Attributions and Coping Styles in Reducing Victimization

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Abstract

To examine the role of attributions and coping on children's victimization over time, 220 children completed questionnaires twice over a 6-month period. Direct and mediational models were tested using regressions, cross-sectionally and longitudinally. Characterological self-blame was positively related to victimization within and across time for boys and girls. Depressive attributions were positively related to victimization only for girls. No coping styles were associated with reduced victimization over time for boys, whereas social support coping was for girls. Avoidant, revenge, and social support coping were positively related to victimization for boys. Avoidant coping directly predicted victimization for girls. No coping styles were significant mediators over time, which suggests situational mechanisms are relevant. Support emerged for strategies for girls to reduce victimization; more research is needed to help boys.

Résumé

Afin d'étudier le rôle des attributions et la capacité des enfants à réagir à la victimisation au fil du temps, nous avons invité 220 enfants à répondre à un questionnaire et ce, à deux reprises sur une période de six mois. Nous avons évalué des modèles directs et médiationnels au moyen de régressions transversales et longitudinales. Nous avons établi un lien entre le blâme personnel caractériel et la victimisation, à court et long terme, chez les garçons comme chez les filles. On note également un rapport entre dépression et victimisation mais uniquement chez les filles. Avec le temps, aucun mode particulier d'intervention n'est associé à la diminution de la victimisation chez les garçons; par contre chez les filles, le soutien social y aurait contribué. Chez les garçons, on voit que l'évitement, la revanche et le soutien social sont liés à la victimisation. Du côté des filles, l'évitement conduit tout droit à la victimisation. Aucune stratégie n'a eu un impact significatif à long terme, nous sommes donc en droit de supposer que des

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interventions situationnelles seraient pertinentes. Nous avons reçu de l'aide afin de mettre au point des stratégies visant à réduire le taux de victimisation chez les filles. Nous devons poursuivre cette recherche afin de venir en aide aux garçons.

Keywords

victimization, bullying, social cognitive theory, attributions, coping strategies, children

Bullying is a relationship problem wherein power and aggression are used to harm others (Pepler, Jiang, Craig, & Connolly, 2008). Bullying research has developed from reporting of prevalence to identifying correlates and underlying mechanisms (e.g., attributions may influence coping styles children employ to address victimization). Social cognitive theory can assist our current understanding on the underlying mechanisms in victimization through a consideration of the links between attributions and coping. Research in other areas (e.g., depression) has shown such connections (Farrokhi, Guilani, Zamani, & Kohsar, 2006). They have been rarely studied, however, in children's experiences of bullying. This study examined relationships among children's attributions, coping, and victimization from a social cognitive perspective.

Social cognitive theory provides a framework for understanding differences in interpretations and responses children make about their social environment. Crick and Dodge (1994) suggest that children's social interactions are influenced by the cues they observe and the interpretations they make about those cues. Children interpret cues by accessing relevant memories and making causal and intent attributions of the events in question. Attributions, thus, impact the child's behaviour or coping responses. The current study examines the attributions children make about their social experiences and how these are associated with coping responses and victimization.

Attributional styles explain why individuals react differently, but predictably, to events and are used to explain events (Weiner, 1986). Researchers who study general attributions often refer to three characteristics: locus (i.e., internal or external cause), stability, and controllability. A globally negative attributional style, for example, reflects a depressive style and represents internal, stable, and uncontrollable causal beliefs about events, which may negatively influence children's victimization experiences. Indeed, Prinstein, Cheah, and Guyer (2005) found that negative internal attributions were associated with increased peer victimization and loneliness. Moreover, Rosen, Milich, and Harris (2007) found that children aged 9 to 13 who made internal attributions about victimization reported more frequent victimization than children who did not make internal attributions. Victimized children may hold generally depressive attributions leading them to believe they lack control over their victimization and cannot change their experiences.

Specific attributions, such as self-blame, also may be associated with victimization. Self-blame is a causal attribution commonly divided into two forms: characterological and behavioural (Graham & Juvonen, 1998). Characterological self-blame involves attributing cause to character (relatively nonmodifiable) and is associated with the

belief that one deserves the negative outcome. Behavioural self-blame involves attributing cause to behaviour (modifiable) and is associated with the possibility of avoiding a negative future outcome. Characterologically self-blaming children blame themselves for their victimization and are more likely to report feeling lonely, socially anxious, and unworthy than children who behaviourally self-blame (Graham & Juvonen, 1998). We examine depressive and self-blaming attributions in relationship to victimization and predict that a depressive attributional style and characterological self-blaming are associated with victimization over time.

