ORIGINAL PAPER

# Coping with Exposure to Violence: Relations to Emotional Symptoms and Aggression in Three Urban Samples

Paul Boxer · Amanda Sheffield Morris · Andrew M. Terranova · Mumbe Kithakye · Sarah C. Savoy · Adrienne F. McFaul

Published online: 4 March 2008 © Springer Science+Business Media, LLC 2008

Abstract Relations among exposure to violence, coping, and adjustment were examined in three urban samples. In study 1, which took place in a southeastern city, children ages 6–16 (N = 35; M age = 10.7 years) completed measures of adjustment, exposure to violence, and coping with violence. In study 2, which took place in one southern Midwestern city and one Northeastern city, children ages 8–15 (N = 70; M age = 11.3 years) completed similar measures with the addition of a measure assessing normative beliefs about aggression. Results are in line with the *pathologic adaptation* model and provide preliminary evidence for two hypothesized pathways explaining the effects of exposure to violence on adjustment: a *normalization pathway* in which exposure leads to more aggression-supporting beliefs and in turn to greater aggression, and a *distress pathway* in which exposure leads to avoidant coping and in turn to emotional symptoms.

**Keywords** Exposure to violence · Aggression · Beliefs · Coping · Emotional symptoms

# Introduction

Despite declining trends nationally in violent crime (Bureau of Justice Statistics 2004), studies continue to demonstrate that exposure to violent behavior remains alarmingly high, particularly in disadvantaged inner-city areas (Stein et al. 2003). Exposure to community violence is associated with a host of psychosocial

A. S. Morris · M. Kithakye

Department of Human Development and Family Science, Oklahoma State University, Tulsa, OK, USA

P. Boxer (🖂) · A. M. Terranova · S. C. Savoy · A. F. McFaul

Department of Psychology, Rutgers University, 101 Warren Street, Newark, NJ 07102, USA e-mail: pboxer@newark.rutgers.edu

adjustment difficulties such as anxiety, depression, traumatic stress, and aggression (for reviews, see, e.g., Buka et al. 2001). Yet extant literature largely is inconclusive with regard to how exposure to community violence leads to these difficulties. Theoretical accounts have been offered to describe how exposure to violence affects outcomes, and some recent studies have supported process models of those effects (e.g., Guerra et al. 2003). However, some have noted that theory currently is reaching beyond available data (Kuther and Wallace 2003). The goal of the studies presented in this article was to examine specifically the roles of avoidant coping and aggressive cognition in the link between exposure to violence and two indicators of psychosocial adjustment—aggression and emotional symptoms.

Several processes whereby community violence exposure leads to adjustment difficulties have been proposed. Cumulative stress or trauma models assert that exposure to violence is a stressor that when experienced in high levels leads to symptoms of depression, traumatic stress, anxiety, and aggression (Horn and Trickett 1997). However, this perspective does not account for why violence exposure has shown stronger associations with aggression in comparison to indicators of distress (e.g., Cooley-Quille et al. 1995; Farrell and Bruce 1997; Fitzpatrick 1993; Kliewer et al. 1998; Schwab-Stone et al. 1995).

Ng-Mak et al. (2002) presented a *pathologic adaptation* model proposing that some adapt to community violence by developing beliefs that normalize violence. After repeated exposure to community violence, these individuals' affective responses to violence become blunted as they come to view violence as morally permissible and to develop uncaring attitudes toward others. This moral disengagement thus mediates the link between violence exposure and aggression. According to the model, individuals who do not acclimate to violence in this manner react instead with general maladaptation, including emotional distress (Ng-Mak et al. 2002). The pathologic adaptation model thus suggests two pathways to problem outcomes. We refer to these as the *normalization pathway* involving mediated effects of exposure on aggression through aggression-supporting cognitive process and the *distress pathway* involving effects of exposure on emotional distress and related affective symptoms.

