



## Emotional insecurity in the family and community and youth delinquency in Northern Ireland: A person-oriented analysis across five-waves

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Running Head: EMOTIONAL INSECURITY ABOUT FAMILY AND COMMUNITY

Emotional Insecurity in the Family and Community and Youth Delinquency in Northern Ireland:

A Person-Oriented Analysis across Five Waves

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## Abstract

**Background:** Over one billion children are exposed worldwide to political violence and armed conflict. Currently, conclusions about bases for adjustment problems are qualified by limited longitudinal research from a process-oriented, social-ecological perspective. In this study, we examined a theoretically-based model for the impact of multiple levels of the social ecology (family, community) on adolescent delinquency. Specifically, this study explored the impact of children's emotional insecurity about both the family and community on youth delinquency in Northern Ireland. **Methods:** In the context of a five-wave longitudinal research design, participants included 999 mother-child dyads in Belfast (482 boys, 517 girls), drawn from socially-deprived, ethnically-homogenous areas that had experienced political violence. Youth ranged in age from 10 to 20 and were 12.18 ( $SD = 1.82$ ) years old on average at Time 1. **Findings:** The longitudinal analyses were conducted in hierarchical linear modeling (HLM), allowing for the modeling of inter-individual differences in intra-individual change. Intra-individual trajectories of emotional insecurity about the family related to children's delinquency. Greater insecurity about the community worsened the impact of family conflict on youth's insecurity about the family, consistent with the notion that youth's insecurity about the community sensitizes them to exposure to family conflict in the home. **Conclusions:** The results suggest that ameliorating children's insecurity about family and community in contexts of political violence is an important goal toward improving adolescents' well-being, including reduced risk for delinquency. **Keywords:** Political violence, social ecology, family, community, mental health, emotional security, delinquency

Emotional Insecurity in the Family and Community and Youth Delinquency in Northern Ireland:  
A Person-Oriented Analysis across Five-Waves

The impact of political violence on youth well-being and adjustment is an increasing concern worldwide (Cairns & Dawes, 1996; Masten & Narayan, 2012). According to a United Nations (2009) report, over one billion children under the age of eighteen are growing up in settings of armed conflict and political violence. Of particular concern are the effects on adolescent delinquency, which may contribute to the intergenerational continuation of antisocial behavior in contexts of political violence (Betancourt, McBain, Newnham, & Brennan, 2012; Dubow et al., 2010; Merrilees et al., 2013). Although correlational and cross-sectional links between political violence and youth's adjustment problems are well-established (e.g., Cairns & Dawes, 1996; Dubow, Huesmann, & Boxer, 2009), limited progress has been made in understanding the pathways of development of antisocial behavior in contexts of political violence (for an example, see Taylor, Merrilees, Goeke-Morey, Shirlow, & Cummings, in press). This study focuses on dynamic patterns of socioemotional processes, based on Emotional Security Theory (EST, Davies & Cummings, 1994) that may underlie adolescent delinquency in Northern Ireland. Longitudinal research based on well-articulated conceptual models is only beginning amid contexts of protracted conflict, but is an essential direction for advancing understanding of the etiology of youth antisocial behavior (Boxer et al., 2013; Cummings, Goeke-Morey, Merrilees, Taylor, & Shirlow, 2014).

This study employs five waves of longitudinal data to address within as well as between-person influences over time, thereby contributing to process-oriented understanding from a person-oriented perspective (Sterba & Bauer, 2010). Person-oriented research emphasizes the study of intra-individual variability in the context of change over time (Nesselroade & Molenaar,

2010). Change during human development occurs at the level of the individual. Thus, charting intra-individual trajectories in the context of inter-individual change substantially advances understanding of developmental processes contributing to youth risk and resilience (Bergman et al., 2006).

The importance of examining the impact of multiple social-ecological contexts of political violence on youth development is increasingly evident (Cummings, Goeke-Morey, Schermerhorn, Merrilees, & Cairns, 2009; Dubow et al., 2009). According to ecological systems theory (Bronfenbrenner, 1979), youth develop within multiple nested contexts (e.g., family, community), with some environments in the social ecology (e.g., family) more proximate than others (e.g., community) as developmental influences. By incorporating multiple contexts of the social ecology into research designs, a more comprehensive and precise understanding of the effects of political violence on youth can adjustment be achieved (Betancourt, McBain, Newnham, & Brennan, 2014; Boxer et al., 2013; Cummings et al., 2014; Dubow et al., 2009). For example, family conflict and violence are well-established risk factors in children's development (Cummings & Davies, 2011), and community violence may increase youths' risk for psychosocial difficulties either directly through exposure to community violence or indirectly in association with increased family conflict (O'Donnell, Schwab-Stone, & Muveed, 2002; Peltonen, Qouta, El Sarraj, & Punamäki, 2010). The current study aims to advance our understanding of the effects of political violence on youth by examining the interplay of family and community influences.

