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Correlates of victimization in Hong Kong children's peer groups

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ABSTRACT

This study reports two separate cross-sectional investigations that focus on bully/victim problems among Hong Kong school children. Study 1 included 1361 children (670 boys, 691 girls; mean age = 12.6 years) and Study 2 included 288 children (153 boys, 135 girls; mean age = 9.6 years). Children's social and academic functioning was assessed with data obtained from teacher ratings and peer nominations. Consistent with findings from research in other settings, the correlates of victimization in groups of Hong Kong children included submissiveness-withdrawal, low levels of assertive behavior, and poor academic performance. There were generally similar findings across age groups for submissiveness-withdrawal and prosocial-assertiveness, but the link between poor academic functioning and peer victimization was complicated by gender and age effects. We also found that aggressive behavior was associated with victimization by peers, and that the relations were stronger for relational victimization than for overt victimization. The practical implications of our findings for intervention efforts that target victimized children are also discussed.

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1. Introduction

Research conducted in Western settings has demonstrated that a minority of children are persistently victimized by their peers. These children represent an important target group for research and clinical intervention. Children who experience repeated verbal or physical abuse by their peers are at risk for maladaptive behavior problems (Hodges & Perry, 1999; Schwartz, McFadyen-Ketchum, et al., 1998), loneliness and depression (Boivin, Hymel, & Bukowski, 1995; Hawker & Boulton, 2000; Ladd, Kochenderfer, & Coleman, 1997), social rejection and friendlessness (Perry, Kusel, & Perry, 1988; Schwartz, Dodge, Pettit, Bates, & The Conduct Problems Prevention Research Group, 2000; Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999), and academic failure (Juvonen, Nishina, & Graham, 2000; Schwartz, 2000). Because of this evidence that peer victimization predicts negative outcomes, we believe that it is important to identify the psychosocial correlates of victimization in the peer group. From an applied developmental perspective, research of this kind could help in the development of prevention and intervention programs.

Recent research on the correlates of peer victimization has led to a growing body of findings (Card, Isaacs, & Hodges, 2007; Espelage & Swearer, 2003; Hawker & Boulton, 2000; Haynie et al., 2001; Paul & Cillessen, 2003; Smith, 2004; Storch & Ledley, 2005). However, because this work has been conducted predominately in North American and European settings, relatively little is known regarding bully/victim problems in other cultural contexts. This potential limitation in the existing literature is noteworthy because children's social interactions with peers can be influenced by the values and conventions inherent in the larger culture (Rubin, 1990). For example, behavioral inhibition and self-restraint are admired and considered marks of accomplishment in the

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Chinese culture compared to cultures in the West, and children are reinforced for displaying quiet or timid behavior (Chen, 2000; Chen & Rubin, 1992). Withdrawn behavior may therefore have different implications for children's adjustment among peers in the Chinese setting as a function of varying societal norms. Moreover, as previous researchers have noted, an exclusive concern with Western contexts could obscure important distinctions between culture-specific and culture-general forms of child maladjustment (see Weisz, McCarty, Eastman, Chaiyasit, & Suwanlert, 1997). The ability to generalize past findings on peer victimization to other cultural settings is also important because it can inform practitioners who work with children from a range of different cultural backgrounds.

Although bully/victim investigators have traditionally focused on Western contexts, a small number of investigators have begun to examine bullying in Chinese children's peer groups (Eslea et al., 2004; Schwartz, Chang, & Farver, 2001; Xu, Farver, Schwartz, & Chang, 2003). The Chinese cultural context has been of high interest to researchers because Chinese and Western societies are often thought to represent different ends of the collectivism–individualism continuum (Oyserman, Coon, & Kemmelmeier, 2002; Triandis, 1995). Despite extensive social changes in China in recent decades, Chinese culture continues to maintain an interdependent orientation that stresses the importance of social obligations and emphasizes an awareness of the group over the needs of the individual (Chen, 2000; Xu, Farver, Chang, Yu, & Zhang, 2006). These culturally-defined ideals stand in contrast to the emphasis on autonomy and individuality that is present in many Western societies (Hart et al., 2000).

Differences in value systems notwithstanding, the preliminary evidence suggests a degree of consistency in the correlates of peer victimization across Chinese and Western cultures (Schwartz et al., 2001; Xu et al., 2003). In North American and European settings, children who are frequently bullied by their peers tend to be characterized by either submissive–withdrawn or aggressive–reactive behavior (Hanish & Guerra, 2000, Schwartz, 2000; Schwartz, Dodge, et al., 1998), academic difficulties (Schwartz, Gorman, Nakamoto, & Toblin, 2005), and psychological distress (Hawker & Boulton, 2000). Similar findings have emerged in the handful of relevant studies that have been conducted in China and other Asian settings (Abou-ezzeddine et al., 2007; Schwartz et al., 2001). However, few studies currently exist on the correlates of peer victimization in Chinese society and further investigation will clearly be necessary before stronger conclusions can be drawn.

Our goal in the current paper was to contribute to the existing research on bullying in Chinese children's peer groups by addressing a number of unresolved issues in the available findings regarding the correlates of peer victimization. More specifically, we sought to examine evidence regarding potential differences in the correlates of peer victimization across different age groups and genders. We also investigated relations between aggression and victimization subtypes and the particular relevance of relational forms of victimization in groups of Hong Kong children. Finally, as an overriding objective, we sought to test previous findings on peer victimization from studies conducted in the West in the culturally complex setting of Hong Kong. Our investigation is unique in that it examined these issues with a large sample of Hong Kong children from multiple schools and a wide range of ages, and included measures of both aggression and victimization subtypes.