Ng-Mak et al. (2004) found support for a normalization pathway in a crosssectional study of adolescents from inner city communities. Specifically, they identified a subgroup of youth exhibiting high aggression and low emotional distress in the context of elevated exposure to community violence. Other recent work also provides support for aspects of the normalization pathway. For instance, Guerra et al. (2003) have shown that exposure to violence led to increases in children's aggression-supporting beliefs, in turn leading to greater aggression over time.

The pathologic adaptation model specifies clear mechanisms for how youth might exhibit characteristics consistent with the normalization pathway. However, processes accounting for how exposure to violence might lead to fairly stable emotional symptoms (a distress pathway) are less clear. We propose that one key mechanism in explaining the relation between exposure to community violence and emotional distress is avoidant coping. Generally, coping consists of cognitive and behavioral responses to reduce or eliminate stressors or the psychological distress resulting from the stressors (Folkman 1984). Although coping behaviors have been

classified in a variety of ways, we focus here on avoidant coping responses as they have been most commonly associated with indicators of maladjustment such as high anxiety and poor behavioral conduct (Causey and Dubow 1992; Dempsey 2002). These coping responses include psychologically or physically distancing oneself from the stressor, acting out or venting negative emotions such as anger (externalized coping), and turning inward through worrying and feeling sorry for oneself (internalized coping).

Of course, stressors are requisite for engaging in coping behavior, and thus characteristics of stressors are important to consider when examining coping. The controllability of a stressor is a critical factor that influences the expression and ultimate outcome of coping efforts (Causey and Dubow 1992; Folkman and Lazarus 1980). When dealing with less controllable stressors, individuals tend to utilize avoidant coping responses (Folkman and Lazarus 1980).

Community violence largely is an uncontrollable stressor, and negative forms of coping commonly are associated with emotional symptoms and problem behaviors (e.g., Dempsey 2002; Kliewer et al. 2006; Scarpa and Haden 2006; Tolan et al. 2002). Thus within the broad pathologic adaptation framework, avoidant coping seems a central mechanism in the distress pathway to maladjustment. The studies reported here were designed to assess primarily the role of avoidant coping as a predictor of emotional distress in the context of community violence exposure.

In Study 1, we focused on the distress pathway in the pathologic adaptation framework in a sample of youth from an inner-city neighborhood who were highly exposed to community violence as well as less severe aggression and victimization. We included exposure to less severe acts because we wanted to examine a range of severity in the aggression to which children might be exposed given that previous research has established a link between lower level exposure and adjustment (e.g., Boxer et al. 2003).

In Study 2, we added a measure of normative beliefs about the acceptability of aggression to examine both the distress pathway and the normalization pathway in two additional samples of urban youth. We expected that in all samples, consistent with much prior work, exposure to violence and aggression would relate positively to avoidant coping, aggression, and emotional symptoms. Consistent with a distress pathway, we expected that avoidant coping would be correlated with emotional symptoms but not aggression. In Study 2, consistent with previous research, we anticipated that normative beliefs also would relate to experiences with violence and aggression as well as to engagement in aggression. In support of a normalization pathway, we expected that beliefs would not relate to emotional symptoms nor to avoidant coping.

#### Study 1

Method

# Participants

Participants for Study 1 were 35 children (57% male; mean age = 10.7 years; age range = 6-16 years; 93% Black/African-American, 7% mixed racial/ethnic status)

enrolled in an afterschool program administered by a faith-based charitable agency and housed in a community center located in an inner-city neighborhood of a large Southern city. According to Census indicators the neighborhood served by the community center is highly socioeconomically distressed (median household income = 10,000/year; 60% of families below poverty line).

# Measures

All alpha coefficients reported are for the Study 1 sample.

*Psychosocial adjustment.* Participants completed the 5-item *emotional symptoms* subscale of the *Strengths and Difficulties Questionnaire* (SDQ; e.g., "I am often unhappy, sad, or tearful"; "I worry a lot";  $\alpha = .61$ ; 0 = not true... 2 = very true). Goodman (e.g., 2001) has reported similar internal reliability and good validity via significant links to other established scales as well as clinical diagnoses. Participants also completed a reliable ( $\alpha = .87$ ) 8-item measure of *aggression* (e.g., "How often do you hit or push other kids?"; 0 = never... 3 = a lot). Boxer and others showed validity for this measure through significant correlations with a variety of contextual and cognitive aspects of youth aggression (Boxer et al. 2003; Musher-Eizenman et al. 2004).

