

Associations between Maternal Physical Discipline and Peer Victimization among Hong Kong Chinese Children: The Moderating Role of Child Aggression

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Published online: 8 May 2009
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Abstract This study examines the relation between maternal physical discipline and victimization by peers, as moderated by child aggression. The sample consisted of 211 Hong Kong Chinese children (98 boys, 113 girls; average age of 11.9). Physical discipline was assessed with a questionnaire completed by mothers, and victimization by peers and aggression were measured using a peer nomination inventory. Latent variable models revealed a moderately strong link between children's experiences with maternal physical discipline and peer victimization, but this effect held only for children who were also high on aggression. These results highlight the interplay between harsh home environments and child aggression and their contributions to the child's adjustment in the peer group.

Keywords Peer relations · Parenting style · Victimization · Hong Kong · Aggression

Children who are frequent targets of bullying by their peers have been identified in a number of different cultural settings, including Asia (Schwartz et al. 2001; Schwartz et al. 2002),

Europe (Olweus 1978), and North America (Perry et al. 1988). These victims of peer aggression are at risk for various adjustment problems, such as depression, anxiety, loneliness, low self-esteem (Björkqvist et al. 1982; Egan and Perry 1998; Kochenderfer and Ladd 1996), externalizing behavior problems (Hodges et al. 1999), school avoidance (Kochenderfer and Ladd 1996), and academic failure (Juvonen et al. 2000; Schwartz et al. 2005). Although some adjustment difficulties predate and increase risk for peer victimization (see Hodges and Perry 1999), mistreatment by peers can lead to internalizing and externalizing symptoms and academic problems over time (Hodges and Perry 1999; Kochenderfer and Ladd 1996; Schwartz et al. 2005).

Because victimization in the peer group portends later maladjustment, researchers have sought to examine potential etiological mechanisms. One line of investigation has focused on the home environments of bullied children. Research in this area has repeatedly linked harsh, punitive parenting with peer group victimization. Schwartz and colleagues (Schwartz et al. 2000), for example, found that preschool exposure to harsh, punitive, or violent home environments is predictive of peer victimization among third and fourth grade boys. Similar findings have been described by other research groups. For instance, persistently bullied children tend to view their family environments negatively (Burk et al. 2008; Rigby 1993), and tend to perceive their mothers as rejecting, coercive, and overcontrolling (Finnegan et al. 1998; Olweus 1993).

At least in Western settings, the link between harsh or punitive home environments and peer group victimization appears to be stronger for children who are also aggressive. For example, Schwartz et al. (1997) found that children who emerge as both aggressive and victimized in the middle years of elementary school tend to have preschool histories of exposure to punitive physical discipline,

This research was supported by an Earmarked Research Grant (CUHK4620/05H) from the Research Grants Council, Hong Kong Special Administrative Region, China and by a grant from the University of Southern California's fund for Advancing Scholarship in the Humanities and Social Sciences.

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maternal rejection, potential abuse, and marital violence. In contrast, victims who are characterized by withdrawn, submissive social behavior do not seem to be exposed to hostile parenting (Schwartz et al. 1997). Maternal overprotectiveness and family enmeshment may be more significant issues for these nonaggressive victims of peer mistreatment (Bowers et al. 1992, 1994; Olweus 1993).

It is not yet clear why punitive parenting would be more strongly linked to victimization among children who are aggressive. It may be that child aggression is indicative of regulatory deficits or maladaptive coping strategies that leave children vulnerable to the negative impact of punitive parenting. Indeed, children with aggressive behavioral problems are more likely to have difficulties regulating their physiological arousal, and tend to be more behaviorally reactive in frustrating situations (Degnan et al. 2008). For a child with such existing deficits, harsh parenting practices may help to create, maintain, or exacerbate maladaptive behavior patterns. When generalized to the peer group, these behavior patterns are likely to incite mistreatment from peers. These children have been described in the literature as over-reactive and behaviorally dysregulated (Perry et al. 1992). They provoke conflict with peers and then lose such conflicts amidst displays of exaggerated distress (Perry et al. 1992).

