

Longitudinal Pathways Between Political Violence and Child Adjustment: The Role of Emotional Security about the Community in Northern Ireland

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Published online: 14 September 2010
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Abstract Links between political violence and children's adjustment problems are well-documented. However, the mechanisms by which political tension and sectarian violence relate to children's well-being and development are little understood. This study longitudinally examined children's emotional security about community violence as a possible regulatory process in relations between community discord and children's adjustment problems. Families were selected from 18 working class neighborhoods in Belfast, Northern Ireland. Participants (695 mothers and children, $M=12.17$, $SD=1.82$) were interviewed in their homes over three consecutive years. Findings supported the notion that politically-motivated community violence has distinctive effects on children's externalizing and internalizing problems through the mechanism of increasing children's emotional insecurity about community. Implications are considered for understanding relations between political violence and child adjustment from a social ecological perspective.

Keywords Child adjustment · Emotional security · Community violence · Political violence

The effects on children of political violence are matters of international concern, with negative outcomes well-documented (Prinz and Feerick 2003), including heightened aggression and violence, anxiety, depression, post-traumatic stress, somatic complaints, poor school performance, and engagement in political violence (e.g., Quota et al. 2008). However, many studies proceed as if political violence occurs in a social vacuum, that is, that demonstrating links between political violence and child adjustment problems is sufficient, without regard to the investigation of the mechanisms underlying the effects on children (Dawes and Cairns 1998). As Barber (2008) has noted, it is over a decade since a call went out, reflected in a special issue of *Child Development* (Cairns and Dawes 1996; Ladd and Cairns 1996), for more sophisticated approaches to the study of children and political violence, including more research towards understanding developmental processes underlying the effects of political violence on children. Moreover, knowledge is limited about the processes and mechanisms through which neighborhoods affect human development (Aisenberg and Ell 2005). More research is needed on how and why, for whom and when, these contexts are associated with adjustment problems in children (Cummings et al. 2009).

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Political Violence in Northern Ireland

The focus of this report is on the longitudinal study of relations between political violence and child adjustment in Northern Ireland (Cairns and Darby 1998), including community factors and child self-regulatory processes in

these contexts. Regarding political violence in Northern Ireland, Nationalists/Republicans (i.e., generally from Catholic community backgrounds) contend for the unification of Northern Ireland with the Republic of Ireland whereas Unionists/Loyalists (i.e., generally from Protestant community backgrounds) hold that Northern Ireland should remain part of the United Kingdom. While religious, ethnic and/or national identities overlap, the labels “Catholic” and “Protestant” are typically used to refer to the primary ethnic/religious groups. Contemporary studies focus on the 30 year period of violence, from 1968 to 1998, colloquially known as the “Troubles.” The Troubles began as campaigns to remove state driven discrimination, including social housing, access to employment, policing and voting rights. These initially peaceful directions were eventually undermined by repressive policing, and the violent acts of the Irish Republican Army and Loyalist paramilitary militias, resulting in the collapse of the Northern Ireland State and the deployment of the British Army. It is estimated that around 3,600 people were killed in this conflict, that 30,000 people were maimed or otherwise injured, and that tens of 1,000s were forced from their homes. The rate of deaths per 1,000 is estimated at around 0.02, a figure that suggests a low rate of deaths related to political conflict (Shirlow and Murtagh 2006). However, in their study of segregated Belfast communities, Shirlow and McEvoy (2008) found that about 65% of adult respondents were related to someone killed in the conflict. In essence, the knowledge and experience of violence is spatially uneven, linked to neighborhoods with high levels of social exclusion and community segregation by religion.

After many attempts to achieve political solutions, the Belfast/Good Friday Agreement was reached in 1998, eventually leading to inter-community power-sharing, and the endorsement of cultural rights. Despite these signs of progress, many neighborhoods and schools in Belfast remain highly segregated by ethnicity. Moreover, as paramilitary organizations have disbanded and decommissioned, it has been evident that young people, unaffiliated with such organizations, have been at the forefront of sectarian rioting and crime. In addition, although Northern Ireland has experienced declines in more extreme forms of violence, substantial levels of conflict and political disturbances persist (Shirlow and McEvoy 2008). Moreover, McAloney et al. (2009) recently reported that over three quarters of adolescents (15–16 year olds) in Belfast had experienced violence within their community reflecting a social and psychological legacy of the Troubles and that both direct and vicarious exposure, that is, knowledge of violent events, was linked with risk for psychological symptoms, including higher levels of depression and substance misuse. Given that this study was limited by the inability to detach “normal” from sectarian community violence, it was concluded that being able to do so was an important direction for future research.

A Social Ecological Perspective: Sectarian and Non-sectarian Community Antisocial Behavior

Little is known about the social ecological bases for relations between political violence and children’s adjustment, in Northern Ireland or in other regions that have experienced protracted conflict. Building on social ecological models of development (e.g., Bronfenbrenner 1979; Cicchetti and Lynch 1993), the hypothesis is that political violence may affect children through multiple levels of individual and societal functioning. The scant published research supports this approach for understanding child outcomes in terms of associated changes in community and child-related processes (e.g., Ajdukovic and Biruski 2008; Aisenberg and Ell 2005; Barber 2008; Belsky 2008; Punamäki 2001; Sagi-Schwartz 2008).

