

AperTO - Archivio Istituzionale Open Access dell'Università di Torino

The Role of Threat Appraisal in the Relation Between Peer Victimization and Adjustment Problems in Early Italian Adolescents

This is the author's manuscript

Original Citation:

Availability:

This version is available <http://hdl.handle.net/2318/46964> since 2016-01-11T16:34:15Z

Published version:

DOI:10.1111/j.1559-1816.2012.00931.x

Terms of use:

Open Access

Anyone can freely access the full text of works made available as "Open Access". Works made available under a Creative Commons license can be used according to the terms and conditions of said license. Use of all other works requires consent of the right holder (author or publisher) if not exempted from copyright protection by the applicable law.

(Article begins on next page)

The Role of Threat Appraisal in the Relation Between Peer Victimization and Adjustment Problems in Early Italian Adolescents

Fabrizia Giannotta¹ and Michele Settanni, *University of Turin, Torino, Italy*

Wendy Kliewer, *Virginia Commonwealth University*

Silvia Ciairano, *University of Turin, Torino, Italy*

Abstract

Appraisals are a key, but understudied part of the coping process. In the current study, the mediating role of threat appraisals in the relation between relational and physical victimization by peers and internalizing and externalizing problems was investigated in a sample of 155 Italian adolescents (52% female; *M* age = 12.2 years) using a cross-sectional design. Structural equation modeling revealed that appraisals of threat (negative self-evaluation, negative evaluation by others, loss of relationship) mediated associations between peer victimization and internalizing problems. Moreover, peer victimization affected externalizing behaviors, but this link was not mediated by threat appraisal. Implications for interventions with youth are discussed.

During adolescence, peer groups play an important role in social, emotional, and behavioral development. Indeed, at the beginning of adolescence (approximately age 11), about 50% of social activities involve peers (Grusec & Lytton, 1988). Moreover, friendship networks are an important predictor of individual adjustment. Researchers have shown that peers influence a broad array of outcomes, including academic motivation (Kinnerman, 1993), school dropout, premature pregnancy, and delinquency (e.g., Cairns & Cairns, 1994; Xie, Cairns, & Cairns, 2001), alcohol use (Ciairano, Bosma, Miceli, & Settanni, 2008; Engels & ter Bogt, 2001), and other substance use (Brook, Brook, Gordon, Whiteman, & Cohen, 1990; Evans, Dratt, Raines, & Rosenberg, 1988; Kandel, 1978; Newcomb & Bentler, 1986). Therefore, peer group interaction is very relevant for youth well-being.

On the negative side, negative interactions with peers, including exclusion, derision, victimization, and bullying are associated with social and psychological maladjustment (Crick & Bigbee, 1998; Crick, Casas, & Ku, 1999; Crick & Nelson, 2002; Hawker & Boulton, 2000; Rigby, 2003; Sullivan, Farrell, & Kliewer, 2006). These kinds of phenomena are quite widespread during early adolescence and contribute to decrements in youths' psychological well-being. Indeed, it is well known that exclusion from the peer group, being bullied, or being the target of victimization more broadly can lead to internalizing problems, such as symptoms of depression and anxiety (e.g., Prinstein, Cheah, & Guyer, 2005; Troop-

Gordon & Ladd, 2005; van Hoof, Raaijmakers, van Beek, Hale, & Aleva, 2008). Moreover, there is also evidence that victimization is associated with increased levels of externalizing problems, such as aggression and delinquency (e.g., Paul & Cillessen, 2003; Troop-Gordon & Ladd, 2005). Finally, some studies have shown that these social and psychological adjustment difficulties persist into adulthood (Kumpulainen, Raesaenen, & Puura, 2001; Olweus, 1993, 1997). Therefore, victimization effects are an important issue for the well-being of children and youth.

One factor that might account for the association between peer victimization and well-being is *threat appraisal*, which is defined as *primary appraisal* in stress and coping theory (Lazarus & Folkman, 1984). According to Lazarus and Folkman, experiencing *stress* depends on one's cognitive evaluation—or appraisal—of the stressor. Primary appraisal involves anticipating the consequences of the situation in terms of negative and positive outcomes. Primary appraisals are affected by one's goals and values, and result in situations being evaluated as a threat, loss, or challenge. Specifically, *threat appraisals* refer to evaluations of “what is at stake” in the encounter. Threat appraisals are important because they drive coping efforts and reflect what is meaningful to individuals. They are judgments of the consequences of the stressor in terms of what is important to the individual, and thus vary from person to person. According to this perspective, children might appraise peer victimization as threatening, and this would influence their responses to victimization and the psychological consequences of the event.

There is evidence from research on children experiencing different types of stressors that elevated threat is associated with higher levels of adjustment problems. For example, Sandler, Kim-Bae, and MacKinnon (2000) found that higher levels of threat appraisal were associated with depression, anxiety, and conduct problems in children who experienced parental divorce. Their findings mirror a number of studies of responses to parental conflict and divorce indicating that threat appraisals play an important role in children's adjustment (El-Sheikh & Harger, 2001; Grych, Fincham, Jouriles, & McDonald, 2000; Kerig, 1998; Lengua, Sandler, West, Wolchik, & Curran, 1999; Rogers & Holmbeck, 1997; Sheets, Sandler, & West, 1996).

