

Do Social Connections and Hope Matter in Predicting Early Adolescent Violence?

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Abstract We tested relationships between social connections, hope, and violence among young adolescents from socially distressed urban neighborhoods, and examined whether relationships between adolescents' family and school connectedness and violence involvement were mediated by hopefulness. Data were from middle school students involved in the *Lead Peace* demonstration study. The sample (N = 164) was 51.8% female; 42% African American, 28% Asian, 13% Hispanic, and 17% mixed race or other race; average age was 12.1 years; 46% reported physical fighting in the past year. In multivariate models, parent-family connectedness was protective against violence; school connectedness was marginally protective. Hopefulness was related to lower levels of violence. The relationship between school connectedness and violence was mediated by hopefulness; some evidence for mediation also existed in the family-parent connectedness and violence relationship. Findings warrant continued exploration of hopefulness as an important protective factor against violence involvement, and as a mediator in relationships between social connections and violence involvement.

Keywords Violence · Hope · Parent-family connectedness · School connectedness · Mediation

Introduction

Youth violence is a devastating social and public health problem. In 2006, 5,958 young people between the ages of 10 and 24 years were murdered in the United States (Centers for Disease Control and Prevention [CDC 2009]). Of these, 84% were killed with firearms (CDC 2009). Members of specific demographic groups, especially males and African Americans, are at particular risk for involvement in serious forms of violence and related negative health and social sequelae (e.g., homicide, incarceration) (CDC 2009; Herrenkohl et al. 2000). While death is the most severe consequence of violence, nonfatal injuries are far more common. In 2007, more than 668,000 10–24 year olds in the United States were treated in emergency rooms for injuries caused by violence (CDC 2009).

Many acts of adolescent violence do not involve either the healthcare or criminal justice system and are therefore more difficult to quantify. In the 2005 Middle School Youth Risk Behavior Survey which involved students from 13 cities and states, over half of 7th grade students reported ever being in a physical fight (Shanklin et al. 2007). One third to one half of 7th graders reported ever carrying a weapon such as a gun, knife, or club. About 8% of 7th graders had ever been injured in a fight severely enough to require treatment. According to the 2007 Minnesota Student Survey, 37% of sixth grade students in Minneapolis Public Schools reported being kicked, bitten, or hit, and 52% reported being punched, shoved, or grabbed during the previous year. By any measure, violence involving young people is all too common. Additionally, involvement in bullying and fighting during early adolescence has also been identified as a potent risk factor for ongoing and more lethal forms of violence involvement during later adolescence

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(Borowsky et al. 2008; Dahlberg and Potter 2001; Herrenkohl et al. 2000).

Relationship Between Adolescent Social Connectedness and Violence Involvement

Research on youth violence includes the identification of risk and protective factors (Borowsky et al. 2008; Brookmeyer et al. 2005; Flannery et al. 2007; Gorman-Smith et al. 2004; Herrenkohl et al. 2000; Resnick et al. 1997, 2004; Sampson and Morenoff 1997; Valois et al. 2002), and includes the examination of the promotive nature of social connections. For adolescents, social connectedness includes relationships with family members (particularly parents), peers, and schools. Parent and family connectedness have been shown to be protective factors against youth violence (Henrich et al. 2005; Resnick et al. 1997, 2004). Among urban male adolescents who have been exposed to violence, high quality relationships with parents appears to act as a protective buffer against violence involvement (Brookmeyer et al. 2005; Gorman-Smith et al. 2004). Conversely, youth who have weak attachments to their parents are at risk for violence involvement (Herrenkohl et al. 2000; Valois et al. 2002).