One of our primary objectives was to conduct analyses that included a wide range of age groups. Attitudes in the peer group toward children's social behaviors and academic performance may change over the course of development. To design appropriate ways to address children's problems, it is important to have an accurate picture of the risk factors associated with peer victimization at each developmental stage. This knowledge can increase the potential effectiveness of a program by determining whether interventions need to be tailored for each age group.

Past work in the Chinese cultural context has generally targeted very specific stages of development (e.g., a narrow period of middle childhood; Schwartz et al., 2001). Nonetheless, a number of theorists have speculated that there may be developmental "shifts" in the implications of some social behaviors for Chinese youth. In particular, Chen, Rubin and Li (1995) hypothesized that the transition from childhood to adolescence would be accompanied by increasingly negative peer group attitudes toward inhibited, shy, or withdrawn social behaviors and more positive attitudes toward assertive dispositions. Researchers have also discussed similar developmental trends in Western settings (Coie, Dodge, & Kupersmidt, 1990; Rubin & Mills, 1988; Younger, Gentile, & Burgess, 1993). If this pattern does hold in Chinese children's peer groups, we might expect associations between submissive–withdrawn behavior and mistreatment by peers to be particularly strong at later stages of development.

A related issue concerns potential age group differences in the association between victimization in the peer group and academic competence. Perhaps, as a reflection of a societal emphasis on achievement, Chinese children who do poorly in school are at high risk for rebuff and victimization by their peers (Chen, Cen, Li, & He, 2005; Chen, Rubin, & Li, 1997; Schwartz et al., 2001). Consistent with this conclusion, previous investigators have found strong associations between academic difficulties and victimization in Chinese children's peer groups during the middle years of elementary school (Schwartz et al., 2001). However, it is not yet clear if these effects will replicate across different age groups of Chinese children. In North American peer groups, the autonomy demands of adolescence appear to be accompanied by changing attitudes toward academic engagement (Clements & Seidman, 2002; Juvonen & Murdock, 1995). As a result, adolescents who do poorly in school may still be quite popular with their peers (Schwartz, Gorman, Nakamoto, & McKay, 2006). We sought to examine evidence for similar effects in Chinese schools. The sample for this study included children from a wide range of ages so these questions could be examined within the same dataset.

Another objective of this project focused on exploration of the associations between aggression subtypes and peer group victimization. Distinctions between relational and overt forms of aggression and victimization have been well-documented in both Western (Crick et al., 2001; Crick & Bigbee, 1998; Crick, Casas, et al., 1999; Crick, Werner, et al., 1999b) and Asian settings (French, Jansen, & Pidada, 2002; Nelson, Hart, Yang, Olsen, & Jin, 2006; Nelson, Robinson, & Hart, 2005; Yang et al., 2004). Overt aggression includes behaviors that directly harm others (e.g., physical aggression, verbal insults or taunting, and threats of physical damage; see Crick & Bigbee, 1998), whereas relational aggression involves attempts to cause damage to social relationships (e.g., spreading rumors, excluding peers, social manipulation; see Crick & Grotpeter, 1995). Past studies with Chinese children have demonstrated that aggression is strongly correlated with mistreatment and rebuff by peers (Schwartz et al., 2001; Xu et al, 2003), but much of this work has incorporated measures that additively combine relational and overt items. We sought to build on these initial investigations by conducting analyses with separate scales for overt and relational subtypes of aggression and victimization. As Leff, Power, Manz, Costigan and Nabors (2001) noted in a review of programs designed to reduce aggression in schools, relational forms of aggression are often overlooked in intervention programs despite considerable evidence supporting its significance.

We expected that relational forms of victimization would have particular relevance for children's social interactions in the Chinese cultural context. Chinese parents tend to encourage their children to suppress physical aggression and control their impulses (Ho, 1986; Leung & Fan, 1996; Sollenberger, 1968). Love-withdrawal, in which love and affection are withheld as a result of child misbehavior, is a common method of child-rearing and moral training (Ho, 1986; Wu et al., 2002; Yang et al., 2004). As a reflection of these socialization practices, children tend to regulate the behavior of their peers through tactics such as shaming and social exclusion (Fung, 1999; Ho, 1986; Wilson, 1981). Accordingly, we hypothesized that children who displayed aggressive behavior would be more likely to encounter relational sanctions from their peers than physical sanctions. We predicted that both subtypes of aggression would be more strongly associated with relational forms of victimization than overt forms.

A final objective of the current project was to replicate existing findings in the specific context of Hong Kong. Past research on the social adjustment of Chinese children has been conducted primarily in the context of Mainland China (Chen et al., 1995; Hart et al., 2000; Nelson et al., 2006; Schwartz et al., 2001; Xu et al., 2006). The Special Administrative Region of Hong Kong shares many similarities with Mainland China and is still strongly influenced by traditional Chinese culture and collectivistic values (Oyserman et al., 2002; Yau & Smetana, 2003). On the other hand, Hong Kong has also experienced considerable exposure to Western and other Asian cultures. While under British control, the social, economic, legal, and political systems of these external cultures affected life in Hong Kong society. Despite the return of Hong Kong to Chinese control by the British in 1997, there remain diverse Western and Asian influences under China's official policy of "one country, two systems." Given this convergence of distinct value systems, we viewed the complex Hong Kong environment as a particularly interesting context for investigation.