In studies of children's responses to different stressors (e.g., cancer), Fearnow-Kenney and Kliewer (2000) showed that threat appraisals contributed to child- and caregiver-rated adjustment beyond assessments of severity of illness and relapse. In research focused on community violence, Schwab-Stone, Ayers, Kaspro, and Voyce (1995) found that exposure to violence and feeling unsafe (a measure of threat appraisal assessed with four items about safety at home, neighborhood, school, and on the way to school) made independent contributions to

internalizing and externalizing problem behaviors and school achievement. Kliewer and Sullivan (2008) found that threats involving concerns about negative self-evaluation, material loss, or loss of relationships mediated links between exposure to violence at Time 1 and adolescent-rated internalizing adjustment problems 1 year later. Thus, data from the literature regarding responses to distressing events (e.g., divorce, violence) document the relation between children's threat appraisals in response to stress and adjustment.

Some studies have specifically examined the role of threat appraisal in youth victimization problems. For instance, in a retrospective study, Hunter, Mora-Merchán, and Ortega (2004) found that college students with higher levels of threat appraisal related to their experiences of bullying during adolescence perceived higher levels of distress than did students with lower levels of threat appraisal. In another study conducted with children, Hunter, Boyle, and Warden (2006) found that negative appraisals were related to higher levels of negative emotions, such as anger, fear and sadness. Hunter, Boyle, and Warden (2007) also discovered that perceived physical imbalance in power in bullying episodes was associated with higher levels of threat appraisal for boys, but not with higher levels of depressive symptoms.

Finally, some authors have found that overt victimization predicted fear of negative evaluation in a sample of adolescents girls (Storch & Masia-Warner, 2001), and in a sample of Hispanic and African American youth (Storch, Nock, Masia-Warner, & Barlas, 2003). Fear of negative evaluation is a construct that might be compared with threat of negative evaluation by others in the taxonomy proposed by Sheets et al. (1996). In summary, research has shown that threat appraisal is a response to victimization and is associated with negative adjustment.

In spite of these associations, to our knowledge, no study has investigated the possible mediating role of threat appraisal in the context of peer victimization during late childhood and early adolescence. Among the types of threat appraisals identified as salient to youth at this age—such as harm to others, criticism of others, material loss, negative self-evaluations, negative evaluation by others, and rejection by others (e.g., Kliewer, Fearnow, & Walton, 1998; Kliewer & Sullivan, 2008; Sheets et al. 1996)—threat to self might be a particularly important mediator of the relation between peer

victimization and internalizing and externalizing problems. Indeed, concerns about losing relationships with others, being negatively evaluated by others, or being highly self-critical are likely to be more salient than other types of threats (e.g., harm to others, material loss).

These threats to the self may play an important role in adjustment because they are closely linked to adolescents' needs to be accepted by

their peers. Peer victimization may be challenging to youth for many reasons, but a key element of victimization may be the cognitions victimization evokes about threats to acceptance and status within the peer group. Moreover, threats to self have shown the strongest association with adjustment problems in Sheets et al.'s (1996) and Fearnow-Kenney and Klierwer's (2000) investigations. Thus, there is a need to investigate the role of threats to self in the relation between victimization and well-being.

The purpose of the present study is to evaluate threats to the self as a mediator of the relation between physical and relational victimization and internalizing and externalizing problems. We investigated this relation in a sample of early adolescents living in Italy, where peer victimization is quite prevalent. Over one quarter (28%) of the middle school students in one study (Menesini et al., 1997) reported having been victims of bullying. Moreover, there is evidence that direct and indirect victimization is associated with higher levels of anxious and depressive symptoms and somatic complaints among Italian early adolescents (Baldry & Winkel, 2004). Using cross-sectional design, we tested the following:

Hypothesis. Experiences of peer victimization, both relational and physical, will be associated with threat appraisals (specifically, threats to the self), which, in turn, will be associated with higher levels of adjustment problems.

Method

Participants

Study participants were 155 Caucasian adolescents (81 females, 74 males) who were ages 12 to 13 years ($M = 12.2$ years, $SD = 0.5$), attending a middle school in Turin, Italy. The students were attending the second year of Italian middle school (7th grade). Most of the students' parents (64% of fathers, 72% of mothers) had a high school diploma. Most parents (88% of fathers, 50% of mothers) were employed full-time. Regarding family structure, 87% of the parents were married and living together, 10% were separated or divorced, and 3% were widowers.

Procedure

We conducted the study in a middle school in Turin, Italy. Parents

provided consent for the students to participate, and the students assented to participate in accordance with Italian law and the ethical code of the Professional Psychologists Association in Italy.

Students completed questionnaires, which were distributed by trained research staff during classroom time. Questionnaires took approximately 45 min to complete. We assured the adolescents of confidentiality and anonymity. Teachers were not present in the classroom during the questionnaire administration. No incentives were offered for participation; however, 100% of the youth completed the questionnaires.