Children also make decisions about how to respond to experiences. Coping is the behavioural enactment of attributions, and the specific coping strategy can aggravate or ameliorate the situation. Cognitive distancing, self-reliance, internalizing, and externalizing are avoidant strategies because the child does not attempt to stop the stressor but manages the cognitive and/or emotional reaction. In contrast, conflict resolution, revenge seeking, and social support seeking are examples of approach coping strategies, whereby the child confronts the stressor. Social support seeking protects victimized girls from social problems but has the opposite effect for boys (Kochenderfer-Ladd & Skinner, 2002). The effectiveness of coping styles may depend on the victimization status of the child; problem-solving strategies are beneficial for nonvictimized children but not for victimized children (Kochenderfer-Ladd & Skinner, 2002). Bullied children may demonstrate deficits in their attributions and consequent coping, supporting a circular relationship between attributions and coping responses (Camodeca & Goossens, 2005a). Only victimized children express sadness after negative experiences and use reactive aggression as a coping mechanism for their victimization (Camodeca & Goossens, 2005a, 2005b). The current study examines specific coping styles and their relationship to specific attributional styles.

Researchers have demonstrated relationships between attributions and victimization, and between coping and victimization, but how all three constructs are associated is not clearly understood. Social cognitive theory suggests that attributions influence coping, which influences victimization. Two questions will be addressed in the current research. How are attributions, coping, and victimization related to each other? We hypothesize that specific attributions (depressive, characterological) and coping (e.g., internalizing, revenge seeking, conflict resolution, social support, etc.) will be directly related to victimization and that coping will mediate the relationship between attributions and victimization. The second focus is to examine longitudinally whether particular coping styles affect changes in victimization over time.

Method

Participants

Approximately equal numbers of girls (Time 1 $n = 147$; Time 2 $n = 124$) and boys (Time 1 $n = 120$; Time 2 $n = 113$) participated, with 220 participating at both times. Eighteen percent of children dropped out of the study. Attrition analyses show no

significant differences on the demographic or study variables between completers and noncompleters.

Seventy-three percent of participants reported living with both parents, 12% in joint custody, 6% with their mother only, 6% with a parent and stepparent, and 3% in another arrangement. These family compositions are comparable to Canada's 2006 census data (Statistics Canada, 2008). Seventy-two percent identified themselves as White, 2% as Native, 2% as South Asian or Chinese, 6% as Other, and 18% as "Don't Know," which is comparable to the Canadian population in 2006 (Statistics Canada, 2008). The educational attainment and average income of the sample is comparable to the 2006 Canadian census data (Statistics Canada, 2008).

Design

Data were collected during class time in spring 2006 and 6 months later in fall 2006. Children obtained parental consent. All participants were treated in accordance with the ethical codes stated by the American Psychological Association (APA, 2001).

Measures

Victimization. Victimization was assessed with a revised 8-item version of the Safe Schools Survey (Hymel, White, & Ishiyama, 2003). Students indicated how often they bullied others and were victimized by four bullying behaviours (i.e., physical, verbal, social, and electronic bullying) using a 4-point Likert-type scale (*never in 4 weeks* to *many times a week*). Victimization and bullying severity scores were calculated by summing reports of all types ($\alpha = .78, .80$ for victimization severity at Times 1 and 2, respectively; $\alpha = .73, .80$ for bullying severity at Times 1 and 2, respectively).

Self-blame. Characterological and behavioural self-blaming attributions were assessed using two vignettes requiring the participant to imagine being victimized by peers. Participants rated 14 statements about the reason the situation had occurred (e.g., "They do this to me because I won't fight back") on a 5-point scale. Both scales had good reliability ($\alpha = .92, .93$ for characterological self-blame at Times 1 and 2, respectively; $\alpha = .79, .81$ for behavioural self-blame at Times 1 and 2, respectively).

The Children's Attributional Styles Questionnaire–Revised (CASQ-R; Kaslow & Nolen-Hoeksema, 1991) assesses general attributional styles through 24 statements. The child chose between two explanations (e.g., "You make a new friend." Choose the explanation that best explains the sentence: "I am a nice person" or "The people that I meet are nice."). Twelve items were summed into a composite score for negative events, and 12 items were summed into a positive events score. A total score was calculated by subtracting the negative score from the positive score. For interpretation purposes, we reverse coded the scale so that high scores represent depressive attributional styles. The CASQ-R has moderate internal consistency ($\alpha = .61$ for both times; Thompson, Kaslow, Weiss, & Nolen-Hoeksema, 1998).

Coping. A modified 43-item version of Causey and Dubow's (1992) Self-Report Coping Scale, in addition to scales developed by Kochenderfer-Ladd (2004), assessed

coping. Children indicated how often, on a 5-point scale, they would use each strategy. Causey and Dubow's (1992) scale consists of five subscales with moderate to good reliability: seeking social support (eight items, $\alpha = .89$ for both times), self-reliance (eight items, $\alpha = .88$, .85 for Times 1 and 2, respectively), distancing (six items, $\alpha = .67$, .71, for Times 1 and 2, respectively), internalizing (seven items, $\alpha = .74$, .80 for Times 1 and 2, respectively), and externalizing (four items, $\alpha = .72$, .77 for Times 1 and 2, respectively). The two additional subscales (Kochenderfer-Ladd, 2004) are conflict resolution (five items, $\alpha = .75$, .74 for Times 1 and 2, respectively) and revenge (four items, $\alpha = .82$, .88 for Times 1 and 2, respectively).