*Exposure to violence, crime, and low-level aggression.* Participants responded to 7 items from Richters and Martinez's (1993) measure of exposure to violence and crime (e.g., "I have seen somebody get stabbed";  $\alpha = .79$ ); this scale consistently has yielded validity through its association with indicators of mental health symptoms. Also included was a measure of exposure to "low level," mild aggression (Boxer et al. 2003). This measure includes subscales measuring witnessing of (e.g., "I have seen other kids get hit or pushed"; 5 items;  $\alpha = .59$ ) and victimization by (e.g., "Other kids have said mean things to me"; 6 items;  $\alpha = .82$ ) low level acts. Boxer and colleagues (2003) have shown that scores on these scales predict a variety of behavioral and emotional outcomes. On all exposure scales participants indicated how often during the past year they had experienced each event on a four point scale (0 = never... 3 = many times).

Avoidant coping with exposure to violence. Participants completed a new 8-item measure of avoidant coping with exposure to violence based on Causey and Dubow's (1992) Self-Report Coping Survey. The measure was introduced with the following: "These items ask about what you do when you see or hear somebody hurting someone, getting into a fight with someone, or threatening to hurt someone really badly. People deal with these things in a lot of different ways. How do you deal with those things?" We developed items representing a mix of the avoidant coping responses described by Causey and Dubow (1992) and correlated with negative adjustment indicators (also see Dempsey 2002). Items assessed distancing (4 items; e.g., "When I see or hear violence...I try to forget about it"), internalizing (2 items; e.g., "...I get so upset that I can't talk to anyone") and externalizing (2 items; e.g., "...I get mad and throw or hit something") responses to witnessing violence. We created a composite score to indicate avoidant coping based on the mean of all items ( $\alpha = .60$ ; 0 = never... 3 = a lot).

## Procedures

All procedures and measures were approved by the university human subjects research committee overseeing the project in addition to the directors of the community center. We sent letters describing the study home to the parents/guardians of all children (N = 39) involved in the center's afterschool program; our sample of 35 children represents a participation rate of 90%. Parents/guardians returned consent forms to the center staff. After about 2 weeks, we contacted parents/guardians who had not yet returned forms to encourage the return of consent forms. Surveys were administered at the community center during one session each for younger children (ages 6–10) and older children (ages 11–16). The first author read surveys aloud to children while research assistants circulated around the room to provide assistance if needed. Children received treats during the survey as rewards for cooperation. At the end of the survey the first author led a short game to help reduce any distress resulting from answering questions about exposure to violence, and children received \$15 gift cards to a local merchant.

## **Results and Discussion**

Table 1 displays descriptive data and correlations for all study measures. It should be noted that despite the wide age range of the sample, age was uncorrelated with the study measures. Greater exposure to violence, crime and low-level aggressive acts was associated with greater engagement in avoidant coping in response to witnessing violence. Although aggression and emotional symptoms were correlated positively and significantly with exposure to violence and crime, they were not significantly correlated with each other. Engagement in avoidant coping correlated positively and significantly with emotional symptoms but not aggression.

The pattern of observed relations generally is consistent with a pathologic adaptation view: exposure to violence is linked to aggression as well as emotional symptoms, but aggression and emotional symptoms are uncorrelated. Further, these correlations suggest that avoidant coping with violence might be a marker of distress in and of itself given its positive relation to emotional symptoms. Thus youth who engage in greater efforts to cope with witnessing violence might be those