School is an important aspect in the lives of adolescents and can play a role in preventing youth violence (Brookmeyers et al. 2006; Henrich et al. 2005; Kaminski et al. 2010; Loukas et al. 2009; Resnick et al. 2004, 1997). Schools offer the opportunity for connections to supportive adults outside of adolescents' families including administrators, teachers and student services staff. Young people who report feeling connected to school are less likely to have conduct problems or participate in violence (Brookmeyers et al. 2006; Loukas et al. 2009; Resnick et al. 2004, 1997). While a body of research supports the notion that strong positive connections to school and family reduce young people's risk for violence involvement, less is known about the mechanisms through which these protective factors work.

Relationship Between Social Connections, Adolescent Hopefulness and Violence Involvement

Hope is the "anticipation of a future which is good, based on mutuality, a sense of personal competence, coping ability, psychological well-being, purpose and meaning in life, and a sense of the possible" (Miller and Powers 1988). It reflects a belief that a personal tomorrow exists (Hinds 1984). An adolescent who possesses a comforting, life-sustaining belief that a personal and positive future exists is hopeful (Hinds 1984; Joiner and Wagner 1995).

Hope or hopelessness can be learned through social interactions and physical environments during childhood

and adolescence (Lynch 1965; McGee 1984; Piaget 1932; Stotland 1969). Nurturing environments and the involvement of competent and supportive adults, who reward pro-social behaviors and assist in negotiating barriers, are linked to the development of hopefulness (Resnick et al. 1997; McGee 1984). Environmental factors such as violence and poverty may limit an adolescent's ability to think about the future and inhibit the development of hope (Lorion and Saltzman 1993). Without hope, adolescents are less likely to be concerned about poor choices that may adversely affect their future.

For adolescents, higher levels of hopefulness have been associated with school achievement, social acceptance, feelings of self-worth, and overall psychological well-being (Gilman et al. 2006; Miller and Powers 1988; Snyder et al. 1997; Valle et al. 2004). Hope has been associated with lower levels of externalizing behaviors such as aggressiveness and delinquent behavior (Valle et al. 2004). In contrast, hopelessness has been associated with violence, depression, school problems, substance use, risky sexual behaviors, and accidental injury (Bolland 2003; DuRant et al. 1994; Kashani et al. 1989; Spirito et al. 1988; Stoddard et al. 2010). Based on this existing literature, adolescents who are less hopeful are more likely to be involved in violence and other behaviors that can negatively impact their health and well-being.

The 2001 Surgeon General's Report on Youth Violence urged practitioners and policy makers to adopt evidence-based approaches to prevent youth violence, employing a dual strategy of addressing known risk factors for violence while simultaneously building protective factors that buffer adolescents from violence involvement (Department of Health and Human Services [DHHS] 2001). While young people's sense of hopefulness (Valle et al. 2004; Bolland 2003) along with high levels of family and school connectedness (Resnick et al. 2004) have been shown to act as protective buffers against youth violence, and nurturing environments and supportive relationships have been linked to the development of hopefulness (McGee 1984), little is known about relationships between social connections, hope and violence for young people. It is plausible that a mechanism through which social connections protect youth from participation in violence is by enhancing their sense of hope. Understanding the role of hopefulness in the relationship between young people's pro-social connections and violence involvement will advance our understanding of a mechanism through which pro-social connections protect youth from participation in violence, and further our understanding of how to intervene to prevent violence and support young people's healthy development (i.e., interventions that promote pro-social connections or interventions that directly promote hope).

The purpose of the current study is to examine relationships between social connectedness, hope and violence among young adolescents from economically and socially distressed urban neighborhoods. With this group of young adolescents, we hypothesize that higher levels of connection to family and to school will be related to lower levels of violence involvement. We also hypothesize that high levels of hopefulness will be related to lower levels of violence involvement. Finally, we hypothesize that young adolescents' self-reported hopefulness will mediate relationships between social connectedness and violence involvement.