Results

Direct Relationships Between Coping and Victimization

Correlations among all variables are displayed in Table 1. Regressions were run separately for boys and girls and controlling for bullying. All models were significant. For boys, externalizing, internalizing, revenge, and social support coping significantly predicted higher levels of Time 1 victimization. For girls, externalizing, internalizing, and distancing coping significantly predicted higher levels of Time 1 victimization. These findings were replicated at Time 2; results are not shown (see Table 2).

Cross-Sectional Relationships Among Attributions, Coping, and Victimization

Following Baron and Kenny's (1986) method, linear regressions were used to assess how children's coping mediates the relationship between attributions and victimization within time (see Figure 1). Bullying perpetration and sex were controlled for. When sex was significant, models were run separately for boys and girls.

Externalizing coping mediating self-blame attributions and victimization. When regressing externalizing coping onto characterological and behavioural self-blame, while controlling for bullying and sex (Condition 1), the overall model was significant, $F(4, 241) = 12.15$, $p < .001$ (adjusted $R^2 = .16$). Higher levels of bullying ($B = .17$, $SE = .04$, $p < .001$) and characterological self-blame ($B = .18$, $SE = .07$, $p < .01$) predicted externalizing coping. In condition 2, victimization was regressed onto characterological and behavioural self-blame, while controlling for bullying and sex. Victimization was significantly related to self-blame attributions, $F(4, 250) = 40.56$, $p < .001$ (adjusted $R^2 = .39$). In addition, when victimization was regressed onto both externalizing coping and self-blame attributions while controlling for bullying and sex, as depicted in Condition 3, the results are significant, $F(5, 241) = 34.14$, $p < .001$ (adjusted $R^2 = .41$). Externalizing coping, however, was found not to be a significant mediator between characterological self-blame and victimization (Sobel's test = 1.80, $p = .07$; see Table 3).

Externalizing coping mediating depressive attributional style and victimization. When regressing externalizing coping onto depressive attributional style, while controlling for bullying and sex, the overall model was significant, $F(3, 250) = 16.99$, $p < .001$ (adjusted $R^2 = .16$). Higher levels of bullying ($B = .15$, $SE = .04$, $p < .001$) and

**Table 1.** Correlations Among Boys' and Girls' Attributions, Coping, and Victimization and Bullying at Times 1 and 2

Scale	Sex	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Victimization Time 1	Boys	—	.31**	.54**	.25*	.15	.07	.18	.31**	.27**	.08	.38**	.59**	.53**	.15
	Girls	—	.34**	.72**	.45**	.03	.02	-.03	.23**	.42**	.25**	.36**	.56**	.34**	.30**
2. Bullying Time 1	Boys		—	.06	.45**	-.21*	-.16	-.12	.20*	.19*	-.02	.08	.12	.14	.30**
	Girls		—	.26**	.41**	-.10	-.17*	-.11	.37**	.41**	.08	.16	.11	.11	.26**
3. Victimization Time 2	Boys			—	.25*	.05	-.01	.03	.29**	.33**	.32**	.43**	.52**	.44**	.22*
	Girls			—	.55**	-.08	-.11	-.19*	.19*	.37**	.14	.34**	.63**	.29**	.42**
4. Bullying Time 2	Boys				—	-.12	-.15	-.17	.19	.24	.05	.05	.18	.19	.35**
	Girls				—	-.27**	-.23**	-.26**	.43**	.48**	.10	.14	.34**	.18	.49**
5. Conflict Resolution Coping	Boys					—	.78**	.77**	-.14	-.06	.02	.49**	.15	.13	-.34**
	Girls					—	.72**	.70**	-.13	-.10	.05	.30**	.12	.21*	-.31**
6. Self-Reliant Coping	Boys						—	.75**	-.21*	-.09	-.07	.43**	.12	.16	-.41**
	Girls						—	.65**	-.13	-.12	-.07	.29**	.15	.21*	-.31**
7. Social Support Coping	Boys							—	.02	.05	.02	.51**	.13	.15	-.38**
	Girls							—	-.13	-.03	-.05	.29**	-.02	.10	-.39**
8. Revenge Coping	Boys								—	.70**	.33**	.18	.16	.15	.28**
	Girls								—	.64**	.24**	.35**	.14	.14	.30**
9. Externalizing Coping	Boys									—	.44**	.29**	.25**	.22*	.28**
	Girls									—	.14	.47**	.33**	.28**	.38**
10. Distancing Coping	Boys										—	.20*	.05	.04	.08
	Girls										—	.12	.14	.10	.13
11. Internalizing Coping	Boys											—	.39**	.31**	.01
	Girls											—	.42**	.47**	.17*
12. Characterological Self-Blame	Boys												—	.88**	.29**
	Girls												—	.59**	.35**
13. Behavioural Self-Blame	Boys													—	.31**
	Girls													—	.23**
14. Depressive Attribution Style	Boys														—
	Girls														—