In this context, community antisocial behavior reflects a likely pathway for the impact of political violence on children. In studies in the United States (US), community violence is linked with children’s externalizing (Jaycox et al. 2002) and internalizing (Gorman-Smith and Tolan 1998) problems. However, in these studies distinctions are not made between sectarian and nonsectarian (or inter- and intra-) community violence. At the same time, distinctions between ordinary crime that is not driven by group-based differences and intergroup crime may be pertinent, for example, with regard to gang or racial violence. Distinguishing between these elements of community violence holds promise for advancing understanding of outcomes associated with political discord as opposed to other sources of community violence (Cummings et al. 2009; McAloney et al. 2009). Towards this goal, Goeke-Morey et al. (2009) described the development and assessment of conceptually- and psychometrically-supported instruments for assessing sectarian antisocial behavior (SAB) and non-sectarian community antisocial behavior (NAB) in Northern Ireland based on focus groups and initial studies in Belfast and Derry/Londonderry, Northern Ireland.

SAB is conceptualized in terms of local levels of conflict and violence due to political strife. That is, SAB reflects conflict and violence occurring in communities between ethnic, religious or cultural groups, in this case Protestants and Catholics. Despite peace accords, relatively high rates of sectarian hostility remain in highly segregated communities in Belfast (e.g., Summary of Statistics Relating to the Security Situation 2006/2007), indicative of continuing sectarian tensions between Catholic and Protestant communities (MacGinty 2006; MacGinty et al. 2007; Shirlow and Murtagh 2006). Rates of SAB are especially elevated in highly segregated and socially deprived areas. By contrast, NAB is “ordinary crime,” found in any community, regardless of political context, and not occurring specifically between ethnic, religious or cultural groups. Notably, socially

deprived areas are also more likely to have higher rates of ordinary crime (Shirlow and Murtagh 2006).

Although both types of community discord are likely to be associated with negative adjustment outcomes in children, pathways of influence on children may differ (Cummings et al. 2009). In comparison with NAB, SAB might be expected to be more closely linked with children's insecurity about the community. Political violence involves intergroup hostility whereas criminal violence is interpersonal. Intergroup violence means individuals behave violently because of their group affiliation (Cairns 1996). Children's emotional security may be especially threatened by SAB because it is more pertinent than NAB to children's ethnic identity, that is, sectarian violence is directed at people like oneself in the community. Thus, children's fear, worry, and safety perception in relation to residence in neighborhoods is expected to be more affected than NAB by the generalized threat associated with political violence. With regard to political and ethnic conflict, from an evolutionary perspective, feeling insecure can be seen as an appropriate and adaptive, even "optimal", response to a world made threatening by sectarian violence (Belsky 2008). Sectarian violence also fosters insecurity about the community by jeopardizing inter-community relations and the integrity of the political system and social order (MacGinty et al. 2007; Shirlow and Murtagh 2006). For example, with regard to the special threats to security associated with sectarian violence, Ayalon (1983, p. 296) has argued "The hostility that individuals encounter in their daily lives in the modern civilized world is seldom expressed as the intention to annihilate them utterly in cold blood, or to obliterate their humanity by reducing them to worthless objects."

Emotional Security Theory: A Theoretical Foundation for Affected Regulatory Processes

The mechanisms by which political tension and sectarian violence relate to children's well-being and development are little understood. Process-oriented studies of the effects on children are rare, particularly for the psychological factors related to political violence and children (Dawes and Cairns 1998; Sagi-Schwartz 2008). Pertinent to this analysis, this study focuses on children's emotional security about community violence as a possible regulatory process in relations between community discord (e.g., SAB, NAB) and children's adjustment.

Although emotional security has historically focused on security in the context of parent–child relationships (i.e., attachment security, Bowlby 1969), this notion has been extended in recent years to other family relationships, including the marital subsystem and family-wide processes. Emotional security is conceptualized as a goal associated

with children's regulatory processes, with a particular emphasis on the importance of emotional security in contexts of conflict and violence (Cummings and Davies 1996). Building on research and theory supporting emotional security as an explanatory variable for child outcomes, emotional security has been advanced as a model for children's regulatory processes related to their adjustment in multiple social ecological contexts (Cummings and Davies 2010). That is, children's emotional security is viewed as a regulatory system theoretically relevant to the impact of multiple levels of the social ecology on child adjustment (Waters and Cummings 2000).

Specifically, emotional security theory (EST, Davies and Cummings 1994) posits that children's protection, safety and security are core concerns in their regulatory functioning. Accordingly, emotional security is defined as a goal around which functioning is regulated, with emotional (e.g., fear, anger), behavioral (e.g., mediation, withdrawal, intervention) and cognitive (e.g., threat perceptions) responses activated in the service of regaining or maintaining a desired level of emotional security in the face of threats to that goal (see Cummings and Davies 2010). Maladaptive behavioral styles may develop as a byproduct of adaptations to stressful social conditions within the family or community (e.g., conflict and violence), including adoption of regulatory responses that are overly hostile, distressed or withdrawn, dangerous to the child's well-being (e.g., increasing the likelihood of eliciting aggression from others), or otherwise dysfunction and linked with increased risk for the development of psychopathology (Cummings and Davies 1996). For example, interparental hostility is linked prospectively with lower thresholds for children's dysregulatory responding in response domains associated with emotional insecurity (e.g., Davies et al. 2006). Frequent or prolonged activation of the emotional security system due to family or community violence requires great expenditure of physical and psychological resources to regulate attention, affect, and action tendencies, which may undermine capacities for adaptive psychological functioning and limit the child's resources to pursue developmental goals (Davies et al. 2007, 2008).