Methods

The Lead Peace Study

Data for the current study were drawn from the *Lead Peace* research demonstration study. *Lead Peace* is a school-based service learning program for urban 6–8th grade students that aims to reduce risks for violence involvement and school failure by promoting specific skills, motivations, opportunities and supports in students' lives. Begun in 2006, the *Lead Peace* demonstration study involved four K-8 Minneapolis public schools assigned to *Lead Peace* program and reference conditions. In consultation with the Minneapolis Public School District, schools with similar ethnically diverse and economically disadvantaged student bodies were selected to be involved in the *Lead Peace* study. At the end of the 2006–2007 school year, one of the study's comparison schools was closed due to declining school district enrollment and budgetary constraints. A new comparison school was added at the beginning of the 2007–2008 school year. This school is located in the same neighborhood as the original comparison school; student bodies of the two schools have similar demographic and academic profiles. The *Lead Peace* study cohort includes the 8th grade class of 2009 at each of these schools. Students in program and reference schools were surveyed in their classrooms at study baseline (fall 2006) and follow-up (spring 2007/fall 2007, spring 2008, and spring 2009). Both active parent consent and student assent were required for survey participation (Secor-Turner et al. 2010). All study protocols were approved by the school district research department and the University of Minnesota IRB.

Lead Peace study schools are located in among the most socially and economically troubled neighborhoods in Minneapolis. While in Minneapolis, 12% of families with children under age 18 live below the poverty level, in neighborhoods of the study schools, between 30 and 42% of families with children under age 18 live in poverty (City of Minneapolis 2010). In the 2006–2007 school year,

92–96% of students from these schools received free or reduced lunch compared to a Minneapolis Public School District average of 72% (Minneapolis Public Schools 2010). These neighborhoods have among the highest rates of homicide and assault in the City of Minneapolis (2008). Details regarding the *Lead Peace* service learning program and evaluation are found elsewhere (Sieving and Widome 2008; Widome et al. 2008; Bosma et al. 2010).

Study Sample

This study employed student self-report data from the spring 2007/fall 2007 *Lead Peace* student survey round. This survey round was completed by a total of 171 students, including 95 students who completed the survey in spring 2007 and 76 students who completed the survey in fall 2007 (75.4% of the eligible student sample). Surveyed students are fairly representative of the class of 2009 in terms of gender and race/ethnicity (Minnesota State Department of Education 2010). The sample for the current study consisted of 164 students who provided complete data on study variables.

The demographic characteristics of the study sample are displayed in Table 1. The sample was racially and ethnically diverse; 42% of students are African American, 28% Asian, 13% Hispanic, and almost 17% Mixed race or other racial backgrounds. Around 15.5% of the sample reports two or more racial/ethnic backgrounds. Over one-half (56.1%) of students lived with two parents, 35.7% lived with one parent, and 8.2% reported living with neither parent. On average, students were 12 years old at the time of the survey. The proportion of males and females were approximately equal (51.8% female).

Data Collection

The survey was administered in classrooms by trained evaluation research staff. Non-participating students were given workbooks and instructed to work quietly during the survey hour while the rest of the class took the survey. The survey instrument was written in English. Several accommodations were made to increase survey comprehension for students with lower reading levels or limited English proficiency. All survey questions were read out loud by research staff, and bilingual staff were available to answer student questions in Spanish and Hmong. In one school with a high percentage of Hmong-speaking students, the survey was read out loud in both English and Hmong.

Measures

Measures for the current study are from the *Lead Peace* student survey. This survey, tailored for young adolescents

Table 1 Sample descriptors (n = 164)

Variable	Mean	SD	Range	Percent
Demographics				
Race/ethnicity				
African American				42.1
Asian				28.0
Hispanic				12.8
Mixed/White/other				17.1
Household living arrangements				
Live with neither parent				7.9
Live with one parent				34.8
Live with two parents				56.1
Age	12.13	.54		
Gender				
Female				51.8
Male				48.2
Independent variables				
Hopefulness	2.21	.54	0–3	
Parent-family connectedness	2.48	.55	0–3	
School connectedness	2.17	.48	0–3	
Dependent variable				
Violence involvement	1.84	2.20	0–8	

(Widome et al. 2008), included questions designed to measure violence involvement, hopefulness, family and school connectedness.

