms but rather reflect a maladaptive distortion of more highly valued behavioral tendencies (i.e., culturally valued forms of behavioral restraint, such as sensitivity, politeness, deference, and humility). Moreover, in our analyses, social acceptance/rejection did not fully account for the link between submissiveness-withdrawal and victimization by peers. Processes other than disliking by peers appear to play a mediating role in these associations.

Further research will be necessary before the relevant mediating mechanisms can be fully delineated. In the meantime, it might be useful to consider peer perceptions regarding a child's vulnerability to victimization. Submissive-withdrawn behavior could signal peers that a child will not defend himself or herself against aggressors (Patterson et al., 1967; Perry et al., 1990). Children who are not actively disliked by their peers may still emerge as victims of bullying because they tend to acquiesce to coercive overtures from peers (Schwartz et al., 1993). That is, some children may experience frequent maltreatment by peers because such children are seen as being likely to reinforce aggressive behavior with submissiveness or withdrawal.

Our findings regarding the social outcomes associated with aggression and assertive-prosocial behavior were more conclusive. Children who were high in aggression, or low in assertive-prosocial behavior, were frequently targeted for peer victimization. These associations were almost fully mediated by social acceptance/rejection. Overall, our results suggest a degree of consistency in the perception of aggressive and prosocial behavior by children across cultures. In both Western and Chinese cultures, sociability appears to be conducive to positive peer relations, whereas aggression is perceived negatively by peers (although there may be developmental changes in children's attitudes toward aggression, and some subtypes of aggression may be more positively evaluated than others; see Graham & Juvonen, 1998b).

The Role of Academic Functioning

In addition to highlighting the link between social behavior and victimization, this investigation also sheds light on relations between academic functioning and social adjustment in Chinese children's peer groups. Academic failure appears to be an important correlate of peer victimization in this context. Children who performed poorly on midterm and final exams or received low teacher ratings for academic performance were frequently victimized by peers.

It is unclear whether this pattern of findings can be replicated in a Western sample. Relatively little is known regarding the link between peer victimization and academic functioning in Western settings, although there is consistent evidence that Western children who exhibit deficient academic performance are not well liked by their peers (Coie & Krehbiel, 1984; Wentzel, 1991; Wentzel & Asher, 1995). Juvonen et al. (2000) recently conducted a relevant investigation focusing on peer harassment in an ethnically diverse middle school in Los Angeles, California. These researchers found a moderately strong pattern of effects, with adolescents who self-reported harassment by peers tending to have low grade point averages and high absentee rates. Other North American researchers have concluded that only a subset of victimized children are likely to be characterized by poor school performance (Schwartz, 2000).

We are not yet in a position to make strong inferences regarding differences across cultures, but it appears that issues related to academic functioning have particular relevance for adjustment in Chinese children's peer groups. In our models, academic failure emerged as a powerful correlate of peer victimization. This pattern of findings could reflect the emphasis placed on academic excellence within Chinese society as a whole (Chen, Rubin, & Li, 1997). Chinese parents are more focused on the academic func-

tioning of their children than are Western parents, and they have higher standards for their children's achievement (Stevenson et al., 1990). Not surprisingly, children in China spend more time involved in academic activities outside school (e.g., studying, homework, educational games) than do Western children (Stevenson et al., 1990). To the extent that this focus on achievement influences the values held by the peer group, children who exhibit poor performance in school may be at increased risk for maltreatment by peers.

It is also important to consider the impact that negative experiences with peers can have on children's functioning at school. Western researchers have viewed rejection and bullying as stressors that exert a pernicious influence on children's academic adjustment and attitudes toward school (Juvonen et al., 2000; Kochenderfer & Ladd, 1996; Wentzel, 1991). Because harmony in interpersonal relationships is of central concern in Chinese society (Ho, 1986), social difficulties with peers could prove especially difficult for children in this setting. Over time, reciprocal relations between academic failure and social maladjustment may emerge (see Chen et al., 1997).

Gender Effects

Consistent with much of the research conducted in Western settings (e.g., Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1998), maladaptive social behavioral tendencies and difficulties with academic functioning appeared to be associated with similar social outcomes for Chinese boys and girls. Structural equation models specified with path coefficients constrained to be equal across gender groups did not differ in fit from models in which coefficients were allowed to vary by gender. Concerns regarding difficulties detecting moderator effects should be taken into consideration (McClelland & Judd, 1993), but the current findings are not indicative of a strong pattern of gender differences in the correlates of victimization.

Caveats and Future Directions

This study provided important descriptive information on the correlates of victimization in Chinese children's peer groups, but several caveats should be mentioned. First, it should be emphasized that our findings do not provide a strong foundation for conclusions about differences *between* cultural groups. Analyses conducted *within* group are a necessary starting point for a wider program of investigation examining the impact of cultural processes and other relevant contextual factors. However, comparative statements regarding the social processes underlying peer victimization across settings should be made with great care.

Questions regarding external validity are also of concern within societies as well as across societies (Bukowski & Sippola, 1998). It should not be assumed that all children experience their culture in the same fashion. Instead, there is likely to be considerable diversity in the customs, belief systems, and cultural practices to which children are exposed. Likewise, traditional Chinese values will exert a stronger influence on some families than others. This intraculture variability may have become particularly meaningful in the last decade, as sweeping economic changes have exerted an increasingly powerful influence on segments of China's population.

A related concern is that the participants in this study are not fully representative of the complete spectrum of Chinese society. We recruited children from one school in a specific urban industrial region of China. However, China is obviously an extremely large country with a diverse social environment. Larger, more representative samples would facilitate generalization of the results. There may be a particular need for research that includes children recruited from rural areas of the country, a context that was not examined in this study.

Apart from issues related to the complexity of conducting research in this setting, there is a need for further research conducted using longitudinal designs. The social meaning of some classes of behavior may change over the course of development. For example, Chen et al. (1995) hypothesized that in Chinese children's peer groups, there is a developmental shift in the outcomes associated with shyness-sensitivity. According to these researchers, shyness-sensitivity is associated with acceptance by peers during the middle years of childhood, but by early adolescence, behavioral tendencies of this nature are viewed as aversive by the peer group. Similarly, in Western settings, there is evidence that subtypes of inhibition gradually become less distinct during the middle years of childhood, so that solitary-passive behaviors become more closely associated with rejection (Asendorpf, 1991; Coplan et al., 1994).

In summary, the current study extends the existing bully-victim literature by focusing on processes underlying this phenomenon in Chinese children's peer groups. Consistent with research conducted in Western samples, we found that the correlates of victimization for Chinese children include submissiveness-withdrawal, aggression, low rates of prosocial-assertive behavior, and academic failure. Thus, there seems to be a remarkable degree of similarity in potential risk factors associated with victimization across settings. Further research in this cultural setting is clearly warranted. There is a particular need for investigations conducted with longitudinal designs and multidimensional assessments of inhibition, aggression, and victimization.

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