Measures

Peer victimization. We assessed relational and physical victimization by peers using a revised version of the Social Experience Questionnaire (SEQ; Crick & Grotpeter, 1995; for an Italian version, see Gini, 2008). The questionnaire asks respondents to indicate the frequency of certain behaviors in the past 30 days. The items were rated on a 5-point scale ranging from 1 (*Never*) to 5 (*20 or more times*). We changed the wording of several items to make them more fitting for middle school students.

The scale consists of two subscales: relational victimization and physical victimization. The relational subscale (6 items) assesses the frequency of victimization experiences focused on damaging or manipulating the victims' social relationships (e.g., "Been left out on purpose by other kids when it is time to do an activity"). We added the item "Had someone start a rumor about you." The eight-item Physical Victimization subscale includes items assessing experiences of being physically harmed or threatened with physical harm by a peer. These items include "being hit, pushed, or shoved," "being threatened with physical harm," "being threatened with a weapon," "another student asking you to fight," "being yelled at by other kids," "being hurt in their feelings," and "being encouraged to fight by other students." Higher scores indicate higher levels of peer victimization. Alphas for these subscales were .78 and .85, respectively, for relational victimization and physical victimization.

Threat appraisal. We used three 4-item subscales in the current study that assess threats to the self from a 24-item measure of threat appraisal, the Threat Appraisals of Negative Events Scale (Kliewer & Sullivan, 2008). These subscales are negative self-evaluation (Cronbach's $\alpha = .68$), negative evaluation by others ($\alpha = .64$), and loss of relationship ($\alpha = .73$). Each stem in the threat appraisal measure was preceded by "When you have experienced problems with peers, how much do you usually think that. . . ." Items were rated on a 4-point scale ranging from 1 (*not at*

all) to 4 (*a lot*). Higher scores reflect more threat. Validation work on the measure indicates that these three subscales were indicators of a latent construct of threat to self, which, in turn, is associated with adjustment problems, as suggested by theory (Kliewer & Sullivan, 2008). The total Cronbach's alpha for threat to self was .78. This measure was forward-backward-forward linguistically validated into Italian.

Adjustment problems. Internalizing symptoms were assessed with the 27-item Children's Depression Inventory (CDI; Kovacs, 1981, 1985; Italian validated version: Camuffo, Cerutti, Lucarelli, & Mayer, 1988) and the 28-item Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), both reported by adolescents. The CDI is a widely used and highly valid and reliable measure of depressive symptomatology. Cronbach's alpha for the current study was .88. Higher scores indicate higher levels of depressive symptoms. The RCMAS assesses children's emotional and physical symptoms of anxiety. The RCMAS was forward-backward-forward linguistically validated into Italian. Cronbach's alpha for the current study was .83. Higher scores indicate greater anxiety.

Externalizing symptoms were assessed with the seven-item physical aggression subscale, the five-item nonphysical aggression subscale, and the eight-item delinquency subscale from the Problem Behavior Frequency Scales (PBFS; Farrell, Kung, White, & Valois, 2000). For all items, students indicated on a 6-point scale ranging from 1 (*Never*) to 3 (*3–5 times*) to 6 (*20 or more times*) how frequently they had engaged in each behavior in the past 30 days. Cronbach's alphas in the current study were .82, .84, and .70, respectively, for physical aggression, nonphysical aggression, and delinquency, with higher scores indicating greater levels of aggression or delinquency. The PBFS was forward-backward-forward linguistically validated into Italian.

Results

Descriptive Analyses

Table 1 presents descriptive information on and correlations among the study variables. We computed correlation coefficients to assess the hypothesized relationships between the study variables: victimization, threat appraisal, and externalizing and internalizing symptoms. Victimization variables were positively correlated with all indicators of threat appraisal and adjustment problems. Threat appraisal showed significant positive correlations with internalizing problems, and moderate or nonsignificant correlations with variables indicating externalizing problems.

Table 1

Intercorrelations Among and Descriptive Information on Peer Victimization, Threat Appraisals, and Internalizing and Externalizing Problems

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Relational victimization	0.32	0.49	—								
2. Overt victimization	0.43	0.59	.70**	—							
3. Threat of negative evaluation by other	6.95	2.40	.39**	.30**	—						
4. Threat of negative self-evaluation	7.85	2.55	.25**	.24**	.44**	—					
5. Threat of loss of relationships	6.26	2.66	.39**	.39**	.35**	.20*	—				
6. Depressive symptoms	1.01	6.70	.33**	.23**	.17*	.27**	.19*	—			
7. Anxious symptoms	8.43	4.88	.35**	.23**	.32**	.35**	.19	.69**	—		
8. Physical aggression	0.39	0.68	.29**	.46**	.03	.00	.15	.19*	.02	—	
9. Nonphysical aggression	0.67	0.79	.33**	.54**	.06	.17*	.11	.28**	.25**	.56**	—
10. Delinquency	0.41	0.61	.45**	.51**	.14	.18*	.22**	.35**	.19*	.65**	.63**

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

Data Analysis

We tested the proposed mediating role of threat appraisal in the relationship between victimization and internalizing and externalizing symptoms using the criteria described by Baron and Kenny (1986) and Holmbeck (1997). In order to demonstrate mediation, the following conditions should be met: (a) the predictor variable must have an effect on the mediator; (b) the mediator variables must have an effect on the outcome variables when controlling for predictor variables; and (c) the effect of the predictor variable on the outcome must be significantly less when the mediator is included in the model than when it is not in the model. In order to control for the effect of gender on the study variables, we included the gender variable in the model as a covariate. We used structural equation modeling (LISREL 8.7; Jöreskog & Sörbom, 2004) to assess mediation.

