

# IMPACT OF EXPOSURE TO VIOLENCE IN SCHOOL ON CHILD AND ADOLESCENT MENTAL HEALTH AND BEHAVIOR

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## **Abstract:**

Exposure to violence at school remains a significant problem for children and adolescents. This study examined the relationship between exposure to violence at school and child reports of psychological trauma symptoms and violent behavior. The sample consisted of children in grades 3 through 12 in 17 public schools from two different states. Rates of witnessing violence ranged from 56% of elementary-school students witnessing someone else being beaten up to 87% of students witnessing someone else being hit, slapped, or punched at school in the past year. Nearly half (44 %) of middle-school youth were threatened at school. After accounting for demographic effects, witnessing violence at school accounted for more variance than being victimized by violence at school in predicting both psychological trauma symptoms and violent behavior. Students who were exposed to high levels of violence at school also were significantly more likely to experience clinical levels of trauma symptoms than students who were exposed to low levels of violence at school. The association between exposure to violence at school and child well being are discussed.

## **Article:**

The level of violence in schools has been declining in recent years (Kingery, Coggeshall, & Alford, 1998), as more violence perpetration and victimization occurs away from school than at school (U.S. Department of Education, 2002a). In general, schools remain relatively safe places, with fewer homicides and nonfatal injuries than in homes or neighborhoods (U.S. Department of Education, 2001a). Although rates of victimization from violence at school are declining, witnessing violence at school remains a serious problem for young people because youth spend a large portion of their day among large, often loosely managed groups of peers in school. Recent research has examined the impact of violence exposure on mental health and behavior, but little research has focused on the impact of school-specific violence exposure, defined here as being either a witness to violence or being a direct victim of violence while at school. Studies that have examined violence exposure at school have focused almost exclusively on adolescents or on high-risk samples. The current study specifically examines exposure to school violence and its relationship to psychological trauma symptoms and violent behavior among children and adolescents.

School violence ranges from incidents of bullying (Nansel et al., 2001; Olweus, 1993) and threats (Singer & Flannery, 2000) to weapon carrying (Centers for Disease Control, 2000), homicide (Kachur et al., 1996), and spree shootings and fatalities (Anderson et al., 2001; Moore, Petrie, Braga, & McLaughlin, 2003). Because of recent concern about high-profile incidents of school violence (Barta, 2000), the federal government has stressed the importance of safe, violence-free schools in Acts such as Goals 2000 (U.S. Department of Education, 1993), the implementation of the Safe Schools/Healthy Start Initiative (U.S. Department of Education, 2001b), and the No Child Left Behind Act of 2001 (U.S. Department of Education, 2002b). For example, Goal 6 of Goals 2000 states, "by the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning" (U.S. Department of Education, 1993). Despite recent declines and a federal emphasis on creating safe schools, violence still exists at high rates in our

schools, and we still know little about the specific impact of exposure to violence at school on child mental health and behavior.

Schools have not been immune to the severest forms of violence. From 1992 to 1994, 105 school-associated violent deaths occurred on school grounds (Kachur et al., 1996). Between 1994 and 1999, 220 violent incidents at school resulted in 172 homicides, 30 suicides, 11 homicide–suicides, 5 legal intervention deaths, and 2 unintentional firearm deaths, with students accounting for 68% of these deaths (Anderson et al., 2001). While the risk of being a homicide victim at school is extremely low, students are not isolated from other types of crime and violence. For instance, during the 2000 school year, children between the ages of 12 and 18 were victims of 1.9 million crimes of violence or theft, and about 128,000 were victims of serious violent crime at school (e.g., rape, sexual assault, or aggravated assault) (U.S. Department of Education, 2002a).

According to the 1999 Youth Risk Behavior Survey, over 17% of youth had carried a weapon in the past 30 days and 7% reported they had brought the weapon to school (Centers for Disease Control, 2000). Between 1993 and 2001, almost 10% of students in grades 9 through 12 indicated they had been threatened or injured by a weapon on school property within the past 12 months (U.S. Department of Education, 2002a). Moore and colleagues (2003) reported that between 1992 and 2001 there were 35 incidents in which students showed up at school or school-sponsored events and started shooting at their classmates and teachers.

