The Power of Developmental Assets in Building Behavioral Adjustment Among Youth Exposed to Community Violence: A Multidisciplinary Longitudinal Study of Resilience

Executive Summary

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ABSTRACT

Researchers and practitioners have repeatedly noted substantial variation in the behavioral functioning of youth exposed to community violence. Several studies across fields have documented the detrimental effects of exposure to violence, while other studies have considered how developmental assets promote positive youth development. However, few have examined the lives of the many youth who demonstrate resilience (that is, positive adjustment despite risk) and hardly any have examined how developmental assets may shape resilient trajectories into adulthood for youth exposed to violence. What resources and relationships can high-risk youth leverage to tip the balance from vulnerability in favor of resilience?

We used generalized estimating equations, a multivariable technique appropriate for longitudinal and clustered data, to examine multilevel longitudinal data from 1,114 youth ages 11-16 from the Project on Human Development in Chicago Neighborhoods (PHDCN). We considered whether baseline family, peer and neighborhood-level protective factors predicted behavioral adjustment 3-7 years later, among youth who were victims of, witnesses of, or unexposed to violence, controlling for individual and neighborhood-level risks.

Behavioral adjustment varied across waves and by exposure to violence. In the short-term, being a victim was associated with increased aggression and delinquency. In the long-term, though, both victims and witnesses to violence had higher odds of behavioral adjustment. Family support, friend support and neighborhood support, family boundaries and collective efficacy had protective effects, and family support, positive peers, and meaningful opportunities modified the effect of exposure to violence to increase the odds of behavioral adjustment over time. Policies, systems and programs across sectors that help nurture these specific supports and opportunities

can promote positive behavioral trajectories and resilience into adulthood among urban youth exposed to community violence.

EXECUTIVE SUMMARY

Introduction

Adolescents living in urban neighborhoods regularly witness or are victims of community violence. Nationally representative estimates range from one-third of girls and one-half of boys witnessing community violence to 70% experiencing violent crime in adolescence (Aisenberg & Herrenkohl, 2008). Exposure to violence affects the behavioral adjustment of individuals over the course of their lives (Bacchini, Miranda, & Affuso, 2011; Cooley-Strickland et al., 2009; McDonald & Richmond, 2008; Wilson et al., 2009), but youth functioning varies substantially among those exposed to violence (Margolin, 2005), with a substantial portion of youth successfully adapting over time in spite of adversities (Benard, 2004; Garmezy, Masten, & Tellegen, 1984; Masten et al., 1999; Werner & Smith, 2001). A resilience perspective suggests that youth may bounce back, cope and recover constructively towards 'normal' health in a few years (Luthar, Doernberger, & Zigler, 1993).

Individual, family, peer, and neighborhood factors appear to each modify the effect of exposure to violence on positive adjustment (Aisenberg & Herrenkohl, 2008). This is illustrative of the ecological-transactional framework (Cichetti & Lynch, 1993; Dawes & Donald, 2000), which nests the developing child within the dynamic social context of family, community, and society. The developmental assets framework (Benson, Leffert, Scales, & Blyth, 1998; Leffert et al., 1998; Benson, 2002) also discusses assets at multiple levels as they relate to key developmental processes. For example, the Search Institute highlights four external developmental assets, including supportive relationships, empowerment, boundaries and expectations, and constructive use of time. The developmental assets framework suggests that meaningful opportunities and relationships with adults are positive experiences that, when

reinforced by systems and policies, can protect youth from high-risk behaviors and enhance positive developmental outcomes. The developmental assets and ecological-transactional frameworks complement, strengthen and expand existing resilience research and practice.

However, much of the research has focused on factors at only one level, thereby limiting our understanding of how individuals nested within families within communities may be comprehensively protected and nurtured (Fergus & Zimmerman, 2005; Ungar, 2011). Additionally, numerous longitudinal studies have considered resilience among children exposed to other adversities like chronic poverty (Garmezy, 1985), parental psychopathology (Rutter, 1985; Werner & Smith, 1992), and child abuse and neglect (Garbarino et al., 1992), but surprisingly little research has documented resilience among youth exposed to community violence. This is especially important to do given that these adverse exposures are often clustered (e.g., family and community violence frequently overlap (Margolin et al., 2009)). More research must be done to understand how these diverse, clustered factors can combine to promote positive adjustment among youth who have been exposed to violence.

Methods

We utilized data from the Project on Human Development in Chicago Neighborhoods (PHDCN), which collects both community- and individual-level data over three waves during adolescence and young adulthood. In particular, our sample of 1,114 youth is composed of all youth with non-missing data at baseline in cohorts 12 and 15 from the PHDCN's Longitudinal Cohort Study of Adolescents, neighborhood data from community-based surveys, and Census and Police homicide data for additional neighborhood variables. The Longitudinal Cohort Study is a random sample of 6,226 children and youth within six months of ages 0 (in utero), 3, 6, 9, 12, 15, and 18 years who were selected from a random sample of 80 neighborhood clusters at

baseline using a multistage probability design. About 25 youth per neighborhood cluster were interviewed three times.