Alternatively, aggression could be indicative of attributes that are predictive of both harsh parenting and victimization. Aggressive children likely possess difficult temperaments and regulatory deficits that present management problems for their parents and, at the same time, make them likely targets for peer victimization. Faced with challenging behavior from their children, some parents respond with punitive discipline and coercive control strategies. Indeed, children's aggression has been shown to predict increases in mothers' use of harsh punishment over time (Sheehan and Watson 2008). These same children are also likely to provoke mistreatment from their peers with their disruptive, off-task behavior. Previous research has shown that children who are prone to displays of anger or dysregulated emotion are often targeted for mistreatment in the peer group (Dodge 1991; Eisenberg and Fabes 1992; Hubbard and Coie 1994).

The findings linking harsh parenting to peer victimization, and the evidence for the potential moderating role of child aggression, are compelling. This line of research could provide important clues regarding the development of this vulnerable group of children. Still, one potential limitation of this area is that the relevant findings have been restricted primarily to Western samples. Recently, investigators have begun to examine bully/victim phenomena in non-Western settings. It appears that, in a number of cultural contexts, frequently bullied children exhibit similar patterns of social behavior and psychosocial adjustment

(Schwartz et al. 2001; Xu et al. 2003). Nonetheless, we are unaware of any study that has examined the home environment of bullied children in settings other than Europe or North America. This limitation is noteworthy because an exclusive focus on Western children's peer groups might limit the generalizability of existing theoretical perspectives (Weisz et al. 1997).

Our goal in the current project is to examine parental discipline as a predictor of victimization for Chinese children in Hong Kong elementary schools. Chinese contexts may be of special theoretical interest, given that Chinese and American cultures are thought to represent two extremes in the collectivism-individualism continuum (Chen 2000; Triandis 1995). Western cultures tend to be characterized by individualistic orientations. Independence, personal choice, and self-expression are often highly valued. Traditional Chinese culture, on the other hand, generally emphasizes the maintenance of group harmony over individual interests (Bond 1996; Ho 1986). To this end, socialization is likely to focus on fostering self-restraint, an interdependent sense of self, and cooperative behavior (Bond 1996). Although the Hong Kong society sampled in the current study has had extended exposure to Western culture, it is deeply influenced by traditional Chinese values. The predictors of positive social outcomes may vary in important ways according to these values. Hence, replication of Western findings in this context is crucial to the development of a psychological theory that is valid across cultures.

The link between parental discipline and peer victimization might be especially important to consider in this context, as researchers have raised questions regarding the meaning and consequences of parenting practices in Asian cultures. Chao (1994, 2001), for example, has argued that parenting behaviors considered to be authoritarian in Western typologies may actually be adaptive for Chinese children. Such behaviors may reflect the Chinese notion of *chiao shun*, which refers to the training of children in expected or appropriate behaviors. *Chiao shun* is an outgrowth of *guan*, which literally means "to govern," but also has positive connotations such as "to care for" or "to love" (Chao 1994). Many investigations, however, have linked physical discipline in particular, and harsh parenting in general, with a host of negative developmental outcomes for Chinese children, including externalizing problems (Chang et al. 2004), low peer acceptance (Chen et al. 1997), low academic achievement (Chen et al. 1997), and emotional dysregulation (Chang et al. 2003). In this study, we are interested in whether punitive parenting will be linked with children's victimization by peers in this setting.

As we considered associations between harsh parenting and peer group victimization, we paid special attention to a number of methodological issues. In our measures, we were

careful to tap into both overt and relational subtypes of aggression and victimization. Our objective was to optimize the content validity of our assessments by considering a wide range of relevant behaviors. We assessed forms of overt victimization that seek to directly cause damage to the well-being of others (e.g., pushing; McNeilly-Choque et al. 1996), as well as relational subtypes that harm others by causing damage to relationships and social status (e.g., exclusion, gossip; Crick and Grotpeter 1995). In Western culture, boys tend to aggress in overt ways, whereas girls are more likely to engage in relational forms of aggression (Crick and Grotpeter 1995). Prior bully/victim research has tended to emphasize overt aggression (e.g., Pellegrini et al. 1999). Our measurement approach is intended to enhance the generalizability of findings across genders, as well as facilitate detection of gender differences.