As a complement to our central research goals, we also conducted exploratory analyses focusing on gender as a moderating factor. Research in Western cultures has not produced consistent evidence regarding gender differences in the correlates of peer group victimization (Espelage & Swearer, 2003; Hanish & Guerra, 2000; Haynie et al., 2001; Paul & Cillessen, 2003). There is some evidence, however, that mean level differences in aggression and victimization are especially pronounced in Chinese children's peer groups with boys having a more significant role in bully/victim problems than girls (Schwartz et al., 2001). Thus, potential gender effects would seem to warrant further exploration.

We addressed our research objectives in two cross-sectional studies using separate datasets that were collected from 1999– 2000. These investigations were conducted as part of a larger project examining the social development of Hong Kong children but have not been reported elsewhere. In Study 1, we examined submissiveness–withdrawal, prosocial–assertiveness, and academic functioning as correlates of peer group victimization with a particular interest in potential age group differences. In Study 2, we examined relations between subtypes of aggression and peer victimization.

2. Study 1

Study 1 used a cross-sectional design with multi-informant assessments of victimization, social behavior, and academic functioning obtained from a representative sample of Hong Kong youth. Previous research in this area has typically relied on constrained periods of development with samples recruited from a very small number of schools. To enhance external validity and allow for comparison across age groups, we recruited a large sample of students from multiple elementary and middle schools in the Hong Kong metropolitan region.

3. Method

3.1. Participants

Participants were 1361 children (670 boys, 691 girls) recruited from 24 classrooms in five urban and semi-urban schools in the Special Administrative Region of Hong Kong. Three schools had both elementary and middle school students, and two schools had only middle school students. All schools were government-funded and located in public housing facilities, indicating that the children attending these schools were from lower- to lower-middle socioeconomic backgrounds. Participating children ranged in age from 7 to 16 years (M = 12.61; SD = 2.43) and were in the second through eighth grades. Broken down by age group, there were 115 students aged 7 to 8 years, 163 students aged 9 to 10 years, 262 students aged 11 to 12 years, 483 students aged 13 to 14 years, and 338 students aged 15 to 16 years. The average number of students per classroom was 57, which is typical for Hong Kong schools.

Written parental consent was obtained for each participant. Parents were informed that the study was an investigation of children's social behavior and they were reminded that their child's involvement was purely voluntary. Of the eligible students, 95% returned positive parental permission and were in attendance during the period of data collection. Children were also instructed that they could choose not to participate or not to complete specific items without penalty.

3.2. Procedure

Data were collected at the end of the school year using a peer nomination inventory and a teacher rating measure. All measures were based on items drawn from the existing bully-victim literature (Schwartz et al., 2001). The items presented in the current report are English back-translations of the Cantonese language items used during administration.

Peer nominations were collected with an inventory that contained 11 items assessing assertiveness-prosociability, submissiveness-withdrawal, and peer victimization. The peer nomination measure was group-administered in a classroombased session by graduate level research assistants. Children were given a class roster with a list of the names and ID codes of participating students, and were asked to nominate up to a maximum of three peers who fit each of the 11 descriptor items. In each classroom, one research assistant read standard instructions aloud while another research assistant walked around to answer questions and to discourage interaction between students. To address possible concerns regarding confidentiality and anonymity, students were asked to only write the ID codes of the students they nominated. Additionally, participating children were seated apart from each other in the same manner that they would be seated if they were taking a test, and students were told that the researchers were not interested in any individual responses.

Teachers completed a rating scale, which consisted of nine descriptors of children's submissiveness–withdrawal, assertiveness–prosociability, and academic functioning. Teachers rated each descriptor on a 5-point scale (1 = not true at all; 5 = very true).

3.3. Measures

3.3.1. Submissiveness-withdrawal

We used four peer nomination items ("is always alone," "is quiet," "likes to stay alone," "is shy"; $\alpha = .84$) and three teacher rating items ("is shy or bashful," "is too submissive," "is afraid of arguing with others or protecting his or her rights"; $\alpha = .72$) (M = 2.18, SD = 1.05) to assess this dimension of children's social behavior. For later analyses, the total number of nominations a child received for each submissiveness–withdrawal item was first calculated and then standardized within class in order to account for varying class sizes (Coie, Dodge, & Coppotelli, 1982). We then calculated the mean of those standardized scores across the four items. The correlation between the mean of the standardized peer nomination items and the mean of the three standardized teacher rating scores was .38 (p < .001), with similar levels of agreement across age groups. For later analysis, we averaged the peer nomination and teacher rating scores into a submissiveness–withdrawal composite score. We combined data across peer and teacher informants in order to optimize the reliability and validity of our measurement model. By creating index variables, we reduce the number of variables in the overall model which reduces error. The same method was followed to sum, standardize, and create composite scores for the remaining peer nomination items measuring children's social behaviors.

