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# Community Violence Exposure, Threat Appraisal, and Adjustment in Adolescents

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## Abstract

Validity data are presented for a new measure of threat appraisals in response to community violence. Adolescents (*N*=358; 45% male; 91% African American, *M*=12.10 years, *SD*=1.63) and their maternal caregivers participated in two waves of a longitudinal interview study focused on the consequences of exposure to community violence. Structural equation modeling revealed that a six-factor correlated model best fit the data, indicating that the six subscales of the threat appraisal measure represent distinct but related constructs. The factor structure was invariant across age and gender. Exposure to violence was associated prospectively with caregiver- and adolescent-rated adjustment problems. Each of the six threat appraisals mediated links between exposure to violence at Wave 1 and adolescent-rated internalizing adjustment problems 1 year later.

Considerable evidence demonstrates that exposure to community violence, defined as experiencing, seeing, or hearing about violence in one's home, school, or neighborhood, can lead to adjustment difficulties in youth. Literature reviews (e.g., Lynch, 2003; Margolin & Gordis, 2000) indicate consistent associations between experiencing or witnessing community violence (both acute and chronic exposure) and academic difficulties, aggressive and delinquent behavior, drug use, and internalizing problems, including anxiety, depression, and posttraumatic stress. Despite consistent links between exposure to community violence and adjustment, individuals vary markedly in the degree to which community violence is related to adjustment problems.

Most literature on individual variability in response to community violence focuses on how youth cope—that is, the cognitive and behavioral strategies they use to manage their responses to community violence (e.g., Dempsey, 2002; Flannery, Singer, & Wester, 2003; Rasmussen, Aber, & Bhana, 2004; Rosario, Salzinger, Feldman, & Ng-Mak, 2003). Although this focus produced key information regarding the role of coping behaviors in the relation between community violence exposure and adjustment problems, this singular focus on coping behaviors ignores a critical aspect of the coping process; namely, appraisals of a stressful situation. Based on Lazarus and Folkman's (1984) theory of stress processing, researchers demonstrated that youth cognitively process the experience of violence exposure differently (e.g., Kliewer, Lepore, Oskin, & Johnson, 1998; Schwartz & Proctor, 2000), and its impact is



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determined in part by adolescents' appraisals of the negative implications violence exposure has for their well-being.

The central aim of this study was to describe the development and initial validation of a threat appraisal measure in response to community violence. To our knowledge, no measures of threat appraisals in response to exposure to community violence exist, and this measurement gap has resulted in a limited focus on this important aspect of the stress process. Well-validated measures of threat appraisals in response to other life stressors exist (e.g., divorce; Sheets, Sandler, & West, 1996) but do not capture threats that are quite salient for youth exposed to community violence. For example, concerns about being physically harmed are not reflected in current measures of threat appraisal but may be quite salient for youth exposed to community violence (cf. Schwab-Stone, Ayers, Kasprow, & Voyce, 1995).

## COGNITIVE APPRAISALS AND THE STRESS AND COPING PROCESS

In their seminal work, Lazarus and Folkman (1984) highlighted the role of cognitive appraisals in the stress-coping process. Specifically, these authors suggest that appraisals (and coping) occurred in response to a specific internal or external demand. That is, appraisals were by definition situational, versus dispositional, although more enduring qualities of an individual affected situational evaluations. Lazarus and Folkman (Lazarus, 1991) theorized that threat appraisals are important because they (a) "drive" coping efforts, (b) are implicated in a wide range of adjustment difficulties, and (c) reflect the meaning and importance individuals attach to stressful events. This latter point is particularly relevant when thinking about adolescents who are exposed to community violence, as threat appraisals can help us both understand *why* events are stressful for adolescents and learn more about the cognitive processes linked to violence exposure that need to be targeted to reduce adjustment difficulties.

When evaluating the potential threat of a stressful event, individuals focus on the ways this event may threaten their identity, values, and goals (Lazarus & Folkman, 1984). In their work with adults, Folkman and colleagues (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Folkman, Lazarus, Gruen, & DeLongis, 1986) asked individuals what was at stake in a *specific* stressful encounter, and we have mirrored that procedure in our study. Examples of salient threats identified by Folkman and colleagues included threats to self-esteem, concerns about a loved one's well-being, not attaining a goal, financial strain, harm to one's physical well-being, and losing respect for someone else. Subsequent work with children experiencing marital discord, which is the context in which the majority of work on threat appraisals has been conducted, has identified similar threat appraisals, including concerns about harm to others, criticism of others, material loss, negative self-valuation, negative evaluation by others, and rejection by others (Sheets et al., 1996). This work has shown that youth vary in their levels of threat appraisal in response to similar types of life events. Further, the various types of threat appraisals in response to different types of life stressors including childhood cancer and marital discord are differentially associated with maladaptive coping and adjustment difficulties (El-Sheikh & Harger, 2001; Fearnow-Kenney & Kliewer, 2000; Grych, Fincham, Jouriles, & McDonald, 2000; Kerig, 1998; Lengua, Sandler, West, Wolchik, & Curran, 1999; Rogers & Holmbeck, 1997; Sheets et al., 1996).

Similarly, violence exposure may have many different meanings for an individual child. For example, witnessing a mugging near one's home may evoke a sense of concern about risk of physical harm to oneself for one adolescent, concern about others' well-being for another adolescent, and a sense of loss of mobility because of safety concerns for another. Being threatened with physical harm might elicit concerns about negative evaluation by others for some youth but negative self evaluation by other youth. As demonstrated in prior research, different types of threat appraisals may be associated with differing types and intensity of affect

or coping behaviors and may lead to variations in adjustment difficulties. Although threat appraisals are made in response to a specific event, at their core they reflect broader ways of engaging with the world (Lazarus & Folkman, 1984). This theoretical conceptualization is consonant with our own and others' (e.g., Sheets et al., 1996) thinking about the measurement and meaning of threat appraisals. Thus, youth's specific threat appraisals represent broader ways that youth appraise violence and patterns of negative appraisals may be linked to adjustment difficulties.

## THE ROLE OF THREAT APPRAISALS IN YOUTH'S ADJUSTMENT TO STRESSFUL SITUATIONS

Most work on threat appraisals in youth has examined the independent contributions of threat appraisals to adjustment difficulties over that of traditional measures of stress. For example, threat appraisals contributed to adjustment problems cross-sectionally and longitudinally after accounting for stress in a sample of children experiencing parental divorce. In a sample of youth with 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. Schwab-Stone et al. (1995), in a study of more than 2,000 middle school students, found that violence exposure and feeling unsafe (a measure of threat appraisal assessed with four items about safety at home, in the neighborhood, at school, and on the way to school) made independent contributions to internalizing and externalizing problem behaviors and school achievement.

Our own view of the role of threat appraisals is that they are important both as independent contributors to adjustment and as a potential mediating process. In the former case, we gain understanding about the types of negative cognitions to attend to in trying to understand adjustment problems in response to community violence. In the later case, we can identify a target for intervention. For example, if threat appraisals account for associations between exposure to violence and adjustment, clinicians and others can work to change these appraisals as one strategy for reducing the impact of exposure to violence on youth adjustment.

