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Adaptive Coping Reduces the Impact of Community Violence Exposure on Violent Behavior among African American and Latino Male Adolescents

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Abstract

This study examined whether coping moderated the impact of community violence exposure (CVE) on violent behavior among 285 urban African American and Latino adolescent males assessed annually across five years. Composites indicating overall CVE (having knowledge of others' victimization, witnessing violence, direct victimization) and approach to coping with CVE were created by averaging across years 1–3 (Time 1; mean ages 14–16). Adolescents classified as coping effectively tended to respond to CVE in beneficial ways (e.g., developing long-term solutions, engaging in positive reappraisal). Violent behavior was examined across years 1–3 (Time 1) and years 4–5 (Time 2; mean ages 18–19). CVE was longitudinally associated with greater violent behavior, adjusting for Time 1 levels of violent behavior. This association was significant only among adolescents with less effective coping strategies. Interventions targeting the enhancement of coping skills may be an effective method of reducing the impact of CVE on adolescent violent behavior.

Keywords

community violence; coping; adolescent; African American; Latino

Research has shown that the majority of urban youth are exposed to high levels of community violence (for reviews, see Buka, Stichick, Birdthistle, & Earls, 2001; Margolin & Gordis, 2000; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Most youth have heard about violent events or witnessed violence in their community, and many have been directly victimized. Previous research has found that up to one third of urban male adolescents report direct victimization, including being beaten or mugged in the school or neighborhood, attacked with a knife or stabbed, or shot at by another person (Singer, Anglin, Song, & Lunghofer, 1995). Estimates of witnessed community violence among urban youth are typically well over 50%, reaching nearly 100% among some samples (Buka et al., 2001; Margolin & Gordis, 2000; Stein et al., 2003). Exposure to community violence occurs early in development. For example, two thirds of a sample of 3–4 year old preschoolers participating in a Washington, DC Head Start program had been exposed to at least one incident of community violence according to their caregivers' reports (Shahinfar, Fox, & Leavitt, 2000). These data suggest that disadvantaged urban youth must begin the task of coping with community violence exposure at very young ages.

Community violence exposure (having knowledge of others' victimization, witnessing violence, direct victimization) has been linked to a range of adjustment problems among youth, including posttraumatic stress (Cooley-Quille, Boyd, Frantz, & Walsh, 2001;

Fitzpatrick & Boldizar, 1993; Ozer & Weinstein, 2004), depression (Fitzpatrick, Piko, Wright, & LaGory, 2005; Gorman-Smith & Tolan, 1998; Ozer & Weinstein, 2004), and academic difficulties (Delaney-Black et al., 2002; Ozer, 2005; Schwab-Stone et al., 1995). Community violence exposure has also been prospectively linked with aggression (Gorman-Smith & Tolan, 1998; Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999) and violent behavior (Farrell & Bruce, 1997; Gorman-Smith, Henry, & Tolan, 2004). Violence exposure need not be in the form of direct victimization to have negative consequences among youth. For example, Scarpa and colleagues found that greater lifetime frequency of hearing about violence was associated with symptoms of posttraumatic stress, depressed mood, and aggression among a college sample (Scarpa, Hurley, Shumate, & Haden, 2006). Duckworth and colleagues found that witnessed violence exposure was associated with posttraumatic stress reactions among African American youth residing in urban, low-income communities even after adjusting for direct victimization experiences (Duckworth, Hale, Clair, & Adams, 2000). Witnessed violence exposure has been linked with greater aggression in both cross-sectional (Schwartz & Proctor, 2000) and longitudinal (Farrell & Bruce, 1997) studies. We focus on violent behavior as an outcome in the present study, as it is one of the most serious consequences associated with exposure to violence among youth. Based on previous research showing that different types of violence exposure are associated with subsequent violent behavior, we focus on all incidents of hearing about violence, witnessing violence, and being directly victimized by violence in this study.

To curb the impact of community violence exposure on violent behavior, it is important to identify who is most at risk of perpetrating violence subsequent to community violence exposure. Despite the high prevalence of community violence exposure within urban, poor communities, the majority of urban youth do not evidence serious behavioral, social, or emotional problems (Tolan & Henry, 1996). One factor that is likely important in buffering risk related to violence exposure is how youth cope with violence exposure. Although a growing body of research has examined factors buffering risk among youth exposed to community violence (for reviews, see Gorman-Smith & Tolan, 2003; Ozer, Richards, & Kliever, 2004), surprisingly little research has examined individual differences in coping responses to violence as a factor protecting youth from the most serious consequences of exposure to community violence.