A related issue considered in this article is the influence of gender on the hypothesized association between parental discipline and peer victimization outcomes. Prior investigations have reported that boys are more likely to be victimized by peers than girls (Pellegrini et al. 1999; Schwartz et al. 2001). These studies, however, may have exaggerated gender differences in peer victimization by focusing solely on overt, rather than relational, aggression (e.g., Pellegrini et al. 1999). Given inconclusive findings in the extant literature, we did not generate a priori hypotheses regarding potential gender effects, but sought to conduct exploratory analyses.

In summary, our primary objective was to examine whether experiences of physical discipline at home are linked to victimization in the school peer group. We hypothesized that this association would be significant only for children who are aggressive. As a secondary goal, we explored potential gender differences in the family correlates of peer victimization. These research questions were examined with a sample of sixth-grade children in the Special Administrative Region of Hong Kong. We chose to focus on middle childhood because individual differences in aggression (Eron 1987; Olweus 1979) and bullying by peers (Perry et al. 1988) stabilize in Western children's peer groups during this developmental period. Moreover, middle childhood marks the cusp of the transition to a new, more complex social situation in adolescence. In the years leading up to this critical transition, it may be particularly important to identify the factors that contribute to negative social outcomes.

Method

Participants

We recruited participants from seven sixth-grade classrooms in three Hong Kong primary schools. The average

number of students per classroom was 49. This class size is typical for Hong Kong schools. The participating schools were located in public housing facilities in Shatin and Shek Wai Kwok. To qualify for government-subsidized home ownership, each family's annual income and fixed assets had to be below set ceilings. Thus, these schools served families who were from Hong Kong's lower-middle socioeconomic class. Almost all of the mothers (97.7%) had a lower secondary school education (the equivalent of a high school degree in the United States) or below. The average age of mothers was 39.9 years ($SD=5.1$).

Active written consent was obtained from parents using permission letters that were distributed by classroom teachers. Parents were reminded that their children's participation was purely voluntary and that they could decline involvement in the study without penalty. Approximately 95 percent of the eligible children returned positive parental consent, agreed to participate, and attended school on the days of data collection. The final sample consisted of 345 children (173 boys, 172 girls) with an average age of 11.9 years.

Parental questionnaires were sent home with the participating students along with the permission letter. In the attached instructions, parents were told that their own participation was also voluntary and that their questionnaire responses would be kept confidential. Parents were instructed to return the questionnaires in sealed envelopes. Students brought questionnaires back to school, and members of the research team collected them from classroom teachers. Of the original sample, 211 (61.2%) mothers returned self-report measures. Children with parental data did not differ from those without parental data on any of the examined variables (all $ps \geq 0.10$).

Measures

We were careful to measure the predictor and outcome with different informants. Mothers reported on their parenting behavior and a peer nomination inventory was used to assess victimization. This approach helps ease concerns that found correlations are inflated by informant bias. All measures were translated into, and administered in, Cantonese. The items reported in the current paper are back translations.

Physical Discipline Mothers completed a subset of items derived from the Chinese version of the Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson et al. 2001). This measure previously demonstrated good psychometric properties in both North American (Robinson et al. 2001) and Chinese samples (Porter et al. 2005). The items were presented on a five-point scale ranging from 1 (*never*) to 5 (*always*). We derived physical discipline scores by calculating the mean across the five items on this scale:

“I slap my child when he/she misbehaves,” “I use physical punishment as a way of disciplining my child,” “I grab my child when he/she is being disobedient,” “I spank my child when he/she is disobedient,” “I guide my child by punishment more than by reason.” Internal consistency for the full scale was moderately high, $\alpha=0.78$.

Peer Victimization Children’s social reputations as victims of bullying were assessed using a peer nomination inventory. Students were given a class roster and asked to circle the names of up to three peers who fit a number of different descriptors, each of which was derived from past research conducted in the Chinese cultural context (e.g., Schwartz et al. 2001). Five peer nomination items assessed mistreatment by peers: “gets pushed around,” “gets picked on or bullied,” “gets bullied and can’t protect themselves,” “has mean things said about them by other kids,” “gets excluded from play.” Internal consistency for this scale was high, $\alpha=0.93$.