3.3.2. Assertiveness-prosociability

We conceptualized assertiveness-prosociability as a broad construct that includes leadership, sociability, and helpfulness (Deluty, 1981, 1985). We used five peer nomination items ("is a leader," "gets others to listen," "makes new friends easily," "helps others," "gets along with others"; $\alpha = .88$) and three teacher rating items ("has leadership qualities," "leads others to play," "good at leading others in activities"; $\alpha = .76$) (M = 2.93, SD = 1.06). The correlation between the mean of the standardized sums of the peer nomination items and the mean of the standardized teacher rating items was .45 (p < .001). For later analysis, we generated an assertiveness-prosociability composite based on the average of the standardized teacher ratings and the standardized peer nomination scores.

3.3.3. Academic functioning

We assessed students' academic functioning using three teacher rating items ("is a good student," "is doing well in school work," "gets high grades"; $\alpha = .88$). For later analysis, we calculated an academic functioning summary variable from the mean of these ratings (M = 3.51, SD = 1.09). In past research in the Chinese cultural context, we have found strong agreement between teacher ratings of academic performance and data derived directly from school records (rs > .64; see Schwartz et al., 2001; Xu et al., 2003).

3.3.4. Peer victimization

Two peer nomination items ("gets pushed or bullied by others," "is often bullied and cannot protect his or her rights"; r = .72, p < .001) were used to assess overt victimization by peers. We summed the number of nominations that each child received for the two items, standardized within class, and then averaged the two standardized scores. Although only two items were used to assess victimization, peer nomination procedures tend to yield reliable indices even when single-item scales are used (Coie, Terry, Lenox, Lochman, & Hyman, 1995). In addition, the large class size in Hong Kong schools resulted in approximately 50 assessors per item.

4. Results

4.1. Bivariate relations between predictor constructs and peer victimization

As a first step in our analyses, we examined bivariate correlations among the variables (see Table 1). Consistent with past findings in both Asian and Western contexts, peer victimization was positively correlated with submissiveness–withdrawal, and

Table 1Study 1. Bivariate correlations among all variables (N = 1361).

	1	2	3	4
1. Peer victimization	-	.37***	20***	19***
2. Submissiveness-withdrawal		-	33***	02
3. Assertiveness-prosociability			-	.46***
4. Academic functioning				-

p* < .05. *p* < .01. ****p* < .001.

negatively correlated with both assertiveness–prosociability and academic functioning. However, these later effects were somewhat smaller in magnitude than we might have expected given past findings (Schwartz et al., 2001; Xu et al., 2003).

4.2. Gender and age as potential moderators in the associations between behavioral and academic vulnerabilities and peer victimization

To examine gender and age as potential moderators of the associations between each predictor construct and peer victimization, we conducted a series of hierarchical regression analyses. We specified separate models for each of the three hypothesized correlates of peer group victimization (submissiveness–withdrawal, assertiveness–prosociability, and academic functioning). On the first step of each model, we entered the main effects of gender, age, and behavioral or academic correlate. On the second step, we entered the two-way interactions for gender and age. On the third and final step, we entered the three-way behavioral/ academic correlate by gender by age effect. Variables were entered simultaneously at each step, and steps were entered sequentially. Significant interactions were conceptualized as indicative of moderation (Baron & Kenny, 1986; Holmbeck, 1997) and were decomposed using procedures recommended by Aiken and West (1991).

As shown in Table 2, there was a significant two-way submissiveness–withdrawal by age interaction, although the effect size was small (Cohen, 1988). We used procedures recommended by Aiken and West (1991) to decompose this interaction. We examined the relation between submissiveness–withdrawal and peer victimization with the level of age algebraically fixed at low (1 *SD* below the mean), medium (the mean), and high (1 *SD* above the mean) levels. The slope of this association decreased as the value of age moved from low ($\beta = .44$, p < .001, $sr^2 = .09$), to medium ($\beta = .36$, p < .001, $sr^2 = .13$), to high ($\beta = .29$, p < .001, $sr^2 = .04$). Thus, the overall pattern of findings suggests that the link between submissiveness–withdrawal and peer victimization is relatively low in older age groups.

There was also a significant three-way interaction for academic functioning by gender by age (see Table 2). To explore this effect, we modeled the two-way interaction of academic functioning and age separately for boys and girls. There was a significant interaction for boys ($\beta = .16$, $sr^2 = .03$, p < .001) but the corresponding effect for girls did not approach significance ($\beta = -.03$,

Table 2

Study 1. Analyses of the moderating roles of gender and age in the associations between behavioral and academic vulnerabilities and peer victimization (N = 1297).

Predictor variable	Step	Effects in model	β	Sr ²
Submissiveness-withdrawal	1	Submissiveness-withdrawal	.38***	.14
		Gender	10***	.01
		Age	00	.00
	2	Submissiveness-withdrawal × Gender	04	.00
		Submissiveness-withdrawal × Age	07**	.00
		Gender×Age	03	.00
	3	Submissiveness-withdrawal × Gender × Age	.03	.00
		Full model: $F(7, 1289) = 31.76, p < .001, R^2 = .15$		
Assertiveness-prosociability	1	Assertiveness-prosociability	20***	.04
		Gender	03	.00
		Age	01	.00
	2	Assertiveness-prosociability × Gender	02	.00
		Assertiveness-prosociability × Age	00	.00
		Gender×Age	04	.00
	3	Assertiveness-prosociability × Gender × Age	.01	.00
		Full model: $F(7, 1289) = 8.13, p < .001, R^2 = .04$		
Academic functioning	1	Academic functioning	21***	.04
-		Gender	.01	.00
		Age	01	.00
	2	Academic functioning × Gender	10***	.01
		Academic functioning × Age	.07**	.01
		Gender×Age	05	.00
	3	Academic functioning × Gender × Age	09***	.01
		Full model: $F(7, 1282) = 13.16, p < .001, R^2 = .07$		