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

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Table 2. Direct Relationships Between Coping and Time 1 Victimization

| | Time 1 victimization | | | |
| | Boys | | Girls | |
Predictors	B	SE	B	SE
Bullying Time 1	0.49**	.18	0.46**	.16
Externalizing coping	0.73**	.28	1.02***	.26
Bullying Time 1	0.56**	.16	0.61***	.14
Internalizing coping	1.42***	.32	1.01***	.25
Bullying Time 1	0.53**	.18	0.60***	.16
Revenge coping	0.63**	.23	0.35	.26
Bullying Time 1	0.66***	.17	0.71***	.15
Social support coping	0.60*	.21	0.02	.21
Bullying Time 1	0.63***	.17	0.68***	.15
Distancing coping	0.32	.29	0.81**	.28

$*p < .05. **p < .01. ***p < .001.$
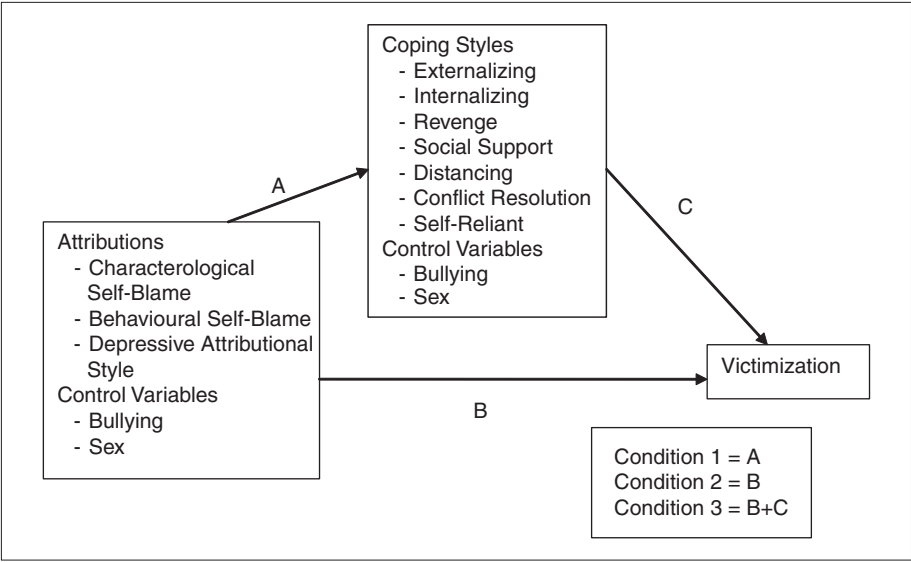
Figure 1. Conceptual model of mediational analyses

depressive attributional style ($B = .06$, $SE = .01$, $p < .001$) predicted higher levels of externalizing coping. Condition 2 was significant, $F(3, 261) = 12.37$, $p < .001$ (adjusted $R^2 = .12$), whereby depressive attributional style predicted higher levels of

Table 3. Regression Analyses for Mediation of Attributions and Victimization by Externalizing Coping

| | Time 1 victimization | | | |
| | Condition 2 | | Condition 3 | |
Predictors	B	SE	B	SE
Self-blame				
Bullying Time 1	0.50***	.09	0.44***	.10
Sex	−0.24	.24	−0.09	.24
Characterological self-blame	1.27***	.17	1.19***	.18
Behavioural self-blame	0.08	.20	0.06	.20
Externalizing coping			0.43*	.17
Depressive attributional style				
Bullying Time 1	0.53***	.11	0.45***	.12
Sex	0.00	.28	0.23	.27
Depressive attributional style	0.11*	.04	0.07	.05
Externalizing coping			0.80***	.19

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

victimization. Also, Condition 3 was significant, $F(4, 250) = 14.65$, $p < .001$ (adjusted $R^2 = .18$). Externalizing coping was found to be a significant mediator between depressive attributional style and victimization (Sobel's test = −3.61, $p < .001$; see Table 3).