Extending past work demonstrating the significance of emotional security about family relationships for children's functioning, a new direction advanced in recent studies on political violence and children in Northern Ireland is the examination of the role of children's emotional security about community (e.g., Cummings et al. 2010b). Previous research has supported the notion that security is a key process for children exposed to violence. Richters and Martinez (1993) reported intra-community violence was related to children's adaptational failure when such adversities reduced the quality of children's perceptions of the stability and safety of their homes (Gorman-Smith and Tolan 1998; Lynch and Cicchetti 2002). Lovell and Cummings (2001)

extended this notion theoretically to include community conflict and violence, hypothesizing that these ecological contexts also influenced children's sense of emotional security, including emotional security about community due to exposure to community antisocial behavior. Bar-Tal and colleagues have also emphasized the importance of security perceptions to psychological adjustment in contexts of political violence (e.g., Bar-Tal and Jacobson 1998). Belsky (2008) has made the connection between emotional insecurity (Davies and Cummings 1994) beyond sources of influences in the family (e.g., parent–child and marital relations) and ethnic conflict in accounting for the effects of political violence on child functioning and adjustment.

It is hypothesized that children in the age period for this study (10–15 years of age) are especially prone to emotional insecurity in the face of social stressors, contributing to risk for adjustment problems (see Cummings et al. 2006). Children in this developmental period are moving from being bystanders and witnesses of sectarian violence to being at risk for becoming engaged as victims and/or perpetrators (Barber 2008; Punamäki 2001). Given these factors and the stresses associated with developmental transition from preadolescence to adolescence, relations between sectarian violence, emotional security, and child adjustment may be especially salient and timely concerns. In light of their greater vulnerability to threat and less developed coping resources, relatively younger children in this age range, that is, 10–12 years of age, may be especially vulnerable to emotional insecurity in the face of SAB, in comparison to older children (e.g., 13–15 years of age).

With regard to child gender, there is some support for the proposition that boys have more problems in contexts of political violence (Garbarino and Kostelny 1996). However, other research suggests girls may be more affected (Slone and Schechner 2009), or that the relative effects of political violence on boys and girls vary across contexts of conflict (Barber 2008). Given the variability of gender differences across studies, and the incidence of non-findings, another conclusion is that child gender does little to explain variability in the outcomes of children exposed to contexts of conflict and violence (Cummings and Davies 2010), or that gender differences only emerge as a function of multiple precursors, processes, and outcomes.

In summary, we hypothesize that children develop a sense of security about their community rooted in their feelings that they and their family members are physically and psychologically safe. Moreover, although both SAB and NAB are hypothesized as stressors for children, sectarian violence is posited as a more salient threat to their emotional security about community, in part, because of the presumed meaning this violence holds for the identity and well-being of the child in the community context. However, empirical evidence regarding the relative

implications of sectarian and non-sectarian community violence for children's emotional insecurity about the community and adjustment is limited.

Children's Emotional Security about Community and Adjustment: Cross-sectional Support

Extending the assessment of security beyond the family system, Goeke-Morey et al. (2009) described the initial development and assessment of a conceptually- and psychometrically-supported Security in the Community Scale (SIC). Based on cross-sectional analyses, mothers' reports of children's insecurity about the community were more closely related to SAB than NAB, even after controlling for demographic variables. Children's insecurity about the community, in turn, was related to children's greater adjustment problems.

Based on further refinements of the SIC, in a recent cross-sectional study of single- and two-parent families in Belfast, Cummings et al. (2010a) reported support for social ecological explanations for relations between political violence and child adjustment in Northern Ireland (see also Cummings et al. 2010a). Pertinent to the present report, SAB was related to children's emotional insecurity about community, and emotional insecurity about community was associated with children's adjustment problems. Thus, children's emotional security about the community contributed to explanatory pathways for relations between SAB in communities in Northern Ireland and children's adjustment problems. These findings highlight the possible importance of children's emotional security about community in relations between ethnic groups and proneness to conflict and violence. Although NAB was related to adjustment problems in children, this association was not transmitted through children's emotional security about community.

Longitudinal Tests of the Role of Children's Emotional Security About Community

The cross-sectional research design in these studies limits conclusions about the particular role of children's emotional security about community in pathways between community violence and child adjustment. For example, the conceptual ordering of pathways between community violence and children's emotional security about community cannot be verified with certainty based on cross-sectional tests. Second, controlling for prior levels of adjustment outcomes in longitudinal model testing further strengthens inferences about explanatory mechanisms regarding the prediction of child adjustment. This study advances understanding of the possible role of children's emotional security as an

explanatory process in relations between community violence (i.e., SAB, NAB) and child adjustment (i.e., externalizing and internalizing problems) by (a) testing these relations longitudinally, (b) including autoregressive controls for prior levels of adjustment in model tests, and (c) specifically focusing on children's emotional security about community as a possible explanatory variable.