With a foundation in Attachment Theory (Bowlby, 1969), EST is a theoretical model for psychological processes associated with youth adjustment over time in contexts of political violence (Cummings et al., 2014). It is consistent with Attachment Theory in its assumption of

the importance of the security of relationships in the family, and builds on it by extrapolating how the quality of the larger social ecology (e.g., community) may also influence children's security. According to EST, children's adjustment is influenced by the extent they feel secure in their social ecology in terms of *both* the family and community (Cummings et al., 2009). EST posits an organizational conceptualization of multiple, testable regulatory processes (social, cognitive and emotional) flexibly organized around a higher-order goal of maintaining emotional security, with prospective relations hypothesized and empirically demonstrated with symptoms of multiple dimensions of psychopathology, including internalizing and externalizing problems, across early childhood, middle childhood, and adolescence (Cummings & Davies, 2011). Notably, the significance of emotional insecurity to war-affected youth has been implicated in multiple contexts of political violence and armed conflict (e.g., Bar-Tal & Jacobson, 1998; Batniji et al., 2009; Hobfoll, et al., 2007; McAloney, McCrystal, Percy, & McCartan, 2009).

Recent research suggests that youth's emotional insecurity about both the family and community mediate the effects of political violence on child adjustment. Northern Ireland is a significant context for the examination of the psychological impact of political violence on youth adjustment (Cairns, 1996). Though dating back centuries, the most recent period of violence between the main ethno-political groups, Catholics/Nationalists and Protestants/Loyalists began in the last 1960s, resulting in the deaths of 3,600 people and tens of thousands imprisoned and injured (Cairns & Darby, 1998). Although this period was formally resolved with the 1998 Belfast Agreement, tensions remain and sectarianism persists. Within this context, three-wave model tests have shown emotional insecurity about the family (Cummings et al., 2012) and community (Cummings et al, 2011) mediate between youth exposure to political violence and adjustment problems. However, the relatively few longitudinal, theory-based tests of processes

between ecological contexts of political violence and youth adjustment have typically been based on (a) mediators assessed at a single point in time and (b) between-person analyses (Cummings et al., 2011; 2012).

The present research advances the longitudinal study of emotional insecurity by examining interrelations between *emotional insecurity about two levels (i.e., family and community) of the social ecology* in predicting adolescent delinquency over time in Northern Ireland. Study of emotional insecurity measured over multiple time points holds promise to advance understanding of its role as an important regulatory process, and allows for modeling of inter-individual differences in intra-individual change. For example, Cummings et al. (2013) demonstrated that within-person change in emotional insecurity about the *community* over four waves was associated with the risk for developing conduct and emotional problems. However, little is known about (a) intra-individual changes in emotional insecurity about the *family* in association with adjustment problems and (b) the possible joint effects about emotional insecurity about different elements of the social ecology (i.e., family and community). For example, insecurity about the community may create contexts for maladaptive regulatory responses in the family by fostering heightened negativity and hostility in social interactions. Toward a more comprehensive social-ecological model from the perspective of EST, it is important to understand interrelations between emotional security about family *and* community on children's adjustment, with delinquency pertinent to the persistence of antisocial behavior in contexts of political violence.

Specifically, the focus of the present study is on the role of emotional insecurity about the *family* in relations with youth delinquency in the context of emotional insecurity about the *community*. This study offers significant strengths in relation to more informatively assessing the

shape and forms of intra-individual change over time. Consistent with extensive past research, our hypothesis is that family conflict will be related to youth's emotional insecurity about the family at each time point (Cummings & Davies, 2011). Consistent with the sensitization hypothesis, another hypothesis is that emotional insecurity about the community will be related to the sensitization of youth to exposure to family conflict, increasing youth's insecurity about the family, thereby strengthening the relation to delinquency (see Cummings & Davies, 2011). Past research provides ample evidence that heightened exposure to violence sensitizes youth to subsequent violence, including heightened emotional insecurity (Cummings & Davies, 2011). However, it is unknown how sensitization works across dimensions of the social ecology; that is, whether greater emotional insecurity about community violence is related to sensitization to hostility in family.