Internalizing coping mediating self-blame attributions and victimization. Boys' overall model for Condition 1 was significant, $F(3, 108) = 7.47$, $p < .001$ (adjusted $R^2 = .15$). High levels of characterological self-blame ($B = .34$, $SE = .12$, $p < .01$) predicted high levels of internalizing coping. Condition 2 was significant, $F(3, 108) = 24.10$, $p < .001$ (adjusted $R^2 = .39$) for boys, with characterological self-blame and bullying predicting higher levels of victimization. Condition 3 was significant, $F(4, 108) = 19.88$, $p < .001$ (adjusted $R^2 = .41$) for boys. Specifically, characterological self-blame, bullying, and internalizing coping predicted higher levels of victimization. Girls' overall model for Condition 1 was significant, $F(3, 139) = 16.21$, $p < .001$ (adjusted $R^2 = .25$). High levels of characterological self-blame ($B = .15$, $SE = .07$, $p < .05$) and behavioural self-blame ($B = .31$, $SE = .08$, $p < .001$) predicted high levels of internalizing coping. Condition 2 was significant, $F(3, 141) = 29.35$, $p < .001$ (adjusted $R^2 = .38$) for girls, with characterological self-blame and bullying predicting higher levels of victimization. Condition 3 was significant, $F(4, 139) = 23.96$, $p < .001$ (adjusted $R^2 = .40$) for girls, with characterological self-blame and bullying but not internalizing coping, predicting higher levels of victimization. The models differed for boys and girls whereby internalizing coping predicted higher levels of victimization for boys but not for girls. However, when testing for significant mediation using Sobel's Test, internalizing coping did not hold as a significant mediator for boys (Sobel's Test = 1.72, $p = .09$), resulting in models that are comparable for boys and girls (see Table 4).

Table 4. Regression Analyses for Mediation of Attributions and Victimization by Internalizing, Revenge, and Social Support Coping

	Time 1 victimization							
	Boys				Girls			
	Condition 2		Condition 3		Condition 2		Condition 3	
Predictors	B	SE	B	SE	B	SE	B	SE
Internalizing coping as mediator								
Bullying Time 1	0.51**	.15	0.50**	.15	0.49***	.12	0.56***	.13
Characterological self-blame	1.35**	.39	1.11**	.39	1.23***	.19	1.16***	.20
Behavioural self-blame	0.05	.42	0.12	.41	0.05	.24	−0.08	.25
Internalizing coping			0.69*	.32			0.39	.25
Revenge coping as mediator								
Bullying Time 1	0.57**	.18			0.50**	.14	0.53**	.16
Depressive attributional style	0.05	.07			0.15**	.05	0.13*	.06
Revenge coping							0.21	.26
Social support coping as mediator								
Bullying Time 1					0.50**	.14	0.60***	.15
Depressive attributional style					0.15**	.05	0.17**	.06
Social support coping							0.27	.22

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

Revenge coping mediating depressive attributional style and victimization. Boys' overall model for Condition 1 was significant, $F(2, 108) = 5.21$, $p < .01$ (adjusted $R^2 = .07$). Low levels of depressive attributional style ($B = .07$, $SE = .03$, $p < .05$) predicted low levels of revenge coping. The overall model for Condition 2 was significant, $F(2, 115) = 6.13$, $p < .01$ (adjusted $R^2 = .08$) for boys with higher levels of bullying predicting higher levels of victimization; however, depressive attributional style was not a significant predictor of victimization. Therefore, analyses were stopped. Girls' overall model for Condition 1 was significant, $F(2, 140) = 15.05$, $p < .001$ (adjusted $R^2 = .17$). High levels of bullying (the control variable; $B = .19$, $SE = .05$, $p < .001$) and depressive attributional style ($B = .05$, $SE = .02$, $p < .01$) predicted high levels of revenge coping. Condition 2 was significant, $F(2, 145) = 13.64$, $p < .001$ (adjusted $R^2 = .15$) for girls indicating higher levels of depressive attributional style and bullying predicted higher levels of victimization. The overall model for Condition 3 was significant, $F(3, 140) = 9.50$, $p < .001$ (adjusted $R^2 = .15$) for girls with higher levels of depressive attributional style and bullying predicting higher levels of victimization; however, revenge coping was not a significant predictor, indicating that it is not a significant mediator (see Table 4).

Social support coping mediating depressive attributional style and victimization. Boys' overall model for Condition 1 was significant, $F(2, 112) = 9.51$, $p < .001$ (adjusted $R^2 = .13$). This indicates that low levels of depressive attributional style ($B = -.10$, $SE = .03$, $p < .001$) predicted high levels of social support coping. Condition 2 was tested previously and failed to meet criteria for mediational analyses. Girls' overall model for Condition 1 was significant, $F(2, 144) = 12.92$, $p < .001$ (adjusted $R^2 = .14$). Low levels of depressive attributional style ($B = -.10$, $SE = .02$, $p < .001$) predicted high levels of social support coping. Condition 2 was shown previously with higher levels of depressive attributional style and bullying predicting higher levels of victimization. The overall model for Condition 3 was significant, $F(3, 144) = 10.99$, $p < .001$ (adjusted $R^2 = .17$) for girls with higher levels of depressive attributional style and bullying predicting higher levels of victimization; however, social support coping was not a significant predictor and therefore not a mediator (see Table 4).