Violence Involvement

Violence involvement was ascertained by four items from the National Longitudinal Study of Adolescent Health (Add Health) student survey (Resnick et al. 1997) that assessed violent behaviors in the past year: *how often did you get into a physical fight, hurt someone badly enough to need bandages or care from a doctor or nurse, use or threaten to use a weapon to get something from someone, and take part in a group fight*. Responses to individual items (*never* = 0; *once* = 1; *more than once* = 2) were summed to create a scale score ranging from 0 to 8. Higher scores reflected higher levels of violence involvement. Cronbach's α for the violence involvement measure was 0.77.

Hopefulness

Hopefulness was assessed with four items from the EQ-I:YV—General Mood scale (Bar-On 2006): *I think that most things I do will turn out okay, I hope for the best, I know things will be okay, and I feel confident*. Responses to individual items (NO = 0; no = 1; yes = 2; YES = 3) were averaged to produce a scale score, with higher scores

indicating higher levels of hopefulness. Cronbach's α for this scale was 0.65 in the study sample.

Parent-Family Connectedness

Parent-family connectedness is a 7-item scale adapted for young adolescents from the Add Health student survey measure (Resnick et al. 1997; Sieving et al. 2001). This scale assessed participants' perceived closeness to parents and family: *My family pays attention to me, my family understands me, my family has fun together, my mother/father cares about me, I feel close to my mother/father or the person who is most like a mother/father to me*. Responses to individual items (NO = 0; no = 1; yes = 2; YES = 3) were averaged to produce a scale score, with higher scores indicating higher levels of parent-family connectedness. Cronbach's α for this scale was 0.81.

School Connectedness

School connectedness is a 10-item scale adapted for young adolescents from the Add Health student survey measure (Resnick et al. 1997; Sieving et al. 2001). This scale assessed participants' perceived closeness to their teachers and their school: *It is important for me to be at school every day, people at school expect me to do well, I try hard on schoolwork, my classes are interesting to me, I like school, my teachers have gotten to know me well, my teachers respect me, most people in my school trust me, if I need help on my schoolwork I know someone I could ask, I get into conversations with adults at my school*. Responses to individual items (NO = 0; no = 1; yes = 2; YES = 3) were averaged to produce a scale score, with higher scores reflecting stronger connections to school. Cronbach's α for this scale was 0.77.

Multivariate analyses incorporated several demographic control variables including student gender (0 = male; 1 = female) and race/ethnicity, which was dummy-coded into mutually-exclusive categories to reflect Asian, Hispanic, and African American students. Youth who reported being American Indian, White, mixed race, or other were grouped into a single racial/ethnic category called "Mixed-White-Other" due to small cell sizes. The African American category was treated as the reference group in multivariate analyses. Finally, differences based on spring 2007 versus fall 2007 survey participation were also controlled in multivariate models, as students surveyed in the fall were slightly older than students surveyed in the spring.

Although the Lead Peace study includes an intervention component, a preliminary analysis found no evidence of intervention effects on the focal variables included in the current study. Therefore, intervention and control groups were pooled, and the full sample of students was used for

this etiological analysis. Preliminary bivariate findings revealed a lack of difference in violence involvement based on household living arrangement; therefore we did not adjust for this indicator in our multivariate models.

Analytic Methods

Initially, Pearson's correlations were used to examine bivariate relationships between study independent variables and violence involvement. Only those variables that had bivariate associations ($p < 0.10$) were included in multivariate analyses. We also examined bivariate relationships between measures of parent-family connectedness and school connectedness. Parent-family connectedness and school connectedness were significantly and positively correlated ($r = .35, p < .01$). With some multi-collinearity between social connectedness variables, we decided not to include both variables in single multivariate model. In addition, we wanted to examine whether hopefulness mediated either social connectedness-violence relationship separately.