The present study thus advances longitudinal, process-oriented study of emotional insecurity from a social ecological perspective. We utilize five waves of longitudinal data to examine interrelations among two theory-based emotional insecurity processes (i.e., family and community) over time. From a person-oriented perspective, this study breaks new ground in testing emotional insecurity about family and community as interrelated factors potentially related to youth delinquency in the context of political violence in Northern Ireland.

Moreover, identifying key moderators of change is another goal of process-oriented perspectives; thus, within-person trajectories (intra-individual change) are examined in the contexts of between person differences (inter-individual differences, e.g., gender, ethno-political membership). Concerning gender, both boys' and girls' adjustment have been shown to be influenced by emotional insecurity. With regard to externalizing problems, such as delinquency and aggression, some studies report greater effects of violence on boys than girls (Cummings &



Davies, 2011). Concerning ethno-political membership, a complex pattern of effects regarding insecurity about the community among Catholic and Protestant youth has emerged (Merrilees et al., 2014); however, little is known about differences between Catholic and Protestant youth in (a) insecurity about the *family* and (b) relations between *family conflict* and insecurity about the family. Finally, although emotional insecurity about the community has been shown to decrease with time, little is known about age changes in emotional insecurity about the *family* over time in contexts of political violence. Thus, multiple potential moderators are also examined, but, in the context of limited past research to support specific hypotheses, these analyses are exploratory.

## Method

### Participants and Procedures

Mother/child dyads (N=999) that participated in at least one of five annual waves of data collection in Belfast were included in the analyses. During the course of the study, the average age of youth participants was 12.18 ( $SD = 1.82$ ), 13.24 ( $SD = 1.83$ ), 13.61 ( $SD = 1.99$ ), 14.66 ( $SD = 1.96$ ), and 15.75 ( $SD = 1.97$ ) years old. Children were equally divided by gender (48.6 % male); Catholic/Protestant affiliation (40%/60%, respectively) was approximately consistent with the demographic split in Northern Ireland. On average, the mothers in the study were 37 to 42 years old ( $SD\ average = 6.19$ ) and two-thirds were the head of single-parent households.

Reflecting the vast majority in Northern Ireland, all of the participants were White.

All participants were drawn from ethnically-homogenous areas that had experienced varying levels of political violence (Shirlow & Murtagh, 2006). The neighborhoods were socially-deprived, that is, ranked among the worst quarter of electoral wards in terms of access to social services across Northern Ireland (NINIS, 2011; NISRA, 2011). Surveys were conducted with mothers and the target adolescent (age 10-17 at the initiation) through face-to-face

interviews in the home. The interviews, conducted by trained professionals, lasted approximately 1 hour and 30-45 minutes for mothers and children, respectively. Consistent with IRB approval from all participating universities, mothers and children provided consent and assent at each wave and a graduated compensation was employed; families received £20 (waves 1 and 2), £40 (waves 3 and 4), and £50 (wave 5) for their participation.

Over the course of the study retention between waves remained high given the high-risk environments of the families; it ranged from 76% to 87%, with one-third of participants completing all 5 waves (12% had 4 waves, 20% 3 waves, 20% 2 waves, and 15% one wave). From waves 1 to 2 and 3 to 4, there were no significant differences between the families that did and did not return on any of the constructs of interest. At wave 3, families higher in conflict ( $t(566) = 2.30, p < .05$ ; retained:  $M = 2.79, SD = 2.11$ ; attrited:  $M = 3.29, SD = 2.53$ ) and less security in the family system ( $t(567) = -3.07, p < .01$ ; retained:  $M = 31.58, SD = 3.69$ ; attrited:  $M = 30.35, SD = 5.22$ ) were less likely to return from wave 2. However, families with greater insecurity in the community were less likely to return between waves 4 and 5 ( $t(603) = -2.06, p < .05$ ; retained:  $M = 5.24, SD = 2.69$ ; attrited:  $M = 5.84, SD = 3.20$ ). The statistical approach used (described below) accounts for these potential differences by including all variables in the analyses.

## Measures

**Insecurity in the family (SIF).** Children's feelings of emotional insecurity were measured with the 7-item emotional security subscale of the Security in the Family Scale (Forman & Davies, 2005), which has good reliability and validity. Items such as "being able to count on the family" were assessed on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*);

that is, higher scores indicated greater insecurity in the family. Cronbach's alpha was good on average ( $M = .91$ ,  $SD = .01$ ) across the waves used.

**Family conflict.** Children reported on the conflict subscale of the family environment scale (FES; Moos & Moos, 1994); this 9-item measure asks if characteristics, such as “we fight a lot in our family,” are *true* (1) or *false* (0). On average, internal consistency was .56 ( $SD = .06$ ) for the five waves included in the trajectory analyses; higher scores indicated greater conflict. This subscale has good psychometric properties and has been used in this context previously (Cummings, Schermerhorn et al., 2010).