Measure	М	SD	Range	1	2	3	4	5	6
1. Witness violence/crime	1.71	0.72	0–3	_					
2. Witness low lev agg	2.09	0.60	.40–3	.55**	-				
3. Victim low lev agg	1.29	0.81	0–3	.52**	.53**	-			
4. Avoidant coping	1.35	0.54	.38-2.63	.49**	.27	.41*	_		
5. Aggressive behavior	1.24	0.68	0-2.75	.49**	.32	.27	.22	-	
6. Emotional symptoms	0.91	0.49	0–2	.41*	.41*	.58**	.41*	.24	_

 Table 1 Descriptive statistics and correlations of study 1 measures

\* p < .05; \*\* p < .01

who experience distress in response to that witnessing. This squares with our view on the role of avoidant coping as a potential mediator of the link between violence exposure and emotional maladjustment. Still, our conclusions are necessarily qualified by the uniqueness and small size of our sample. Study 2 was designed to explore relations among exposure, coping, and adjustment in a larger sample of individuals at risk for exposure to community violence. For this study we included also a brief measure of beliefs supporting aggression. Thus in Study 2 we examined the role of coping and aggression-supporting beliefs in the link between exposure to various forms of aggression and psychosocial adjustment.

## Study 2

Method

#### Participants

Participants for Study 2 were 70 children (51% male; mean age = 11.3 years; age range = 8–15 years; 93% Black/African-American, 7% mixed racial/ethnic status) involved in afterschool programs administered by a national non-profit youth services agency and housed in community centers in urban and inner-city areas of large metropolitan regions in the Northeast ("city 1"; n = 34) and southern Midwest ("city 2"; n = 36). According to Census indicators (American Community Study, 2005) the catchment areas served by the community centers are socioeconomically distressed (city 1, Northeast: median household income approx. \$16,000/year; 55% of families below poverty line; city 2, Midwest: median household income approx.

#### Measures

All alpha coefficients reported are for the Study 2 sample.

*Psychosocial adjustment*. As in Study 1, participants completed the *emotional symptoms* subscale of the SDQ ( $\alpha = .62$ ) and the Boxer et al. (2003) measure of *aggression* ( $\alpha = .81$ ).

*Exposure to violence, crime, and low-level aggression.* Participants responded to 7 items from the Richters and Martinez (1993) scale ( $\alpha = .83$ ) as well as the witnessing ( $\alpha = .76$ ) and victimization ( $\alpha = .73$ ) subscales of Boxer et al's (2003) "low level" exposure measure, with slight modifications made to capture a somewhat broader range of low level acts.

Avoidant coping with exposure to violence. Participants completed a revised version of the measure of coping with exposure to violence described above. Specifically, one item on the initial version measuring an externalizing coping response ("...I want to do something violent too") was replaced with two different externalizing items ("...I want to punch or kick something"; "...I feel like hurting somebody or breaking something"). Thus a 9-item version was used, with the same

instructions and response scale. However, confirmatory factor analysis (CFA) of this scale conducted via multiple-group modeling of children's responses in tandem with responses given by a sample of adults to the same items (parents/guardians of children in the current sample who were separately surveyed) yielded a 7-item version (2 internalizing; 2 distancing; 3 externalizing). AMOS 7.0 (SPSS 2007) was used to compute the CFA. This method of scale reduction provides a better estimate for the composite score of a new, theoretically derived measure with a hypothesized factor structure (Byrne 2001; see, e.g., Boxer and Tisak 2003). Item weights from the CFA were used to create a linear composite indicating tendencies to cope in an avoidant manner in response to seeing or hearing violence. Computational details including model fit and item weights can be obtained from the first author.

Aggression-supporting beliefs. Participants completed a 2-item measure ( $\alpha = .73$ ) of the extent to which they approved of behaving aggressively based on Huesmann and Guerra's (1997) Normative Beliefs about Aggression Scale (NOBAGS). Participants rated how "okay" or "wrong" it is to "get in fights with or hit other people" in general and when angry, using a 4-point scale (1 = "it's really wrong" to 4 = "it's perfectly okay"). Previous work has shown that reduced versions of the NOBAGS produce valid estimates through significant associations with indicators of aggressive behavior (Musher-Eizenman et al. 2004).