Multivariate regression analyses examined whether parent-family connectedness, school connectedness, and hopefulness were associated with violence involvement. We used an approach described by Baron and Kenny (1986) to test the study hypothesis that relationships between young adolescents' connectedness to family and school and their violence involvement are mediated by hopefulness.

According to Baron and Kenny (1986), four conditions must exist for a variable to be considered a mediator: (1) the predictor (family or school connection) must be significantly associated with the hypothesized mediator (hopefulness) (path a) (2) the mediator (hopefulness) must be significantly associated with the dependent variable (violence involvement) (path b); (3) the predictor (family or school connection) must be significantly associated with the dependent variable (violence involvement) (path c); and (4) the impact of the predictor (family or school connection) on the dependent measure (violence involvement) is less after controlling for the mediator (hopefulness) (path c').

A stepwise linear regression approach was used to test for mediation effects (Baron and Kenny 1986). The first multivariate regression models (Models 2 and 4) contained a social connection variable (either family or school) and demographic control variables as predictors of violence involvement. Next, multivariate regression models were estimated that contained the social connectedness variable, hopefulness and demographic controls as predictors of violence involvement (Models 3 and 5). The Sobel test was used to assess whether the mediator reduces the relationship between predictor and dependent variables in Models

3 and 5 (Sobel 1982; Baron and Kenny 1986). Models were estimated using Stata 10.0 using the `xtreg` command to adjust standard errors for the clustering of students within schools (StataCorp 2007). This command accounts for clustering within the data by calculating robust standard errors for the regression estimates. The unit of the cluster is the school; in this sample, there 5 clusters (representing the five schools participating in the study). The average cluster sample size was approximately 33 students.

As an alternative to Baron and Kenny's classic approach, mediated effects were also tested by computing 95% asymmetric confidence limits for indirect effects using PRODCLIN program (MacKinnon et al. 2004). This method takes into account that the estimator of the indirect effects (i.e., the product of the coefficients ab) is often asymmetric and computes confidence limits based on the distribution of the product. The use of asymmetric confidence limits is considered more exact than normal theory confidence limits (MacKinnon et al. 2004).

Results

Description

Table 1 provides descriptive data for the focal independent variables (hopefulness, parent-family connectedness, school connectedness) and the dependent variable (violence involvement). As a group, participants expressed relatively high levels of hopefulness ($M = 2.21$, Range 0–3), connections to parents and family ($M = 2.48$, Range 0–3), and connections to school ($M = 2.17$, Range 0–3). While violence involvement was low in this group ($M = 1.84$, Range 0–8), there was a substantial amount of variability between individuals ($SD = 2.20$). Almost 46% of participants reported being in one or more physical fights during the past year and 25% reported needing bandages or medical care due to physical fighting during the past year.

Bivariate Associations

Correlations between hopefulness, social connectedness and violence involvement were examined (Table 2). There were significant, negative relationships between parent-family connectedness ($r = -.24$), school connectedness ($r = -.24$) and violence involvement, i.e., young adolescents who were more connected to family or school were less likely to report violence involvement. Hopefulness was also significantly negatively related to violence involvement ($r = -.24$).

Correlations between the social connectedness variables (parent-family connectedness and school connectedness)

Table 2 Bivariate correlations between study variables

	Violence involvement	Hopefulness	Parent-family connectedness	School connectedness
Violence involvement	1.00			
Hopefulness	−0.24*	1.00		
Parent-family connectedness	−0.24*	0.34*	1.00	
School connectedness	−0.24*	0.48*	0.36*	1.00

* Significant at 0.01 level (2-tailed test)

and hopefulness were also examined. Both parent-family connectedness and school connectedness were significantly and positively correlated with hopefulness ($r = .34$, $p < .01$ and $r = .48$, $p < .01$, respectively). Thus, significant correlations between the social connectedness variables, hopefulness and violence involvement met the conditions necessary to assess for mediation (Baron and Kenny 1986).