**Insecurity about the Community (SIC).** Mothers' report of children's insecurity about community was included to reduce potential mono-reporter bias. This scale was developed specifically for this context through focus groups and pilot testing to increase ecological validity (Goeke-Morey et al., 2009). Participants responded on a scale from 1 (*not at all like my child*) to 5 (*a whole lot like my child*) for four items such as “my child feels threatened by people approaching from the other community” and “my child feels that something very bad is going to happen in our community.” Cronbach's alpha for this scale was adequate across all waves ( $M = .82$ ,  $SD = .01$ ).

**Delinquency.** Child self-report of delinquent behaviors were used with responses ranging from 0 (*never*) to 5 (*10 or more times*) on 14 items (McAloney et al., 2009; McCrystal, Higgins, & Percy, 2006). Items such as “deliberately damaged or destroyed property that did not belong to you” were summed; thus, higher scores indicated more frequent delinquent acts over the previous 12 months. Internal consistency for this scale was .94 and .85 at waves 4 and 5, respectively.

## Results

The longitudinal analyses were conducted using hierarchical linear modeling (HLM) with full information maximum likelihood estimation. This approach accurately estimates parameters under the assumption that data are missing at random, and robust standard errors, which adjust for possible violations of the assumption of normality. A model building approach was followed to identify a parsimonious structural growth model for change in security in the family across age (Singer & Willet, 2003). For example, this approach can identify if the linear change model fits as well as the quadratic growth model. To do so, the deviance statistic (-2LL) is compared between nested models, those in which the full model can be made identical to the restricted model by constraining parameters to 0.

In HLM, within-person variables are represented at Level 1 and the between-person constructs are at Level 2. At Level 1, time was modeled as age and the growth parameters included an adolescent's initial level of insecurity in the family (intercept), change with age (linear slope), and curvature of change (quadratic slope). Age was centered on the grand mean (Singer & Willet, 2003), so the growth parameters can be understood as the pattern of change for the average-aged adolescent. Also at Level 1, family conflict was a time-varying covariate to control for the direct relation on security in the family within each age. Centered on the individual's mean, the parameter can be interpreted as the strength of the relation between the risk factor of family conflict and average insecurity in the family for a particular adolescent.

In cross-level interactions, Level 1 coefficients are regressed on the Level 2 predictors, representing the effect of between-person differences on within-person change. Thus Level 2 variables were moderators of intra-individual change of insecurity in the family, including demographic variables of gender and Protestant/Catholic affiliation. The average of insecurity about the community was also added as an ambient predictor, that is, as a contextual factor that

affects individual development. At Level 2, insecurity about the community was conceptualized as a risky environmental condition that may affect an individuals' trajectory over time.

### **Unconditional Models**

Intra-individual change was assessed with a progression of unconditional models with variables at Level 1. First, the intercept-only model (A) was fitted, followed by the linear (Model B) and quadratic growth (Model C) curves. Because the quadratic model did not fit significantly better, Model B, with random intercept and slope parameters, was retained to estimate how insecurity in the family changed with age. To control for the influence of family conflict on insecurity within each time point, it was added as a random effect time-varying covariate (Model D). The addition of family conflict at Level 1 significantly improved model fit compared to the linear growth model. The final unconditional growth model suggested that greater family conflict relates to more insecurity in the family within time point ( $\beta_2 = .318, p < .001$ ), and that on average, the level of insecurity in the family increases with age ( $\beta_1 = .201, p < .001$ ).

### **Conditional Models**

To assess between-person differences in change of insecurity in the family, a number of variables were added to Level 2 (Model E). As controls, adolescent gender (boys=0, girls=1) and ethno-political membership (Protestant=0, Catholic=1) were added. Boys and Protestant youth reported higher initial insecurity than girls ( $\gamma_{01} = -.675, p < .001$ ) and Catholics ( $\gamma_{02} = -1.00, p < .001$ ), respectively. These demographic factors did not significantly moderate the linear slope. However, ethno-political affiliation did influence the impact of family conflict on insecurity in the family. For Catholics, there was a stronger relation between family conflict and the adolescent report of insecurity in his/her family than for Protestant youth ( $\gamma_{22} = .325, p < .01$ ).

Finally, the ambient-level of insecurity about the community, average across five waves and centered on the grand-mean, was also added at Level 2. Insecurity about the community did not moderate the intercept or slope of insecurity in the family, however it did exacerbate the effect of family conflict on insecurity in the family ( $\gamma_{23} = 0.048, p < .05$ ). This suggests that adolescents who also experience insecurity in their communities may be more sensitized to exposure to family conflict in the home environment (Figure 1).