Method

Participants

The sample includes 695 mothers and one focal child ranging in age from 10 and 17 years ($M=12.17$; $SD=1.82$). This age range was selected because (a) the official census only tracks the presence of children under age 16 in households, (b) by 8 years of age, children are aware of the social distinctions being investigated (Cairns 1987), and (c) children ages 10 and over are most likely to be involved in sectarian-related violence, either as participants or as victims (see Cummings et al. 2009). For households with more than one child in the indicated age range, the youngest child interested in participating was selected. The average age of mothers was 37.13 years ($SD=6.13$). Single-parent and two-parent families were included in the study reflecting the demographic characteristics of the neighborhoods involved. Thirty percent ($n=206$) of the sample was married and an additional 13% ($n=93$) of mothers reported that they were living as married. For single-parent families, mothers reported the following, expressed as percentages of the entire sample: 15% ($n=104$) were separated; 8% ($n=59$) were divorced; 2% ($n=17$) were widowed; 5% were dating ($n=36$) and 26% ($n=180$) were never married. Procedures and measures were similar each wave to foster longitudinal model tests.

Given the unique context of Belfast, including highly segregated housing, several factors guided the selection of electoral wards (neighborhoods) from which participants were drawn. The first goal was to ensure representative sampling of Catholics and Protestants. The second goal was to limit differences in socio-economic status; thus, families were chosen from working class, socially deprived wards. At the same time, we were interested in choosing wards with varying levels of historical sectarian violence.

Data used for selection of study areas were derived from the Northern Ireland Housing Executive and the 2001 Northern Ireland Census of Population. The census was based upon Northern Ireland's 582 electoral wards with an average population of approximately 3,500 residents per ward. In addition, most wards in Northern Ireland, and all wards in Belfast, are divided into Super Output Areas (SOAs) with an average population of around 600 residents.

These small scale SOAs, given their low populations, generally contain populations that are homogeneous with respect to ethnic background (i.e., Catholic or Protestant) and socio-economic conditions. Our study areas are located in 11 of Belfast's 51 wards and are constructed around 28 SOAs. The levels of ethnic segregation within the study areas are high. Based on our sources of data, 47% of all residents within the Belfast Urban Area were Catholics and around 50% were Protestants, indicating that if there was no religious segregation, each study area would be expected to have relatively equal populations by religion. In reality, approximately 68% of residents in Belfast live in wards that are at least 81% Catholic or Protestant, and SOAs are generally more segregated when compared to wards (Shirlow and Murtagh 2006). Within all of the study areas, the majority ethnic group (i.e., Catholic or Protestant) within the given community made up 90% to 99% of the population for that community. In other words, study areas were not representative of the overall percentage share of the two ethnic groups living within the wider Belfast Urban Area, but were consistent with the high level of religious segregation within socially deprived communities within the city.

Wards were also chosen based on a Deprivation Index (NISRA 2004). This index is based upon a score of 1 indicating the most deprived ward and 582 indicating the most affluent ward, with all 582 wards in Northern Ireland being indexed in terms of their deprivation. Multiple deprivation rankings were determined based upon income, employment, health, education, proximity to services, crime and the quality of the living environment. The sampling methodology was designed to select neighborhoods that reflect contexts associated with historical and contemporaneous politically-motivated violence, and also to limit differences across the neighborhoods selected in social deprivation, minimizing the influence of this factor on the interpretation of the results. All study areas were located within the most deprived fifth of all wards in Northern Ireland and 13 of the 18 study areas were located within the worst tenth (range from rank of 2 to 94, of 582 wards in Northern Ireland).

To ensure variability in the measure of historic experience with the Troubles in these communities, police records regarding sectarian violence over the past 5 years were used as well as other historical information, including the volume and spatial distribution of politically-motivated deaths within the city. We considered the spatial location of interface "peace" walls, as families living in communities adjoining an interface are likely to experience higher levels of sectarian violence compared to families that live with buffer zones between their community and the other community. The chosen study areas contained 48.2% of all politically-motivated violence in Belfast between 1968 and 2008. Notably, even in the context of these high risk neighborhoods,

there was considerable variability in both historical and contemporaneous rates of politically-motivated violence. The average number of politically-motivated deaths for the study areas (by ward) was 44.6 deaths compared to 16.7 for all wards in Belfast.

Eighteen specific wards were identified with 35 to 40 families selected for participation from each area. Stratified random sampling was used to identify families across the chosen wards, and to ensure that equal numbers of boys and girls would be represented in the sample. Data were collected via in-home interviews conducted by an established survey company based in Northern Ireland. Children's surveys took approximately 30 min to complete; mothers' surveys took about 1 h to complete. Data for the current study were drawn from the first three waves of a larger, ongoing study. At the second wave of data collection 572 (82%) families participated, and in the third wave 466 (81% of wave 2; 67% of wave 1) families participated. Based on the approach to analysis described below, all completed data were retained in model tests. Thus, for example, 572 (82%) of children provided data on the mediating variable in model tests, that is, emotional security about the community. Families were given modest monetary compensation for their time.