Multivariate Models

Results for each model of violence involvement are shown in Table 3. Higher levels of hopefulness was associated with less violence involvement in Model 1 ($b = -.97$, $p < .01$). In Model 2, higher levels of parent-family connection was significantly related to lower reported levels violence involvement ($b = -1.01$, $p < .05$). In Model 3, hopefulness was not directly associated with violence

involvement after controlling for parent-family connection and demographic variables. After adjusting for hopefulness, the relationship between parent-family connection and violence became marginally significant ($b = -.78$, $p = .06$), providing evidence of a trend toward mediation (95% asymmetric confidence interval: $-.60$ to $.02$). Figure 1a displays a mediation model with parameter estimates for relationships between family connections, hope, and violence.

In Model 4, school connectedness was marginally related to violence involvement after controlling for demographic variables ($b = -.65$, $p = .08$). In Model 5, hopefulness was protective against violence involvement after controlling for demographic variables ($b = -.89$, $p < .05$). The inclusion of hopefulness in the model made the relationship between school connection and violence non-significant ($b = -.16$, $p = .64$). The change in the point estimate associated with school connectedness between Models 4 and 5 suggested mediation. In addition, the 95% asymmetric confidence interval was from $-.73$ to $-.15$, confirming mediation. Figure 1b displays a mediation model with parameter estimates for paths between school connections, hope, and violence.

Discussion

This study examined relationships between social connectedness, hope and violence among young adolescents from economically and socially distressed urban neighborhoods. Our findings supported the hypotheses that higher levels of social connectedness and hopefulness

Table 3 Violence involvement multivariate regression models ($n = 164$)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	Hopefulness		Family connection		Family connection and hopefulness		School connection		School connection and hopefulness	
	b	SE	b	SE	b	SE	b	SE	b	SE
Parent-family connectedness			−1.01**	.26	−.78‡	.30				
School connectedness							−.65‡	.28	−.16	.32
Hopefulness	−.97**	.26			−.66	.34			−.89*	.29
Female (vs. male)	−.87‡	.40	−1.07‡	.41	−.96‡	.36	−.95‡	.37	−.87‡	.36
Asian ^a	−1.46*	.52	−1.82*	.57	−1.74*	.47	−1.65*	.46	−1.55*	.42
Mixed race/other ^a	.61	.70	.44	.62	.51	.64	.41	.69	.56	.72
Hispanic ^a	−1.56**	.32	−1.38**	.31	−1.60**	.37	−1.32**	.28	−1.60**	.32
Fall vs. spring	.50	.36	.43	.38	.47	.40	.48	.30	.52	.37
R ²	.27		.29		.31		.27		.27	

Analyses controlled for timing of survey (spring 2007 vs. fall 2007); STATA xtreg command used to adjust for within-school clustering