Coping as a moderator of risk

Only a limited number of cross-sectional studies have examined how youths' coping may alter the impact of violence exposure. Each, however, suggests that adaptive forms of coping may buffer the effects of community violence exposure on behavior problems. For example, use of confrontational coping (e.g., planning revenge, staring people down) moderated the association between community violence exposure and delinquency among a sample of African American and Hispanic urban 6th grade students, such that witnessing or being victimized by violence was associated with greater delinquency only among those youth who scored highly in confrontational coping (Rosario, Salzinger, Feldman, & Ng-Mak, 2003). Among a sample of African American urban youth aged 12–18, an association between violence exposure and externalizing behavior was weakest among youth who engaged in “positive” general coping strategies (e.g., seeking social support) and strongest among youth who engaged in “negative” general coping strategies (e.g. avoidance; McGee, 2003). Similarly, an association between direct victimization and aggressive behavior was strongest among a sample of college students aged 18–22 who typically coped with stressors through disengagement (e.g., denying stressful events, abusing substances; Scarpa & Haden, 2006). Each of these studies focused on cross sectional relations between violence exposure, coping, and behavior. To our knowledge, there has been no longitudinal examination of these relations.

Compas and colleagues have called for more rigorous research on the association between coping and psychopathology among youth (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). In their outline for a research agenda on coping, Compas et al. (2001) note that coping is multidimensional and that studies that place coping subtypes within a theoretical framework are most likely to make a significant contribution to the field. Some research has begun to address these recommendations. For example, Tolan and colleagues examined the longitudinal association between coping with many types of stressors and internalizing and externalizing symptoms among a sample of inner-city minority males (Tolan, Gorman-Smith, Henry, Chung, & Hunt, 2002). Coping “minimally” with stressors (e.g., avoidance of problem solving through substance use, venting emotions) was associated with greater increases in symptoms over 1-year compared with coping through support or seeking guidance from others (e.g., talking things out with parents, low use of venting emotions). Because coping strategies traditionally conceptualized as distinct from one another (e.g., seeking support, venting emotions, avoidance through substance use) tended to co-occur in more adaptive or less adaptive patterns, Tolan and colleagues concluded that a continuum of coping, ranking multidimensional coping strategies from least adaptive to most adaptive, might better capture the process and functionality of coping among adolescents. Using these data as a guide, Meese-Putman, Tolan, and colleagues developed an ordinal measure of coping that ranked adolescents’ coping responses from least effective to most effective in terms of the response’s potential to result in positive long term adjustment (Meese, Montani, Tolan, & Gorman-Smith, 2000). In subsequent analyses, the same investigators found that the averaged coping effectiveness of adolescents’ responses to various stressors did not change over time across six annual waves of data collection (Meese, 2003), suggesting that the overall adaptiveness of adolescents’ coping strategies in this sample was relatively stable over time.

The present study examines whether community violence exposure is longitudinally associated with violent behavior among urban African American and Latino male adolescents and whether overall effectiveness of coping with violence is a protective factor for youth exposed to community violence. Previous studies on the association between community violence exposure and adjustment have examined general strategies for coping with stress. The present study utilized participants’ open-ended responses to how they coped with specific violent events reported across three years of assessment. We hypothesized that greater levels of community violence exposure during middle adolescence would be longitudinally associated with greater violent behavior during late adolescence, and that effects would remain after controlling for earlier levels of violent behavior. We further hypothesized that coping would moderate the longitudinal association between community violence exposure and violent behavior, such that community violence exposure would be less strongly associated with violent behavior among those youth who coped effectively at the time of exposure.

Method

Research Participants

The present study used data from five annual waves of the Chicago Youth Development Study (CYDS), a longitudinal study of the development of serious delinquent behavior among inner-city male adolescents. Inner-city males from lower income families and communities with concentrated poverty are particularly at risk for the development of delinquent and violent behavior, yet are underrepresented in most longitudinal studies. The African American and Latino ethnic composition of the CYDS sample is reflective of inner-city Chicago communities characterized by high rates of poverty and crime relative to the surrounding city.

Sample selection and recruitment—Adolescents were initially recruited from the fifth and seventh grades of 17 Chicago public schools. Written parental consent and youth assent were obtained to gather teacher ratings of child behavior. After obtaining consent and assent, 1,105 boys were screened with the Achenbach Teacher Rating Form (Achenbach, 1991); they represented 92% of the population of fifth- and seventh-grade boys in the 17 schools. Boys were then selected for participation in the longitudinal study such that 50% of them were considered at “high risk” for development of serious aggression on the basis of teacher ratings indicating that they were already engaging in high levels of aggressive behavior. These youth were selected from the top third of the original screening sample (above the 90th percentile using national norms). After this categorization, participants were randomly selected from the remainder of those screened.