Like previous investigators, we assessed both relational and overt forms of aggression (Crick and Grotpeter 1995). A principal components analysis (PCA), however, yielded a single-component solution (based on an eigenvalue greater than 1.0) with all loadings ≥ 0.85 . The solution accounted for 80.8 percent of the variance in the items. We therefore opted to treat these items as a unidimensional scale. This is consistent with the method employed in past reports (Abou-ezzeddine et al. 2007; Schwartz et al. 2002; Schwartz et al. 2001; Schwartz et al. 2005; Xu et al. 2003). For later analyses, the number of nominations a child received for each victimization item was standardized within class to account for varying classroom sizes (Coie et al. 1982). We then generated each child’s peer victimization score by calculating the mean of the standardized scores for the five items.

Aggression Children’s social reputations as aggressive were assessed with four items on the peer nomination inventory: “always fights with others,” “always pushes or hits others,” “gossips or says mean things about other kids,” “tries to leave other kids out of play to hurt their feelings.” A PCA of these items yielded a single-component solution (based on an eigenvalue greater than 1.0) with all loadings ≥ 0.88 . The solution accounted for 80.0 percent of the variance in the items. For later analyses, the number of nominations a child received for each item was standardized within class. The aggression score was generated as the mean of the four standardized items.

Procedure

The peer nomination data were collected in classrooms by trained graduate-level research assistants. On the day of

data collection, consenting children were given a set of questionnaires and a class roster for use with the peer nominations items. The students filled out the questionnaires independently while two research assistants walked around the room to answer questions.

Statistical Procedures

Our hypotheses were tested using structural equation modeling (SEM). All models were fit using the AMOS statistical program (Arbuckle and Wothke 1999). We relied on diagnostic procedures contained in this program (derived from McDonald and Krane 1977) and careful examination of model parameters to assess identification and stability. In an effort to improve fit of the models, we allowed error terms to correlate within data source as guided by modification indices. We considered a number of different indices to assess model fit (Kline 1998), including the chi-square (χ^2) statistic. This statistic indexes the closeness of fit between the unrestricted covariance matrix and the restricted (model) covariance matrix. Thus, small and nonsignificant χ^2 statistics indicate good fit between the data and the hypothesized model. Because χ^2 values are inflated by large sample sizes, we also relied on other fit indices that are less sensitive to sample size. A common practice is to calculate the χ^2/df ratio. Values of less than three are considered indicative of good fit. We also examined the comparative fit index (CFI; Bentler 1990), which indicates the proportion in the improvement of the overall fit of the hypothesized model to the null model. Additionally, we considered the root mean square residual error of approximation (RMSEA). The RMSEA provides a measure of the model fit relative to the data, taking into account the complexity of the model. Acceptable fit is generally indicated by CFI values greater than 0.95 and RMSEA values of 0.05 or less (Browne and Cudek 1993; Kline 1998).

Tests of moderation were conducted using multiple group latent variable path models in AMOS (Byrne 2001). Multiple group path models allow us to test whether specific estimates of model parameters vary across groups by imposing cross-group equality constraints. Such a constraint forces the statistical program to derive equal estimates of that parameter across groups. In our analyses, we imposed a cross-group equality constraint on the path coefficient from maternal physical discipline to peer victimization. The χ^2 of this model is then contrasted against the χ^2 of the model where this equality constraint is removed. If the relative fit of the constrained model is significantly worse than that of the unconstrained model, we can conclude that the direct effect differs across groups.

Table 1 Bivariate Correlations between Predictor, Outcome, and Moderator Variables

Variable	Mean	SD	1	2	3	4
1. Maternal physical discipline	2.41	0.72	—	0.16*	0.20**	0.10
2. Victimization	-0.02	0.89		—	0.58***	0.19**
3. Aggression	-0.05	0.82			—	0.27***
4. Gender ^a						—

^a Gender is coded 0 = girls and 1 = boys.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Results

Bivariate Relations

Correlations between the variables are summarized in Tables 1 and 2. As shown, physical discipline was significantly correlated with both victimization and aggression, with small effect sizes (Cohen 1988). We also found a large positive correlation between victimization and aggression. Gender was coded as a dichotomous variable (0 = girls, 1 = boys). Thus, negative correlations between gender and a variable indicate higher scores for girls than boys, and positive correlations indicate higher scores for boys than girls. Notably, boys were more aggressive and victimized than girls.