There is some evidence that some specific types of threat are more strongly associated with adjustment difficulties than others. Sheets et al. (1996), for example, found that concerns about threats to the self (e.g., rejection by others, negative evaluation by others, and negative self-evaluation) had the most robust associations with adjustment difficulties within the context of parental divorce. Threats to the self also were most consistently related to adjustment problems in the Fearnow-Kenney and Kliewer (2000) investigation. In regard to violence exposure, it also is likely that threats that reflect emotional harm to the self (e.g., negative evaluations of the self), as well as relationship losses would be more strongly associated with adjustment difficulties than concerns about being physically harmed or others being harmed. One reason for this is that threats evoking concerns about one's value are linked to the core need to feel competent; threats of relationship loss are linked to the core need for relatedness to others (Skinner & Wellborn, 1994). In our study we anticipated that threats to one's sense of self and relationship loss would have the strongest associations with adjustment problems.

There also is some limited evidence that threat appraisals are more strongly associated with internalizing versus externalizing adjustment problems. Sheets et al. (1996) found that for youth 10 years of age and older, threat appraisals were associated concurrently and over time with internalizing but not with externalizing, problem behavior in models where stress was included.

One reason for the stronger association between threat appraisals and internalizing versus externalizing behavior problems might be because although cognitions play a role in both

internalizing and externalizing disorders, threat appraisals are more closely linked to the maladaptive cognitions evident in depression and anxiety (e.g., personal failure, loss, ambiguous threat) than in aggression (e.g., hostile attribution bias). Based on this literature, in our study we anticipated that threat appraisals would have stronger associations with internalizing than with externalizing adjustment problems.

## THE STRUCTURE OF THREAT APPRAISALS IN RESPONSE TO EXPOSURE TO COMMUNITY VIOLENCE

In developing the threat appraisal measure, a key aim of this study was to determine how threat appraisals to community violence are best represented dimensionally. For example, do youth conceptualize all types of threat related to violence in the same way or do they differentiate different types of concerns when thinking about community violence? We began with the work of prior researchers (Sheets et al., 1996). In two prior community-based studies conducted by the first author (Kliewer, Lepore, Oskin, & Johnson, 1998; Kliewer et al., 2004), youth were interviewed regarding their threat appraisals in response to specific incidents of community violence they had witnessed or experienced. Youth were asked about their affective responses to the situation and the features of the situation that worried them the most. Coding procedures mirrored those used by Sheets et al. to identify threat appraisals. Seven types of threat appraisals emerged from these analyses, although one type of threat—unfairness—appeared to be qualitatively distinct from the six other types of threat and was excluded from subsequent analyses. Based on the qualitative analyses, the first author wrote items to represent new threats (i.e., those emerging relative to community violence exposure and not present in threat appraisals measures used for other stressors). The resulting 24-item measure, which contained six types of threats, was included in our study. These six threats were (a) *Harm to others*—concerns that others would be hurt because of the violence; (b) *Physical harm to self*—concerns that the youth would suffer physical harm or injury because of the violence; (c) *Negative evaluation by others*—concerns that the adolescent would be disrespected, put down, or thought badly of by others as a result of the violence; (d) *Negative self-evaluation*—Self-lame or other forms of self-deprecation resulting from the violence; (e) *Material loss*—concerns about loss of possessions or restriction of activities resulting from violence; and (f) *Loss of relationships*—concerns that the youth would lose friendships or other important relationships as a result of the violence (see the appendix for a copy of the measure).

As anticipated, the emerging measure reflected a combination of core threat appraisals documented in other studies (e.g., negative evaluation of self and negative evaluation by others) but also threat appraisal that may be more unique to the lived experience of witnessing violence or being victimized and are not represented in other measures. For example, concerns about physical harm to self and loss of relationships, threat appraisal, not included in the Sheets et al. (1996) measure of appraisals, emerged as salient. Criticism of others, which was included in the Sheets et al. measure, did not emerge as a concern in the qualitative work. In our study, we first examined competing factor structures for the threat appraisal measure to determine which one best fit the data. Previous research on youths' threat appraisals in different stressful contexts has identified one-factor and three-factor models (Kliewer, Fearnow, & Walton, 1998; Sheets et al., 1996). Next we tested the invariance of the factor structure across age and gender Prior research on threat appraisals in youth has found no gender differences in the factor structure of threat appraisals (Kliewer, Fearnow, & Walton, 1998; Sheets et al., 1996). With respect to age, researchers studying samples of youth 10 years of age and older have found that these youth differentiate types of threat appraisals (Sheets et al., 1996). For our study, we anticipated the factor structure would be similar across age and gender.

## THE PRESENT STUDY

Based on this past research, the main purposes of our study were to describe the development of a new questionnaire measure of threat appraisals in response to community violence, establish the factor structure of this measure and whether it varied across gender and age, and to document validity by showing associations over time with a wide range of caregiver- and adolescent-rated adjustment problems, specifically internalizing and externalizing behaviors. We tested threat appraisals both as an independent contributor to adjustment difficulties above that of violence exposure and as a mediator of the relation between community violence exposure and adjustment problems. Based on previous research we anticipated that threat appraisals would be more strongly associated with internalizing versus externalizing behavior problems. Further, we expected that threat appraisals concerning negative self-evaluation would be most strongly associated with adjustment and the most likely to mediate linkages between community violence exposure and outcomes.

Adolescents at the beginning (fifth graders) and end (eighth graders) of early adolescence were recruited as part of a larger study of the consequences of exposure to community violence on development, and these developmental periods were chosen for several reasons. More generally, this reflects the age range of youth most commonly included in studies of exposure to community violence (Lynch, 2003), and studies document the considerable exposure to violence experienced by youth in these age ranges living in inner-city contexts. Second, developmentally these adolescents are in a time of cognitive, social, and physical transition. Relative to their younger peers, adolescents have an advanced capacity for interpersonal understanding (Selman, 1981) and advanced causal reasoning about others' behavior (Shantz, 1983), both of which are relevant to understanding how youth process exposure to community violence. Social relationships are changing as well with youth moving from adult- to peer-centered relationships, which also affects the meaning adolescents place on events they experience or witness.

## METHOD

### Participants

Participants included 358 adolescents ages 9 to 16 (*M*=12.10 years, *SD*=1.63) and their maternal caregivers who were part of a larger longitudinal study of the consequences of exposure to community violence. Data in this article are from the first two waves, which were separated by 1 year. Youth were either in the fifth (53.4%) or eighth grades (46.6%) at the start of the study. Nearly half (45%) of the sample was male, and 91.3% was African American. There was some diversity in terms of socioeconomic status. Approximately one third (34.2%) of the families had a weekly household income of $300 or less; 21.2% earned $600 or more per week. About one fourth (23.0%) of the caregivers had not completed high school; 31.2% had completed high school or had a general education diploma; 23.6% had some education beyond high school but had not completed a post-high school degree; and 22.2% had completed either an associate's, vocational, bachelor's, or master's degree. A range of family structures was represented in the sample, though many (40.6%) of the caregivers had never married. One third (31.9%) of caregivers were married or cohabitating at the time of the study, 14.3% were separated, 11.2% were divorced, and 2% were widowed.