Model E:      Level 1:  $SIF_{ij} = \beta_{0i} + \beta_{1i}AGE_{ij} + \beta_{2i}exp\ CONF_{ij} + \varepsilon_{ij}$   
                   Level 2:  $\beta_{0i} = \gamma_{00} + \gamma_{01}GEN_i + \gamma_{02}ETH_i + \gamma_{03}SIC_i + \zeta_{0i}$   
                                $\beta_{1i} = \gamma_{10} + \gamma_{11}GEN_i + \gamma_{12}ETH_i + \gamma_{13}SIC_i + \zeta_{1i}$   
                                $\beta_{2i} = \gamma_{20} + \gamma_{21}GEN_i + \gamma_{22}ETH_i + \gamma_{23}SIC_i + \zeta_{2i}$

### **Insecurity in the Family Trajectories and Delinquency**

The final set of analyses examined the relations between the trajectories of insecurity in the family with age on adolescent delinquency. To do so, the individual ordinary least squares residuals from Model E in the HLM analyses were combined with the overall estimates of the intercepts and slopes. By adding the individual residual to the average across all participants in the study, the person-specific estimate of change was calculated. The controls of ethno-political membership, age, and family conflict in the current wave did not significantly predict adolescent delinquency. Girls were less likely than boys to engage in delinquent acts ( $\beta = -.44, p < .05$ ), and the higher average level of insecurity about the community was related to greater delinquency at the trend level ( $\beta = .13, p = .06$ ). The intercept, or initial level of insecurity in the family, did not relate to later delinquent acts; even after controlling for delinquency the year prior ( $\beta = .20, p < .001$ ), the linear slope, or change in security in the family, significantly related to greater delinquency at wave 5 ( $\beta = .13, p < .05$ ). That is, youth with a steeper increase of insecurity in the family with age were more likely to report indicators of delinquency.

### **Discussion**

The present findings indicate that both emotional insecurity about the family and community affect youth's risk for delinquency in contexts of political violence. Building on evidence that emotional insecurity about the family contributes to inter-individual differences in mediating relations between sectarian community violence and children's externalizing problems in Northern Ireland (Cummings et al., 2012), intra-individual trajectories of emotional insecurity about the family related to children's delinquency. Moreover, insecurity about the community worsened the impact of family conflict on youth's insecurity about the family, consistent with the notion that youth's insecurity about the community sensitizes them to exposure to family conflict in the home. This report thus (a) affirms emotional insecurity about the family as a significant process for understanding the development of delinquency from a person-oriented perspective in contexts of political violence and (b) demonstrates that insecurity about community and family both relate to youth delinquency.

This study advances empirical bases for conceptualizations of the psychological and developmental processes and contextual factors that relate to adolescent delinquency in contexts of political violence. These results show the developmental significance of emotional insecurity about the family; adolescents who continue on a path of insecurity about family over time are at heightened risk for later delinquency problems. These findings call attention to the need for assessment over time to articulate the dynamic characteristics of risk processes, advancing a person-oriented analysis of emotional insecurity about the family.

Demonstrating the importance of a social ecological perspective on emotional insecurity, emotional insecurity about the community elevated the impact of family conflict on adolescent insecurity about the family, which, in turn, was related to delinquency. Delinquent behaviors included stealing, behaving poorly in public, spray painting, or breaking into a car (McAloney et

al., 2009). Although interrelations between emotional insecurity about family and community in relations to child adjustment problems have been shown based on cross-sectional tests, this is the first longitudinal demonstration of interrelations between these psychological response processes across multiple contexts of the social ecology (i.e., family and community). This work adds to other longitudinal studies examining patterns of adjustment over time from a social ecological perspective (e.g., Betancourt et al., 2014; Cummings et al., 2013; Dubow et al., 2012), breaking new ground in articulating empirical approaches to the longitudinal, process-oriented study of relations between political violence and youth adjustment.

There are several possible bases for relations between emotional insecurity about the community and family conflict. Emotional insecurity about the community has repeatedly been shown to be significantly related to sectarian community violence, hypothesized as a result of the threat of sectarian community violence to personal and ethnic identities (Cummings et al., 2014). Since emotional insecurity about the community reflects appraisals of the threats posed by the sectarian community violence it might be expected to be an especially proximal influence of community relations on family functioning. Heightened insecurity about the community is likely to result in the adoption of regulatory responses in the family that are maladaptive. Such reactions may include heightened negativity and hostility, or elevated expenditures of physical and psychological resources over prolonged and extended periods of time, thereby undermining family members' capacities for adaptive psychological functioning and constructive resolution of family conflicts.