Measures

Children's exposure to community antisocial behavior The Sectarian Antisocial Behavior (SAB) and the Non-sectarian Antisocial Behavior (NAB) scales were developed for this project as indices of children's exposure to sectarian and non-sectarian conflict and violence, respectively. Focus groups and a two-wave pilot study supported instrument development (see Goeke-Morey et al. 2009). The SAB is a 12-item questionnaire, with items assessing children's awareness of sectarian antisocial behaviors within the past 3 months such as stones or objects thrown over peace walls, houses or churches paint bombed, or someone killed or seriously injured by the other community. The NAB is a 7-item questionnaire with items assessing children's awareness of non-sectarian antisocial behaviors within the past 3 months such as drugs being used or sold, robberies, or killings and injuries unrelated to sectarian affiliations. Items were answered using a 5-point Likert-type scale, with choices ranging from (1) *Not in the last 3 months* to (5) *Every Day*. For the current study, children's reports of awareness of SAB and NAB were used. Cronbach's alphas for the SAB and NAB were 0.90 and 0.74, respectively.

Insecurity about the community Mothers completed the Security in the Community questionnaire (SIC). The SIC assesses the mother's perception of her child's sense of safety and threat about the community, sensitive to the

cultural context of Northern Ireland. Supporting construction of a latent variable representing security in the community, items were chosen to include each of the components of emotional security (behavioral, affective, cognitive, Davies and Cummings 1994), further supported by factor analysis of the items. Items were scaled such that high scores indicated greater insecurity about the community; thus, high SIC scores indicated *insecurity* in the community. The four items are "My child feels threatened by people approaching from the other community," "My child stays in because of the threat posed by the other community," "Sometimes my child feels that something very bad is going to happen in our community," and "My child at times has been unable to sleep because of the violence in the area." Mothers responded to statements using a 5-point Likert-type scale ranging from (1) *Not at all like my child* to (5) *A whole lot like my child*. Focus groups and pilot work with independent samples supported instrument development and demonstrated adequate psychometric properties, including internal consistency and predictive and construct validity (Goeke-Morey et al. 2009). Cronbach's alpha for this scale was 0.81.

Child adjustment The Strengths and Difficulties Questionnaire (SDQ; Goodman 1997) was completed by mothers and children. This 25-item measure has five subscales, including four problem subscales (conduct problems, peer problems, emotion problems, and problems with hyperactivity). Each item is completed on a 3-point Likert scale, with choices ranging from (0) *Not True* to (2) *Certainly True*. Psychometric properties are well established (Goodman and Scott 1999). For the current study, mothers' reports of conduct problems were used as indicators of externalizing problems. Both mothers' and children's reports of emotion problems were used as indicators of internalizing problems. Although relatively low internal consistencies for the subscales of the SDQ have been reported; scale construction was focused on choosing items to maximize clinical significance as well as statistical consistency. Goodman and Scott (1999) report the SDQ subscales correlated more highly with interview-based ratings of clinical symptoms compared to the CBCL, and discriminated between high risk and low risk samples, further supporting criterion validity. Cronbach's alphas for the conduct problems scale were 0.51 and 0.47 for mothers' reports at time 1 and time 3 respectively. For the emotion problems subscale, alphas were 0.68 and 0.62 for mothers' reports at time 1 and time 3, and for children's reports alphas were 0.61 and 0.50 at time 1 and time 3.

Aggression symptoms Child report of the Aggression Scale (AS; Orpinas and Frankowski 2001) was also used as an indicator of externalizing problems at time 3. This 11-item scale measures the frequency of self-reported anger and

physically and psychologically aggressive behaviors such as hitting, pushing, name-calling, and threatening. Sample items include “*I pushed or shoved other students.*” Good internal consistency ($\alpha=0.88$ to 0.90) has been reported for children 8 to 13 years old. Cronbach’s α for the current study was 0.92 .

Results

Analytic Plan

All tests were conducted within a structural equation modeling (SEM) framework using AMOS 4.0 (Arbuckle and Wothke 1999). First, the main model was tested with all participants. Additional multi-group analyses were conducted to test for moderation by gender. For all tests full information maximum likelihood estimation was used, which adequately estimates parameters with missing data under the assumption that the data is missing at random. We included controls for age, child gender and mothers’ reported family income. The following model fit indices were used: the relative χ^2 index (χ^2/df), the normative fit index and the comparative fit index (NFI, CFI; Bentler 1990), and the root mean square error of approximation (RMSEA; Browne and Cudeck 1993). Acceptable model fit is suggested by scores below three on the χ^2/df index, values above 0.90 for the NFI and CFI (Hu and Bentler 1999), and RMSEA values below 0.08 . In model tests, autoregressive controls were employed to control for variability in the time 3 child outcome variables accounted for by time 1 functioning (i.e., externalizing or internalizing).

Preliminary Analyses

Means and standard deviations for all study variables are provided in Table 1. All variables representing the same latent construct are significantly correlated (see bolded correlations in Table 1). The frequency of child awareness of SAB and NAB was examined separately. Forty-four percent of children reported exposure to SAB in the past 3 months and 50% of children reported exposure to NAB in the previous 3 months. Data were gathered outside of the period of the most violent time of year, that is, the summer “marching season” (Shirlow and Murtagh 2006). This policy was followed to foster both the cooperation and safety of both families and interviewers.