A second round of parental consent and child assent was obtained prior to the first wave of assessment and included information regarding the sensitive nature of some of the questions included in the interview, reporting responsibilities of the investigators, and the fact that participants could refuse to answer any questions or decide not to participate at any time. Seventy-five percent of eligible participants completed interviews during the first wave of interviews (n=341).

Sample characteristics—In the present analyses, we included 285 participants interviewed during Waves 2–4 (84% of those interviewed during Wave 1). These participants completed measures assessing both community violence exposure and involvement in violent behavior at least once during Waves 2–4. Of the 285 participants interviewed during Waves 2–4, 250 participated in at least one interview during Waves 5 and 6 (73% of those interviewed during Wave 1; 88% of those interviewed during Waves 2–4). Cross-sectional analyses examining the distributions of and associations between study variables during middle adolescence included all 285 participants. Longitudinal analyses included the 250 participants who completed at least one interview during Waves 2–4 and at least one interview during Waves 5 and 6. At Time 1 (Waves 2–4), 37 participants completed one interview (13% of 285), 43 participants completed two interviews (15%), and 205 participants completed all three interviews (72%). At Time 2 (Waves 5–6), 63 participants completed one interview (25% of 250) and 187 participants completed both interviews (75%).

Participants were of African American (65%) or Latino (35%) ethnicity and lived in economically disadvantaged inner-city neighborhoods of Chicago. Sixty-two percent of participants were from single-parent homes, 47.6% of families had a total income below \$10,000 per year, and 73.5% had incomes below \$20,000 per year. The mean age of boys was 14.1 (SD = 1.1) during the second wave of interviews and 19.6 (SD = 1.2) during the sixth wave of interviews. The 35 participants who did not complete interviews during Waves 5 or 6 did not differ from other participants in terms of age, single-parent family structure, total family income, community violence exposure, coping effectiveness, or violent behavior across Waves 2–4. However, they were more likely to be of Latino ethnicity (N=25) than African American ethnicity (N=10).

Procedure

Participants were interviewed in their homes or in a mutually agreed-upon location by trained interviewers. Individual interviews were conducted separately with the participant and his caregiver(s) following a joint family-interaction task. Data were gathered on individual, family, peer, school, and neighborhood variables. The same information was collected across informants at each wave. Total interview time at each wave was 3 – 3 ½ hours. Present analyses are limited to participants’ report of the constructs described below.

Measures

Community violence exposure—Exposure to community violence was measured at Waves 2–4 (Time 1) using the Exposure to Violence Interview, a section of the CYDS Stress and Coping Interview (Tolan & Gorman-Smith, 1991). The Exposure to Violence Interview consists of 9 items related to violence exposure and victimization; the composite score of violence and victimization was associated with increases in aggression from Wave 1 to Wave 2 in the present sample (Gorman-Smith & Tolan, 1998). In the current study, we eliminated 3 of the items because the questions were ambiguous enough that a positive response could reflect an experience other than *community violence* exposure. These included: a close friend of yours was killed, you were the victim of a non-violent crime, you were the victim of a sexual assault.

During each annual interview, participants were asked to indicate the number of times the following six events had occurred within the past year: 1) anyone in your family was robbed or attacked (or otherwise hurt intentionally by someone), 2) someone else you know, other than a member of your family, was beaten, attacked, or really hurt by others, 3) you saw anyone beaten up, 4) you saw anyone shot or killed, 5) you were the victim of any violent crime involving force or threat of force, 6) you witnessed any violent crime (not counting what you have already told me about). We excluded incidents of violence between family members. Reported frequencies for each event were recoded using the scale: 0 - none, 1 - once, 2 - more than once. We computed the mean score across the six events within wave, resulting in an overall score ranging from 0–2. These scores were then averaged across Waves 2–4 to derive the final composite score for community violence exposure during Time 1, corresponding to middle adolescence.

Coping effectiveness—We computed a composite score for the effectiveness of youths' coping responses to violent events during Waves 2–4 (Time 1). Each time participants indicated that a specific type of violent event had occurred, they were asked to report how they tried to react to or deal with the event the last time it happened. Within each wave, it was possible for participants to be queried on how they reacted to or dealt with up to 6 types of events. Coping responses were typed verbatim by interviewers on laptop computers. Interviewers were not familiar with the coding method described below and did not code the coping data.