Although longitudinal relations between family conflict and later adjustment problems have been demonstrated (Cummings et al., 2012), this is the first study to incorporate within-person changes of insecurity about the family. Whereas family conflict has previously been



shown to have later implications for maladjustment, family conflict is not a constant, and may vary over time. In fact, levels of family conflict fluctuated over course of this study, that is, change was not linear. Thus, in order to take into account how insecurity was related to family conflict in this context of change, family conflict was included as a time-varying covariate to control for its effect on insecurity about the family when estimating how trajectories of insecurity related to later adolescent delinquency. That is, we estimated the within-person changes in emotional insecurity about family by taking into consideration the concurrent levels of family conflict each individual experienced within each wave. The trajectory of emotional insecurity about family can be interpreted as the adjusted measure of the within-person change, after accounting for experience with family conflict (Curran & Bollen, 2011).

Moreover, although not a diagnostic outcome of psychopathology, emotional insecurity is conceptualized as a process-oriented risk factor for psychopathology that dynamically exercises influence over time in the context of other risk and protective factors in the social ecology (DeKlyen & Greenberg, 2008). Frequent or prolonged activation of the emotional security regulatory system may increase the risk of delinquency through a variety of processes, including negative expectations of family relations or demanding psychological and physical resources, thereby reducing capacities to regulate functioning or pursue developmental goals.

Developmental change also merits comment. Insecurity about family increased on average with age. From a developmental perspective, this may reflect increasing conflict with parents during adolescence and less time with the family and more time with their peers. Trajectories of emotional insecurity about family had implications for later adjustment. More specifically, even after controlling for delinquency the year prior, the linear slope of insecurity in the family predicted greater delinquency at wave 5. Adolescents who had greater increases in

insecurity in the family had more delinquency problems. By comparison, prior work has found that emotional insecurity about the community decreased over time (Cummings et al., 2013). It remains for future research to identify the substantive bases for these differences in average changes in developmental trajectories of emotional insecurity, although in both instances adolescents who had greater within-person increases in insecurity had more adjustment problems.

Finally, consistent with prior work, age and gender did not moderate patterns of relations over time and findings were complex as a function of ethno-political affiliation (Cummings et al., 2014). That is, Protestant youth reported higher initial insecurity in the family than Catholics. On the other hand, stronger relations were found between family conflict and insecurity about the family for Catholic than Protestant youth. These differences may reflect important differences in family communication patterns and their implications for Catholic and Protestant families. However, in the absence of prior study, and given the complexity of other recent findings (Cummings et al., 2014), this interpretation is highly speculative; these issues need much further study.

Certain limitations should be acknowledged. First, findings are based on questionnaire assessments; the addition of observational and physiological data would add to the cogency of the tests. Second, findings are limited to the socio-political context of Northern Ireland; future research should examine these models in additional contexts of political violence and children to expand understanding of relations across contexts, including tests of generalizability.

### **Conclusion**

The results suggest that ameliorating children's insecurity about family and community in contexts of political violence could be an important goal toward improving individual well-

being. The findings support efforts by governments and communities to find ways to attempt to foster children's trust and feelings of safety even when confronted with these events. Addressing multiple levels of the social ecology, children's emotional security may be advanced by programs to increase both support in schools/ community (Slone, Shoashni & Lobel, 2013) and parent-child communication (Dybdahl, 2001). These findings also offer promising directions for future research on explanatory processes underlying the impact of political violence on child adjustment, with implications for studying similar processes in other parts of the world in which children are exposed to political violence.

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### **References**

- Bar-Tal, D. & Jacobson, D. (1998). A psychological perspective on security. *Applied Psychology: An International Review*, 47 (1), 59-71. doi: 10.1111/j.1464-0597.1998.tb00013.x
- Batniji, R., Rabaia, Y., Nguyen-Gillham, V. Giacaman, R., Sarraj, E., Punamaki, R.L., Saab, H., & Boyce, W. (2009). Health as human security in the occupied Palestinian territory. *The Lancet*, 373 (9669), 1133-1143. doi: 10.1016/S0140-6736(09)60110-0
- Bergman, L. R., von Eye, A., & Magnusson, D. (2006). Person-oriented research strategies in developmental psychopathology. (pp. 850-888) John Wiley & Sons Inc, Hoboken, NJ