We conducted mediation analysis as follows (cf. Holmbeck, 1997; Hoyle & Smith, 1994): We evaluated the fit of the direct effect model (victimization → symptoms) to verify the influence of the predictor on the outcome variables. If this model had a satisfactory fit, we then assessed the fit of the full model, including the mediator. Theoretically, if mediation does exist, the full model should provide an adequate fit, and the coefficients of the direct path (victimization → symptoms), the paths from the predictor variable to the mediator (victimization → threat appraisal), and the paths from the mediator to the outcome variables (externalizing and internalizing problems) should all be significant and in the directions predicted. A mediation effect is present if, when the mediating paths are included, the overall fit of the model improves and the paths from predictor to outcomes are lowered (Hoyle & Smith, 1994). If the direct effects between the predictor and the outcome are no longer statistically significant, the mediation effect is said to be a *full mediation*. If the significance of the direct paths is lowered but still significant, the mediation effect is said to be a *partial mediation*. We controlled for gender in all models.

For the victimization measure, we constructed a latent variable with relational victimization and physical victimization as indicators. We used three subscales of the threat appraisal measure (negative self-evaluation, negative evaluation by others, and loss of relationship) to construct the latent threat appraisal factor. We used the CDI and the RCMAS scores as observed variables for the internalizing problems latent factor. Finally, we constructed a latent factor of externalizing problems from the scores of three subscales from the PBFS (physical aggression, nonphysical aggression, and delinquency).

First, we tested the direct effect of victimization on internalizing and externalizing symptoms in a model. After we ascertained the significance of those relationships, we tested the model (victimization and threat appraisal → adjustment). Then, we assessed the significance and direction of the model paths. The final step was to assess the fit of the same models under two different conditions: (a) when the victimization → adjustment path was constrained to 0; and (b) when the victimization → adjustment path was not

constrained. The conceptual models appear in Figure 1.

With regard to model indexes of fit, we will report chi square, root mean square error of approximation (RMSEA), and comparative fit index (CFI). A model was considered to fit well when the proportion between chi square and degrees of freedom was less than 3 (Jöreskog & Sörbom, 1993). Moreover, the RMSEA value, which is a measure of approximate fit in the population, is good when it is less than .05, adequate when it is between .05 and .10 and poor when it is greater than .10 (Hair, Anderson, Tatham, & Black, 1998). Finally, CFI (Bentler, 1990) should be greater than .90.

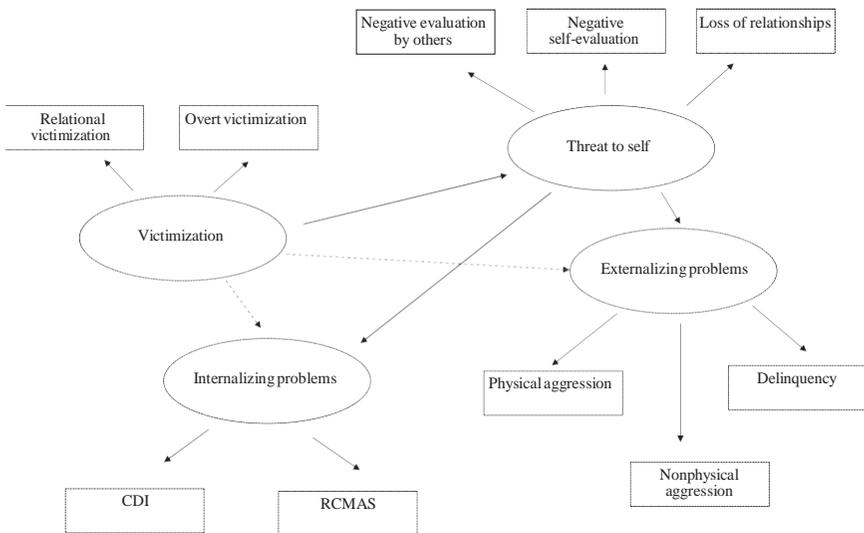


Figure 1. Conceptual model of relationships among victimization, threat appraisal, externalizing and internalizing symptoms. CDI = Children’s Depression Inventory (Kovacs, 1981); RCMAS = Revised Children’s Manifest Anxiety Scale (Reynolds & Richmond, 1978).

Mediation Analyses: Victimization, Threat Appraisal, and Adjustment

Tables 2 and 3 present the results of all of the steps in the analysis. The first step to test mediation was to assess the relation between victimization and internalizing and externalizing problems. The second step consisted of testing the victimization and threat appraisal internalizing or externalizing symptoms model, without the direct path from victimization to adjustment.