Open-ended responses were coded into one of 7 levels based on the response's potential to result in long-term positive adjustment (Meese, 2003; Meese, Montani, Tolan, & Gorman-Smith, 2000). Coping levels, and the types of coping responses that comprised each level, were determined by the CYDS team based on reviews of theory and empirical findings (e.g., Compas et al., 2001; Tolan et al., 2002) prior to coding of data. Coping responses were assigned to levels without reference to the specific stressors prompting them. One doctoral student took primary responsibility for coding the coping responses. Other coders were graduate-level psychology students. We cross-tabulated the levels to which pairs of coders assigned responses, forming a symmetric matrix from which kappas could be calculated. The kappa values represent the degree to which coders assigned the same coping responses to the same levels. Kappas calculated between the three students who coded the data for this study averaged above .80.

Operational definitions for levels were based on several factors, including level of activity in responding to violence exposure, recognition that violence was a stressor in need of a coping response, specificity and potential consequences of the coping plan, and whether the stress response was reactive or proactive. Although adolescents may have mentioned more than one strategy to cope with violence per violent event, coping responses were assigned a single level. Assignment was based on the most adaptive strategy adolescents mentioned.

Examples of coping responses assigned to each of the 7 levels are as follows: 7) compromise and negotiation, learning new skills, engaging in esteem-enhancing activities, 6) proactively confronting others, shaping future-oriented solutions with no specific plan, helping family or friends, 5) talking to people, seeking advice, praying, hoping for the best, focusing on the positive, engaging in positive types of distraction, 4) accepting the situation or deciding to “let it go,” thinking about the stressor, 3) doing nothing, feeling bad, isolating oneself, deciding not to think about the stressor, 2) running away, holding in one’s emotions, deriving a sense of satisfaction from watching others be victimized, planning revenge, 1) seeking immediate relief in a way that harms oneself or others.

In the present study, our goal was to determine whether the association between community violence exposure and violent behavior would be weakened among those adolescents who engaged in adaptive coping strategies at the time of violence exposure. For relatively uncontrollable stressors such as violence exposure, the conceptualization of coping responses along an ordinal continuum may not be the best way to capture the adaptiveness of adolescents’ responses. Our continuum of coping ranks active forms of coping (e.g., shaping future oriented solutions) more highly than passive forms of coping (e.g., praying). In a meta-analysis of 40 studies of children and adolescents, Clarke (2006) found that active coping was associated with fewer externalizing problems and higher social competence only in the context of coping with controllable life stressors. Flexibility in selecting from a variety of strategies that may be broadly construed as adaptive may be particularly important for youth confronted with uncontrollable stressors (Lazarus & Folkman, 1984), including threats of violence (Zeidner, 2005). For this reason, we divided adolescents into groups whose overall coping responses were either less effective or more effective (see Preliminary Results, below).

Violent behavior—We computed composite scores for violent behavior during Waves 2–4 (Time 1) and Waves 5–6 (Time 2). At each wave, participants were asked to indicate the number of times they had engaged in each of the following eight behaviors within the past year: 1) threw objects at people, 2) became involved in gang fights, 3) hit someone with intent to harm, 4) carried a hidden weapon, 5) hurt or threatened someone for sex, 6) tried to force someone to have sex, 7) used a weapon or force to get something, 8) attacked someone with a weapon. Reported frequencies for each event were recoded using the scale: 0 - none, 1 - once, 2 - more than once. Consistent with previous studies and a widely accepted method within the field (e.g., Elliott, Dunford, & Huizinga, 1987; Loeber, Stouthamer-Loeber, & White, 1999; Tolan, Gorman-Smith, & Henry, 2003), we weighted the recoded frequencies for each event by legal seriousness, ranging between an index of 4 (Class A misdemeanors, such as item 1) to an index of 8 (Class 1, corresponding to serious felonies, such as items 6–8). Item 2 was weighted by an index of 5, items 3–4 were weighted by an index of 6, and item 5 was weighted by an index of 7. After summing across weighted scores for each item within wave, we computed two final composite scores for violent behavior by averaging across Waves 2–4 (Time 1) and Waves 5–6 (Time 2) separately. Natural log transformations of composite scores were used in analyses to reduce positive skew.

Plan of Analyses

Preliminary analyses examined adolescents’ report of community violence exposure and violent behavior, the distribution of coping effectiveness scores, and associations between study composite variables, with and without controlling for participants’ age and ethnicity. Age and ethnicity were planned as covariates in the event that the pattern of correlations between study variables differed with their inclusion. Preliminary analyses also included general linear models testing whether violence exposure was longitudinally associated with violent behavior, adjusting for violent behavior at Time 1, and whether there was an

interaction effect between violence exposure and coping effectiveness on Time 1 violent behavior.