Despite these high-profile events, rates of victimization from violence at school are lower than what occurs at home or in the neighborhood (Singer et al., 1999). Student-reported rates of *witnessing* violence at school are consistently higher than rates of direct *victimization* from violence. Nearly 90% of elementary- and high-school students report having witnessed someone else being threatened at school, and one in four reported having seen someone else being beaten up at school (Singer et al., 1999).

Whether as a witness or a victim, exposure to violence is related to a number of emotional and behavioral problems, such as posttraumatic stress, anxiety, anger, depression, dissociation, and self-destructive and aggressive behavior (Breslau, Davis, Andreski, & Peterson, 1991; Flannery, 1999; Flannery, Singer, & Wester, 2001; Hurt, Malmud, Brodsky, & Gianetta, 2001; Overstreet & Braun, 2000; Schwab-Stone et al., 1995). Crick and colleagues (Crick & Grotpeter, 1995; Crick & Bigbee, 1998) found that children who persistently are victimized from violence suffer from higher levels of depression, anxiety, and loneliness compared to nonvictimized children. Reardon (1997) reported, for example, that bullying could result in severe psychological, academic, or physical harm to the victim, irreparable harm to the perpetrator, and a rejection of responsibility for the bystander/observer, particularly if the aggressive or violent behavior is allowed to persist over time. In one study, eight percent of children reported school violence or bullying had affected their lives to the point that they tried suicide, ran away, or refused to go to school (Cullingford & Morrison, 1995). According to Hazler (1996), 17% of students who are bullied reported suffering from academic problems. In another study, 14% of high-school students and 22% of fourth- to eighth-grade students reported that violence exposure diminished their ability to learn in school (Hoover & Oliver, 1996).

Exposure to violence in general also is associated positively with risk for perpetrating aggression and violence (Flannery et al., 2001). For example, in one longitudinal study, adolescents who were victims of child maltreatment prior to age 12 were 24% more likely to report engaging in violent behavior in high school compared to their nonvictimized peers (Thornberry, 1994). Adolescents who reported attacking another person with a knife or shooting at someone were significantly more likely to be exposed to high levels of violence compared to nonviolent youth (Flannery et al., 2001).

Exposure to violence in any setting (i.e., home, community, or school) tends to have serious behavioral and mental-health consequences for children, both as witnesses and as victims. Despite this recognition, little research has focused on the impact of violence exposure in school, a place where children spend a great deal of their time and where significant socialization and learning occurs. The earlier a child is exposed to violence, the greater the potential long-term consequences. Thus, it is critical to examine exposure to violence among young

children and not wait until adolescence. In the current study, we examine the relationship between school-specific violence exposure and two outcomes: 1) child self-reported psychological trauma symptoms; and 2) violent behavior. We examine these issues for children and adolescents in grades 3 through 12.

In addition to examining rates of school violence exposure, we hypothesized that: (a) witnessing violence and being a victim of violence at school would be related significantly to psychological trauma symptoms and violent behavior, independent of the influence of demographic factors; and (b) that children and adolescents who are exposed to frequent incidents of violence at school would be more likely to experience clinical levels of trauma symptoms, such as anger, anxiety, depression, dissociation, and posttraumatic stress compared to youth who are exposed to low levels of violence at school.

## **METHOD**

This investigation uses data from two separate studies. The first included children in grades 3 through 8 and the second included adolescents in grades 9 through 12 (Total  $N= 5969$ ). While these studies used different samples, each gathered data on the same set of variables to assess youth exposure to violence, violent behavior, and psychological trauma symptoms. Within each study, schools purposely were selected to be representative of their geographic location. To maximize recruitment, students in all classrooms attending school on the day the surveys were administered had the opportunity to participate. Classroom teachers administered surveys to students during the usual school day during a single class period. Once students completed the survey, they placed the questionnaire in a separate unmarked envelope. Teachers did not see any completed surveys. Parents were notified of the survey by letter and given the opportunity to withdraw their children from the study. The study protocol was approved by the University Review Committee for Human Studies of Case Western Reserve University, Cleveland, Ohio.