Primary Analyses

Construction of latent variables A latent variable representing youth insecurity in the community was constructed. This

latent variable has been tested in previous work with an earlier wave of data from the same project. Child outcomes were also constructed as latent variables using both mother and child reports of youth adjustment. For child externalizing problems, mother report of conduct problems on the SDQ and child report of the aggression scale were used in the current study. Only mother report of the SDQ was used as an autoregressive control at wave 1 as the aggression scale was added in wave 3 to strengthen the measurement of externalizing problems. Both mother and child report of the emotion problems subscale of the SDQ served as indicators of internalizing problems at both wave 1 and wave 3.

Test of the main model To examine the role of child security in the community as an explanatory mechanism, the model shown in Fig. 1 was tested. Fit indices supported that this model fits the data well ($\chi^2(76)=208.04$, $p<0.001$); $\chi^2/df=2.74$; NFI = 0.98 ; CFI = 0.99 ; RMSEA = 0.050 (90% CI: 0.042 – 0.58). SAB was related to insecurity in the community 1 year later whereas NAB was not significantly related to insecurity. In turn, child insecurity in the community at wave 2 was related to greater internalizing and externalizing problems at wave 3. To test the significance of the indirect effect, the Sobel statistic was calculated. A significant Sobel statistic indicates that the indirect effect is significantly different from zero. Significant indirect effects supported pathways from SAB to internalizing and externalizing symptoms (internalizing: $z=2.13$, $p=0.033$; externalizing: $z=1.99$, $p=0.046$).

By contrast, NAB at Time 1 was directly related to both internalizing and externalizing problems at wave 3 (see Fig. 1). Gender was also a significant predictor of time 3 externalizing problems ($\beta=-0.23$, $p<0.01$) indicating that boys had more externalizing problems compared to girls. Older children also reported more awareness of NAB ($\beta=0.19$, $p<0.001$). No other relations between age, child gender or mothers’ reported family income and the main constructs were found.

Child age as a moderator of relations We also tested age as a moderator of the main structural paths in the model. Age and the other predictor variables were centered at their means, and cross products were formed of the centered variables. To form the SIC X age interaction term, the centered age variable was multiplied by each centered variable based on the SIC, forming cross products of age and SIC. These cross products were then entered in the SEM model as indicators of the SIC X age interaction, and the latent first-order factors representing SAB, NAB, SIC, and the centered age variable were retained in the model. We then regressed SIC, internalizing, and externalizing on these interaction terms. The age X SAB interaction effect on internalizing was significant ($\beta=-0.13$, $p<0.01$). Since we centered the age variable at 12.17 years of age, this interaction indicates that the relationship between SAB and

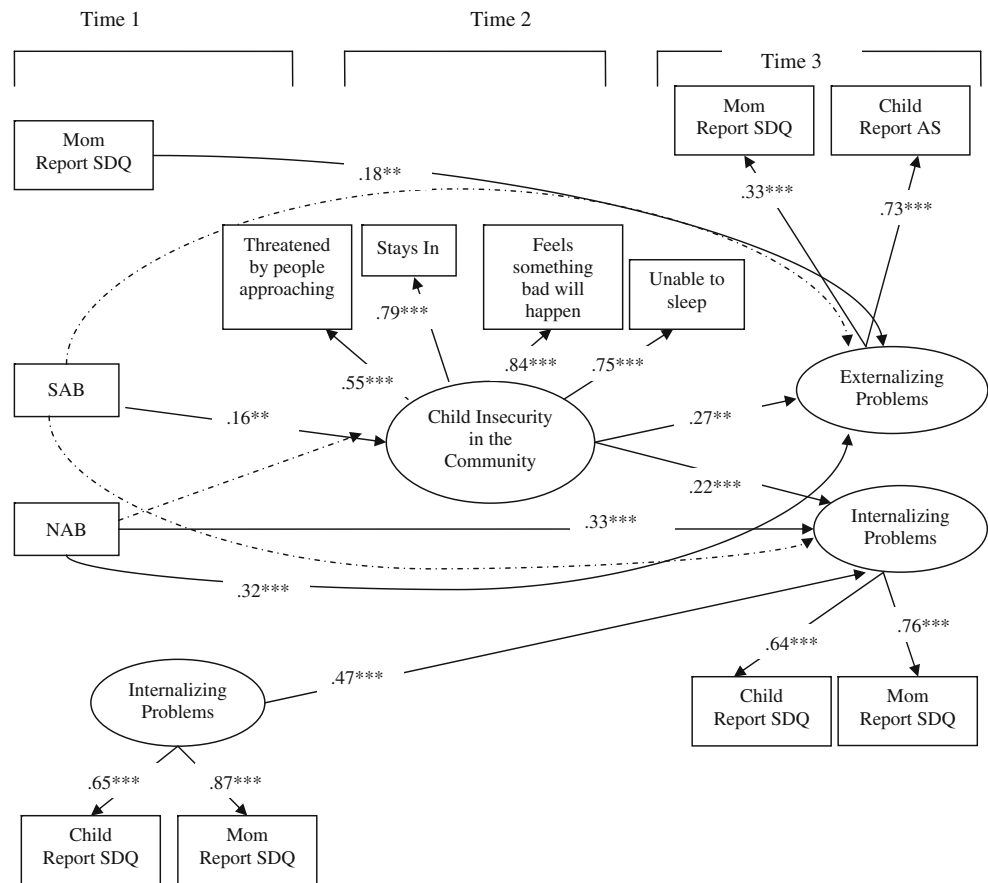
Table 1 Intercorrelations for all study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Time 1															
1. Child age	–														
2. SAB—Child	0.06	–													
3. NAB—Child	0.19***	0.53***	–												
4. SDQ Conduct— Mom	0.02	0.06	0.01	–											
5. SDQ Emotion— Child	0.01	-0.11**	-0.08*	0.19***	–										
6. SDQ Emotion— Mom	0.02	-0.09*	-0.11**	0.31***	0.56***	–									
Time 2															
7. SIC 2 (threatened)	0.03	0.13**	0.03	0.03	0.12**	0.20***	–								
8. SIC 3 (stays in)	0.01	0.06	0.01	0.03	0.20***	0.20***	0.51***	–							
9. SIC 6 (feels something bad will happen)	-0.04	0.08	-0.02	0.04	0.21***	0.23***	0.40***	0.66***	–						
10. SIC 7 (unable to sleep)	-0.02	0.12**	-0.01	0.02	0.16***	0.16***	0.41***	0.56***	0.66***	–					
11. Take-home income	0.03	-0.17***	-0.16***	-0.07	0.01	0.01	-0.06	-0.02	-0.03	-0.01	–				
Time 3															
12. SDQ Conduct Mom	-0.01	-0.07	-0.01	0.09*	-0.01	0.09*	0.06	-0.01	0.03	-0.04	-0.01	–			
13. Aggression—Child	-0.02	0.07	0.17***	0.10*	0.14**	0.16**	0.19***	0.14**	0.15**	0.11*	-0.08	0.23***	–		
14. SDQ Emotion— Child	0.04	0.04	0.16**	-0.02	0.28***	0.25***	0.11*	0.16**	0.20***	0.14**	-0.07	0.14**	0.29***	–	
15. SDQ- Emotion— Mom	0.04	0.01	0.11*	0.03	0.31***	0.35***	0.18***	0.17***	0.17**	0.15**	-0.03	0.42***	0.31***	0.51***	–
Mean	12.17	3.04	2.26	2.32	2.37	2.3	1.67	1.47	1.35	1.41	7.14	2.26	3.02	1.68	1.84
Standard Deviation	1.82	5.77	3.38	1.87	2.05	2.21	1.11	1.02	0.87	0.89	2.51	2.01	6.74	1.65	2.1