Summary of Cross-Sectional Results

Only externalizing coping was a significant mediator of attributions and victimization. There were multiple significant direct relationships. For both sexes, higher levels of externalizing and internalizing coping and characterological self-blame significantly predicted higher levels of victimization. Higher levels of revenge and social support coping predicted higher levels of victimization for boys, whereas higher levels of distancing coping and a depressive attributional style predicted higher levels of victimization for girls.

Longitudinal Relationships Between Attributions, Coping, and Changes in Victimization

Whether coping styles are related to changes in victimization over time remains a question. Using mediational analyses, predictor variables at Time 1 included attributions and coping, while controlling for Time 1 victimization and bullying; Time 2 victimization was the outcome. Children who did not experience a change in victimization across times were excluded from the analyses. As sex was significant, the models were run separately by sex.

Direct relationships between coping and victimization over time. In examining the relationship between coping styles and Time 2 victimization, only two models were significant for boys, whereas all models were significant for girls. For boys, internalizing and distancing coping significantly predicted higher levels of Time 2 victimization. For girls, social support coping significantly predicted lower levels of Time 2 victimization (see Table 5).

Externalizing coping mediating self-blame attributions and victimization over time. Condition 1 was significant, $F(4, 54) = 3.87$, $p < .001$ (adjusted $R^2 = .18$) for boys. Higher levels of Time 1 bullying ($B = .35$, $SE = .11$, $p < .01$) predicted higher levels of

Table 5. Direct Relationships Between Coping Styles and Time 2 Victimization

	Time 2 victimization			
	Boys		Girls	
Predictors	B	SE	B	SE
Victimization Time 1			0.52***	.11
Bullying Time 1			0.00	.21
Externalizing coping			0.37	.30
Victimization Time 1	0.18	.12	0.48***	.11
Bullying Time 1	−0.04	.24	0.12	.20
Internalizing coping	1.04*	.46	0.40	.20
Victimization Time 1			0.52***	.11
Bullying Time 1			0.08	.21
Revenge coping			0.17	.27
Victimization Time 1			0.52***	.10
Bullying Time 1			0.07	.20
Social support coping			−0.51*	.26
Victimization Time 1	0.25*	.12	0.55***	.10
Bullying Time 1	−0.04	.24	0.15	.20
Distancing coping	0.87*	.35	−0.31	.34

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

externalizing coping. Condition 2 was significant, $F(4, 56) = 3.00$, $p < .05$ (adjusted $R^2 = .13$) for boys with higher levels of characterological self-blame at Time 1 predicting higher levels of victimization at Time 2. Condition 3 was significant, $F(5, 54) = 2.67$, $p < .001$ (adjusted $R^2 = .13$) for boys with higher levels of characterological self-blame at Time 1 predicting higher levels of victimization at Time 2; however, externalizing coping was not a significant predictor and, therefore, not a mediator. Girls' overall model for Condition 1 was significant, $F(4, 68) = 8.34$, $p < .001$ (adjusted $R^2 = .30$). Higher levels of Time 1 bullying ($B = .20$, $SE = .08$, $p < .05$) and characterological self-blame ($B = .35$, $SE = .12$, $p < .01$) predicted higher levels of externalizing coping. Condition 2 was significant, $F(4, 72) = 16.77$, $p < .001$ (adjusted $R^2 = .47$) for girls with higher levels of characterological self-blame at Time 1 predicting higher levels of victimization at Time 2. Condition 3 was significant, $F(5, 68) = 13.90$, $p < .001$ (adjusted $R^2 = .49$) for girls, again with higher levels of characterological self-blame at Time 1 predicting higher levels of victimization at Time 2; however, externalizing coping was not a significant predictor and, therefore, not a mediator (see Table 6).

Table 6. Regression Analyses for Mediation of Attributions and Victimization by Externalizing, Internalizing, and Social Support Coping Over Time

	Time 2 victimization							
	Boys				Girls			
	Condition 2		Condition 3		Condition 2		Condition 3	
Predictors	B	SE	B	SE	B	SE	B	SE
Externalizing coping as mediator								
Victimization Time 1	0.12	.14	0.12	.14	0.18	.12	0.22	.12
Bullying Time 1	0.09	.25	0.05	.31	0.30	.15	0.24	.19
Characterological self-blame	1.33*	.62	1.24	.62	1.20***	.27	1.21***	.29
Behavioural self-blame	−0.68	.64	−0.69	.64	−0.28	.26	−0.21	.26
Externalizing coping			0.44	.37			−0.07	.28
Internalizing coping as mediator								
Victimization Time 1					0.18	.12	0.18	.12
Bullying Time 1					0.30	.15	0.28	.18
Characterological self-blame					1.20***	.27	1.17***	.28
Behavioural self-blame					−0.28	.26	−0.33	.28
Internalizing coping							0.17	.29
Externalizing coping as mediator								
Victimization Time 1					0.39***	.10	0.42***	.11
Bullying Time 1					0.11	.16	−0.03	.20
Depressive attributional style					0.21**	.06	0.19**	.07
Externalizing coping							0.16	.30
Social support coping as mediator								
Victimization Time 1					0.39***	.10	0.41***	.10
Bullying Time 1					0.11	.16	0.03	.19
Depressive attributional style					0.21**	.06	0.20**	.07
Social support coping							−0.06	.29