The first study, which included adolescents in high school, was designed to investigate the relationship between exposure to violence and symptoms of psychological trauma ( $n = 3724$ ; Singer, Anglin, Song, & Lunghofer, 1995). This survey study used anonymous self-report questionnaires administered to students in grades 9 through 12 in six public high schools in the 1992–1993 school year. The sample included youth from six different high schools: two large city schools were located in Cleveland, Ohio and two were in Denver, Colorado. One high school was located in a northeast Ohio suburb and another was in a small city in northeast Ohio. Students in Cleveland and Denver schools resided in neighborhoods with predominantly lower socioeconomic status. The small-city high school was located in an economically depressed area whose residents were primarily blue-collar workers. Students from the suburban high school resided in a small upper-middle class town. An overall response rate of 68% was achieved.

The second study was designed to investigate the relationship between violence exposure and symptoms of psychological trauma among children in grades 3 through 8 in eleven public schools in Ohio ( $n = 2245$ ; Singer et al., 1999). The study employed a survey design similar to that used in the high-school study. Specifically, an anonymous self-report instrument was administered in the 1995–1996 school year during regular school hours, with a participation rate of 80%. The public schools were located in Cleveland (3 schools), a small northeast Ohio city (4 schools), and a rural Ohio school district composed of several towns and villages (4 schools). Students in the Cleveland schools resided in neighborhoods of predominantly lower or lower-middle socioeconomic status. The small-city and rural schools were located in areas whose residents were characterized primarily as blue-collar workers.

### ***Instrumentation***

**Recent Exposure to School Violence.** Recent exposure to school violence was assessed through two subscales: (a) witnessing school violence and (b) being victimized by violence at school. Each subscale measured three specific acts of violence: threats, beatings, or slapping/hitting/punching. For each type of violent act, students were asked if they were victimized by or had witnessed someone else being threatened, beaten, or slapped/hit/punched *at school* during the past year. A 6-point Likert scale ranging from “never” (0) to “almost every day” (5) was used to assess the frequency of exposure to each type of violent act at school. The exposure to

school violence scale consisted of six questions and was a sum of the two subscales (i.e., witnessed and victimized; Chronbach's  $\alpha = 0.71$ ).

**Trauma Symptoms.** Psychological trauma symptoms were assessed using the 54-item Trauma Symptom Checklist for Children (TSC-C; Briere, 1996). The TSC-C was developed as a standardized, normed test to assess childhood trauma-related symptomatology. The TSC-C was written to be understandable to children as young as eight years of age. The TSC-C contains six subscales assessing anxiety (9 items), depression (9 items), posttraumatic stress (10 items), dissociation (10 items), anger (9 items), and sexual concerns (10 items). The child is presented with a list of thoughts, feelings, and behaviors, and is asked to mark "How often do each of these things happen to you?" Items reflect assessments of current functioning. Each item is rated on a 4-point Likert scale ranging from "never" (0) to "almost all the time" (3). In addition to the scale scores, computed by summing individual items, a Total Trauma Symptom score can be computed. Requests by school personnel resulted in the removal of all items related to the sexual concerns subscale. The TSC-C has high internal reliability and concurrent validity, and it has been used to differentiate clinical from nonclinical samples (Briere, 1996; Singer et al., 1995). Reliability of scales for the current sample was adequate (average  $\alpha = 0.85$ ).

**Violent Behavior.** Aggressive and violent behaviors were measured by asking students to report how often during the past year they had engaged in each of five violent acts: threatening others, slapping/hitting/punching someone before the other person hit them, slapping/hitting/punching someone after the other person hit them, beating someone up, and attacking someone with a knife. For adolescents, the scale also included an item "Have you ever shot at or shot someone else with a real gun?" A 4-point Likert scale ranging from "never" (0) to "almost every day" (3) was used to assess the frequency of each type of violence. Chronbach's  $\alpha$  revealed that both the 5- and 6-item scales were reliable for this sample ( $\alpha = 0.75$ ). Previous studies using the scale achieved a Chronbach's  $\alpha$  of 0.79 and 0.77 (Singer et al., 1999; Song, Singer, & Anglin, 1998).