- Betancourt, T.S., McBain, R., Newnham, E.A., & Brennan, R.T. (2014). Context matters: Community characteristics and mental health among war-affected youth in Sierra Leone. *Journal of Child Psychology and Psychiatry*, 55 (3), 217-226. doi: 10.1111/jcpp.12131
- Betancourt, T.S., McBain, R., Newnham, E.A. & Brennan, R.T. (2013) Trajectories of Internalizing Problems in War-Affected Sierra Leonean Youth: Examining Conflict and Postconflict Factors. *Child Development*, 84 (2), 455-470. doi: 10.1111/j.1467-8624.2012.01861.x
- Boxer, P., Huesmann, R.L., Dubow, E.F., Landau, S.F., Gvirsman, S.D., Shikaki, K., & Ginges, J. (2013). Exposure to violence across the social ecosystem and the development of aggression: A test of ecological theory in the Israeli–Palestinian conflict. *Child Development*, 84 (1), 163-177. doi: 10.1111/j.1467-8624.2012.01848.x
- Bowlby, J. (1969). The study and reduction of group tensions in the family. *Human Relations*, 2(2), 123-128. doi: 10.1177/1001872674900200203
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Cairns, E. (1996). *Children and Political Violence*. Oxford: England: Blackwell.
- Cairns, E. & Dawes, A. (1996). Children: Ethnic and political violence: A commentary. *Child Development*. 67 (1), 129-139. doi: 10.2307/1131691
- Cummings, E. M., Goeke-Morey, M., Merrilees, C. E., Taylor, L. K., Shirlow, P. A. (2014). Social-ecological, process-oriented perspective on political violence and child development. *Child Development Perspectives*. 12(1): 16–38.
- Cummings, E. M., Goeke-Morey, M. C., Schermerhorn, A. C., Merrilees, C. E., & Cairns, E. (2009). Children and political violence from a social ecological perspective: Implications

for research on children and families in Northern Ireland. *Clinical Child and Family Psychology Review*, 12, 16-38.

Cummings, E. M., & Davies, P. T. (2011). *Marital conflict and children: An emotional security perspective*. New York and London: The Guilford Press.

Cummings, E. M., Merrilees, C. E., Schermerhorn, A. C., Goeke-Morey, M. C., Shirlow, P., & Cairns, E. (2012). Political violence and child adjustment: Longitudinal tests of sectarian antisocial behavior, family conflict and insecurity as explanatory pathways. *Child Development*, 83, 461-468.

Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*, 116, 387-411.

Dubow, E.F., Huesmann, L.R., & Boxer, P. (2009). A social-cognitive-ecological framework for understanding the impact of exposure to persistent ethnic-political violence on children's psychosocial adjustment. *Clinical Child and Family Psychology Review*, 12(2), 113-126. doi: 10.1007/s10567-009-0050-7

Dubow, E.F., Boxer, P., Huesmann, L.R., Khalil, S., Landau, S., Gvirsman, S. D., & Ginges, J. (2010). Exposure to Conflict and Violence Across Contexts: Relations to Adjustment Among Palestinian Children. *Journal of Clinical Child and Adolescent Psychology*, 39 (1), 103-116. doi: 10.1080/15374410903401153

Dybdahl, R. (2001). Children and mothers in war: An outcome study of a psychosocial intervention program. *Child Development*, 72, 1214-1230.

Forman, E.M., & Davies, P.T. (2005). Assessing children's appraisals of security in the family system: the development of the Security in the Family System (SIFS) scales. *Journal of*

*Child Psychology and Psychiatry*, 46 (8), 900-916. doi: 10.1111/j.1469-7610.2004.00385.x

Goeke-Morey, M. C., Cummings, E. M., Ellis, K., Merrilees, C. E., Schermerhorn, A. C., Shirlow, P., & Cairns, E. (2009). The differential impact on children of inter- and intra-community violence in Northern Ireland. *Peace and Conflict: Journal of Peace Psychology*, 15, 367-383.

Hobfoll, S.E., Hall, B.J., Canetti-Nisim, D., Galea, S., Johnson, R.J., & Palmieri, P.A. (2007). Refining our understanding of traumatic growth in the face of terrorism: Moving from meaning cognitions to doing what is meaningful. *Applied Psychology: An International Review*, 56, 345-366. doi: 10.1111/j.1464-0597.2007.00292.x

Masten, A. S., & Narayan, A.J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology* 63, 227-257. doi: 10.1146/annurev-psych-120710-10035

McAloney, K., McCrystal, P., Percy, A., & McCartan, C. (2009). Damaged youth: Prevalence of community violence exposure and implications for adolescent well-being in post-conflict Northern Ireland. *Journal of Community Psychology*, 37 (5), 635-648. doi: 10.1002/jcop.20322