Note. The main effects were entered simultaneously prior to the interaction terms. β represents the standardized coefficients. *sr*² is the squared semipartial correlation coefficient, the percentage of variance accounted for uniquely by the parameter. Gender was entered as a dichotomous variable. **p* < .05. ***p* < .01. ****p* < .001. $sr^2 = .00$, p < .44). We then used the procedures suggested by Aiken and West (1991) to decompose the two-way interaction between academic functioning and age for boys. The negative association decreased in magnitude as the level of age went from low ($\beta = -.26$, p < .001, $sr^2 = .03$), to medium ($\beta = -.11$, p < .01, $sr^2 = .01$), to high ($\beta = .05$, p = .34, $sr^2 = .00$). These analyses demonstrated that the relation between poor academic functioning and victimization for boys was strongest in younger age groups. We did not find any gender or age interactions for the association between assertiveness–prosociability and peer victimization.

5. Discussion

The results from Study 1 replicate past research conducted in Western settings and Mainland China in the complex social context of Hong Kong. Peer victimization was negatively associated with assertiveness–prosociability and academic functioning, although the effect sizes were relatively small. We found somewhat stronger links between submissive–withdrawn behavior and victimization in the peer group. In other words, children who were victimized by their peers were more likely to show submissive and withdrawn behavior, less likely to display assertive and prosocial behavior, and less likely to be doing well in school. These results add to the growing body of evidence regarding consistency in the correlates of peer group victimization across settings (Abou-ezzeddine et al., 2007; Schwartz, 2000; Schwartz et al., 2001).

One of our primary objectives was to consider evidence for age-group differences in the correlates of victimization. The overall pattern provided mixed evidence regarding such effects. There were no age-group interactions for assertiveness–prosociability, suggesting similar associations with peer victimization across developmental stages. Our analyses focusing on submissiveness– withdrawal yielded counter-intuitive findings. The relation between submissiveness–withdrawal and victimization in the peer group was slightly stronger for younger age groups than older age groups. However, the relevant effect sizes were quite small and the findings were not consistent with a priori theory. Still, these results might suggest a need for further investigation.

The picture with regard to academic functioning was also complex. The effects were only significant for boys. Moreover, links between peer victimization and academic difficulties were strongest for younger age groups. We hesitate to draw strong conclusions, but developmental changes in the social implications of academic functioning may be an important issue for future exploration in this cultural context. To summarize, we found that submissive, withdrawn behavior and low levels of assertive, prosocial behavior were risk factors for peer victimization for both girls and boys across different age groups of Hong Kong youth. Low academic functioning was also a risk factor, but our findings suggest that younger boys who do poorly in school are more at risk than underachieving adolescent boys in this setting.

While our findings in Study 1 help highlight the need for further investigation of possible developmental trends, this study was limited by a unitary assessment of victimization. Consistent with past bully/victim research in the Chinese cultural context (Schwartz et al., 2001; Xu et al., 2003), we did not attempt to make distinctions between subtypes of victimization. While there is some evidence that aggression in China has a multidimensional structure (Nelson et al., 2006; Yang et al., 2004), Study 2 is the first investigation that we are aware of that examined both victimization and aggression subtypes in groups of Chinese children.

6. Study 2

Study 2 is a cross-sectional investigation that focused on subtypes of aggression and victimization in Hong Kong children's peer groups. Our primary objective was to test the hypothesis that high levels of aggression would be more closely associated with relational victimization than overt victimization. We also sought to conduct exploratory analyses focusing on potential gender differences.

7. Method

7.1. Participants

The participants were 288 children (153 boys, 135 girls) recruited from six third- and fourth-grade classrooms in two elementary schools in Hong Kong. The average number of students per classroom was 48. Participating children ranged in age from 8 to 12 years (M = 9.57; SD = 0.96). As was the case in Study 1, these children lived in public housing facilities and were from lower-middle class socioeconomic backgrounds. Written parental consent was obtained for each of the participating children. Parents were told that the study was an investigation of children's social behavior and they were reminded that their child's involvement was purely voluntary. Of the eligible students, 95% returned positive parental permission and were in attendance during the period of data collection. Children were also told that they could choose not to participate or not to complete specific items.

7.2. Procedure and measures

Data were collected for Study 2 in the middle of the school year, and we used the same procedures that were described in Study 1 to obtain the peer nomination data. The peer nomination inventory contained a total of 10 behavioral and social adjustment descriptors and was group-administered to the children by graduate research assistants. Participating children were given a classroom roster and asked to nominate up to three peers who fit each of the items. Included were three overt aggression items ("fights with others," "pushes or hits others," "bullies others"; $\alpha = .93$), two relational aggression items ("gossips or says mean

things about other kids," "tries to leave other kids out of play to hurt their feelings"; r = .82, p < .001), three overt victimization items ("gets pushed around," "gets picked on or bullied," "gets bullied and can't protect themselves"; $\alpha = .89$) and two relational victimization items ("has mean things said about them by other kids," "gets excluded from play"; r = .54, p < .001).