### Plan of Analyses

The majority of the analyses were conducted using the entire sample ( $N = 5969$ ). Pearson correlations (by gender) examined the association between age and violent behavior, exposure to school violence, and trauma symptoms. Hierarchical regressions were conducted to examine the relationship between demographic characteristics, witnessing violence at school, being a victim of violence at school, and mental-health symptoms and violent behavior. Exploratory analyses were conducted to examine differences in psychological trauma symptoms between youths who were exposed to high levels of violence at school and those exposed to low levels of school violence.

*Table 1. Sample Demographics*

	N	Percent
Gender		
Female	3039	51%
Male	2927	49%
School		
Elementary	2245	38%
High school	3724	62%
Ethnicity		
Caucasian	2525	43%
African American	2036	34%
Hispanic	962	16%
Asian	141	2%
Other	266	5%
Family structure		
Mother and father	3187	54%
Father only	295	5%
Mother only	2140	36%
Neither mother or father	319	5%
Geographical location		
Urban	3346	56%
Non-urban	2623	44%

## RESULTS

Sample demographics are contained in Table 1. The final sample consisted of students in grades 3 through 12. Slightly over half the sample was female ( $n = 3039$ , 51%) and 62% of youth were in high school. Forty-three percent of students self-reported their ethnicity as Caucasian, 34% were African American, 16% were Hispanic,

2% were Asian, while 5% self-reported “other” as their ethnicity. Over half of the sample reported living in an urban location ( $n = 3346$ , 56%), while the remaining students lived in a non-urban setting (i.e., suburban, rural, or small city). When examining family structure, 54% of the youths reported living with both their mother and father, 36% lived with just their mother, 5% with their father, and 5% lived with neither their mother nor father. Students’ ages ranged from 7 to 19 years old ( $M = 14.24$ ,  $SD = 2.72$ ).

Correlations between age and violent behavior, exposure to violence, and trauma symptoms by gender are reported in Table 2. For both males and females, age was not related significantly to exposure to school violence, but was significantly and inversely associated with violent behavior ( $p < 0.01$ ), suggesting that the older a child is, the less they report engaging in violent behavior. Some gender differences existed regarding the relationship between age and psychological trauma symptoms. For males, age was significantly and negatively related to all trauma symptoms ( $p < 0.01$ ); for females, age was inversely related to anxiety, depression, and dissociation ( $p < .05$ ), but positively related to anger ( $p < 0.05$ ). Age was not associated significantly with posttraumatic stress or total trauma symptoms for females.

Violent behavior was significantly and positively associated with exposure to school violence for both genders ( $r = 0.45$  for both,  $p < 0.01$ ). For all children, violent behavior was positively related to Total Trauma ( $r = 0.40$  for males;  $r = 0.39$  for females;  $p < 0.01$ ), as well as to individual trauma symptoms ( $r = 0.31$  through  $r = 0.40$  for males;  $r = 0.31$  through  $r = 0.39$  for females;  $p < 0.01$ ). Students who were exposed to more violence at school reported higher levels of psychological trauma symptoms.

**Table 2. Correlations by Gender**

	V1	V2	V3	V4	V5	V6	V7	V8	V9
V1. Age	–	NS	-.09**	NS	NS	-.05*	.04*	-.04*	-.04*
V2. School violence exposure	NS	–	.45**	.39**	.32**	.31**	.39**	.30**	.31**
V3. Violent behavior	-.08**	.45**	–	.38**	.27**	.22**	.55**	.25**	.30**
V4. Total trauma symptoms	-.14**	.40**	.40**	–	.90**	.88**	.78**	.88**	.88**
V5. Post-traumatic stress	-.10**	.35**	.28**	.88**	–	.81**	.58**	.82**	.75**
V6. Anxiety	-.15**	.31**	.24**	.86**	.79**	–	.54**	.76**	.71**
V7. Anger	-.06**	.40**	.55**	.78**	.56**	.52**	–	.59**	.61**
V8. Depression	-.20**	.27**	.20**	.83**	.69**	.73**	.52**	–	.73**
V9. Dissociation	-.13**	.33**	.32**	.88**	.73**	.68**	.63**	.68**	–

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; Correlations for females are above the diagonal, males are below.