SAB sectarian antisocial behavior; NAB non-sectarian antisocial behavior; SDQ strengths and difficulties questionnaire

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Fig. 1 Tests of the conceptual model of the role of children’s emotional security in relations between community violence and child adjustment. *SAB* sectarian antisocial behavior; *NAB* nonsectarian antisocial behavior; *SDQ* strengths and difficulties questionnaire; *AS* aggression scale. Standardized path coefficients reported. Error variances omitted from the model. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Model fit for SEM: $\chi^2(76) = 208.04$, $p < 0.001$; $\chi^2/df = 2.74$; NFI = 0.98; CFI = 0.99; RMSEA = 0.050 (90% CI: 0.042–0.58)



internalizing is stronger for children younger than 12.17 years of age. All the other interaction effects tested were nonsignificant.

Gender moderation To test for differences in path coefficients between boys and girls, the base model was fit separately for each group with all paths free to vary. Using a chi-square test this model was then compared to a model in which the paths were constrained to be equal for both groups (Bollen 1989). If the chi-square value is significantly different between the two models, there are significant differences between the two groups in the structural paths of the model. When estimated separately, the pattern of significant paths was different for boys and girls; however, the models did not differ significantly when the models were constrained to be the same compared to when the path estimates were allowed to freely vary ($\chi^2_{diff}(10) = 7.72$, $p > 0.05$). These results suggest that gender does not moderate the relations found in Fig. 1.

Discussion

This study further supports the notion that politically-motivated community violence (i.e., SAB) has distinctive

effects on children’s adjustment problems through the mechanism of increasing children’s emotional insecurity about community. Also advanced is the extension of the emotional security construct beyond the family (Davies and Cummings 1994) to include extra-familial contexts, such as the community (Waters and Cummings 2000). By demonstrating these relations in a longitudinal research design, these findings add cogency to the notion that psychological processes of security are possible explanatory processes for child outcomes in contexts of political violence (Bar-Tal and Jacobson 1998). The results also further support the findings of US studies regarding relations between non-sectarian forms of community violence (i.e., NAB) and children’s adjustment problems, albeit through different intermediary processes. That is, emotional insecurity about community was not identified in pathways between NAB and child adjustment problems.

These findings support emotional security as a regulatory system pertinent to social ecological explanations for relations between political violence and child adjustment (Cummings et al. 2009). Consistent with expectations, children’s self-reported experiences with sectarian community violence were linked with mothers’ observations of children’s emotional insecurity about the community. Building on past findings of cross-sectional tests advancing

a social ecological perspective, the role of regulatory processes in children's reactions to contexts of heightened ethnic conflict are highlighted. Sectarian community violence appears, at least partly, to affect children's adjustment by elevating psychological threat to their personal sense of safety, protection and well-being, that is, their appraisals of the threat to security posed by the other ethnic group (Bar-Tal and Jacobson 1998). Consistent with expectations, emotional security as an indicator of safety perception about the community was more closely related to violence that was political than community violence that was not politically motivated.