* $p < .05$; ** $p < .01$; ‡ $p < .10$

^a African-American students were the referent category

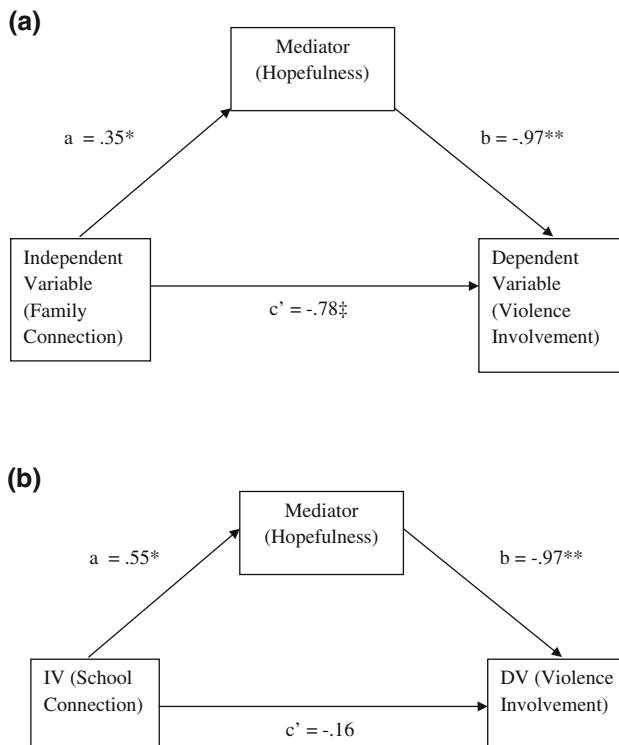


Fig. 1 Conceptual figures with estimates illustrating the proposed mediation models tested. *Path a* represents the estimate of the independent variable on the mediator. *Path b* represents the estimate of the mediator on the dependent variable. *Path c'* represents the estimate of the independent variable on the dependent variable after controlling for the mediator. Tests for mediation: For the family connection/hope/violence involvement model (a): Sobel test = -1.49 (.15), $p = .14$; MacKinnon's 95% asymmetric confidence limits for indirect effects: CI = $(-.60, .02)$. For the school connections/hope/violence involvement model (b): Sobel test = -3.10 (.16), $p = .002$; MacKinnon's 95% asymmetric confidence limits for indirect effects: CI = $(-.73, -.15)$

would be related to lower levels of violence involvement in this group of young adolescents. In separate multivariate models, hopefulness and parent-family connectedness were protective against violence involvement; school connectedness was marginally protective against violence involvement. Our findings also supported the hypothesis that relationships between social connectedness and violence involvement would be mediated by adolescents' hopefulness. Hopefulness appeared to mediate both the relationship between family connectedness and violence involvement and the relationship between school connectedness and violence involvement.

Our estimates of youth violence are in the same range as those found in previous studies in similar populations. According to the 2007 Minnesota Student Survey, 52% of sixth graders in the Minneapolis area report they have been pushed, shoved, or grabbed on school property in the past 12 months. Twenty-five percent of 6th graders reported

hitting or beating up another person at least once in the past 12 months; 37% of 6th graders report they have been kicked, bitten, or hit. National estimates vary but at least 50% of 7th graders report ever being in a physical fight (Shanklin et al. 2007).

In this study, young people who reported stronger connections to their parents and families reported lower levels of violence involvement. Our findings are consistent with previous research with adolescents and suggest that family connectedness is a strong protective buffer against participation in violence (Henrich et al. 2005; Resnick et al. 1997, 2004). The relationship between school connection and violence involvement trended in an anticipated direction. Previous research with adolescents suggests that school connectedness is protective against violence involvement, even among youth who have been exposed to violence in their everyday lives (Brookmeyers et al. 2006; Ozer 2005). On average, this sample reported moderate levels of school connectedness. Our marginally significant findings may be explained by a relatively small sample size, which inhibited the ability of school connectedness to be a significant protective factor.

In our study, a racially diverse group of urban young adolescents who noted higher levels of hopefulness also reported less involvement in violence. The protective nature of hopefulness is consistent with previously published literature on violence involvement and delinquency during adolescence (Bolland 2003; Valle et al. 2004). The current study offers a unique contribution to the literature as it examines the positive aspect of hopefulness as a protective factor, rather than examining hopelessness as a risk factor. Most previous research examining the role of hope in relation to youth violence has focused on hopelessness (Bolland 2003; Bolland et al. 2005; Duke et al. 2009; DuRant et al. 1994; Stoddard et al. 2010).