In the main analyses, we fitted a general linear model to determine whether Time 1 violence exposure and coping effectiveness interacted to predict Time 2 violent behavior. Time 1 violent behavior, community violence exposure, coping effectiveness, and the interaction between community violence exposure and coping effectiveness were included as predictors. In the event of a significant interaction, simple effects tests were planned to examine the nature of the longitudinal association between community violence exposure and violent behavior among youth who were high or low in overall effectiveness of coping responses. We also examined whether the pattern of results differed when items assessing direct victimization were eliminated from the community violence exposure composite score, forming a measure solely comprised of items assessing witnessed community violence or knowledge of community violence (indirect community violence exposure). Finally, we examined whether interaction effects remained after testing for quadratic effects of community violence exposure (MacCallum & Mar, 1995).

Results

Preliminary Results

Examination of participants' reports of violence—Sizable numbers of adolescents reported exposure to relatively severe forms of violence (see Table 1). For example, 36% of adolescents reported witnessing someone get shot or killed, one third of adolescents reported that someone in their family had been robbed or attacked, and a fifth reported being the victim of a violent crime. With respect to violent behavior, up to 25% of adolescents reported becoming involved in gang fights, hitting someone with intent to harm, and carrying a hidden weapon during middle adolescence. By late adolescence, 15–20% of participants reported these behaviors.

Table 2 shows the number and percentage of adolescents reporting different *types* of community violence exposure and violent behavior. The mean and median numbers of different types of community violence exposure reported were both 2 per participant across the period of middle adolescence ($SD=1.4$). Only 15 adolescents (5% of the sample) reported that none of the assessed community violence exposure events occurred during middle adolescence. These adolescents are included in analyses examining the distributions of violence exposure and violent behavior and the correlation between these two variables, but are excluded from analyses involving coping effectiveness. The majority of adolescents reported no acts of violent behavior during middle and late adolescence. At both time points, roughly 20% of adolescents reported engaging in only one type of violent behavior. During middle and late adolescence, 28% and 19% of participants reported engaging in two or more types of violent behavior, respectively. A paired sample t-test (not shown in table) revealed that participants reported engaging in more *types* of violence during middle adolescence ($M=1.0$, $SD=1.3$) than during late adolescence ($M=0.8$, $SD=1.2$), $t(249)=3.07$, $p<.01$.

Coping effectiveness scores and creation of groups—Because coping effectiveness did not change over time in the present sample (Meese, 2003), we averaged scores across all endorsed violent events across Waves 2–4 to derive a Time 1 composite coping effectiveness score. The average mean coping effectiveness score across all types of community violence exposure and all participants was 3.77, with a standard deviation of 0.82. There was no association between *number* of coping responses (which was contingent upon the number of different types of violent events that participants reported) and coping effectiveness scores. In order to determine whether the effectiveness of coping responses varied systematically by the *type* of violence exposure, we fitted a random-intercepts mixed

model of coping effectiveness on individual intercepts and effect-coded community violence type. Coping effectiveness scores were clearly clustered within individuals, as was indicated by a significant random effect for individual intercepts, $\tau=0.19$, $z=3.49$, $p<.01$. There was no significant relation between coping effectiveness and the type of violence exposure experienced, $F(5, 525.5)=1.77$, *ns*.

The median coping effectiveness score neatly divided the sample into groups whose overall coping responses were either less adaptive or more adaptive. Levels 1 through 3 reflected reactive and/or potentially harmful methods of responding to violence exposure and failure to recognize that violence exposure is a stressor in need of a coping response. Levels 4 through 7 reflected proactive and/or potentially beneficial methods of responding to violence exposure and general recognition that violence exposure is a stressor in need of a coping response. We thus divided participants into less adaptive or more adaptive coping groups based on whether their mean coping effectiveness score fell in the range of less effective (levels 1 through 3) or more effective (levels 4 through 7) coping strategies.

Associations between composite variables—Table 3 contains distributions of and correlations between study composite variables. Mean violent behavior, weighted for legal seriousness, did not differ between Time 1 and Time 2. Adolescents who reported greater levels of violence exposure at Time 1 reported greater levels of violent behavior at both Time 1 and Time 2. The association between Time 1 violence exposure and Time 2 violent behavior remained significant when controlling for Time 1 violent behavior (see Step 1 in Table 4).