Community violence was longitudinally related to both internalizing and externalizing problems in children. SAB was indirectly related to these child adjustment problems as a function of children's emotional insecurity about community. By comparison, children's emotional security about marital conflict has been shown in other research to relate longitudinally to internalizing and externalizing problems in children, although links are somewhat more consistently found for internalizing problems (Cummings et al. 2006). This study thus contributes to extant research on resilience, coping and child adjustment difficulties in contexts of political violence (see review in Sagi-Schwartz 2008). For example, Punamäki (2001) identified factors related to children's positive outcomes during a period of intense political violence in Chile, including coping strategies, such as positive views of the future. Garbarino and Kostelny (1996) reported that community resources (e.g., schools) in the conflict in Palestine may function as safe havens, fostering interactions between people and environments that promote positive development in children.

Relations with adjustment problems were directly related to NAB in this study. These findings further indicate the significance of NAB for children's adjustment problems, consistent with findings regarding relations between community violence and child adjustment in US samples (e.g., Gorman-Smith and Tolan 1998; Jaycox et al. 2002; Richters and Martinez 1993; see review in Margolin and Gordis 2000). From a developmental psychopathology perspective, direct relations mean the explanatory processes remain to be identified rather than an indication that outcomes occur in the absence of causal mechanisms (Cummings and Davies 2010). For example, one might speculate that nonsectarian community violence influences adjustment problems through modeling antisocial behavior (Bandura 1977) or social cognitive processes, such as negative social attributions and biases in fostering children's aggressive responding toward others (Crick and Dodge 1994). Disruptions in children's capacities for self-regulation and control (Maughn and Cicchetti 2002) and social cognitive biases toward attributing more hostile intentions to others (Earls 2003) have been associated in

US studies with exposure to community violence, and thus are candidates for further study as possible explanatory variables. The present study reinforces the urgency of understanding the bases for both SAB and NAB in elevating children's risk for adjustment problems.

A strength of this study is the reliance on children's reports to index community violence (i.e., SAB and NAB), which allows insight into what matters to the child as opposed to what others perceive as on-going in the community. In terms of child characteristics, among the sample of preadolescent and adolescent children studied (i.e., primarily 10–15 year olds), younger children were more prone to internalizing problems in reaction to SAB than older children. These results are consistent with the hypothesis that younger children in this age period are more likely to develop internalizing difficulties than older children in contexts of political violence, perhaps because of their greater physical vulnerability or their less developed resources for coping with inter-ethnic conflicts. On the other hand, Slone and Schechner (2009) reported that older Israeli adolescents exhibited more psychological symptoms than younger adolescents in response to exposure to political violence. However, the fact that a wider age span of adolescence (10–18 years) was examined, and the mandatory military draft at age 18 years affects Israeli youth, may factor in the discrepancy with the current findings. Also relating to the role of child characteristics in these contexts, differential reactions by boys and girls were absent. These results are consistent with past research indicating child gender does little to explain variability in the outcomes of children exposed to conflict (Cummings and Davies 2010).

The findings regarding the impact of SAB on children's insecurity about community and risk for adjustment problems have political implications regarding the acceptability of practices and norms in communities for these forms of violence. However, also evident is that even in the midst of political conflict "ordinary" crime and violence does not go away and that children in situations of war and conflict thus share some of the risks for adjustment problems related to exposure to NAB similar to those highlighted in US studies (Margolin and Gordis 2000) albeit via different mechanisms.

Certain limitations should be acknowledged. Most children ranged between 10 and 15 years of age, reflecting the interest in studying age groups at risk for becoming participants as well as observers of sectarian conflict. Future research should examine age as a factor in contexts of sectarian violence, especially given evidence in this report for age as a moderator. Additional sources of information about key constructs, for example, additional sources of objective information beyond family members' perceptions, would strengthen tests. At the same time, for some constructs, such as children's awareness of community conflict, perceptions may be more psychologically significant

than other sources of information. Finally, culturally distinct forms of sectarian antisocial behavior may vary widely across societal contexts, so that the generalizability of these assessments to other cultures remains to be demonstrated. In each culture studied, it will be important to develop culturally appropriate measures, given that specific expressions of political violence may be context-specific.

Nonetheless, the implications for advancing peace processes merit consideration. Agreements between political leaders are only a start towards sustained peace processes because, as MacGinty et al. (2007) have pointed out, “reaching a peace deal is not the same as reaching peace”. Therefore, it is critical to understand and address the effects of political strife on communities, families and children for any high likelihood of sustained peace because it is the children growing up today who will have to take the peace process forward in the years to come. For this reason ameliorating children’s insecurity about sectarian tensions and violence over the long term should be seen as an important goal if lasting peace is to be achieved. This report demonstrates longitudinally the role of children’s regulatory processes of emotional insecurity in their adjustment over time in contexts of political violence. The need is indicated for state, community and police to foster emotional security and trust even in the face of sectarian violence, and also for reducing child exposure to sectarian tensions and conflict, including the creation of safe integrated spaces for children (Brand 2009; Murtagh 2002). This study also adds to evidence of interrelations between elements of the social ecology in contexts of political violence (Cummings et al. 2009) by identifying child regulatory processes that may contribute to these relations. At the same time, given the many gaps, more advances are urgently needed.

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