### Exposure to Violence at School

Table 3 contains the percentage of students who reported they had witnessed or been victimized by violence at school at least once during the past year. Rates are reported by gender, school type (elementary, middle, and high), and geographic location (urban vs. non-urban). Slightly more males than females reported a higher (but nonsignificant) percentage of witnessing others being slapped, beaten up, or threatened at school. Students in middle schools and high schools reported witnessing all three types of violence more than elementary-school students. Students in urban locations reported higher rates of witnessing other students being hit/slapped and beaten up at school than students in non-urban locations. Little difference existed in the amount of threats witnessed at school between youths in urban and non-urban settings.

Students also reported the frequency of victimization from violence at school. Overall, males reported being victimized by violence at school at rates 10 to 15% higher than females. Although older students reported *witnessing* more violence at school, elementary students reported higher rates of *victimization* from violence at school, including being hit/slapped/punched and being beaten up at school, compared to middle- or high-school students. Rates of being threatened by someone at school were highest among middle-school youth. Finally, youths residing in urban and non-urban locations reported similar rates of being victimized by being hit/slapped or beaten at school, but non-urban youths reported higher rates of being threatened at school compared to youths in urban schools.

**Table 3. Percentage of Youth Self-Reported Exposure to Violence at School**

	Gender		School			Geographical Location	
	Males	Females	Elementary	Middle School	High School	Urban	Non-urban
			(Grades 3–5)	(Grades 6–8)	(Grades 9–12)		
Witnessed violence at school							
Witnessed someone else slapped, hit, punched in school	85%	81%	64%	83%	87%	86%	80%
Witnessed someone else beaten up at school	72%	70%	56%	79%	72%	75%	65%
Witnessed someone else being threatened at school	80%	78%	63%	81%	82%	79%	78%
Victimized by violence at school							
Slapped in school	40%	25%	38%	37%	30%	32%	33%
Beaten up at school	10%	5%	15%	7%	6%	8%	7%
Threatened at school	43%	35%	40%	44%	37%	33%	41%

**Trauma Symptoms, Violent Behavior, and Exposure to Violence at School**

Using hierarchical regression, we assessed the degree to which student’s self-reported trauma symptoms and violent behavior could be explained by self-reported violence exposure at school after controlling for the influence of demographic factors (gender, age, ethnicity, geographical location, and family structure). In each set of analyses, demographic variables were entered first to control for their effects, followed by each of the school violence exposure variables. Demographics, witnessed violence at school, and victimized by violence at school were regressed on total trauma symptoms and violent behavior. Table 4 reports the results of these hierarchical regressions.

For trauma symptoms, the final model (Model 3) showed gender had a significant effect on trauma symptoms ( $\beta = -0.24, p < 0.01$ ), with males reporting lower levels of trauma symptoms than females. Age was related significantly to total trauma symptoms ( $\beta = -0.07, p < 0.01$ ), with older youth reporting fewer trauma symptoms than younger children. Ethnicity and geographical location also were related significantly to the amount of total trauma symptoms reported by students ( $\beta = 0.03, p < 0.05$  for both). Specifically, Caucasian students reported fewer trauma symptoms than non-Caucasian youths. With respect to geographical location, youths living in non-urban neighborhoods reported fewer trauma symptoms than youths who resided in urban communities. Overall, demographic variables accounted for 4% of the variance in total trauma symptoms, with gender having the strongest influence among these variables (as represented by the standardized  $\beta$ ).