McCrystal, P., Higgins, K., & Percy, A. (2006). Brief Report: School exclusion drug use and delinquency in adolescence. *Journal of Adolescence*, 29 (5), 829-836. doi: 10.1016/j.adolescence.2006.05.006

Nesselrode, J. R., & Molenaar, P. C. M. (2010). *Emphasizing intraindividual variability in the study of development over the life span: Concepts and issues* John Wiley & Sons Inc, Hoboken, NJ. doi:<http://dx.doi.org/10.1002/9780470880166.hlsd001002>

- O'Donnell, D.A., Schwab-Stone, M.E., & Muveed, A.Z. (2002). Multidimensional resilience in urban children exposed to community violence. *Child Development*, 73 (4), 1265-1282. doi: 10.1111/1467-8624.00471
- Peltonen, K., Qouta, S., El Sarraj, E. & Punamäki, R.L. (2010). Military trauma and social development: The moderating and mediating roles of peer and sibling relations in mental health. *International Journal of Behavioral Development* 34 (6), 554-563. doi: 10.1177/0165025410368943
- Singer, J. D., & Willett, J. B. (2003). Survival Analysis. In J. A. Schinka & W. F. Velicer (Eds.), *Handbook of Psychology, Volume 2: Research Methods in Psychology* (pp. 555-580). New York, NY: John Wiley & Sons.
- Slone, M., Shoshani, & Lobel (2013). Helping youth immediately following war exposure: A randomized controlled trial of a school-based intervention program. *Journal of Primary Prevention*, 34, 293-307.
- Sterba, S. K., & Bauer, D. J. (2010). Statistically evaluating person-oriented principles revisited. *Development and Psychopathology*, 22(2), 287-294. doi:<http://dx.doi.org/10.1017/S0954579410000064>
- Taylor, L.K., Merrilees, C.E., Goeke-Morey, M.C., Shirlow, P., & Cummings, E.M. (in press). Perpetuating protracted intergroup conflict: Trajectories of adolescent aggression and family cohesion. *Journal of Clinical Child and Adolescent Psychology*.

Table 1

*Trajectory of Insecurity in the Family for Children in Belfast - Model E (N=999)*

<b>Initial Status (<math>\beta_{0i}</math>)</b>		
Intercept	$\gamma_{00}$	11.568*** 0.169
Female	$\gamma_{01}$	-0.675*** 0.203
Catholic	$\gamma_{02}$	-1.000*** 0.212
SIC_Ave	$\gamma_{03}$	0.027 0.058
<b>Rate of Change (<math>\beta_{1i}</math>)</b>		
Intercept	$\gamma_{10}$	0.201*** 0.060
Female	$\gamma_{11}$	0.021 0.073
Catholic	$\gamma_{12}$	-0.072 0.078
SIC_Ave	$\gamma_{13}$	0.006 0.017
<b>Family Conflict (Time-Varying Covariate) (<math>\beta_2</math>)</b>		
Intercept	$\gamma_{20}$	0.318*** 0.079
Female	$\gamma_{21}$	-0.048 0.103
Catholic	$\gamma_{22}$	0.325** 0.109
SIC_Ave	$\gamma_{23}$	0.048* 0.023

*Note.*  $\beta$  indicates a Level 1 parameter;  $\gamma$  indicates a Level 2 parameter; the subscript "i" indicates a random variable and all others are fixed. Standard errors reported under coefficient estimates. SIC\_Ave = the average insecurity about community over five waves.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



Table 2  
*Multiple Regression Predicting Delinquency (N = 574)*

<b>Variable</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math></b>
Constant	-0.67	1.16	
Age	0.04	0.06	0.03
Female	-0.44	0.22	-.011*
Catholic	0.08	0.24	0.02
Family Conflict	0.05	0.07	0.04
Previous Delinquency	0.20	0.05	.21***
SIC_Ave	0.13	0.07	.11 <sup>t</sup>
Intercept of Insecurity in the Family (SIF)	-0.23	0.03	-0.50
Linear Slope of Insecurity in the Family (SIF)	0.13	0.06	.13*
R <sup>2</sup>		0.10	
F		4.08***	

Note. <sup>t</sup> $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Figure Caption**

*Figure 1.* HLM two-way interaction plot of family conflict and insecurity about the community (SIC) on children's' emotional insecurity in the family (SIF). Lines were plotted at the mean ( $\pm 1 SD$ ) of insecurity about the community. Higher levels of insecurity about the community exacerbated the link between family conflict and emotional insecurity in the family.

### Interaction of Security about the Community (SIC) and Family Conflict on Emotional Insecurity in the Family