The neighborhood-level data were aggregated from the first wave's community survey, which assessed 8,872 randomly selected residents' perceptions of their neighborhood quality, safety and sense of community (all residents surveyed were 18 and older and came from 343 total Chicago neighborhood clusters). Neighborhood clusters were geographically sensible and homogenous in terms of race/ethnicity, socioeconomic status, family structure and housing density. The 1990 Census and Police homicide data from 1995 provided information about the crime rate and neighborhood structural variables. A detailed description of the sampling procedures used in the PHDCN has been reported elsewhere (Earls & Buka, 1997).

This analysis considers the moderating effect of caring relationships and support on the association between exposure to community violence—which was measured based on the My Exposure To Violence (My ETV) scale (Selner-O'Hagan et al., 1998)—and behavioral adjustment. Subjects' exposure to 18 different violent events in the community in the past year was measured using the My ETV scale (Buka, Selner-O'Hagan, Kindlon, & Earls, 1997; Kindlon, Wright, Raudenbush, & Earls, 1996; Selner-O'Hagan, Buka, Kindlon, Raudenbush, & Earls, 1998) at wave 2, the earliest wave for which exposure to violence is available. It is also worth noting that the My ETV scale only measures community violence, not any violence in the home. The outcome variable of interest was behavioral adjustment, which was operationalized as an externalizing problem score calculated by summing 14 items from a reduced version of Achenbach's (1991) Youth or Young Adult Self-Report scale. This instrument was composed of nine items on aggression and five items on delinquency.

Socio-demographic variables of the youth that were controlled for in our analyses were age, gender, family socioeconomic position (a composite of parental income, education and occupational code), family structure, and race/ethnicity. Neighborhood-level factors that were controlled in the analyses included concentrated poverty and perceived violence in the community.

The protective factors of interest were both interpersonal and neighborhood-based. Interpersonal items from the PHDCN that corroborated with the Search Institute's external assets of support, opportunities, boundaries, and expectations, and empowerment (Benson & Leffert, 1999) and WestEd's California Healthy Kids Survey Resilience module were identified at all waves, and scales were developed accordingly. Neighborhood-level protective factors that were identified included social cohesion, neighborhood social capital, and collective efficacy (Sampson, Raudenbush, & Earls, 1997), as well as an index of organizations and services in the neighborhood.

Using SAS version 9.0 (SAS Institute, 1999), the final sample of 1,114 youth was studied for differences in protective factors by the exposure to community violence group using chi-square tests and t-tests. Bivariate Pearson correlations were examined to assess the magnitude and significance of the correlations between the primary outcome, risk of exposure to violence, and protective factors. Systematic differences between respondents and non-respondents were also examined.

Next, generalized estimating equations (GEE) with a logit function were estimated regressing intercept at wave 2 and slope from wave 2 to wave 3 onto individual and neighborhood-level predictors at baseline (Liang & Zeger, 1986; Bryk & Raudenbush, 1987; Subramanian, Jones, & Duncan, 2003). GEE was the preferred method of analysis because this

technique provides a statistically robust model that adequately accounts for variation in the outcome that exists at multiple levels and adjusts for expected autocorrelation across time (within-subjects) and space (between subjects within neighborhoods) (Fitzmaurice, Laird, & James, 2004). Multilevel models were sequentially built starting with a null model that included no predictors, then adding time (age), the primary risk variable (exposure to violence group), level 2 controls (sex, race, socioeconomic position, family structure), and level 3 controls (neighborhood perceived violence and concentrated poverty).

Results

We first consider the individual and neighborhood characteristics at baseline of 1,114 youth in 78 Chicago neighborhoods, stratified by the exposure to violence group. The unexposed (n=238; 21.4%) were the smallest group; witnesses (n=499, 44.8%) were the plurality, and victims composed just over one-third of the study population (n=377, 33.8%). The average age of subjects at baseline was 13.5 years (range: 11-16), 15.5 years (range: 12-20) at wave 2, and 18.1 years (range: 15-22) at wave 3. Blacks were overrepresented in the witness and victim groups, as compared to the unexposed (37% and 41% vs. 20%, $p<0.05$); Whites were underrepresented among witnesses and victims ($p<0.05$); and Hispanics were more evenly represented in each group ($p>.05$). Victims were more likely to be male (55%) and living in single-parent households (33%) than witnesses and those unexposed to violence. Witnesses and victims lived in neighborhoods of higher mean concentrated poverty than the unexposed group ($p<0.05$).

In terms of the distribution of protective factors, the unexposed group had significantly higher levels of family support and positive peers compared to the other two groups; and victims reported significantly lower positive peer influence, family boundaries, and friend support than

other exposure to violence groups. Hours in structured activities, other adult support, neighborhood cohesion, and neighborhood control were similar across all exposure to violence groups ($p>.05$).