Violent behavior was correlated across time points (see Table 3). Time 1 coping effectiveness was not associated with Time 1 violence exposure or violent behavior. The association between Time 1 coping effectiveness and Time 2 violent behavior was marginally significant, $r=-.11$, $p<.10$. Logistic regression analysis showed no interaction effect between violence exposure and coping effectiveness on Time 1 violent behavior.

The pattern of associations did not differ when effects of age and ethnicity were partialled from correlations displayed in Table 3. Thus, age and ethnicity were not included as covariates in subsequent analyses.

Main Analyses

Coping effectiveness as a moderator of the longitudinal association between community violence exposure and violent behavior—Coping effectiveness moderated the longitudinal association between community violence exposure and violent behavior, adjusting for Time 1 level of violent behavior, $B = 1.42$, $SE = 0.65$, $t(234) = 2.19$, $p < .05$ (see Step 2 of Table 4). Simple effects tests (not shown in table) revealed that greater exposure to community violence at Time 1 was associated with greater violent behavior at Time 2 among those youth who coped less effectively with violence exposure at Time 1, $B=1.53$, $s.e.=0.53$, $t(117)=2.88$, $p<.01$. In contrast, there was no longitudinal association between violence exposure and violent behavior among those youth who coped more effectively with violence exposure at Time 1, $B=0.10$, $s.e.=0.48$, $t(116)=0.20$, *ns*. This effect is depicted by Figure 1.

Evaluation of community violence exposure other than direct victimization—The pattern of results was the same when direct victimization items were eliminated from the community violence exposure composite score, forming a measure solely comprised of witnessed episodes of community violence and knowledge of community violence. Main analyses showed that coping effectiveness moderated the association between indirect community violence exposure and subsequent violent behavior, after adjusting for initial

violent behavior, $B=1.20$, $s.e.=0.60$, $t(234)=2.02$, $p<.05$. Simple effects tests showed that indirect community violence exposure at Time 1 was associated with greater violent behavior at Time 2 among those youth who coped less effectively with violence exposure at Time 1, $B=1.24$, $s.e.=0.49$, $t(117)=2.51$, $p<.05$. In contrast, there was no longitudinal association between indirect community violence exposure and violent behavior among those youth who coped more effectively with violence exposure at Time 1, $B=0.06$, $s.e.=0.42$, $t(116)=0.14$, *n.s.*

Robustness of interaction effect—In order to determine that the obtained effects were not artifacts of nonlinearity of regression (MacCallum & Mar, 1995), we added a quadratic term for community violence to the equation. The interaction effect remained significant, suggesting that the interaction was not an artifact of nonlinearity in the relation between community violence exposure and violent behavior.

Discussion

Exposure to community violence during middle adolescence was associated with greater involvement in serious violent behavior during late adolescence. This was true when including both direct victimization and indirect violence exposure (witnessing or hearing about community violence) in the violence exposure composite and when incidents of direct victimization were excluded from the composite. These findings are consistent with other studies of youth showing that both indirect exposure to violence and direct victimization are associated with increases in aggressive and violent behavior (Farrell & Bruce, 1997; also see Margolin & Gordis, 2000, for a review).

A growing body of research has examined factors that serve to protect youth from the most serious consequences of exposure to violence (for reviews, see Gorman-Smith & Tolan, 2003; Ozer, Richards, & Kliewer, 2004), yet surprisingly little research has examined how individual differences in coping responses to violence may moderate the impact of violence exposure on later behavior. The primary purpose of the present study was to determine whether adolescents' coping strategies moderated the impact of community violence exposure on violent behavior, such that adaptive coping would help to protect youth from one of the most serious consequences associated with exposure to violence. Consistent with our hypothesis, greater community violence exposure during middle adolescence was associated with greater violent behavior during late adolescence only among those youth who coped poorly with community violence during middle adolescence. These analyses adjusted for levels of violent behavior during middle adolescence. Community violence exposure was *not* associated with violent behavior over time among those youth who coped well.

Because coping effectiveness was coded for each violent event adolescents reported and combined across three years, coping effectiveness scores reflected whether an adolescent's overall approach to coping with violence was adaptive or maladaptive. Adolescents who coped effectively in the present study exhibited an array of strategies likely to result in positive long-term adjustment. For example, adolescents classified as coping effectively sought advice from others, tried to focus on positive aspects of their lives, modified their behavior without confronting others, engaged in positive distracting activities (e.g., sports), prayed, tried to negotiate with others, engaged in activities to enhance their self-esteem, and arranged to live outside of a violent neighborhood. In contrast, adolescents classified as coping ineffectively used substances, argued or fought with others, enjoyed watching others being beaten up, held in their emotions, isolated themselves, told themselves they didn't care, and tried to forget about what they had experienced.