## Procedures

All procedures and measures first were approved by the university human subjects research committees overseeing the project in addition to the directors of agencies at both sites. Directors of centers informed parents/guardians of children in the targeted age range (8-15 years) about the project approximately three weeks prior to data collection. A participation rate could not be calculated because it was not known to us how many parents/guardians were informed of the project. Data collection occurred in early evening hours at the various centers. At the start of each session, parents/guardians of the children were informed of the study and consent to survey the children was obtained. Children provided their own assent and were surveyed in rooms or areas at each center separate from their parents and nonparticipating children to ensure privacy. One researcher read surveys aloud while others circulated to provide individual assistance if needed. Children received treats during the survey as rewards for cooperation. At the end of the child survey the researcher led a short game to help reduce any distress resulting from answering questions about exposure to violence, and children received \$20 gift cards to a local merchant.

#### **Results and Discussion**

Table 2 displays descriptive data on all study measures. T-tests indicated that there were no significant differences in any of the study variables by city or by sex. Age, however, was significantly correlated with most variables; Table 3 presents the

Measure	City 1			City 2			
	Mean	SD	Range	Mean	SD	Range	
Witness violence/crime	1.16	0.81	0–3	0.80	0.70	0–2.86	
Witness low lev agg	1.60	0.81	0–3	1.56	0.71	.60–3	
Victim low lev agg	1.24	0.82	0–3	1.15	0.69	0-2.67	
Avoidant coping	0.18	1.83	-1.77-4.61	-0.23	1.67	-1.77-4.21	
Normative beliefs	1.36	0.62	1-4	1.72	0.85	1–4	
Aggressive behavior	0.95	0.77	0–3	1.09	0.61	0-2.43	
Emotional symptoms	0.73	0.52	0-1.80	0.57	0.36	0-1.40	

Table 2 Descriptive statistics for study 2 measures, by city

Table 3 Correlations for study 2 measures

Measure	1	2	3	4	5	6	7	8
1. Child age	_							
2. Witness violence/crime	.36**	-						
3. Witness low lev agg	.26*	.64**	_					
4. Victim low lev agg	.05	.28*	.43**	_				
5. Avoidant coping	11	.15	02	.40**	_			
6. Normative beliefs	.50**	.29*	.27*	17	19	_		
7. Aggressive behavior	.36**	.47**	.49**	.28*	.06	.48**	_	
8. Emotional symptoms	38**	04	.03	.08	.35**	20	11	_

\* p < .05; \*\* p < .01

correlations among all study measures including child age. We applied path analysis to assess the roles of avoidant coping and aggression-supporting beliefs in accounting for links between exposure to violence and aggression and psychosocial adjustment. Although structural equation modeling is more optimal for assessing multivariate directional relations, our sample size in tandem with the number of parameters that would need to be estimated precluded the use of this technique (Bentler and Chou 1987). In all regressions computed to estimate path coefficients, we controlled sex, city, and age given the potential confounding role of those variables when interpreting coefficients accurately. As shown on Table 3 the correlation between exposure to violence/crime and witnessing low level aggression was .64 (p < .01). Because path analysis requires the interpretation of coefficients entered simultaneously and not hierarchically, we reduced the potential effects of collinearity between these two measures by standardizing and then summing the scores.

Figure 1 presents the results of the path modeling. Unbroken lines represent statistically significant path coefficients. Overall findings support our notion of two paths linking exposure violence and adjustment. Regarding the normalization



Fig. 1 Path model results showing the relations among exposure variables, normative beliefs, avoidant coping, and adjustment (aggression and emotional symptoms). Sex, city, and age were specified as control variables.  $R^2$  values reflect the full model, including controls; adjusted  $R^2$  values reflect the additive effects of the study variables beyond the controls. \*p < .10; \*p < .05; \*\*p < .01

pathway, aggression was predicted significantly by direct and mediated effects of the witnessing composite. Normative beliefs accounted for some of the effect of exposure. Even though the avoidant coping scale included aggressive forms of coping, this measure did not predict aggression, suggesting that aggressive youth were not distressed enough by the exposure to feel a need to cope actively with it. In the distress pathway, however, youth who experience exposure as distressing are likely to engage in avoidant coping aimed at reducing that distress, yet avoidant coping generally has been linked to negative adjustment (e.g., Dempsey 2002). Supporting this pathway, avoidant coping was again linked to exposure (i.e., victimization) and emotional symptoms.