In this study, hopefulness was highly correlated with both parent-family connectedness and school connectedness. Young people with higher levels of connection to family and school also reported high level of hopefulness. Hopefulness mediated the relationship between school connectedness and violence involvement, and marginally mediated the relationship between family connectedness and violence involvement. Part of the protectiveness of family and school connectedness may be that these connections nurture hope which, in turn, protects against violence. Hope and hopelessness can be learned through social interactions and physical environments during childhood and early adolescence (Lynch 1965; McGee 1984; Piaget 1932; Stotland 1969). Our findings support the notion that involvement of competent and supportive adults and nurturing environments are linked to higher levels of hopefulness among young adolescents, which in turn suggests

that family and school may play an important role in the dynamic development of hope (McGee 1984).

Despite the strengths of the current study, several limitations should be noted. First, since the study is cross-sectional, we cannot assert that the associations reported are causal. In model testing, data can never confirm a model; they can only fail to disconfirm it (Cliff 1983). Our analysis supported hopefulness as a mediator between social connections and violence involvement, particularly for school connectedness. However, when data do not disconfirm a model, there are many other models that are not disconfirmed either (Cliff 1983). It is plausible that youth who are more hopeful report stronger connections to family and school, and it is possible that a sense of hopefulness enhances young peoples' connections to family and school. Further research employing a longitudinal design is needed to truly examine the roles social connectedness and hopefulness play in preventing youth violence, and to better clarify the causal sequence of social connections and hopefulness to violence involvement. Second, we used items from the EQ-I:YV—General Mood scale as a measure of hopefulness (Bar-On 2006). While this indicator does capture a sense of hopefulness, it was not developed as a measure of hope. Future research should be conducted with measures validated specifically to assess the concept of hope (e.g., Children's Hope Scale, Snyder et al. 1997). Third, due to the small sample size and collinearity between measures of parent-family connectedness and school connectedness, our multivariate models accounted for connectedness within a single social domain. Further research with larger samples might examine the concurrent effects of social connectedness in family and school domains. Finally, additional studies are needed to explore and understand the relationships between hopefulness, social connections and violence among young people from additional geographic areas, rural youth, and older youth.

Within an ecological framework, risk and protective factors at multiple levels are related to adolescents' involvement in violence. At an individual level, factors such as exposure to violence, previous violence or aggression, and other emotional and social skills have been identified as important risk and protective factors for youth violence involvement (Borowsky et al. 2008; Dahlberg and Potter 2001; Herrenkohl et al. 2000). Additional family, school and neighborhood factors including parental monitoring (Li et al. 2000), school climate (Brookmeyer et al. 2005), interactions with peers (Herrenkohl et al. 2000; Valois et al. 2002) and aspects of neighborhood context (fear of violence, availability of social resources) (Bolland et al. 2005; Herrenkohl et al. 2000; Molnar et al. 2008; Sampson and Morenoff 1997) have been shown to provide both risk and protection for violent behavior. To more fully understand the array of individual and social context

influences on youth violence involvement, studies are needed that include protective factors examined in the current study and additional factors at multiple levels of the ecological framework.

While additional clarification is needed on the effects of social context and hopefulness on violence involvement, this study suggests that hopefulness about the future may play a part in protecting youth from participation in violence. Hopefulness was positively associated with parent-family connectedness and school connectedness, and negatively associated with violence (i.e., higher level of hopefulness was associated with less violence). Furthermore, hopefulness mediated the relationship between school connectedness and violence involvement. Efforts that promote these forms of social connectedness during early adolescence may also foster the related protective factor of hope. Hope is fundamental to addressing some of the central questions of adolescence ('who am I' and 'what will I be') and may contribute to positive adolescent development. Within families, schools and other youth-oriented contexts, individual-level interventions need to be designed to instill a sense of hope and empowerment in youth. Interventions that promote the 5 C's of positive youth development (confidence, competence, connection, contribution, character; Roth and Brooks-Gunn 2003) may foster the development of hope and reduce violence involvement among youth (Sullivan et al. 2008). Among young people living in high-risk environments, violence prevention programming should include activities that build pro-social connections and promote a sense of hopefulness for the future.

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