The Relation between Maternal Physical Discipline and Peer Victimization

To examine the hypothesized main-effect between maternal physical discipline and victimization by peers, we specified a latent variable model with maternal physical discipline as the exogenous predictor variable. The latent variable was indicated by the five mother-report questionnaire items. Peer victimization was the endogenous outcome variable and was indicated by the five peer-nomination items. The fit for this model was adequate ($\chi^2 = 77.2$, $df = 33$, $p < 0.001$, $\chi^2/df = 2.34$; CFI = 0.97; RMSEA = 0.08). As summarized in Table 2, all factor loadings were significant and of moderate to large magnitude (Cohen 1988). In addition, maternal physical discipline and peer victimization were significantly correlated, with a small effect size (see Fig. 1).

Aggression as a Moderator of the Link between Maternal Physical Discipline and Peer Victimization

We hypothesized that the link between maternal physical discipline and peer victimization would be of relatively strong magnitude for children who are also concurrently aggressive. To test this hypothesis, we used a multi-group modeling approach implemented in SEM (Byrne 2001). As a first step, we stratified our sample into high ($n = 65$) and low aggression groups ($n = 146$) based on a mean split. We then specified a latent variable model with maternal

physical discipline predicting peer victimization (indicated as described above). We constrained factor loadings to be equal across the high and low aggression groups but we did not impose any constraints on the maternal physical discipline \rightarrow peer victimization path¹. The fit indices for this model were generally in the acceptable range ($\chi^2 = 135.1$, $df = 74$, $p < 0.001$; $\chi^2/df = 1.83$; CFI = 0.95; RMSEA = 0.06). Next, we respecified the model with the maternal physical discipline \rightarrow peer victimization path constrained to be equal across groups. This modified model also fit the data acceptably well ($\chi^2 = 139.5$, $df = 75$, $p < 0.001$; $\chi^2/df = 1.86$; CFI = 0.95; RMSEA = 0.06) but the added constraint significantly decremented model fit ($\chi^2 \text{ diff} = -4.1$, $df = 1$, $p < 0.05$). Thus, the full pattern of findings provide support for our hypotheses regarding the moderating role of child aggression.²

Figure 2 presents the latent variable models for low and high aggression groups separately. As depicted, the association between maternal physical discipline and peer victimization was significant for the high aggression group ($\beta = 0.33$, $p < 0.05$), but not the low aggression group ($\beta = 0.05$, *ns*).

¹ We examined the invariance of the maternal physical discipline and peer victimization factors across the low and high aggression groups by conducting multiple group analyses with the factor loadings freed to vary. Visual examination of the results suggested similar patterns of factor loadings across groups. However, there was not true factor invariance because freeing the loadings to vary across groups improved model fit. It should be noted, however, that removing the constraints on the factor loadings did not alter the pattern of results. Accordingly, results with the factor loadings constrained are presented for ease of interpretation.

² As an alternative analytic approach, we also examined moderation using the regression procedures described by Aiken and West (1991). We specified a model with peer victimization predicted from physical discipline, aggression, and the two-way interaction between aggression and physical discipline. Consistent with our hypothesis, this interaction reached significance ($\beta = 0.13$, $p < 0.05$, $sr^2 = 0.02$). As per Aiken and West's (1991) recommendations, we then conducted follow-up models predicting victimization from physical discipline at low (1 SD below the mean), medium (the mean), and high (1 SD above the mean) levels of aggression. The association between physical discipline and peer victimization increased as the level of aggression moved from low ($\beta = -0.08$, *ns*), to medium ($\beta = 0.05$, *ns*) to high ($\beta = 0.18$, $p < 0.05$). Maternal physical discipline was only significantly associated with victimization for children who were highly aggressive.