### Procedure

The Institutional Review Board at Virginia Common-wealth University approved the study. Participants were recruited from neighborhoods in the greater Richmond, Virginia, metropolitan area. U.S. Census data from 2000 indicate that 61% of 15- to 24-year-olds in Richmond were African American, and 61% of children lived in neighborhoods classified as

high in poverty (Kids Count, 2004). Richmond was ranked the ninth most dangerous city among all U.S. cities with populations more than 75,000 based on 2003 FBI violent crime statistics (Nolan, 2004). Participants were recruited from neighborhoods that had high levels of violence and/or poverty based on police statistics and census data (e.g., DeNavas-Walt, Proctor, & Lee, 2005). For example, participants were recruited from neighborhoods that had low-income housing, and most of these neighbor-hoods also had higher levels of crime (i.e., murder, robbery, assault) relative to other areas of the city. They were recruited through community agencies and events and by canvassing qualifying neighborhoods via flyers posted door to door. Eligible families needed to speak English, have a fifth or eighth grader living in the home, and have female caregiver available to be interviewed. The participation rate of eligible families was 63% (calculated by dividing the number of families who enrolled in the study by the number of eligible families who received flyers). Eligible respondents were scheduled for interviews, which were conducted in participants' homes unless a family requested to be interviewed elsewhere.

Teams of two interviewers arrived at the home for the interviews. The parent interviewer reviewed the consent and assent forms with the family and answered any questions. The caregiver received a copy of the signed consent form. After the adolescent and their maternal caregiver provided written assent and consent, the caregiver and adolescent separated for their respective interviews. Additional assent was provided by the adolescent before initiating the interviews. Face-to-face interviews using visual aids to illustrate the response options were used to collect the data, and all questions were read aloud, with the exception of a small portion of the adolescent interview. Adolescents who had passed a reading screening test (the Slosson) at the sixth-grade level completed several scales in a booklet without interviewer assistance. Approximately half of the sample completed the booklet themselves. Scales in the booklet assessed the quality of the caregiver–adolescent relationship; adjustment problems, including drug use; and coping behavior.

As part of the procedure, following assessments of adjustment problems and of exposure to community violence, adolescents completed the Social Competence Interview (SCI; Ewart, Jorgensen, Suchday, Chen, & Matthews, 2002), a 15- to 20-min audiotaped interview in which adolescents were asked to re-experience their most stressful event of the past couple months. For this project, adolescents were prompted to discuss situations that involved witnessing or experiencing violence. As a guide for choosing a stressful event, adolescents were asked to rank eight categories of different types of violence from most to least stressful. The interviewer then asked the adolescent if they could identify a recent, stressful situation that exemplified the category they deemed the most stressful. The interviewer then guided the adolescent through a series of semistructured questions in which the adolescent re-experienced the stressor. The second half of the SCI focuses on the adolescent's ideal ending to the situation and how that ending could be achieved. Once the SCI had ended, adolescents completed the questionnaire measure of threat appraisals.

Tests for interviewer race and gender effects revealed no systematic biases (*ps* > .10). Interviews lasted approximately 2½ hr, and participating families received $50 in gift cards at each wave. The project was approved by the Institutional Review Board at the authors' institution. Because of the level of risk in the study, additional safety precautions were taken. First, a Certificate of Confidentiality was obtained from the National Institutes of Health. Second, interviewers received detailed training in how to respond to caregiver or adolescent distress. In particular, a specific protocol was developed if adolescents responded positively to the question about suicidality. In several cases interviews with youth were stopped and youth were referred for mental health services. In those instances, families were not contacted for a Wave 2 interview.

## Measures

**Violence exposure—**The Survey of Children's Exposure to Community Violence (Richters & Saltzman, 1990) was used to assess the adolescent's level of violence exposure. Two subscales of this measures were used that assessed the frequency an adolescent had been victimized by or witnessed about 20 different forms of violence and violence-related activities within their community. Respondents indicated how often they had been victimized (10 items) or witnessed violence (21 items) violence in their lifetime on a scale from 0 (*never*) to 4 (*almost every day*). See Table 1 for a list of items on the victimization and witnessing scales. This measure has been used in many studies including the National Institute of Mental Health Community Violence Project conducted by Richters and Martinez (1993). Validity has been demonstrated by associations in the expected direction on a range of adjustment measures (e.g., Kliewer et al., 1998). The Witnessing and Victimization subscales were combined for form one index of exposure. Total frequency scores were computed by summing across the number of items. Higher scores reflect greater exposure.

**Threat appraisal—**A 24-item measure of threat appraisal, the Threat Appraisals of Negative Events Scale, was developed by the first author. As noted previously, the measure was developed by examining prior measures of threat appraisals (e.g., Sheets et al., 1996) developed for other stressful contexts and from coding semistructured interviews in two prior community-based studies of the effects of community violence exposure on youth (Kliewer, Lepore, Oskin, & Johnson, 1998; Kliewer et al., 2004). The current measure contains six 4-item subscales: Physical Harm to Self, Harm to Others, Negative Self-Evaluation, Negative Evaluation by Others, Material Loss, and Loss of Relationship. In completing the questionnaire measure in our study, youth were asked to think about the event they had described in the SCI. They were asked to rate how much they felt or were concerned about each of the 24 statements when the event occurred and were reminded that for some of the questions they might not feel that way at all if that wasn't something they were concerned about. Response options ranged from 1 (*not at all*) to 4 (*a lot*). Scores were added to compute a total, with higher scores indicating greater threat. If an adolescent could not generate or did not choose to discuss a stressful event, he or she did not complete the SCI or the threat appraisal measure. This occurred in a small number of cases ($n$=5). The Cronbach alphas for the subscales were as follows: Harm to Others, .72; Physical Harm to Self, .79; Negative Evaluation by Others, .66; Negative Self-Evaluation, .65; Material Loss, .71; and Loss of Relationship, .81. The actual range on all subscales was 4 to 16. Skewness was .15 for Harm to Others, .90 for Physical Harm to Self, 1.19 for Negative Evaluation by Others, 1.48 for Negative Self-Evaluation, .68 for Material Loss, and .85 for Loss of Relationship.

**Adjustment problems—**Measures of youth adjustment problems included depressive symptoms, anxious symptoms, symptoms of posttraumatic stress disorder, and externalizing problems. All adjustment measures used in the analyses were from the Wave 2 interviews.

Adolescents rated their depressive symptoms using the 27-item Child Depression Inventory (CDI; Kovacs, 1981). The CDI is a widely used measure of depressive symptomatology. Saylor, Finch, Spirito, and Bennett (1984) reported an internal reliability (Cronbach's alpha) of .94 for the CDI as well as discriminant validity for distinguishing between clinically depressed children and nondepressed psychiatric patients. The CDI correlated .65 with a children's anxiety measure (Revised Children's Manifest Anxiety Scale [RCMAS]) and −.59 with a children's self-esteem measure with a psychiatric population (Kovacs, 1985). Cronbach alpha for the current study was .85. Higher scores indicate higher levels of depressive symptoms.