#### **General Discussion**

In the present studies, we examined pathways to maladjustment in the context of exposure to violence and lower level forms of aggression. Following Ng-Mak and colleagues' (2002, 2004) pathologic adaptation model, and integrating research on children's coping (e.g., Causey and Dubow 1992; Dempsey 2002), we analyzed a

set of variables selected to indicate two hypothesized pathways: a normalization pathway to aggressive behavior, and a distress pathway to emotional symptoms. In the normalization pathway, for some children experiences with community violence leads through desensitization or disengagement to a cognitive orientation that normalizes violence (Ng-Mak et al. 2002). Children who develop these normalizing cognitions believe that aggression is normal and therefore morally acceptable. Once formed, this cognitive orientation leads to greater engagement in aggressive behavior. In the *distress pathway*, for some children experiences with community violence create emotional distress and the need actively to cope with that distress. We viewed the most likely form of coping in response to community violence (a stressor over which children have little control) to be avoidant coping. Frequent engagement in avoidant coping leads ultimately to more generalized emotional symptoms. Results across the two studies presented here provided support for this dual-pathway view of how exposure to different forms of violence and aggression can affect adjustment. Although preliminary given the design of our studies, the findings have important implications for further research on how various forms of exposure to violence relate to adjustment outcomes.

These results suggest that exposure to violence and aggression appears to be a meaningful risk factor for avoidant coping. Avoidant coping was related to emotional symptoms but not to aggression in both studies even though our measure included items tapping externalized coping behaviors. This suggests that avoidant coping in response to victimization (and, in study 1, to witnessing violence) might be a marker for increased distress. Perhaps only children who are troubled by those experiences attempt to cope with them; this could account for the observation in Study 2 that only victimization predicted avoidant coping.

Although this study is the first known to locate avoidant coping in a larger model exploring differential effects on aggression and emotional distress from violence exposure, it is important to acknowledge the limitations of our coping assessment. We did not include measures of positive coping (e.g., problem-focused or approachoriented) because we were interested specifically in links to emotional distress. Even though exposure to violence generally is uncontrollable for children, others have attempted to examine coping responses aimed at reducing exposure or maintaining safety. For example, findings reported by Rosario et al. (2003) suggest that there is little by way of positive coping that children can do in response to violence except to avoid it entirely.

In Study 2 we observed that witnessing violence and low level aggression positively predicted normative beliefs approving of aggressive responding, which in turn predicted higher levels of aggressive behavior. This finding is directly analogous to earlier studies showing that witnessing violence augments aggression-supporting cognitions (e.g., normative beliefs, hostile biases, positive outcome expectancies for aggression, aggressive fantasies) and consequently aggression (Guerra et al. 2003; Musher-Eizenman et al. 2004; Schwartz and Proctor 2000). In fact, exposure to violence is theorized to be a central risk factor for habitual aggression through its effects via social learning on social cognition (see Guerra et al. 2003).

Interestingly, we observed in Study 2 that victimization negatively predicted normative beliefs. Children who reported experiencing greater victimization also reported less approval of aggressive responding. Though this finding is inconsistent with general theory proposing that experiences with aggression and violence should on average promote the emergence of an aggression-supporting cognitive style, it is in line with recent empirical findings on the link between victimization and aggressive cognition. For example, Musher-Eizenman et al. (2004) reported that general victimization was related positively and significantly to aggressive fantasizing; victimization by indirect acts (e.g., peer exclusion) was related significantly to greater concern for the consequences of aggression. Similarly, Marini et al. (2006) noted that children classified as "victims" (of bullying) held normative beliefs legitimizing aggression at a level equivalent to beliefs held by children uninvolved in bullying, and significantly lower than did children classified as bullies or bully-victims. Schwartz and Proctor (2000) observed that violent victimization was uncorrelated with a composite measure of aggressive cognition but instead significantly predictive of emotion dysregulation. Although Ng-Mak et al. (2004) did not separate the effects of witnessing from victimization in their analyses of pathologic adaptation, our findings in tandem with the studies described suggest that the normalization pathway is more likely to be accounted for by frequent witnessing of violence, whereas the distress pathway might be prompted by frequent victimization.