Some coping responses classified as ineffective included violent behavior, but analyses suggested that the moderating effect of coping effectiveness was not due to the inclusion of some violent responses in the measure of coping effectiveness. All analyses included Time 1 violent behavior as a covariate, meaning that the interaction effect between community violence exposure and coping effectiveness was independent of violent behavior. In addition, coping effectiveness was not associated with violent behavior during middle adolescence and was only weakly associated with violent behavior during late adolescence (i.e., non-significant trend).

The effect of community violence exposure on violent behavior over time was due entirely to the subpopulation of adolescents who were classified as not coping well with violence during middle adolescence. Adolescents classified as engaging in effective coping strategies may have recognized that violent events required coping, responded to events in beneficial ways, and developed long-term solutions. They may also have developed a relatively broad array of responses from which to choose when they later encountered stressful situations. Adaptive coping may thus buffer adolescents from the likelihood that violent behavior becomes a long-term consequence of community violence exposure. Conversely, adolescents who initially coped poorly with violence exposure may have been limited in their development of behavioral responses to stressful situations. Maladaptive coping with community violence exposure may thus promote the long-term adoption of violent behavior as a strategy to negotiate the demands of living.

The sample in the present study was comprised of inner-city African American and Latino adolescent males living in communities characterized by high rates of poverty and crime relative to the surrounding city. Although caution must be used in generalizing study results to other populations, we have no reason to expect that associations between violence exposure, coping effectiveness, and violent behavior would be different among other subgroups of adolescents, particularly in contexts of disadvantage and contexts in which engagement in violent behavior is normative among youth. Community violence affects children and adolescents of all ethnic backgrounds and communities, although relatively few studies have examined general population samples and youth in non-urban settings (Stein et al., 2003). In one predominantly Caucasian sample of rural youth in grades 3 through 8, 20% of boys reported ever being beaten up, 6% reported being attacked with a knife, and 13% reported having a gun pointed at them or being shot at (Slovak & Singer, 2002). Violence exposure was associated with symptoms of trauma, consistent with studies of urban youth (e.g., Cooley-Quille et al., 2001). This suggests that the manner in which youth cope with violence exposure is of importance regardless of ethnic background and geographical setting.

To date, efforts to curb violent behavior among youth have shown progress, although additional work is needed to demonstrate widespread effectiveness (Farrell & Flannery, 2006). Violence prevention initiatives have attempted to improve environmental structure and support through family (Metropolitan Area Child Study Research Group, 2002; Tolan, Gorman-Smith, & Henry, 2004), community (Briggs, 1997; Huston et al., 2005; Kling, Liebman, & Katz, 2005), and school based approaches (Farrell, Meyer, & White, 2001; Mytton, Diguseppi, Gough, Taylor, & Logan, 2006). Findings from the present study suggest that interventions targeting the enhancement of children's and adolescents' coping skills may be an effective and practical way of reducing the impact of community violence exposure on adolescent violent behavior. Interventions may be most effective when they occur relatively early in development. One such example is the Coping Power Program (Lochman & Wells, 2004), a program designed to aid at risk youth in developing a series of strategies including setting goals, becoming aware of feelings and physiological arousal, making coping self-statements, using distraction and relaxation techniques, and developing

social problem solving skills. In a large randomized controlled trial, Lochman and Wells (2004) found that the Coping Power intervention resulted in lower rates of delinquent behavior at a 1-year follow-up.

Coping styles in childhood and adolescence may not only moderate the impact of stressors such as violence exposure, but may also place individuals on a trajectory to cope in more or less adaptive ways throughout life (Compas et al., 2001). We view the lack of an association between level of community violence exposure and coping skill in the present study as a cause for optimism, in that it supports the idea that youth can thrive despite living within disadvantaged communities, provided they are also given environmental supports to promote resiliency. The coping skills of adolescents that were judged to be effective likely developed as a result of guidance and support provided by caregivers and other community mentors across time. When environmental supports are lacking, health care professionals, schools, and community leaders can partner with adolescents and their families to create conditions ensuring that all youth have the ability to reach their full potential.