Anxious symptoms were evaluated using the 28-item RCMAS (Reynolds & Richmond, 1978), reported by adolescents. The RCMAS assesses children's emotional and physical symptoms of anxiety. This scale has good reliability (.83) and is highly correlated with the Trait subscale of the State-Trait Anxiety Inventory for Children ($r$=.85; Reynolds, 1980) and with the Anxiety subscale of the Minnesota Multiphasic Personality Inventory ($r$=.76; Lee, Piersel, Friedlander, & Collamer, 1988). Cronbach alpha for the current study was .89. Higher scores indicate greater anxiety.

Symptoms of posttraumatic stress disorder were measured with the 10-item Post-Traumatic Stress Scale of the Trauma Symptom Checklist for Children (Briere, 1996). Adolescents were asked to rate symptom occurrence in the prior 2 weeks on a scale from 0 (*never*) to 3 (*almost all of the time*). Sample items include "bad dreams or nightmares" and "remembering things that happened that I didn't like." The TSCC was normed on urban and suburban samples with a large proportion of ethnic minority adolescents and correlates strongly with children's report of behavioral problems as measured by the Child Behavior Checklist (Achenbach, 1991; Briere & Lanktree, 1995) and with adolescents' reports of experiencing violence (Singer, Anglin, Song, & Lunghofer, 1995). Cronbach alpha in our study was .84. Higher scores indicate greater symptom levels.

Caregivers reported on adolescent internalizing symptoms using the 14-item Anxiety-Depression subscale, the 8-item Withdrawn sub-scale, and the 10-item Somatic Complaints subscale from the Child Behavior Checklist (CBCL; Achenbach, 1991). Caregivers indicated how frequently their child engaged in specific behaviors over the past 3 months using a 3-point scale, ranging 0 (*not true* [*as far as you know*]), 1 (*somewhat or sometimes true*), and 2=(*very true or often true*). The CBCL is the most widely used parent-report measure of youth adjustment problems and has excellent reliability and validity (Achenbach, 1991). The Cronbach alpha coefficients for our sample were .72 for the Withdrawn subscale, .86 for the Anxiety/Depression subscale, and .72 for the Somatic Complaints subscale. Higher scores reflect greater adjustment difficulties.

The Physical Aggression, Non-Physical Aggression, and Delinquency subscales of the Problem Behavior Frequency Scales (Farrell, Kung, White, & Valois, 2000) were used as adolescent reports of externalizing behavior problems. The Physical Aggression scale included seven items (e.g., "been in a fight in which someone was hit," "threatened to hurt someone with a weapon [knife, gun, club, etc.]") based on items on the Center for Disease Control's Youth Risk Behavior Survey (Kolbe, Kann, & Collins, 1993). Five items representing nonphysical aggression were also included. Several of these items were similar to those included in Crick and Grotpeter's (1995) measure of relational aggression (e.g., "spread a rumor," "excluded some-one"). Other nonphysical aggression items were based on focus groups focusing on interpersonal problems situations (e.g., "insulted someone's family;" Farrell, Ampy, & Meyer, 1998). The eight-item Delinquent Behavior scale included both illegal behaviors, such as shoplifting and vandalism, and school-related problems such as truancy. For all items, students were asked how frequently they engaged in each behavior during the past 30 days. Responses were based on a 6-point scale, ranging 1 (*never*), 2 (1–2 *times*), 3 (3–5 *times*), 4 (6–9 *times*), 5 (10–19 *times*), and 6 (20 *times or more*). Scores on each scale represented the mean response to the individual items, with higher scores indicating more aggression or delinquency. Cronbach alphas were .78 for Physical Aggression, .80 for Non-Physical Aggression, and .74 for Delinquency in our study.

Finally, maternal caregivers completed the 20-item Aggressive Behavior and 13-item Delinquent Behavior subscales of the CBCL (Achenbach, 1991) as an additional index of externalizing behavior. All items are scored on a 3-point scale from 0 (*not true*) to 2 (*very true or often true*). The externalizing subscales of the CBCL have good test–retest reliability (.64–.

69) and discriminated between clinic-referred and nonreferred children (Achenbach, 1991). In addition, these subscales were highly correlated with observational rating of on-task behaviors (Achenbach, 1991). In our study, Cronbach's alphas were .92 and .78 for the Aggressive and Delinquent Behavior subscales, respectively. Higher scores indicate more problem behavior.

# RESULTS

## Attrition Analyses

The majority of families ($n$=319, 89%) completed both waves of the study. Families who did and did not participate in both waves of the study were compared using $t$ tests and chi-square difference tests. There were no group differences on violence exposure, threat appraisals, any measure of adjustment, adolescent age, or family income, $ts(351)<1.29$, $ps>.10$. Male and female adolescents were equally likely to participate in both waves, $\chi^2(1)<1$, $p>.10$. However, caregivers who participated in both waves were more educated than caregivers who only completed one wave, $t(354)=2.40$, $p<.05$.

## Frequencies of Lifetime Violence Exposure

Table 1 presents the frequencies of youth who ever experienced, witnessed, or heard about the types of violence exposure assessed in this study. As seen in Table 1, more youth witnessed than directly experienced violence, which was expected. Being slapped, hit, or punched and threatened with serious harm were the most frequently endorsed victimization experiences. Hearing gunfire near home; seeing arrests; seeing others slapped, hit, or punched; and seeing others being asked to use drugs were events commonly witnessed by youth.

## Associations Among Exposure to Violence, Threat Appraisals and Adjustment Problems

Means, standard deviations, and intercorrelations among exposure to violence, the threat appraisal sub-scales, and adolescent- and caregiver-rated adjustment problems are presented in Table 2. All correlations among the Appraisals of Negative Events subscales were significant. In addition, with the exception of a non-significant correlation between witnessing violence and negative self-evaluation, all of the threat appraisal sub-scales were positively associated with victimization and witnessing violence. As seen in the table, most of the associations between threat appraisals at Wave 1 and adolescent-reported internalizing problems at Wave 2 were significant. In contrast, there were fewer significant associations between threat appraisals at Wave 1 and adolescent-reported externalizing problems at Wave 2. With two exceptions, both involving negative self-evaluation, none of the threat appraisal scales were significantly correlated with caregiver-reported internalizing or externalizing scales.

## Internal Structure of the Appraisals of Negative Events Scale

Confirmatory factor analyses were used to test the factor structure of the Appraisals of Negative Events Scale using Version 3 of M-plus (Muthen & Muthen, 1998). Analyses were conducted on parcels or subsets of items because individual items usually have low reliability, low intercorrelations, and restricted correlations with other variables (Kishton & Widaman, 1994). For each of the six subscales comprising the Appraisal of Negative Events Scale, items were grouped according to their corrected item-total correlations to generate parcels with similar levels of internal consistency. The items within each group were then randomly assigned to parcels.