**Table 4. Hierarchical Regression on Trauma Symptoms and Violent Behavior**

	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
Trauma symptoms			
1. Demographics			
Gender	-.18**	-.21**	-.24**
Age	-.08**	-.11**	-.07**
Race	.03*	.02	.03*
Geographic location	.00	.02	.03*
Family structure	-.03*	-.02	-.02
2. Witnessed violence at school	.31**	.22**	
3. Victimized by violence at school	.25**		
Adjusted $R^2$	.041	.134	.189
Incremental $R^2$		.093	.055
Violent behavior			
1. Demographics			
Gender	.17**	.15**	.13**
Age	-.11**	-.14**	-.12**
Race	.05**	.04**	.05**
Geographic location	-.08**	-.05**	-.05**
Family structure	-.09**	-.07**	-.07**
2. Witnessed violence at school	.41**	.36**	
3. Victimized by violence at school	.16**		
Adjusted $R^2$	.057	.223	.244
Incremental $R^2$		.166	.021

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

Witnessing violence at school and being victimized by violence at school were related both significantly and positively to psychological trauma symptoms ( $\beta = 0.22, p < 0.01$ ;  $\beta = 0.25, p < 0.01$ , respectively), suggesting that youths who reported higher levels of exposure to school violence also reported higher levels of psychological trauma. Witnessing violence at school was entered in Model 2 and was found to account for 9% of the total variance explained in trauma symptoms. This was the largest amount of variance accounted for in the entire model (total overall variance explained was 19%). In the final model, victimization from violence at school independently accounted for approximately 6% of the variance in total trauma symptoms (see Table 4).

When examining violent behavior as an outcome, all variables in the final model (Model 3) were significant (see Table 4). Gender was related significantly to violent behavior ( $\beta = 0.13, p < 0.01$ ), with males engaging in more violent behavior than females. Age also was related significantly to violent behavior ( $\beta = -0.12, p < 0.01$ ), with younger students reporting more violent behavior than older students. Ethnic status was related both significantly and positively to violent behavior ( $\beta = 0.05, p < 0.01$ ), indicating that Caucasian students reported less violent behavior than non-Caucasian students. Geographic location and family structure were found to be related both significantly and negatively to violent behavior ( $\beta = -0.05, p < 0.01$ ;  $\beta = -0.07, p < 0.01$ , respectively). Youths living in an urban neighborhood reported more violent behavior than youths residing in a non-urban area, while students who were living with only one parent (mother or father) reported engaging in more violent behavior than youths who resided with both parents or neither parent (see Table 4). Demographics accounted for approximately 6% of the total variance explained in violent behavior.

Witnessing violence at school and being victimized by violence at school were both found to be significantly and positively related to violent behavior ( $\beta = 0.36, p < 0.01$ ;  $\beta = 0.16, p < 0.01$ , respectively), suggesting that as the amount of reported violence exposure at school increased, the amount of self-reported violent behavior also increased. Self-reports of violent behavior did not specify just violent behavior in school, but behavior that occurs in any setting (i.e., home, neighborhood, and school). Witnessing violence at school accounted for 16% of the explained variance, which is over half of the total variance explained (total  $R^2$  in the fully specified model was 0.24). Being victimized by violence explained only 2% of additional variance in violent behavior.<sup>1</sup>

### ***Violence Exposure and Mental Health***

Chi square analyses were used to conduct an exploratory analysis examining levels of school violence exposure and individual trauma symptoms. Youths were classified into “high violence exposure” and “low violence exposure” groups. We used the entire available sample of children and adolescents ( $N = 5969$ ) to identify our low and high violence-exposed youths. Students were included in an exposure group depending on their scale score on the six self-reported exposure to violence items. Youths were included in the “high exposure” group if they were in the top 25% for their gender, school (i.e., elementary/middle or high school), and geographical location (i.e., urban or non-urban) on self-reported violence exposure at school. Youths were included in the “low exposure” group if they were in the bottom 25% for their gender, school, and geographical location.

Within the high and low exposure to school violence groups, the percent of youths who self-reported experiencing clinical levels of psychological trauma symptoms were identified. Clinical levels of trauma symptoms were calculated using normative cut-off scores for the TSC-C scales (Briere, 1996). In Briere’s sample, the cut-off score to determine clinical levels was 1.5 standard deviations above the mean of the normative sample by age (i.e., 8 to 12 years old, and 13 to 16 years old) and gender. These predetermined clinical cut-off scores were used in the current study, with student grade serving as the proxy for age in years.