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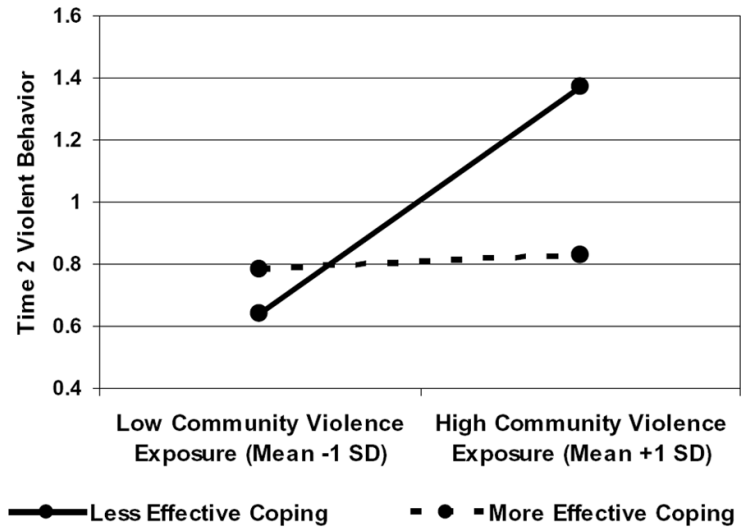


Figure 1. Time 1 community violence exposure and coping effectiveness interact to predict Time 2 violent behavior, adjusting for Time 1 violent behavior (violent behavior is weighted for legal seriousness).

Table 1

Percentage of adolescents reporting violence during middle and late adolescence.¹

	Middle Adolescence (Waves 2-4; N=285)				Late Adolescence (Waves 5-6; N=250)			
	0	1	2+		0	1	2+	
Community Violence Exposure								
Anyone in your family was robbed or attacked	67	21	12					
Someone other than family was beaten, attacked, or hurt by others	59	19	22					
You saw anyone beaten up	13	13	74					
You saw anyone shot or killed	64	18	18					
You were the victim of a violent crime	80	12	8					
You witnessed a violent crime (other than those above)	81	6	13					
Violent Behavior								
Threw objects at people	76	5	19		88	4	8	
Became involved in gang fights	87	3	10		85	4	11	
Hit someone with intent to harm	75	8	17		79	5	16	
Carried a hidden weapon	73	6	21		81	4	15	
Hurt or threatened someone for sex	99.5	0	.5		100	0	0	
Tried to force someone to have sex	99.5	0	.5		100	0	0	
Used a weapon or force to get something	99	0	1		99.5	0	.5	
Attacked someone with a weapon	93	2	5		92	3	5	

¹ N=285 for variables assessed during middle adolescence, while N=250 for variables assessed during late adolescence.

Table 2

Number and percentage of adolescents reporting different types of violent events. ¹

Number of violence types reported	Community Violence Exposure		Violent Behavior	
	Waves 2-4 (N=285)	Waves 2-4 (N=285)	Waves 2-4 (N=285)	Waves 5-6 (N=250)
	N	(%)	N	(%)
0	15	(5)	149	(52)
1	72	(25)	58	(20)
2	76	(27)	40	(14)
3	66	(23)	20	(7)
4	35	(12)	13	(5)
5	16	(6)	4	(1.5)
6	5	(2)	1	(.5)
7	-	-	0	(0)
8	-	-	0	(0)

¹ Six types of community violence exposure were assessed, while eight types of violent behavior were assessed.

Table 3

Distributions and correlations between study composite variables.

	Mean	SD	1. T1 Vio. Exp.	2. T1 Cop. Eff.	3. T1 Vio. Beh.
1. Time 1 Violence Exposure	.32	.25			
2. Time 1 Coping Effectiveness	3.77	.82	-.06		
3. Time 1 Violent Behavior, Weighted for Legal Seriousness	1.02	1.17	.43 ***	-.08	
4. Time 2 Violent Behavior, Weighted for Legal Seriousness	.91	1.25	.27 ***	-.11	.32 ***

 $p < .001$

Table 4

Linear regression of Time 2 violent behavior, weighted for legal seriousness, on Time 1 violent behavior, community violence exposure, and coping effectiveness.

	Predictors	B (s.e.)	t	Total df for Step
Step 1	Time 1 Violent Behavior, Weighted for Legal Seriousness	.27 (.07)	3.83 ***	249
	Community Violence Exposure	.80 (.33)	2.41 *	
Step 2	Time 1 Violent Behavior, Weighted for Legal Seriousness	.21 (.07)	2.92 **	234
	Community Violence Exposure	.10 (.48)	.22	
	Coping Effectiveness	-.34 (.29)	-1.18	
	Interaction between Community Violence Exposure and Coping Effectiveness	1.42 (.65)	2.19 *	

*
 $p < .05$

**
 $p < .01$

 $p < .001$