The following four competing models were tested: (a) a one-factor model in which item parcels were a function of a single underlying factor; (b) a three-factor model in which the item parcels were a function of three separate factors including Harm (Harm to Others and Harm to Self),

Negative Evaluation (Negative Self Evaluation and Negative Evaluation by Others), and Loss (Material Loss and Loss of Relationships); (c) a six-factor correlated model in which the six factors representing the six subscales of the Appraisals of Negative Events Scale reflect distinct but correlated factors; and (d) a higher order one-factor model in which the six factors in the preceding model were subsumed under a higher order Threat factor. Goodness-of-fit indices used to evaluate the models included the comparative fit index (CFI), the root mean square error approximation (RMSEA), the Bayesian Information Criterion (BIC), and the chi-square difference test. Models with CFI values above 0.90 (Bentler, 1992) and RMSEA values below 0.08 (Browne & Cudeck, 1993) are generally considered to have an acceptable fit. When comparing models with the BIC, differences of 10 indicate strong evidence of differences between the models, with the lower values favoring the simpler, more parsimonious model (Raftery, 1993).

The fit of the one-factor model, $\chi^2(54)=534.2$, $p<.001$, was not acceptable. For this model, the CFI was 0.699 and the RMSEA was 0.159. The fit of the three-factor model, $\chi^2(51)=368.3$, $p<.001$, also was not acceptable with CFI and RMSEA values of 0.801 and 0.133, respectively. Both the higher-order one-factor model, $\chi^2(48)=150.9$, $p<.001$, and six-factor correlated model, $\chi^2(39)=85.2$, $p<.001$, fit the data adequately with CFI values above 0.90 and RMSEA values below 0.08. The chi-square difference test ($\chi^2$ difference=65.7, $p<.001$) favored the six-factor correlated model. This model also fit the data better based on the improvement in the CFI from 0.936 to 0.971, a decrease in the RMSEA from 0.078 to 0.058, and decrease in the BIC value of −13. The factor loadings and correlations between the factors are reported in Table 3 for the six-factor correlated model. Multiple group analyses were then conducted to test the invariance of the factor loadings and intercepts across age (*younger*–fifth graders and *older*–eighth graders) and gender for the six-factor correlated model. The factor structure and intercepts were found to be invariant across age and gender for this model. (More detailed information on these analyses is available by request from the authors.)

## Indirect Effects of Exposure to Violence on Internalizing and Externalizing Behavior Through Threat Appraisals

Measurement models were tested in which each variable (violence exposure, threat appraisals, and internalizing and externalizing behavior) was correlated with all other study variables. Models where correlations between variables were allowed to vary across age and gender, respectively, were compared to models with correlations constrained across age and gender. Results indicated that the models with correlations constrained across both age and gender fit the data better than the respective unconstrained models based on nonsignificant chi-square difference tests, a greater than 10-point decrease in the BIC values, and little change in the CFI and RMSEA fit indices. Based on these findings, the models testing direct and indirect effects were conducted using the full sample and the theoretical model is presented in Figure 1.

As an initial step, a direct effects model was tested to determine if exposure to violence at Time 1 (T1) predicted internalizing and externalizing problem behaviors at Time 2 (T2) 1 year later. This model, $\chi^2(68)=148.0$, $p<.001$, fit the data well (CFI=0.963, RMSEA=0.057) and exposure to violence predicted higher levels of adolescent-reported internalizing ($\beta=.13$, $Z=2.2$, $p<.05$) and externalizing ($\beta=.29$, $Z=5.3$, $p<.001$) behavior and also caregiver-reported externalizing ($\beta=.17$, $Z=2.8$, $p<.01$) but not internalizing behavior. Based on these findings, we tested for indirect effects of threat appraisals on all adjustment outcomes except parent-reported internalizing behavior. That is, we examined threat appraisals as a mediator of associations between T1 exposure to violence and T2 adjustment.

The indirect models included the following paths: (a) exposure to violence at T1 to threat appraisal at T1, (b) threat appraisal at T1 to internalizing and externalizing symptoms at T2, and (c) exposure to violence at T1 to internalizing and externalizing symptoms at T2. To test

these models, we used M-Plus syntax recommended by MacKinnon (2008) that computes the significance of the indirect, direct, and total effects as part of the output with the equation to test the significance of indirect effects based on the Sobel (1982) product of coefficients test. Six latent variable models (one for each threat appraisal) were run, and each fit the data adequately with significant chi-square statistics ($p<.001$), CFI values ranging from .957 to .967, and RMSEA values ranging from .056 to .063. No significant indirect (mediational) effects were found for the six threat appraisals on the relation between exposure to violence and adolescent- or parent-reported externalizing behaviors. However, significant indirect (mediational) effects were found for all six threat appraisals on the relation between exposure to violence and adolescent-reported internalizing symptoms. The standardized path coefficients for the direct, indirect, and total effects for relations between violence exposure, threat appraisals, and child-reported internalizing behaviors and z-scores for these models are reported in Table 4. The standardized path coefficients for the total effect ranged from 131 to .134 with coefficients ranging from .061 to .098 for the direct effects and from .035 to .073 for the indirect effects. Overall, the indirect effects accounted for between 26 and 54% of the total effect with the strongest indirect effects found for material loss and loss of relationships. In every model, violence exposure was significantly associated with the threat appraisal in the model, the threat appraisal was significantly associated with adolescent-reported internalizing problems, and the path from violence exposure to adolescent-reported internalizing problems was no longer significant after accounting for the above paths.

## DISCUSSION

Work on stress processes associated with community violence has focused on coping behavior and rarely has considered the role of appraisals, thus preventing a full test of Lazarus and Folkman's (1984) theory of stress processing. Part of the reason researchers have not addressed threat appraisals in the context of community violence exposure is the lack of validated measurement tools to assess threat. This study addressed that gap by describing and providing validity information on a new measure of threat appraisals in response to community violence. The study demonstrated that threat appraisal in response to community violence is an important, multifaceted construct that encompasses concerns broader than personal safety. Thus, this work extends investigations that have examined safety concerns associated with community violence exposure (e.g., Rasmussen et al., 2004; Richters & Martinez, 1993; Schwab-Stone et al., 1995) and highlights the importance of concerns about loss, negative evaluation by others, and concern for others' well-being in youth exposed to community violence.

Using confirmatory factor analysis, results indicated that a six-factor correlated model best fit the data and that this factor structure was invariant across age and gender. Thus, youth have distinct but interrelated threats in response to community violence exposure, and that this structure was similar for boys and girls and for early and middle adolescents. The fact that youth have differentiated views of threat is consistent with developmental theory (Harter, 1983). Harter noted that adolescents are able to differentiate their views of the self, whereas preadolescents are not. As compared to a study focusing on marital discord where a three-factor model emerged as best fitting the data (Sheets et al., 1996), six distinct threat appraisal factors emerged in response to violence exposure in our study. It is possible that witnessing or experiencing community violence is more traumatic and salient than difficult but nontraumatic stressors such as marital discord and thus may result in more differentiated perceptions of threat. The lack of gender differences in the factor structure was consistent with past research (Sheets et al., 1996).