Previous researchers have attempted to use peer nomination items to assess relational and overt victimization/aggression in Chinese children's peer groups (Schwartz et al., 2001). Because evidence regarding the discriminant validity of these assessments has sometimes been mixed, we decided to examine the structure of our items before creating summary variables. To this end, we conducted a series of Confirmatory Factor Analyses (CFA) using the AMOS statistical package (Arbuckle, 2003). First, we specified a single-factor aggression model with one latent variable indicated by all five of the peer nomination aggression items ($\chi^2 = 188.47$, df = 5, p < .001; $\chi^2/df = 37.70$; CFI = .86; RMSEA = .36). We then compared the fit of this model to a two-factor model in which the overt aggression and relational aggression items indicated separate factors ($\chi^2 = 58.75$, df = 4, p < .001; $\chi^2/df = 14.69$; CFI = .96; RMSEA = .22). A test of the difference in chi-square fit statistics showed evidence that the two-factor model fit the data better than the one factor model ($\chi^2_{diff} = 129.72$, $df_{diff} = 1$, p < .05). Similarly, we compared a latent variable model with all five victimization items indicating a single factor ($\chi^2 = 81.94$, df = 5, p < .001; $\chi^2/df = 16.39$; CFI = .90; RMSEA = .23) to a two-factor model with the overt victimization and relational victimization items indicating separate factors ($\chi^2 = 33.60$, df = 4, p < .001; $\chi^2/df = 8.40$; CFI = .96; RMSEA = .16). A test of the difference in chi-square fit statistics showed evidence that the two-factor model fit the data better than the one factor model ($\chi^2_{diff} = 48.34$, $df_{diff} = 1$, p < .05). In light of these analyses, we created four separate scales from the means of the relevant items standardized within class, which were used to measure overt and relational aggression, and overt and relational victimization.

8. Results

8.1. Bivariate relations

We predicted that both subtypes of aggression would be more strongly correlated with relational victimization than overt victimization. As a first step in our efforts to test this hypothesis, we examined bivariate associations among the study variables. As depicted in Table 3, there were positive correlations between each of the aggression and peer victimization variables. Next, we used Steiger's (1980) *t*-test for dependent correlations (i.e., correlation coefficients drawn from the same sample) to compare the correlations between overt aggression and each victimization subtype, and the correlations between relational aggression and each victimization subtype. Consistent with our expectations, the link between overt aggression and relational victimization was larger in magnitude than the link between overt aggression and overt victimization, *t*(285) = 7.1, *p* < .001. Likewise, the relation between relational aggression and overt victimization was larger in magnitude than the relational victimization was larger in magnitude than the relational aggression and relational victimization was larger in magnitude than the relational victimization was larger in magnitude than the relational aggression and relational victimization was larger in magnitude than the relation between relational aggression and overt victimization, *t*(285) = 11.7, *p* < .001.

8.2. Gender as a potential moderator in the associations between subtypes of aggression and subtypes of peer victimization

In order to examine the moderating influence of gender on relations between the aggression and victimization subtypes, a series of exploratory regression analyses were conducted. We specified separate models predicting relational and overt victimization. For both models, we entered the main effects of overt aggression, relational aggression, and gender on the first step. On the second step, we entered the two-way interaction terms for overt aggression by gender, relational aggression by gender, and overt aggression by relational aggression. Significant interactions were conceptualized as indicative of moderation (Baron & Kenny, 1986; Holmbeck, 1997). As depicted in Table 4, there were significant overt aggression by gender interactions in the prediction of both subtypes of victimization. There was also a relational aggression by gender interaction in the prediction of overt victimization.

Analyses conducted separately for each gender indicated that the relations between the aggression subtypes and victimization were stronger for girls than boys. For girls, the association between overt aggression and overt victimization was significant ($\beta = .67$, p < .001, $sr^2 = .31$) while the relation did not reach significance for boys ($\beta = .12$, p < .37, $sr^2 = .01$). Likewise, the link between relational aggression and overt victimization was significant for girls ($\beta = ..35$, p < .001, $sr^2 = .08$) but not for boys ($\beta = .06$, p < .63, $sr^2 = .00$). Although the associations between overt aggression and relational victimization were significant for both boys and girls, the effect was slightly stronger for girls ($\beta = .38$, p < .001, $sr^2 = .10$) than for boys ($\beta = .30$, p < .01, $sr^2 = .03$) in our sample.

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	1	2	3	4
1. Overt victimization	-	.53***	.27***	.18**
2. Relational victimization		-	.60***	.67***
3. Overt aggression			-	.74***
4. Relational aggression				-

Table 3Study 2. Correlations among all variables (N = 288).

p* < .05. *p* < .01. ****p* < .001.

34	
Table	1

Tuble 1	
Study 2. Analyses of the moderating role of gender in the associations between	n subtypes of aggression and subtypes of peer victimization ($N = 288$).