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

Internalizing coping mediating self-blame attributions and victimization over time. Condition 1 was significant, $F(4, 56) = 2.97$, $p < .05$ (adjusted $R^2 = .12$) for boys; none of the individual predictors significantly predicted internalizing coping. No other analyses were run. Girls' overall model for Condition 1 was significant, $F(4, 71) = 6.65$, $p < .001$ (adjusted $R^2 = .24$). Higher levels of behavioural self-blame ($B = .29$, $SE = .11$, $p < .05$) predicted higher levels of internalizing coping. Condition 2 was shown previously. Condition 3 was significant, $F(5, 71) = 13.08$, $p < .001$ (adjusted $R^2 = .46$) for girls with characterological self-blame at Time 1 predicting higher levels of victimization at Time 2; however, internalizing coping was not a significant predictor, indicating it is not a mediator (see Table 6).

Revenge coping mediating depressive attributional style and victimization over time. Boys' overall model for Condition 1 was significant, $F(3, 55) = 5.79$, $p < .01$ (adjusted $R^2 = .21$). Higher levels of Time 1 victimization ($B = .12$, $SE = .06$, $p < .05$) and bullying ($B = .31$, $SE = .12$, $p < .01$) predicted higher levels of revenge coping. Boys' overall model for Condition 2 was not significant, $F(3, 60) = 2.57$, $p = .06$ (adjusted $R^2 = .07$). No further analyses were done. Girls' model for Condition 1 was significant, $F(3, 70) = 2.79$, $p < .05$ (adjusted $R^2 = .07$); but none of the individual predictors significantly predicted higher levels of revenge coping. Further analyses were not run.

Externalizing coping mediating depressive attributional style and victimization over time. As Condition 2 was previously shown to be nonsignificant for boys, further analyses were not conducted here. Girls' overall model for Condition 1 was significant, $F(3, 69) = 9.09$, $p < .001$ (adjusted $R^2 = .26$). Lower levels of depressive attributional style ($B = .06$, $SE = .03$, $p < .05$) predicted lower levels of externalizing coping. Condition 2 was significant, $F(3, 73) = 17.40$, $p < .001$ (adjusted $R^2 = .40$) for girls with higher levels of depressive attributional style and victimization at Time 1 predicting higher levels of victimization at Time 2. Condition 3 was significant, $F(4, 69) = 12.32$, $p < .001$ (adjusted $R^2 = .40$) for girls with higher levels of depressive attributional style and victimization at Time 1 predicting higher levels of victimization at Time 2; however, externalizing coping was not a significant predictor and not a mediator (see Table 6).

Social support coping mediating depressive attributional style and victimization over time. Girls' overall model for Condition 1 was significant, $F(3, 72) = 10.69$, $p < .001$ (adjusted $R^2 = .29$). Lower levels of depressive attributional style ($B = -.13$, $SE = .03$, $p < .001$) predicted higher levels of social support coping. Condition 2 was shown previously. Condition 3 was significant, $F(4, 72) = 12.87$, $p < .001$ (adjusted $R^2 = .40$) for girls with higher levels of depressive attributional style and victimization at Time 1 predicting higher levels of victimization at Time 2; however, social support coping was not a significant predictor and cannot be a mediator (see Table 6).

Summary of Longitudinal Results

Higher levels of characterological self-blame and internalizing and distancing coping directly predicted higher levels of victimization over time for boys. For girls, higher levels of characterological self-blame and depressive attributional style, and lower levels of social support coping predicted higher levels of victimization over time. None of the coping styles was a significant mediator.

Discussion

Temporal sequencing among attributions and coping to support Crick and Dodge's (1994) social cognitive theory was not found. Attributions showed stability over time in their relationships to victimization and these relationships generally were not mediated by coping. Some coping styles were directly related to victimization but differed between boys and girls. Coping that related to lower levels of victimization within time was different from coping that was related to lower levels of victimization across time.

The relationships between attributions and victimization remained stable within and across time, although different for boys and girls. Higher levels of victimization were related to characterological self-blaming for both sexes, suggesting these children may be less likely to change their behaviours or try other strategies because characterological qualities are more static and uncontrollable than behavioural features (Graham & Juvonen, 1998). Through intervention, these children could understand that they have the right to be free from abuse and obtain the support required to do so.