Table 2

Factor Loadings for Observed Variables on Latent Factors in the Victimization → Threat Appraisal → Adjustment Model (Controlling for Gender)

Model: Peer Victimization → Threat Appraisal → Internalizing Problems	Peer victimization	Threat appraisal	Internalizing problems	Externalizing problems
1. Relational victimization	.70			
2. Overt victimization	1.00			
3. Negative evaluation by others		.71		
4. Negative self-evaluation		.62		
5. Loss of relationship		.43		
6. Depressive symptoms			.82	
7. Anxious symptoms			.85	
8. Physical aggression				.83
9. Nonphysical aggression				.81
10. Delinquency				.71

Note. All of the factor loadings were significant at $p < .01$.

Table 3

Standardized Path Coefficients Between Victimization, Threat Appraisal, and Internalizing and Externalizing Problems (Controlling for Gender)

	Threat appraisal	Internalizing problems	Externalizing problems
Step 1			
Peer victimization		.48**	.77**
Step 2			
Peer victimization		.23*	.75**
Threat appraisal		.54**	-.05
Step 3 (full model)			
Peer victimization	.60**	.14	.78**
Threat appraisal		.52**	-.06

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

For the third step, we added in the model a path from victimization to threat appraisal to see whether the fit would change significantly. If this was not the case and the path from victimization to internalizing or externalizing symptoms was not significant, then the conditions for mediation were met.

Regarding the first step of the procedure, the model had an adequate fit, $c^2(16) = 29.68$, $p = .02$ (RMSEA = .08, CFI = .98), with significant paths both from victimization to externalizing problems (standardized path = .77, $p < .01$) and from victimization to internalizing symptoms (standardized path = .48, $p < .01$). Given that the model adequately fit the data—and the sizes, directions, and significances of the path coefficients indicate that the requirement of the significance of the influence of the predictor on the outcomes was met—we proceeded to the second step, testing the model with both effects of victimization and threat appraisal on outcomes. This model showed a worse fit, $c^2(38) = 107.18$, $p < .01$ (RMSEA = .11, CFI = .92). The path from victimization to internalizing problems (standardized path = .23, $p < .05$) and externalizing problems (standardized path = .75, $p < .01$) was significant, and the path from threat appraisal to internalizing problems was significant (standardized path = .54, $p < .01$), while the effect of threat appraisal on externalizing problems was not significant (standardized path = -.05, *ns*). Thus, the second step for mediation was met for internalizing symptoms, as hypothesized. However, contrary to our expectations, the relation between victimization and externalizing symptoms was not mediated by threat to self.

Finally, we tested the full model, including the mediator variable. The full model provided a good fit, $c^2(37) = 77.97$, $p < .01$ (RMSEA = .08, CFI

= .96). The path coefficient from victimization to externalizing problems was still significant (standardized path = .78, $p < .01$), while the path from victimization to internalizing symptoms was not significant (standardized path = .14, *ns*). At the same time, the path from victimization to threat was positive and significant (standardized path = .60, $p < .01$). Additionally, the path from threat appraisal to internalizing symptoms was positive and significant (standardized path = .54, $p < .01$), while the path connecting threat appraisal to externalizing problems was not significant (standardized path = -.06, *ns*). According to our hypothesis, these results indicate the presence of a full mediational effect of the threat appraisal on internalizing symptoms (Sobel test for indirect effect = 3.19, $p < .001$). The effect that victimization exerted on internalizing symptoms was not direct, but was fully mediated by threat appraisal. In contrast to our expectations, externalizing problems were directly influenced by victimization, with no mediational effects exerted by threat appraisal.

Discussion

The present study tested whether threats to the self (e.g., concern about loss of relationships, negative evaluation of the self or by others) accounted for the relation between victimization by peers and adjustment problems in early adolescents. More specifically, we hypothesized that experiences of peer victimization would be associated with threat appraisals, which, in turn, would be associated with higher levels of adjustment problems. We found that threats to self completely mediated the relation between victimization and internalizing problems; specifically, symptoms of depression and anxiety. On the contrary, threat to self did not mediate the relation between peer victimization and externalizing problems; namely, aggression and delinquency. In other words, the ways youth appraise—that is, cognitively evaluate—their peer victimization experiences help to explain why they demonstrate lower or higher depressive and anxious symptoms, but not why they show lower or higher levels of physical and nonphysical aggression and delinquency in response to peer victimization. Thus, our data indicate that threats to self are an important key to understanding the effects of victimization on internalizing problems.

Other studies have examined possible mediators of the relation between peer victimization and internalizing problems, focusing especially on individual social-cognitive processes. For instance, Troop-Gordon and Ladd (2005) discovered in a study conducted with children between the ages of 9 and

11 that social self-acceptance and peer beliefs were two factors that mediated the relation between victimization and internalizing symptoms. Victimized children decreased their social self-acceptance and increased the perception of peers as unfriendly. This, in turn, raised the level of internalizing problems. van Hoof et al. (2008) found that peer victimization caused changes in youth personal identity, which increased depressive symptoms. Indeed, adolescents victimized by peers had more difficulties amalgamating school, home, and leisure-time identities into one profile. In turn, this was one of the determinants of depressive symptoms. Høglund and Leadbeater (2007) underlined in their study with youth that social-cognitive processes—particularly social perspective awareness—were, in part, responsible for the effect of peer victimization on depressive and anxiety problems. In other words, relational and physical victimization in youth decreased awareness of peers' perspectives. This, in turn, increased depressive and anxiety symptoms. In summary, there is consensus regarding the possible mediating role of individual features and social-cognitive processes in the relation between victimization and internalizing problems. In this study, we highlighted that one of the cognitive process involved in this relation might be threat appraisal related to self.