Outcome variable	Step	Effects in model	β	sr ²
Overt victimization	1	Overt aggression	.26	.03**
		Relational aggression	05	.00
		Gender	.12	.01
	2	Overt aggression × Gender	64	.06**
		Relational aggression × Gender	.22	.02**
		Overt aggression × Relational aggression	12	.01
		Full model: $F(6, 281) = 8.99, p < .001, R^2 = .16$		
Relational victimization	1	Overt aggression	.26	.03**
		Relational aggression	.50	.11***
		Gender	08	.01
	2	Overt aggression × Gender	31	.01**
		Relational aggression × Gender	00	.00
		Overt aggression × Relational aggression	08	.00
		Full model: $F(6, 281) = 48.6, p < .001, R^2 = .51$		

Note. The main effects were entered simultaneously prior to the interaction terms. β represents the standardized coefficients. sr^2 is the squared semipartial correlation coefficient, the percentage of variance accounted for uniquely by the parameter. Gender was entered as a dichotomous variable. *p < .05. *p < .01. **p < .01.

9. Discussion

The results of Study 2 present a complex picture regarding relations between aggressive behavior and subtypes of victimization. We had predicted that children who display aversive behaviors (i.e., aggression) would be more likely to experience relational sanctions than overt aggression as a function of the cultural values embedded in the larger context. Some aspects of our findings were consistent with this hypothesis. Bivariate correlations between the aggression subtypes and relational victimization were larger than the corresponding effects for overt victimization. That is, aggressive children were more likely to be harassed relationally rather than physically in this cultural setting. However, these results were complicated by gender effects. For girls, overt aggression was positively associated with both subtypes of victimization while relational aggression was negatively linked with overt victimization. In other words, girls who were physically aggressive were more at risk for both forms of peer victimization, whereas girls who were relationally aggressive were actually less likely to be physically victimized by their peers. In contrast, when aggressive boys were sanctioned by their peers it was more often in the form of relational rather than physical victimization.

What processes might underlie this potentially interesting pattern of findings? We hesitate to draw strong conclusions at the present time in the absence of a priori theory. However, a number of studies conducted in the West suggest that behaviors that are inconsistent with socially-defined gender roles (e.g., displays of physical aggression with girls) could have very negative social implications (Crick, 1997; Prinstein, Boergers, & Vernberg, 2001; Putallaz et al., 2007; Young & Sweeting, 2004). Overt aggression is generally reported to be more prevalent in boys' peer groups than among girls (Crick & Grotpeter, 1995; Prinstein et al., 2001; Putallaz et al., 2007). Perhaps girls who are overtly aggressive in the Chinese setting are at especially high risk of being sanctioned by the peer group for engaging in gender non-normative behavior.

10. General Discussion

In the current paper, we used two separate investigations to examine some unanswered questions in the literature on the correlates of victimization in Chinese children's peer groups. Our objective in the first study was to replicate the social and academic correlates of peer victimization across different age groups of Hong Kong youth, and we therefore conducted our analyses across a wide range of ages. The second study focused on whether the relation between aggressive behavior and victimization varies as a function of victimization subtype in the Hong Kong context. We found that children who were victimized by their peers were characterized by submissiveness–withdrawal, low levels of assertiveness–prosociability, and poor academic functioning. While the effect sizes for assertiveness–prosociability and academic functioning were relatively small, the association between submissive–withdrawn behavior and victimization in the peer group was larger in magnitude. Our results extend existing research on bullying to the cultural context of Hong Kong and provide further support for the consistency of correlates of peer victimization across settings.

To examine evidence for developmental "shifts" in the meaning of inhibition and prosocial behavior in Chinese children's peer groups, we conducted a series of hierarchical regression analyses, with age and gender as potential moderator constructs. We did not find any interaction effects for assertiveness–prosociability, which suggests that the negative relation among assertive, prosocial behavior and victimization by one's peers is similar across gender and age groups. Our findings also suggest that submissiveness–withdrawal is consistently associated with peer victimization across developmental stages in the Hong Kong context. Although there were significant interactions between submissiveness–withdrawal and age, the effect sizes were small and decomposition of this interaction produced results that are counter-intuitive. The correlations between inhibited behavior and peer victimization were stronger for younger age groups and relatively weaker for older age groups. Again, these differences between age groups were too small to provide much of a foundation for conclusions. Potential gender and age interactions were also considered in the link between academic functioning and victimization in the peer group. These effects were strongest in younger age groups and were only significant for boys. That is, poor academic functioning was associated with victimization in the peer group more for younger boys than for adolescent boys. Although our results are difficult to interpret in the absence of a priori theory, previous researchers have reported similar patterns of findings. In a study conducted with Chinese youth, Chen, Chang, and He (2003) found that relations between academic performance and social competence were stronger in elementary school than high school. These authors suggest that educational success becomes less of an influence on social functioning as children in Chinese society transition to adolescence. Researchers in North America have also found changes across development in children's attitudes towards academics (Clements & Seidman, 2002; Juvonen & Murdock, 1995), and this issue should be investigated further.

The results from our first study support an intervention model that targets victimized children's submissive–withdrawn behavior and low levels of prosocial–assertive behavior in a similar manner across both age and gender. Educators and practitioners can help these children to improve their skills in these areas. Our findings also suggest that efforts focusing on academics may be more effective with boys and at younger developmental stages. However, further replication of this pattern of effects is needed before strong recommendations can be made.