To demonstrate the validity of the threat appraisal questionnaire, we examined associations over time with adolescent- and caregiver-reported adjustment problems using structural equation modeling. We examined the contributions of threat appraisals at Wave 1 to adjustment

problems at Wave 2 over and above the contribution of violence exposure; we also tested threat appraisals as a mediator of the relation between exposure to violence and adjustment problems. Once total violence exposure at Wave 1 was controlled, all six types of threat were significantly associated with adolescent-reported internalizing symptoms 1 year later. The finding that threat appraisals uniquely contributed to adjustment problems after controlling for violence exposure further demonstrates their importance in the stress process. This suggests that knowing about the specific concerns adolescents have related to exposure to violence predicts additional variation in adjustment problems beyond the experience of the stressors themselves. Although all six types of threat mediated relations between exposure to violence and adolescent-rated internalizing problems, mediational effects were the strongest for negative evaluation by others, material loss, and relationship loss. Threat appraisals tap into the meaning and significance of events for youth. When youth voice concerns that others are disrespecting them, or that things or people that are important to them may be taken away, this may reflect deeper concerns about needs for emotional safety, connection, respect, and autonomy.

In contrast to results for adolescent-reported internalizing behavior problems, threat appraisals were not significantly associated with adolescent reports of externalizing behavior problems or caregiver reports of internalizing or externalizing behavior problems at Wave 2 once violence exposure at Wave 1 was controlled. These findings mirror prior work by several researchers (Grych et al., 2000; Kerig, 1998; Sheets et al., 1996). Our data indicate that different causal processes might be at work linking violence exposure with internalizing versus externalizing problem behavior. Links between violence exposure and externalizing behavior problems may be driven by modeling and identification with those observed. In contrast, the links between violence exposure and internalizing behavior problems may be a function of reflecting on how exposure threatens things that are important to you. It also might be the case that coping behaviors may play an important in linkages between violence exposure and externalizing behavior problems (Rosario et al., 2003).

The fact that threat appraisals did not mediate associations between violence exposure and externalizing behavior does not mean threat appraisals are irrelevant to externalizing behavior problems. Indeed, in the zero-order correlational analyses, which also were longitudinal, threat appraisals were significantly associated with many of the adolescent-reported externalizing scales. Material loss was associated with aggression and delinquency more consistently than other measures of threat. Threats of material loss (i.e., losing things that are important to you or having freedoms restricted because of violence) may arouse frustration, which in turn is expressed in aggression and delinquency. Many care-givers in our study reported restricting their adolescent's mobility because of safety concerns and noted that adolescents felt frustrated when this happened.

Victimization was associated with most adolescent-and caregiver-reported adjustment problems, and witnessing was associated with adolescent- and caregiver-rated externalizing adjustment problems. This finding suggests that there are significant cross-reporter associations in the data set and that not all of the observed associations are due to source bias. On average, associations between victimization and adjustment problems were stronger than associations between witnessing violence and adjustment problems. This may reflect that victimization threatens core needs for competence, relatedness, and autonomy (Skinner & Wellborn, 1994) to a greater extent than witnessing violence.

## Strengths and Limitations

Strengths of the study include attention to a neglected construct in stress research, use of the state-of-the-art methods to examine the factor structure and correlates of threat appraisals, a longitudinal design with good retention across the two waves of the study, and reports from adolescents and caregivers on both internalizing and externalizing adjustment problems.

Limitations include the correlational nature of the data, which preclude statements about causality. Further, the Cronbach alphas on some of the threat subscales were lower than ideal. The fact that threat appraisals only mediated self-reported adjustment is another limitation, although this is consistent with other research. Last, the magnitude of the zero-order associations between threat appraisals and adjustment problems was weak, suggesting that there are other viable mediators of associations between violence exposure and adjustment.

### Implications for Research, Policy, and Practice

These data should be replicated with other populations to establish the robustness of the findings. Future research might focus on different types of violence exposure or might focus on specific expressions of internalizing or externalizing adjustment problems. It also would be worthwhile to develop models to assess factors that mediate relations between exposure to violence and externalizing problems. For example, exposure to violence might reduce youths' emotion regulation skill, their adapative coping ability, or their level of perceived support, which in turn might account for increased externalizing problems.

In terms of implications for practice, our data highlight the importance of assessing appraisals when treating youth who have been witnesses to or victims of violence. Merely knowing the level of exposure to violence does not capture the concerns of adolescents regarding how the exposure will affect their life. Attention to these concerns can assist in developing therapeutic strategies to reduce levels of anxiety and depression. For example, if an adolescent expresses a lot of self-blame in response to victimization, clinicians might focus on that specific concern. If losses are most salient, the clinician can work with the adolescent and his or her family to find ways to develop or enhance social networks.

In summary, we have provided data on the validity of a new questionnaire measure of threat appraisals for use in the context of exposure to violence. We believe this measure may be useful to both researchers and clinicians working with youth exposed to high levels of violence, and may provide an avenue to reducing the high costs associated with this environmental stressor.

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# APPENDIX

## Directions

Experiencing, seeing, or hearing about violence can be very upsetting or stressful. Kids think different things when they experience, see, or hear about violence. For the next questions, think about [the event]. Tell me how much you felt each of these things when [the event] happened. Remember, for some of the questions I read, you may say “didn’t feel that way at all” if that isn’t what you were concerned or worried about.

## Response Scale

1 – Not at all 2 – A little 3 – Somewhat 4 – A lot.

## Stem

When this violence happened, how much did you think that …

1. Someone other than yourself might get hurt.
2. You might feel pain.
3. You would lose the respect of others.
4. It was your fault or you were to blame.
5. Something of yours might be taken away.
6. Someone important to you wouldn’t be there to talk to you.
7. Someone other than yourself might be sad.
8. You might get injured.
9. People who are important to you were disrespecting you.
10. You did something wrong.
11. You might not get to have something you wanted to have.
12. Someone important to you wouldn’t be there to take care of you.
13. Someone other than yourself might get their feelings hurt.
14. You might have to go to the doctor or hospital.
15. People who are important to you were hurting you on purpose.
16. You let yourself down.
17. You might not get to do something you wanted to do.
18. Someone important to you wouldn’t be there to spend time with you.
19. Someone other than yourself might feel left out.
20. You might get scratched or bruised. left out.
21. People who are important to you didn’t care about you.
22. You couldn’t do anything right.
23. You wouldn’t be able to find something important to you.
24. Someone who is important to you wouldn’t be there to have fun with.

*Note*. Concern about Harm to Others: Items 1, 7, 13, 19. Concern about Physical Harm to Self: Items 2, 8, 14, 20. Concern about Negative Evaluation by Others: Items 3, 9, 15, 21. Concern about Negative Self-Evaluation: Items 4, 10, 16, 22. Concern about Material Loss: Items 5, 11, 17, 23. Concern about Loss of Relationships: Items 6, 12, 18, 24.