Table 2 Summary of Factor Loadings

Item	Loading
Maternal physical discipline	
I slap my child when he/she misbehaves.	0.82***
I use physical punishment as a way of disciplining my child.	0.55***
I grab my child when he/she is being disobedient.	0.49***
I spank my child when he/she is disobedient.	0.76***
I guide my child by punishment more than by reason.	0.61***
Peer victimization	
Someone who gets pushed around.	0.90***
Someone who gets picked on or bullied.	0.98***
Someone who gets bullied and can't protect themselves.	0.91***
Someone who has mean things said about them by other kids.	0.73***
Someone who gets excluded from play.	0.79***

*** $p < 0.001$.

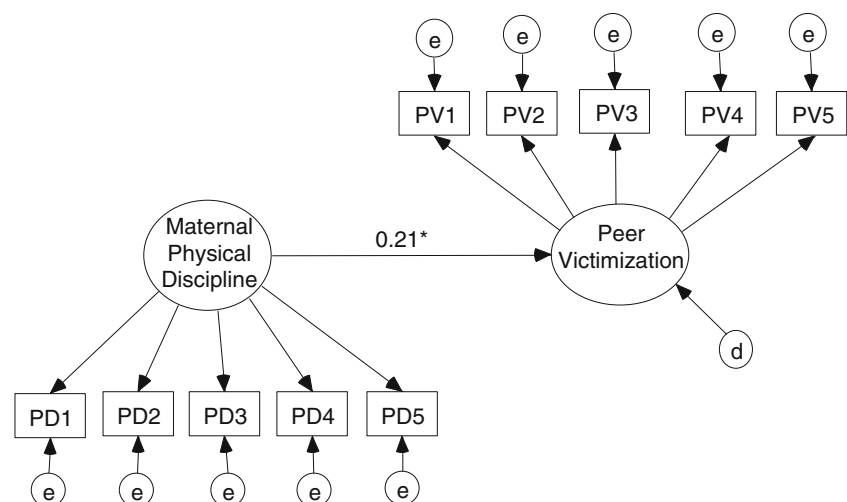
Gender as a Moderator of the Link between Maternal Physical Discipline and Peer Victimization

To explore the possibility that the effects of physical discipline vary by gender, we again conducted multiple group analyses. We specified a model with the maternal physical discipline → peer victimization path free to vary across genders. This model provided an acceptable fit to the data ($\chi^2=129.9$, $df=74$, $p<0.001$; $\chi^2/df=1.76$; CFI=0.96; RMSEA=0.06). A modified model with the path constrained to be equal across boys and girls also fit the data acceptably well ($\chi^2=129.9$, $df=75$, $p<0.001$; $\chi^2/df=1.73$; CFI=0.96; RMSEA=0.06) and this constraint did not result in a significant decrement in fit (χ^2 diff=0.02, $df=1$, *ns*). Thus, our analyses do not provide support for the hypothesis that gender moderates the association between harsh parenting and victimization.

Discussion

Past investigations have documented a link between children's exposure to overly restrictive, hostile, punitive home environments, and later experiences of peer victimization. This line of research, however, has been largely limited to Western settings. The current project sought to extend the existing literature on frequently bullied children by examining associations between harsh parenting and victimization in Chinese children's peer groups. Consistent with findings from Western settings, our structural equation models yielded evidence that maternal physical discipline is linked to victimization in the peer group. This relation, however, was moderated by the child's level of aggression. At high levels of aggression, physical discipline by mothers was associated with peer victimization. In contrast, the link was not significant at low levels of child aggression. Thus,

Fig. 1 Latent variable model examining relations between mothers' use of physical discipline and their children's victimization by peers. Standardized path estimate is presented. Correlations between error terms are not illustrated. See text for details regarding model fit. Factor loadings are summarized in Table 2. e = error; d = disturbance. * $p < 0.05$



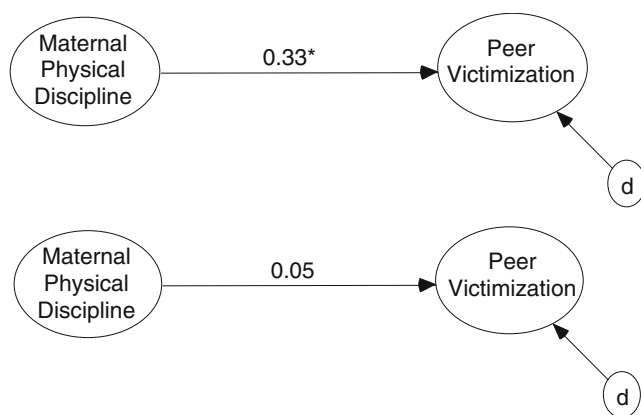


Fig. 2 Latent variable model examining relations between mothers' use of physical discipline and their children's victimization by peers, for aggressive (top panel) and non-aggressive (bottom panel) children separately. Standardized path estimates are presented. Factor loadings were constrained to be equal and have been omitted. See text for details regarding model fit. $e = \text{error}$; $d = \text{disturbance}$. * $p < 0.05$

mothers' use of corporal punishment was correlated with peer group victimization, but only among aggressive children.