We also found that even though victimization affected externalizing problems, this effect was not mediated by the role of threats to self. Other studies have pointed to different mechanisms for this association. For instance, Troop-Gordon and Ladd (2005) found that the relation between victimization and externalizing problems in boys was not mediated by self-evaluation, but by children's perceptions of the social disposition of their peers. In other words, initial hostile peers' beliefs mediated the relation between initial victimization in boys and externalizing problems. However, this was not true for girls. In another study, Høglund and Leadbeater (2007) found that hostile attributions to peers was a mediator of the effects of victimization. Specifically, they found that victimization increased rates of physical aggression through hostile attributions, interpersonal skills, and social perspective awareness. That is, victimized youth increased their hostile interpretation of peers' actions, became less aware of the peers' thoughts and feelings in conflicts, and decreased interpersonal skills. These elements, in turn, were responsible for an increase in the level of physical aggression. These studies suggest that the mechanisms that link victimization with externalizing problems might be related to a hostile perception of others. This interpretation is in line with social information processing theory (for a review, see Crick & Dodge, 1994). Social information processing theory (Crick & Dodge, 1994, 1996) postulates that aggressive responses are a consequence of a hostile attributional bias in the interpretation of others' behaviors.

The current work sheds light on the mechanisms by which negative events in adolescence (e.g., victimization) affect youths' well-being. Moreover, the current study extends work on threat appraisals conducted with youth coping with cancer (Fearnow-Kenney & Kliewer, 2000), parental divorce and conflict (Sheets et al., 1996; Xin, Chi, & Yu, 2009), and community violence (Kliewer & Sullivan, 2008) in the realm of peer victimization. Thus, threats to self are a key mechanism explaining the relation between various stressful events for children, such as peer victimization, cancer, interparental problems, community violence, and the development of internalizing symptoms. The present study has two key limitations: its cross-sectional design and the relatively small sample size. The cross-sectional nature of the study makes it impossible to demonstrate causal association among variables. Moreover, it precludes us from investigating the long-term effects of peer victimization on the development of threat appraisals, which, in turn, lead to future adjustment problems. It is possible that both acute and chronic peer victimization experiences contribute to threat appraisal. The next step in this line of research is to investigate these associations over a period of time. For instance, it might be useful to know whether being victimized in childhood might contribute to the tendency of evaluate events negatively in early adolescence, and whether this tendency would increase internalizing and externalizing symptoms in young adulthood. The relatively small sample size and the fact that all participants resided in one region of Italy also makes it difficult to generalize the present results to different populations. Moreover, the small sample did not allow us to conduct analyses by gender. This might be relevant, considering the number of studies that have shown differences in the effects of victimization on boys and girls (e.g., Paquette & Underwood, 1999; Sullivan et al., 2006; Troop-Gordon & Ladd, 2005). Thus, further studies might take into account gender differences and longitudinal associations.

In spite of its limitations, the present study explicated at least one process underlying the relationship between victimization and negative outcomes in early adolescents. Understanding the role of threat appraisals might be useful in designing programs to counteract the negative consequences of victimization. For instance, it might be useful to promote a positive reframing of the situation. Reframing would be aimed at facilitating the evaluation of the situation as a challenge, which is related to the use of active coping and to fewer internalizing problems among children experiencing negative life events (e.g., Folkman & Moskowitz, 2000). Indeed, there are studies that have testified regarding the utility of teaching and supporting positive appraisal among youth to enable them to cope with depression and other internalizing problems

(Fava, Rafanelli, Cazzaro, Conti, & Grandi, 1998; Fava et al., 2004). Moreover, Tugade and Fredrickson (2004) showed that highly resilient people were more able than were individuals low in resilience to experience positive emotions, even under conditions of threat appraisal. Tugade and Fredrickson suggested that promoting positive appraisal styles might be of particular help for individuals low in resilience. Thus, there is already some evidence in the literature that positive reframing of a negative situation might decrease negative psychological outcomes.