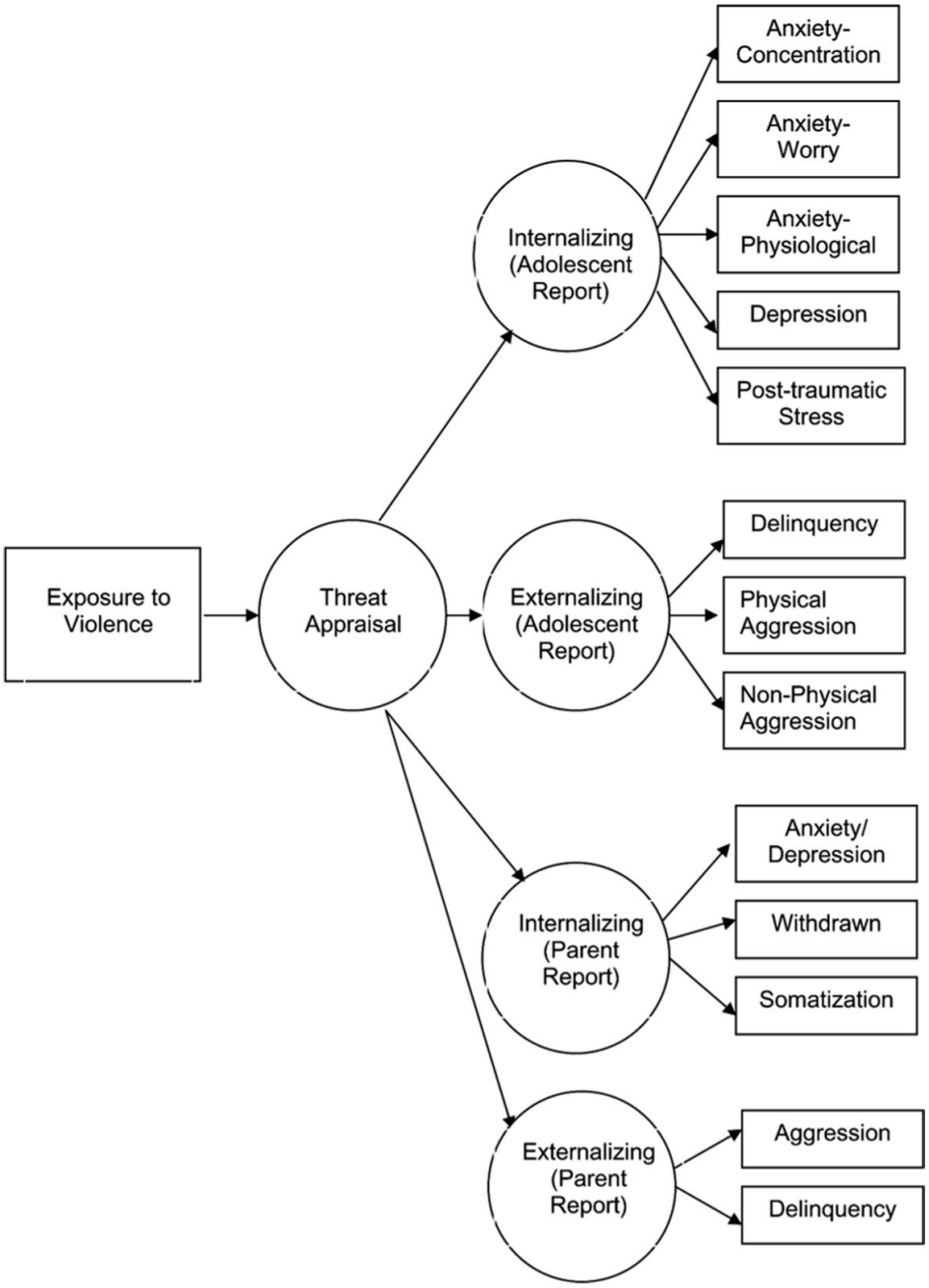


**FIGURE 1.**
Latent variable model of the relations between exposure to violence, threat appraisals, and adjustment problems.

## TABLE 1

Frequency of Lifetime Exposure to Violence

| Type of Exposure | % Endorsing | Type of Exposure | % Endorsing |
|---|---|---|---|
| *Violence Experienced* | | *Violence Witnessed* | |
| Chased by Gangs or Older Youth | 19.2 | Seen Others Chased | 58.9 |
| Asked to Use Drugs | 12.1 | Seen Others Asked to Sell Drugs | 32.3 |
| Asked to Sell Drugs | 6.2 | Seen Others Asked to Use Drugs | 58.7 |
| House Broken Into When Home | 9.0 | Seen a Serious Accident | 68.0 |
| Threatened With Serious Harm | 24.9 | House Broken Into When No One | |
| Slapped, Hit, or Punched | 57.9 | Was Home | 18.1 |
| Beaten Up or Mugged | 14.9 | Seen an Attempted Break-In | 44.4 |
| Stabbed with a Knife | 1.1 | Seen Someone Arrested By Police | 79.1 |
| Shot | 2.0 | Seen Someone Threatened | 37.3 |
| Other Situation Where They Were Very | | Seen Someone Slapped, Hit, or | |
| Scared or Thought They Might Die | 23.6 | Punched by Family Member | 41.5 |
| | | Seen Someone Slapped, Hit, or | |
| | | Punched by Non-Family Member | 59.9 |
| | | Seen Someone Beaten Up, Mugged | 40.9 |
| | | Seen Someone Carrying a Weapon | 41.6 |
| | | Seen Someone Seriously Wounded | |
| | | After Violence | 28.1 |
| | | Seen a Knife Attack | 9.6 |
| | | Heard Gunfire Near Home | 81.7 |
| | | Heard Gunfire Near School | 25.3 |
| | | Gun Fired In Home | 2.5 |
| | | Seen Someone Shot | 14.4 |
| | | Seen a Dead Body in the Community (Not at a Funeral) | 13.0 |
| | | Seen a Suicide Attempt | 6.2 |
| | | Seen Someone Killed | 5.6 |