Resilience or behavioral adjustment varied by wave and level of risk exposure, ranging from 42% to 95%. As expected, victims were least likely to be behaviorally resilient at all 3 waves (37%), followed by witnesses (64%), and the unexposed (83%). Behavioral adjustment increased significantly for witnesses and victims by wave 3.

Multilevel factors generally had more of a protective effect for youth unexposed to violence than for those who had been exposed. Among the support variables, family ($p<0.05$) and friend support ($p<0.10$ borderline) had main positive effects on adjustment at wave 2 and change over time from wave 2 to 3, even after controlling for individual and neighborhood risks (perceived violence and concentrated poverty), frequency of violence exposure and wave 1 adjustment. Baseline family support positively influenced the unexposed group's (by 50%) and victims' (33%) wave 2 functioning more so than for witnesses (0.5%); however, baseline family support was associated with a greater increase in behavioral resilience for witnesses (15%) over time, as compared to victims.

Having positive peers at baseline (under the domain of boundaries and expectations) increased the odds of behavioral adjustment 7 years later, for the unexposed by 42%, witnesses by 13%, and victims by 9% by wave 3. Each unit increase in hours spent in structured opportunities (meaningful opportunities domain) at baseline increased the odds of behavioral adjustment for the unexposed group by 2.7 times at wave 2, and slightly increased odds for behavioral adjustment for victims and witnesses.

Neighborhood-level support or cohesion significantly and negatively influenced the rate of change from wave 2 to 3; that is, each unit increase in neighborhood cohesion at wave 1 decreased odds of behavioral adjustment for all youth from wave 2 to 3. The effect of collective efficacy on the slope was robust and significant even after the inclusion of individual assets and exposure to violence group, suggesting that the effect on building resilience was the same for all exposure to violence groups over time.

Discussion

This longitudinal, strengths-based study explored whether multilevel protective factors deemed fundamental for positive youth development for all youth build behavioral resilience among an ethnically diverse sample of urban at-risk youth. Specifically, we examined whether developmental assets were protective for adolescents exposed to various levels of community violence, above and beyond individual and neighborhood-level confounders. We found strong evidence that specific developmental assets were associated with behavioral adjustment at wave 2 and rate of change until wave 3. Both main and interactive effects have implications for informing interventions and policies, and were examined accordingly. Family support, friend support, neighborhood support, and family boundaries had main effects, reducing aggression and delinquency for all youth, including those exposed to violence. The influence of family support, other adult support, positive peers and meaningful participation at baseline on wave 2 functioning or rate of change depended upon the youth's exposure to violence. Family support was most protective for victims by wave 3, whereas family support and positive peers influenced rate of change mostly for witnesses. Collective efficacy had a main effect on the rate of change for all youth.

This resilience study had several limitations, including availability of reliable and valid measures at all time points, such that protective factors were measured at wave 1 and risk was measured at wave 2. Also, the data are only from one city (Chicago) and thus, are illustrative but may not be generalizable to all populations. Both of these limitations could be overcome in future prospective cohort studies. The study's primary strength is its multidisciplinary, multilevel theory-based investigation of various developmental assets for youth exposed to violence that controls for objective and perceptive measures of community violence and other neighborhood factors.

Implications for research

Future resilience studies should continue to build upon multidisciplinary fields including conducting a broader review of criminology, youth development, and public health literatures. We recommend employing both quantitative and qualitative youth-driven approaches to operationalizing and measuring positive stage-salient outcomes and domain-specific resilience, as well as accounting for changes in protective factors, communities, and within individual lives. Stratifying analyses by race and gender to account for population-specific exposures and competencies, and examining how schools, peers and neighborhoods might interact with each other and with individual assets (recognizing that resilient youth is also an active agent) along developmental pathways is greatly needed. Finally, rigorously evaluating strength-based programs, systems and policies to identify effective best practices is critical.

Implications for policy and practice

Much of the media and research on urban youth tends to disproportionately focus on the few individuals that get caught up in the juvenile and adult justice systems, which contributes to negative stereotypes of urban youth. Evidence documenting the strengths and successes of urban

high-risk youth provides insights into what works, and hopefully will lead to positive changes in societal perceptions of urban youth, and better inform the ways policies and programs are practiced. Primary prevention of violence in urban neighborhoods should continue to be the ultimate goal. However, in addition to prevention of underlying root causes of violence, this study suggests that policies and programs should focus on recognizing, marshalling, and building upon specific developmental assets at home, among peers, and in urban neighborhoods. Thus, in partnership with public health programs, mental health systems (e.g., Becker, Hall, Ursic, Jain, & Calhoun, 2004; O'Donnell et al., 1999), schools (e.g., Telleen, Kim, & Pesce, 2009), and non-traditional community partners (e.g., Randall et al., 1999), juvenile justice systems should work collaboratively to build youth and community capacity utilizing a strengths-based, interdisciplinary approach to data collection, service delivery, capacity building and systems change. Resources and efforts need to be tailored towards securing support, positive peers and meaningful opportunities at home, among peers and in the community to ensure lasting positive change for youth exposed to violence.

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