References

- Baldry, A. C., & Winkel, F. W. (2004). Mental and physical health of Italian youngsters directly and indirectly victimized at school and at home. *International Journal of Forensic Mental Health, 3*, 77–91.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238–246.
- Brook, J. S., Brook, D. W., Gordon, A. S., Whiteman, M., & Cohen, P. (1990). The psychosocial etiology of adolescent drug use: A family interactional approach. *Genetic, Social, and General Psychology Monographs, 116*, 111–267.
- Cairns, R. B., & Cairns, B. D. (1994). *Lifelines and risks: Pathways of youth in our time*. New York: Cambridge University Press.
- Camuffo, M., Cerutti, R., Lucarelli, L., & Mayer, R. (1988). Il CDI (Children's Depression Inventory) nella scuola media: Indagine psicometrica [The CDI (Children's Depression Inventory) in the middle school: A psychometric study]. *Bollettino di Psicologia Applicata, 185*, 37–46.
- Ciairano, S., Bosma, H., Miceli, R., & Settanni, M. (2008). Adolescent substance use in two European countries: Relationships with psychosocial adjustment and activities. *International Journal of Clinical and Health Psychology, 1*, 119–138.
- Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multi-informant approach. *Journal of Consulting and Clinical Psychology, 66*, 337–347.
- Crick, N. R., Casas, J. F., & Ku, H. C. (1999). Relational and physical forms of peer victimization in preschool. *Developmental Psychology, 35*, 376–385.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101.
- Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development, 67*, 993–1002.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social psychological adjustment. *Child Development, 66*, 337–347.
- Crick, N. R., & Nelson, D. A. (2002). Relational and physical victimization within friendships: Nobody told me there'd be friends like these. *Journal of Abnormal Child Psychology, 30*, 599–607.
- El-Sheikh, M., & Harger, J. (2001). Appraisals of marital conflict and chil-

- dren's adjustment, health, and physiological reactivity. *Developmental Psychology*, *37*, 875–885.
- Engels, R., & ter Bogt, T. (2001). Influences of risk behaviors on the quality of peer relations in adolescence. *Journal of Youth and Adolescence*, *30*, 675–695.
- Evans, R. I., Dratt, L. M., Raines, B. E., & Rosenberg, S. S. (1988). Social influences on smoking initiation: Importance of distinguishing descriptive versus mediating process variables. *Journal of Applied Social Psychology*, *18*, 925–943.
- Farrell, A. D., Kung, E. M., White, K. S., & Valois, R. (2000). The structure of self-reported aggression, drug use, and delinquent behaviors during early adolescence. *Journal of Clinical Child Psychology*, *29*, 282–292.
- Fava, G. A., Rafanelli, C., Cazzaro, M., Conti, S., & Grandi, S. (1998). Well-being therapy: A novel psychotherapeutic approach for residual symptoms of affective disorders. *Psychological Medicine*, *28*, 475–480.
- Fava, G. A., Ruini, C., Rafanelli, C., Finos, L., Conti, S., & Grandi, S. (2004). Six-year outcome of cognitive behavior therapy for prevention of recurrent depression. *American Journal of Psychiatry*, *161*, 1872–1876.
- Fearnow-Kenney, M. D., & Kliwer, W. (2000). Threat appraisal and adjustment among children with cancer. *Journal of Psychosocial Oncology*, *18*, 1–17.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist*, *55*, 647–654.
- Gini, G. (2008). Associations among overt and relational victimization and adolescents' satisfaction with friends: The moderating role of the need for affective relationships with friends. *Journal of Youth and Adolescence*, *37*, 812–820.
- Grusec, J. E., & Lytton, H. (1988). *Social development: History, theory, and research*. New York: Springer.
- Grych, J. H., Fincham, F. D., Jouriles, E. N., & McDonald, R. (2000). Interparental conflict and child adjustment: Testing the mediational role of appraisals in the cognitive-contextual framework. *Child Development*, *71*, 1648–1661.
- Hair, J. F., Anderson, R. E., Tatham, R., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hawker, D. S. L., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychological maladjustment: A meta-analytic review of cross sectional studies. *Journal of Child Psychology and Psychiatry*, *41*, 441–455.
- Hoglund, W. J., & Leadbeater, B. J. (2007). Managing threat: Do social-cognitive processes mediate the link between peer victimization and adjustment problems in early adolescence? *Journal of Research on Ado-*

lescence, 17, 525–540.

- Holmbeck, G.N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65, 599–610.
- Hoyle, R. H., & Smith, G. T. (1994). Formulating clinical research hypotheses as structural equation models: A conceptual overview. *Journal of Consulting and Clinical Psychology*, 62, 429–440.
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2006). Help seeking amongst child and adolescent victims of peer-aggression and bullying: The influence of school-stage, gender, victimisation, appraisal, and emotion. *British Journal of Educational Psychology*, 74, 375–390.
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2007). Perceptions and correlates of peer-victimization and bullying. *British Journal of Educational Psychology*, 77, 797–810.
- Hunter, S. C., Mora-Merchán, J., & Ortega, R. (2004). The long-term effects of coping strategy use in victims of bullying. *Spanish Journal of Psychology*, 7, 3–12.
- Jöreskog, K., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Chicago: Scientific Software.
- Jöreskog, K. G., & Sörbom, D. (2004). *LISREL 8.7: User's reference guide*. Chicago: Scientific Software, Inc.
- Kandel, D. B. (1978). Homophily, selection, and socialization in adolescent friendships. *American Journal of Sociology*, 84, 427–436.
- Kerig, P. K. (1998). Moderators and mediators of the effects of interparental conflict on children's adjustment. *Journal of Abnormal Child Psychology*, 26, 199–212.
- Kindermann, T. A. (1993). Natural peer groups as contexts for individual development: The case of children. *Developmental Psychology*, 29, 970–977.
- Kliewer, W., Fearnow, M. D., & Walton, W. N. (1998). Dispositional, environmental, and context-specific predictors of children's threat appraisals in everyday stressful situations. *Journal of Youth and Adolescence*, 27, 83–100.
- Kliewer, W., & Sullivan, T. N. (2008). Community violence exposure, threat appraisal, and adjustment in adolescents. *Journal of Clinical Child and Adolescent Psychology*, 37, 860–873.
- Kovacs, M. (1981). Rating scales to assess depression in school-age children. *Acta Paedopsychiatrica*, 46, 305–315.
- Kovacs, M. (1985). The Children's Depressive Inventory (CDI). *Psychopharmacology Bulletin*, 21, 995–998.