Despite the theoretically consistent findings of our studies, conclusions are qualified by our sample size, broad age range, reliance on self-report, and use of a cross-sectional design. Further, despite replication of important relations across samples from three different inner-city venues, we observed some discrepancies in correlations between Study 1 and Study 2. For example, though emotional symptoms were correlated with all three indicators of violence exposure in Study 1, this was not the case in Study 2. At the same time, in Study 2 aggression was related more consistently to exposure. These observations might potentially reflect real instability across independent samples in the extent to which exposure relates to outcomes. Alternatively, relatively low internal reliability estimates for the witnessing and coping measures in Study 1 might have limited our ability to observe greater consistency between the two studies. Still, although most research on children's violence exposure shows links between exposure and a variety of mental health outcomes, the outcomes showing significant associations do represent a "mixed bag" of findings and variations in measurement and sampling often could lead to these sorts of inconsistencies (e.g., Brandt et al. 2005).

To advance the ideas raised in these studies, replication in larger samples with more reliable multi-informant reports of children's behavior clearly is needed. In addition, to test mediators of the link between exposure to violence and adjustment, longitudinal approaches are a critical next step. This is especially important with regard to examining variation in theorized processes as the function of child age (i.e., development). We were limited in examining moderating effects of age by virtue of our sample size, but given the importance of development for the crystallization of cognitive beliefs (Guerra et al. 2003) and the emergence of appropriate emotion regulation skills (Frick and Morris 2004), age is likely to affect

meaningfully the relations among violence exposure, theorized mediators, and psychosocial adjustment over time.

#### References

- Bentler, P. M., & Chou, C. (1987). Practical issues in structural equation modeling. Sociological Methods & Research, 16, 78–117.
- Boxer, P., Edwards-Leeper, L., Goldstein, S. E., Musher-Eizenman, D., & Dubow, E. F. (2003). Exposure to "low-level" aggression in school: Associations with aggressive behavior, future expectations, and perceived safety. *Violence and Victims*, 18, 691–704.
- Boxer, P., & Tisak, M. S. (2003). Adolescent attributions about aggression: An initial investigation. Journal of Adolescence, 26, 559–573.
- Brandt, R., Ward, C. L., Dawes, A., & Flisher, A. J. (2005). Epidemiological measurement of children's and adolescents' exposure to community violence: Working with the state of the science. *Clinical Child and Family Psychology Review*, 8, 327–342.
- Buka, S. L., Stichik, T. L., Birdthistle, I., & Earls, F. J. (2001). Youth exposure to violence: Prevalence, risks, and consequences. *American Journal of Orthopsychiatry*, 71, 298–310.
- Bureau of Justice Statistics. (2004). Results from the National Crime Victimization Survey, 1973–2003. Downloaded from http://www.ojp.usdoj.gov/bjs/cvict.htm.
- Byrne, B. M. (2001). Structural equation modeling with AMOS: Basic concepts, applications, and programming. Mahwah, NJ: Lawrence Erlbaum.
- Causey, D. L., & Dubow, E. F. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology*, 21, 47–59.
- Cooley-Quille, M. R., Turner, S. M., & Beidel, D. C. (1995). Emotional impact of children's exposure to community violence: A preliminary study. *Journal of American Academy of Child and Adolescent Psychiatry*, 34, 1362–1368.
- Dempsey, M. (2002). Negative coping as mediator in the relation between violence and outcomes: Innercity African American youth. American Journal of Orthopsychiatry, 72, 102–109.
- Farrell, A. D., & Bruce, S. E. (1997). Impact of exposure to community violence on violent behavior and emotional distress among urban adolescents. *Journal of Clinical Child Psychology*, 26, 2–14.
- Fitzpatrick, K. M. (1993). Exposure to violence and presence of depression among low-income, African-American youth. Journal of Consulting and Clinical Psychology, 61, 528–531.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. Journal of Personality and Social Psychology, 46, 839–852.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219–239.
- Frick, P., & Morris, A. S. (2004). Temperament and developmental pathways to severe conduct problems. Journal of Clinical Child and Adolescent Psychology, 33, 54–68.
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 1337–1345.
- Guerra, N. G., Huesmann, L. R., & Spindler, A. (2003). Community violence exposure, social cognition, and aggression among urban elementary school children. *Child Development*, 74, 1561–1576.
- Horn, J. L., & Trickett, P. K. (1997). Community violence and child development: A review of research. In P. K. Trickett & C. J. Schellenbach (Eds.), *Violence against children in the family and the community* (pp. 103–138). New York: Free Press.
- Huesmann, R. L., & Guerra, N. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of Personality and Social Psychology*, 72, 408–419.
- Kliewer, W., Lepore, S. J., Oskin, D., & Johnson, P. D. (1998). The role of social and cognitive processes in children's adjustment to community violence. *Journal of Consulting and Clinical Psychology*, 66, 199–209.
- Kliewer, W., Parrish, K. A., Taylor, K. W., Jackson, K., Walker, J. M., & Shivy, V. A. (2006). Socialization of coping with community violence: Influences of caregiver coaching, modeling, and family context. *Child Development*, 77, 605–623.
- Kuther, T. L., & Wallace, S. A. (2003). Community violence and sociomoral development: An African American cultural perspective. *American Journal of Orthopsychiatry*, 73, 177–189.