A number of possible processes may explain the observed association between maternal physical discipline and peer victimization for aggressive children. Transactional and interactive models of psychopathology suggest that the interplay between individual characteristics and environmental factors are important to consider in predicting adjustment outcomes (see Steinberg and Avenevoli 2000). Children's temperamental characteristics may influence the impact of parenting strategies. Aggression could be indicative of difficult temperament and regulatory deficits that make children more susceptible to the negative impact of harsh discipline. While some children are resilient to physical punishment, such punishment could sustain or worsen behavioral and emotional regulation problems for other children. Alternatively, children's aggression may be placing them at risk for mistreatment at home and at school. Aggressive children are more likely to evoke more punitive discipline from their parents, and are more likely to be targeted for victimization by their peers (Dodge 1991; Eisenberg and Fabes 1992; Hubbard and Coie 1994; Sheehan and Watson 2008).

These models notwithstanding, there are a host of other biological and environmental factors that might play a role in predisposing children to problems with peers. Shared genes between children and parents may partly account for the association between physical discipline by mothers and social maladjustment in children. Exposure to mistreatment by peers may strengthen existing maladaptive behavior patterns or exacerbate emotional difficulties. Evidence suggests that some behavior problems antedate and con-

tribute to victimization, but the experience of victimization also exerts a negative influence on children's psychosocial adjustment (Graham and Juvonen 1998; Hanish and Guerra 2002; Hawker and Boulton 2000; Hodges and Perry 1999; Schwartz et al. 1998). Transactions between children's behavioral problems, aversive parenting strategies, and negative peer group experiences may cyclically influence each other, and over time, help to sustain or worsen a child's difficulties. Future longitudinal studies may help to clarify the nature of these potentially complex associations.

Our index of physical discipline was linked to victimization by peers among aggressive children, but it was not associated with similar difficulties for nonaggressive children. These results are broadly consistent with Western data, which suggest that there may be distinct pathways to peer victimization. Victims who exhibit disruptive and aggressive tendencies tend to come from families that are harsh, punitive, and hostile (Schwartz et al. 1998, 2000). In contrast, victims who are characterized by passive, submissive behavior tend to have overprotective and enmeshing parents (Bowers et al. 1994; Finnegan et al. 1998; Olweus 1978). For these children, such overprotective parenting presumably undermines the development of independent, assertive behavior that is necessary for positive peer functioning (Hodges and Perry 1999). To our knowledge, there are currently no data on the family background of passive victims in Chinese peer groups. Future inquiries into this area may add to a more complete understanding of peer victimization in this cultural setting.

A growing body of research indicates that, among Chinese families, harsh discipline by parents may be linked to a number of negative outcomes for children. Indices capturing harsh, dominating, or authoritarian parenting have been repeatedly linked with externalizing symptoms, social maladjustment, and academic difficulties among mainland and Hong Kong Chinese children (Chang et al. 2003, 2004; Chen et al. 1997, 2002; Lansford et al. 2005; Nelson et al. 2006; Rubin et al. 1998). Some researchers have suggested that harsh parenting can be conceptualized both as a physically aggressive act and as a form of affect communication. In addition to modeling aversive behavior, harsh discipline by parents may also carry a message of anger or rejection. Both of these elements may be responsible for its negative effects on children. There is some evidence, however, that authoritarian parenting may not have negative effects for the academic performance of Asian-American adolescents (Chao 2001; Dornbusch et al. 1987). As the current literature stands, it is difficult to know what may account for these discrepant findings. Study differences in geographic region sampled, age range of the participants, outcome of interest, and conceptualization and measurement of authoritarian parenting are all potential explanations for the conflicting results. Future research may

benefit from a stronger focus on the mechanisms that underlie the link between parenting practices and child outcomes. Additionally, it seems worthwhile to examine how culture may moderate these mechanisms.