- Kumpulainen, K., Raesaenen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior, 27*, 102–110.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lengua, L. J., Sandler, I. N., West, S. G., Wolchik, S. A., & Curran, P. J. (1999). Emotionality and self-regulation, threat appraisal, and coping in children of divorce. *Development and Psychopathology, 11*, 15–37.
- Menesini, E., Eslea, M., Smith, P. K., Genta, M. L., Giannetti, E., Fonzi, A., et al. (1997). Cross-national comparison of children's attitudes towards bully/victim problems in school. *Aggressive Behavior, 23*, 245–257.
- Newcomb, M. D., & Bentler, P. M. (1986). Frequency and sequence of drug use: A longitudinal study from early adolescence to young adulthood. *Journal of Drug Education, 16*, 101–120.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Williston, VT: Blackwell.
- Olweus, D. (1997). Bully/victim problems in school: Facts and intervention. *European Journal of Psychology of Education, 12*, 495–510.
- Paquette, J. A., & Underwood, M. K. (1999). Gender differences in young adolescents' experiences of peer victimization: Social and physical aggression. *Merrill-Palmer Quarterly, 45*, 242–266.
- Paul, J. J., & Cillessen, A. H. N. (2003). Dynamics of peer victimization in early adolescence: Results from a four-year longitudinal study. *Journal of Applied School Psychology, 19*, 25–43.
- Prinstein, M. J., Cheah, C. S. L., & Guyer, A. E. (2005). Peer victimization, cue interpretation, and internalizing symptoms: Preliminary concurrent and longitudinal findings for children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 34*, 11–24.
- Reynolds, C. R., & Richmond, B. O. (1978). "What I think and feel": The revised Children's Manifest Anxiety Scale. *Journal of Abnormal Psychology, 6*, 271–280.
- Rigby, K. (2003). Consequences of bullying in school. *Canadian Journal of Psychiatry, 48*, 583–590.
- Rogers, M. J., & Holmbeck, G. N. (1997). Effects of interparental aggression on children's adjustment: The moderating role of cognitive appraisal and coping. *Journal of Family Psychology, 11*, 125–130.
- Sandler, I. N., Kim-Bae, L. S., & MacKinnon, D. (2000). Coping and negative appraisal as mediators between control beliefs and psychological symptoms in children of divorce. *Journal of Clinical Child Psychology, 29*, 336–347.
- Schwab-Stone, M. E., Ayers, T. S., Kaspro, W., & Voyce, C. (1995). No safe haven: A study of violence exposure in an urban community. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1343–

- Sheets, V., Sandler, I. N., & West, S. G. (1996). Appraisals of negative events by preadolescent children of divorce. *Child Development, 67*, 2166–2182.
- Storch, E. A., & Masia-Warner, C. (2001). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence, 27*, 351–362.
- Storch, E. A., Nock, M. K., Masia-Warner, C., & Barlas, M. E. (2003). Peer victimization and social-psychological adjustment in Hispanic and African-American children. *Journal of Child and Family Studies, 12*, 439–452.
- Sullivan, T. N., Farrell, A. D., & Kliewer, W. (2006). Peer victimization in early adolescence: Association between physical and relational victimization and drug use, aggression, and delinquent behaviors among urban middle school students. *Development and Psychopathology, 18*, 119–137.
- Troop-Gordon, W., & Ladd, G. W. (2005). Trajectories of peer victimization and perceptions of the self and schoolmates: Precursors to internalizing and externalizing problems. *Child Development, 76*, 1072–1091.
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 16*, 320–333.
- van Hoof, A., Raaijmakers, Q. A. W., van Beek, Y., Hale, W. W., III, & Aleva, L. (2008). A multi-mediation model on the relations of bullying, victimization, identity, and family with adolescent depressive symptoms. *Journal of Youth and Adolescence, 37*, 772–782.
- Xie, H., Cairns, B. D., & Cairns, R. B. (2001). Predicting teen motherhood and teen fatherhood: Individual characteristics and peer affiliations. *Social Development, 10*, 488–511.
- Xin, Z., Chi, L., & Yu, G. (2009). The relationship between interparental conflict and adolescents' affective well-being: Mediation of cognitive appraisal and moderation of peer status. *International Journal of Behavioral Development, 33*, 421–429.