Results from our investigation of aggression and victimization subtypes with children in Hong Kong suggest that both subtypes of aggression were more strongly correlated with relational victimization than overt victimization. Taken together, these findings support our hypothesis that forms of victimization that involve social exclusion and causing harm to relationships may be particularly relevant in Chinese children's peer groups. The social values embedded in this setting emphasize the perspective of the group. Moreover, children are socialized to suppress physically aggressive behavior (Ho, 1986; Leung & Fan, 1996; Sollenberger, 1968). In this cultural context, relational victimization may serve an important role in regulating undesirable behaviors (e.g., aggression).

We also conducted exploratory analyses focusing on gender as a possible moderating factor in the relations between aggression and victimization. For girls, overt aggression was positively associated with both types of victimization. In contrast, girls who engaged in relational aggression were less likely to be overtly victimized. Although it is difficult to draw strong conclusions in the absence of a priori hypotheses, one potential explanation for these findings might be that girls who display overtly aggressive behavior are negatively evaluated by their peers and targeted for mistreatment. Given that overt aggression is generally viewed as a gender non-normative behavior for girls (Crick, 1997), these gender moderating effects provide preliminary evidence that overtly aggressive behavior in girls violates social norms and may not be tolerated in Chinese children's peer groups. Our finding that relational aggression was negatively linked to overt victimization for girls in our sample is also consistent with the notion that girls who engage in gender-normative aggression may experience less social sanctions compared to girls who display gender atypical aggression (Crick, 1997; Prinstein et al., 2001; Putallaz et al., 2007; Young & Sweeting, 2004).

For boys, the relations between either subtype of aggression and overt victimization were not significant. This suggests that peers may tolerate some level of aggression in boys. When the association between aggressive behavior and victimization did occur, boys were more likely to be relationally victimized. This finding provides partial support for our hypothesis that children who display aggressive behavior in this cultural setting are more likely to encounter relational sanctions by their peers rather than physical victimization. We did not find a gender interaction for the remaining relation between relational aggression and relational victimization. These results highlight the need for relational forms of aggression and victimization to be incorporated in prevention and intervention plans, and bring further attention to the potential vulnerability of girls who engage in gender non-normative behavior across cultural settings.

The findings from our two studies further our understanding of the processes involved in peer victimization in Chinese children's peer groups. However, some potential limitations of this investigation should be acknowledged. First, we emphasize that our intention was not to directly measure "culture" or to form conclusions about differences between cultural groups. Before progressing to this more complex level of analyses, we must first examine the within-group processes that underlie peer victimization in specific cultural contexts. Our goal was to add to the literature by exploring the correlates of peer victimization across a wide range of ages in the Hong Kong setting.

Another set of issues involve concerns over external validity, which can apply to investigations within as well as across cultural groups (Bukowski & Sippola, 1998). Instead of assuming that all children experience the same culture, a more accurate perspective would be that customs, belief systems, and cultural practices that characterize children's environments vary considerably within a culture. This variability may be a particularly relevant factor in the context of Hong Kong, which has a history of exposure to diverse cultures.

Aside from the complexities associated with research in international settings, our reliance on a cross-sectional design is a notable limitation of this paper. Cross-sectional investigations preclude conclusive statements regarding change over time. A prospective longitudinal design would improve our ability to investigate potential developmental transitions in the meaning of specific classes of social behavior.

Also, a relatively small number of items were used to measure some constructs in the peer nomination inventory across both studies. Even so, all of these items were peer nominations and this approach tends to yield reliable indices even when very few items are used (Coie et al., 1995). Additionally, about 50 students reported on each behavioral descriptor due to large class sizes in Hong Kong schools.

In summary, the current study advances the field in several ways. We were able to replicate the behavioral and academic correlates of peer victimization from past research conducted in the West and Mainland China with children in Hong Kong. These results support previous evidence indicating similar correlates of peer victimization across different cultural settings. However, the

overall pattern of findings provided mixed evidence regarding age-group differences in the risk factors associated with victimization. Results from this study also suggest that children who displayed aggressive behavior were more likely to experience relational rather than overt victimization. The relevance of relational forms of victimization in the Hong Kong setting is particularly interesting given the importance placed on group membership and the societal disapproval of physical aggression in the Chinese culture. To our knowledge, this is the first study to examine the correlates of peer group victimization with a large sample of Hong Kong children from multiple schools and different stages of development. Our findings can be used to inform clinicians and educators in the design of effective and appropriate interventions to identify at-risk children and work on skills that might mitigate their vulnerability to victimization in the peer group.

An important goal for future research is to test the effectiveness of programs that incorporate research on the behavioral and academic risk factors associated with peer victimization. These programs should also take into consideration possible differences in the patterns of victimization across age, gender, and cultural context. Another direction for future studies could be the exploration of the role of emotion and emotional dysregulation in the relation between aggression and peer victimization in the Chinese context. Past studies on children who are both aggressive and victimized have found that these children tend to regulate their affect poorly during interpersonal conflicts and often reward bullies with displays of emotional distress (Perry, Perry, & Kennedy, 1992; Schwartz, 2000). Researchers conducting studies in Mainland China have begun to study aggressive victims, but emotion regulation has yet to be addressed with this class of victimized children in the Chinese setting (Xu et al., 2003). Future research on victimization in Chinese children's peer groups might also benefit from an increased focus on multidimensional assessments of aggression and victimization, and studies that incorporate a longitudinal design.

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