A final pattern of results warrants discussion. Our analyses did not yield evidence to suggest that the relation between maternal physical discipline and peer victimization differed between boys and girls. Although boys are more likely to be victimized than girls (Pellegrini et al. 1999; Schwartz et al. 2001; Xu et al. 2003), consistent gender differences in the correlates of victimization have not emerged in the literature. Other investigations have also failed to show that family variables have different effects on peer outcomes for boys and girls (e.g., Schwartz et al. 2000). One caveat regarding this finding is necessary. Null results do not provide a strong foundation for conclusions, and caution seems particularly warranted given that interaction effects are especially difficult to detect in naturalistic designs (McClelland and Judd 1993).

As far as we know, this is the first investigation of the parenting correlates of peer group victimization in the Chinese cultural context. Our contribution to this knowledge is enhanced by a number of methodological strengths of this investigation. We were careful to assess parenting behavior and peer victimization with independent sources. Using the same informant to report on both predictor and outcome is problematic because observed correlations may partly result from informant bias. Our measurement approach helps to minimize this artifact. Moreover, our measures of aggression and victimization tapped both overt and relational subtypes. Previous investigations of peer victimization have focused only on overt subtypes, which may be problematic given evidence that boys and girls tend to aggress in different ways. Our multidimensional assessment of these constructs should bolster confidence that our findings are applicable to both genders.

We also view our focus on the Hong Kong cultural context as a significant expansion of the existing literature. Thus far, the study of family correlates of victimization has largely been limited to North American or European settings. Replication in other cultures is a necessary step in ensuring the generalizability of our knowledge. Cultural values may influence norms for social behavior, meanings of parental behavior, and other factors that may influence the relation between family variables and a child's adjustment in the school peer group. Examination of risk factors for victimization across cultures can help to delineate between universal and culture-dependent phenomena and is a crucial step in developing psychological theories that have pan-human validity.

Taken together, our findings help shed light on the relation between parenting practices and social adjust-

ment in the Chinese culture. Nonetheless, a number of potential limitations of this project should be considered. Most notably, ours was a within-group investigation of the correlates of victimization in Hong Kong children's peer groups. As such, it does not provide a strong foundation for making between-group inferences (e.g., comparisons between Hong Kong Chinese and North American children). Studies conducted within groups are a necessary starting point for cross-cultural research (Schwartz et al. 2001). Comparative statements, however, should be made with caution until appropriate cross-setting studies are conducted. Similarly, we utilized a sample of lower-middle class Hong Kong children and their mothers. Future replication of this study with other demographic groups is needed before generalizations can be made. For example, findings should not be generalized to mainland Chinese or other cultures in the absence of further research.

Another potential shortcoming of this study is that we measured peer victimization and parenting behavior concurrently. Documentation of a concurrent association is an important first step in investigating the relation between proposed risk factors and outcomes. Future longitudinal research is needed before causal statements can be made. It is possible that experiences of victimization in the peer group lead children to act out at home and provoke physical punishment from their mothers. Longitudinal studies conducted in Western cultures, however, have shown aversive home experiences to predate peer group victimization (Schwartz et al. 1997, 2000). Nevertheless, it may be worthwhile to investigate cyclical influences and transactions between adjustment in the peer group and family functioning over time. In addition, longitudinal designs may be especially useful for examining processes and mediating mechanisms.

In summary, the current study extends our knowledge of risk factors for peer victimization in Hong Kong children's peer groups. Prior research suggests that the behavioral profiles of victims may be similar between Western and Chinese cultures. To our knowledge, this project is the first to examine correlations between home environment variables and children's experiences of peer victimization in the Chinese setting. We found that maternal physical discipline was associated with children's reputations as victims of bullying, but only for children who were also rated as aggressive by peers. Though further research is needed, our findings suggest that the family environment of bullied children may be similar across Chinese and Western cultural contexts. Our knowledge in this area may be greatly enhanced by longitudinal investigations that examine the transactions between family variables, child attributes, and social adjustment outcomes.

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