- Marini, Z. A., Dane, A. V., Bosacki, S. L., & YLC-CURA. (2006). Direct and indirect bully-victims: Differential psychosocial risk factors associated with adolescents involved in bullying and victimization. Aggressive Behavior, 32, 551–569.
- Musher-Eizenman, D. R., Boxer, P., Danner, S., Dubow, E. F., Goldstein, S. E., & Heretick, D. M. L. (2004). Social-cognitive mediators of the relation of environmental and emotion regulation factors to children's aggression. *Aggressive Behavior*, 30, 389–408.
- Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, A. C. (2002). Normalization of violence among inner-city youth: A formulation of research. *American Journal of Orthopsychiatry*, 72, 92–101.
- Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, A. C. (2004). Pathologic adaptation to community violence among inner-city youth. *American Journal of Orthopsychiatry*, 74, 196–208.
- Richters, J. E., & Martinez, P. (1993). The NIMH community violence project I: Children as victims and witnesses to violence. *Psychiatry*, 56, 7–21.
- Rosario, M., Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2003). Community violence exposure and delinquent behaviors among youth: The moderating role of coping. *Journal of Community Psychology*, 31, 489–512.
- Scarpa, A., & Haden, S. C. (2006). Community violence victimization and aggressive behavior: The moderating effects of coping and social support. Aggressive Behavior, 32, 502–515.
- Schwab-Stone, M. E., Ayers, T. S., Kasprow, W., Voyce, C., Barone, C., Shriver, T., & Weissberg, R. P. (1995). No safe haven: A study of violence exposure in an urban community. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 1343–1352.
- Schwartz, D., & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, 68, 670–683.

SPSS. (2007). AMOS version 7. Chicago: SPSS, Inc.

- Stein, B. D., Jaycox, L. H., Kataoka, S., Rhodes, H. J., & Vestal, K. D. (2003). Prevalence of child and adolescent exposure to community violence. *Clinical Child and Family Psychology Review*, 6, 247– 264.
- Tolan, P. H., Gorman-Smith, D., Henry, D., Chung, K., & Hunt, M. (2002). The relation of patterns of coping of inner-city youth to psychopathology symptoms. *Journal of Research on Adolescence*, 12, 423–449.