A depressive attributional style was related to higher levels of victimization only for girls. Compared to boys, the higher rates of depression reported by adolescent girls in other research (Prinstein, Cheah, & Guyer, 2005) may reflect higher levels of a depressive attributional style found here. The relationship between depressive attributions and victimization was present at the initial assessment and persisted over time. Depressive attributions may place girls at risk for victimization by maintaining anticipatory perceptions that victimization is inevitable. Beck's (Clark, Beck, & Alford, 1999) cognitive model of depression postulates reciprocity whereby depressive attributions lead to negative experiences, confirming cognitive perceptions. These girls may come to expect being victimized, inadvertently signalling peers that they are vulnerable to victimization.

Contrary to attributions, coping styles showed a lack of stability with victimization over time. Only avoidant styles of coping were consistently related to higher levels of victimization within and over time for boys. Avoidant styles (internalizing, externalizing, and distancing coping) manage thoughts and feelings related to the stressor; they do not stop the stressor itself (Causey & Dubow, 1992). Managing feelings rather than stopping the stressor is not a proactive strategy and may not reduce future victimization. Inadvertently, their avoidance may signal a vulnerability to peers by communicating their inability to cope, resulting in continued victimization. Boys may need to engage in more proactive assertive coping to avoid victimization.

Within time, higher levels of victimization in boys also were related to social support and revenge-seeking coping, suggesting ineffective strategies. Although social support seeking protects victimized girls, it does the opposite for boys (Kochenderfer-Ladd & Skinner, 2002), which may reflect the nature of friendships for boys. Boys' friendships are characterized less by intimacy, emotional support, and self-disclosure compared to that of girls (Berndt & Perry, 1986). When boys seek social support, they may not receive the emotional support they need and it may not be a normative behaviour. In addition, revenge was an ineffective strategy in reducing victimization. Previous research has demonstrated that aggressive coping strategies increased the severity of aggression during a bullying episode (Mahady-Wilton, Craig, & Pepler, 2000). None of the coping styles assessed were associated with reduced victimization for boys, whereas some were associated with increased victimization over time. Furthermore, prosocial strategies (e.g., social support seeking) were also ineffective, perhaps because of their stereotypically nonmasculine nature.

Girls also showed differences in coping within and across time. Within time, girls who used avoidant coping reported higher levels of victimization. These girls may

lack the confidence or skills to actively and prosocially address their victimization. The approach coping styles (i.e., social support and conflict resolution) were not related to victimization in the short term; however, social support was related to lower levels of victimization over time. The benefits of social support may emerge over time through the development of interpersonal relationships, characterized by intimacy, support, trust, and communication. In contrast to boys, girls' friendships are characterized by the sharing of thoughts and feelings (Bukowski & Kramer, 1986). Girls may learn that avoidant styles of coping are not effective in reducing victimization, and over time they use their social networks for managing or obtaining support for their victimization.

Children's coping was directly related to their victimization, but social cognitive theory suggests temporal sequencing among attributions, coping, and outcomes. The only support for this theory was found within time, where externalizing coping explained some of the relationship between depressive attributions and higher levels of victimization. According to Beck's (Clark, Beck, & Alford, 1999) cognitive theory, depressive attributions lead to expecting negative experiences. To cope with these expectations, avoidance may occur because of the self-belief in the inability to affect change, while externalizing behaviours are used to manage feelings. These externalizing behaviours may inadvertently signal to peers to increase aggression. Thus, it is perceptions and behavioural enactment based on those beliefs that explains some of the "in the moment" victimization but not victimization over time.

Unlike cross-sectional results, none of the coping styles was a mediator over time, where direct associations more accurately accounted for how these constructs are related. Mediational relationships may be dependent on the unique and complex components of a particular bullying interaction. For example, a coping style (i.e., externalizing behaviour) that works in one interaction may not work with a different peer because it is affected by numerous factors, such as the peer's characteristics or the composition of the peer group. Attributions and coping appear to be related to victimization individually but not interactively. The reciprocal nature of Beck's (Clark, Beck, & Alford, 1999) cognitive theory may best explain these relationships. The current findings did not support a social cognitive theory of mediation over time but do support direct effects of attributions and behavioural enactment on day-to-day experiences.

Although there are many strengths to this study, there are limitations. Mediation may have been difficult to detect because of changing academic years between data collection (grades, classrooms, peer groups), which could impact their social experiences. In addition, our models account for a small proportion of variance in victimization; they do, however, find significant relationships. Future research should be directed at examining other possible social cognitive and behavioural correlates. Finally, data were self-report, and shared method variance may be an issue. Using multiple reporters can reduce biases associated with self-report; however, there is evidence to suggest that children's self-reports have high validity, especially when examined over time.

This study offers a preliminary understanding of the factors related to continued or discontinued victimization. Girls can benefit from social support, but the same is not

necessarily true for boys. This difference calls for more research to learn what we can do to help boys end their victimization experiences. The current study provides hope that for some children some coping styles will result in reduced peer victimization. Future research is required to inform interventions to help children cope more effectively with peer victimization.

Declaration of Conflicting Interests

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Bios

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