**TABLE 2**

Intercorrelations Among and Descriptive Information for Appraisals of Negative Events, Exposure to Violence, Internalizing and Externalizing Behavior, and Posttraumatic Stress Variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Harm–Others | — | | | | | | | | | | | | | | | | | | | | |
| 2. Physical Harm–Self | .43** | — | | | | | | | | | | | | | | | | | | | |
| 3. Negative Evaluation–Others | .30** | .29** | — | | | | | | | | | | | | | | | | | | |
| 4. Negative Evaluation–Self | .24** | .27** | .45** | — | | | | | | | | | | | | | | | | | |
| 5. Loss–Material | .38** | .42** | .44** | .59** | — | | | | | | | | | | | | | | | | |
| 6. Loss–Relationships | .45** | .44** | .46** | .32** | .49** | — | | | | | | | | | | | | | | | |
| 7. Concentration (CR) | .10 | .07 | .22** | .20** | .19** | .21** | — | | | | | | | | | | | | | | |
| 8. Worry (CR) | .22** | .20** | .23** | .20** | .26** | .25** | .70** | — | | | | | | | | | | | | | |
| 9. Physiological Anxiety (CR) | .15** | .17** | .20** | .17** | .22** | .22** | .69** | .62** | — | | | | | | | | | | | | |
| 10. Depression (CR) | .09 | .10 | .19** | .17** | .18** | .21** | .72** | .59** | .65** | — | | | | | | | | | | | |
| 11. Posttraumatic Stress (CR) | .24** | .24** | .21** | .23** | .27** | .24** | .55** | .61** | .60** | .56** | — | | | | | | | | | | |
| 12. Physical Aggression (CR) | .16* | .12* | .09 | .10 | .14* | .09 | .16* | .13 | .26** | .30** | .33** | — | | | | | | | | | |
| 13. Non-Physical Aggression (CR) | .16* | .08 | .03 | 13* | .15* | .10 | .14* | .11 | .24** | .25** | .31** | .76** | — | | | | | | | | |
| 14. Delinquency (CR) | .10 | .10 | .15* | .15* | .14* | .06 | .10 | .05 | .16* | .20** | .16* | .64** | .50** | — | | | | | | | |
| 15. Somatization (PR) | .00 | −.05 | −.06 | −.08 | −.07 | −.04 | −.01 | −.01 | .09 | .13* | −.03 | .03 | .01 | .03 | — | | | | | | |
| 16. Withdrawn (PR) | −.02 | .04 | .00 | .11* | .05 | .02 | .18** | .11* | .18** | .20** | .13* | .08 | −.03 | .04 | .31** | — | | | | | |
| 17. Anxiety Depression (PR) | .07 | .03 | .07 | .10 | .08 | .07 | .31** | .20** | .27** | .32** | .23** | .13* | .04 | .06 | .29** | .61** | — | | | | |
| 18. Aggressive Behavior (PR) | .02 | −.02 | .04 | .08 | .03 | .05 | .21** | .11* | .24** | .26** | .18** | .25** | .17** | .12* | .29** | .53** | .76** | — | | | |
| 19. Delinquent Behavior (PR) | .07 | .02 | .08 | .13* | .06 | .05 | .19** | .13* | .17** | .19** | .17** | .24** | .13* | .19** | .19** | .42** | .61** | .72** | | | |
| 20. Victimization | .14** | .20** | .24** | .23** | .32** | .24** | .18** | .24** | .23** | .24** | .34** | .22** | .21** | .13* | −.05 | .10 | .19** | .15** | .20** | — | |
| 21. Witnessing Violence | .19** | .14** | .13* | .09 | .16** | .20** | −.04 | .00 | .10 | .12 | .15* | .26** | .24** | .18** | .09 | −.08 | .02 | .13* | .14* | .43** | — |
| *M* | 9.2 | 7.6 | 6.4 | 6.0 | 7.3 | 7.3 | 1.9 | 3.1 | 2.5 | 7.6 | 5.4 | 3.3 | 3.1 | 1.7 | 2.0 | 3.1 | 4.5 | 10.6 | 3.1 | 1.9 | 19.6 |
| *SD* | 3.2 | 3.4 | 2.7 | 2.4 | 2.9 | 3.4 | 2.1 | 2.6 | 2.1 | 6.4 | 5.1 | 4.1 | 4.1 | 3.1 | 2.5 | 2.7 | 4.6 | 8.2 | 3.2 | 2.1 | 13.3 |

Note: All adjustment measures are from Wave 2 of the study. CR=Child Report. PR=Parent Report.

* p<.05.

** p<.01.

**TABLE 3**

Factor Loadings and Factor Relationships for the Six Factor Correlated Model

| | Factor 1: HMO | Factor 2: HMS | Factor 3: NEO | Factor 4: NSE | Factor 5: LOA | Factor 6: LOR |
|---|---|---|---|---|---|---|
| HMO–Parcel 1 | .77 (.00) | | | | | |
| HMO–Parcel 2 | .72 (.11) | | | | | |
| HMS–Parcel 1 | | .85 (.00) | | | | |
| HMS–Parcel 2 | | .74 (.09) | | | | |
| NEO–Parcel 1 | | | .77 (00) | | | |
| NEO–Parcel 2 | | | .71 (.09) | | | |
| NSE–Parcel 1 | | | | .78 (.00) | | |
| NSE–Parcel 2 | | | | .74 (.08) | | |
| LOA–Parcel 1 | | | | | .74 (.00) | |
| LOA–Parcel 2 | | | | | .77 (.09) | |
| LOR–Parcel 1 | | | | | | .85 (.00) |
| LOR–Parcel 2 | | | | | | .84 (.07) |
| Factor Correlations and Standard Errors | | | | | | |
| Factor 1: HMO | — | | | | | |
| Factor 2: HMS | .60* (.21) | — | | | | |
| Factor 4: NEO | .41* (.14) | .41* (.15) | — | | | |
| Factor 5: NSE | .32* (.12) | .34* (.12) | .62* (.11) | — | | |
| Factor 6: LOA | .51* (.14) | .54* (.14) | .60* (.16) | .42* (.13) | — | |
| Factor 7: LOR | .58* (.19) | .54* (.19) | .62* (.13) | .81* (.12) | .63* (.16) | — |

*Note*: HMO=Harm to Others; HMS=Harm to Self; NEO=Negative Evaluation by Others; NSE=Negative Self-Evaluation; LOA=Material Loss; LOR=Loss of Relationships.

* $p<.001$.

**TABLE 4**

Standardized Path Coefficients between Exposure to Violence, Threat Appraisal, and Adolescent-Reported Internalizing Problem Behaviors

| | β | Z Score | % Total Effect |
|---|---|---|---|
| Harm to Others | | | |
| Total Effect | 0.132 | 2.3* | 100 |
| Indirect Effect | 0.043 | 2.0* | 33 |
| Direct Effect | 0.089 | 1.5 | 67 |
| Harm to Self | | | |
| Total Effect | 0.133 | 2.3* | 100 |
| Indirect Effect | 0.035 | 2.0* | 26 |
| Direct Effect | 0.098 | 1.6 | 74 |
| Negative Evaluation by Others | | | |
| Total Effect | 0.133 | 2.3* | 100 |
| Indirect Effect | 0.058 | 2.5* | 44 |
| Direct Effect | 0.075 | 1.3 | 56 |
| Negative Evaluation of Self | | | |
| Total Effect | 0.131 | 2.2* | 100 |
| Indirect Effect | 0.040 | 2.1* | 31 |
| Direct Effect | 0.091 | 1.5 | 69 |
| Material Loss | | | |
| Total Effect | 0.134 | 2.3* | 100 |
| Indirect Effect | 0.073 | 2.9** | 54 |
| Direct Effect | 0.061 | 1.0 | 46 |
| Loss of Relationships | | | |
| Total Effect | 0.132 | 2.2* | 100 |
| Indirect Effect | 0.071 | 3.1** | 54 |
| Direct Effect | 0.061 | 1.0 | 46 |

* $p<.05$.

** $p<.01$.