Table 5 reflects the percentage of students who reported clinically significant levels of psychological trauma symptoms, including anxiety, anger, depression, dissociation, and posttraumatic stress. For both males and females, regardless of the type of school, students who were in the high violence exposure at school group were more likely to report experiencing clinically significant levels of trauma symptoms. In elementary school, females in the high violence exposure group were significantly more likely to experience clinical levels of anxiety [ $X^2(1, N = 673) = 31.61, p < 0.00011$ ], anger [ $X^2(1, N = 673) = 23.21, p < 0.00011$ ], depression [ $X^2(1, N = 673) = 40.55, p < 0.00011$ ], dissociation [ $X^2(1, N = 673) = 31.93, p < 0.00011$ ], and posttraumatic stress [ $X^2(1,$

$N = 673$ ) = 39.73,  $p < 0.00011$  compared to females in the low violence exposure at school group. High-school females in the high violence exposure group also were significantly more likely to report clinical levels of trauma symptoms, such as anxiety [ $X^2(1, N = 1116) = 35.70, p < 0.00011$ ], anger [ $X^2(1, N = 1116) = 48.62, p < 0.00011$ ], depression [ $X^2(1, N = 1116) = 32.45, p < 0.00011$ ], dissociation [ $X^2(1, N = 1116) = 23.73, p < 0.00011$ ], and posttraumatic stress [ $X^2(1, N = 1116) = 27.73, p < 0.00011$ ] compared to high-school females in the low school violence exposure group.

**Table 5.  $\chi^2$  Examining the Percentage of Youth Experiencing High and Low Levels of School Violence in Relation to Trauma Symptoms**

<i>Grades 3–8</i>				
<i>PTSD Symptoms</i>	<i>Females (n = 673)</i>		<i>Males (n = 659)</i>	
	<i>Low School Violence Exposure</i>	<i>High School Violence Exposure</i>	<i>Low School Violence Exposure</i>	<i>High School Violence Exposure</i>
	Anger	3%	14%*	1%
Anxiety	2%	12%*	2%	12%*
Depression	3%	17%*	2%	13%*
Dissociation	3%	16%*	1%	14%*
PTSD	3%	16%*	1%	9%*

  

<i>Grades 9–12</i>				
<i>PTSD Symptoms</i>	<i>Females (n = 1116)</i>		<i>Males (n = 990)</i>	
	<i>Low School Violence Exposure</i>	<i>High School Violence Exposure</i>	<i>Low School Violence Exposure</i>	<i>High School Violence Exposure</i>
	Anger	1%	11%*	2%
Anxiety	2%	11%*	1%	11%*
Depression	2%	11%*	2%	11%*
Dissociation	2%	10%*	0.3%	10%*
PTSD	2%	10%*	0.7%	10%*

*Note.* \* $p < .0001$ ; controlled for urban/non-urban geographic location within grades 3–8 and 9–12 samples.

Similar results were found for male students in elementary and high school, with high violence exposure associated with higher rates of clinically significant trauma symptoms. Specifically, males who were exposed to high levels of school violence in elementary school were significantly more likely to report experiencing clinical levels of anxiety [ $X^2(1, N = 659) = 29.67, p < 0.00011$ ], anger [ $X^2(1, N = 659) = 56.01, p < 0.00011$ ], depression [ $X^2(1, N = 659) = 3.40, p < 0.00011$ ], dissociation [ $X^2(1, N = 659) = 56.01, p < 0.00011$ ], and posttraumatic stress [ $X^2(1, N = 659) = 27.10, p < 0.00011$ ] than males in the low violence exposure group. High-school males who were in the high violence exposure at school group also were significantly more likely to report clinical levels of anxiety [ $X^2(1, N = 990) = 47.93, p < 0.00011$ ], anger [ $X^2(1, N = 990) = 27.45, p < 0.00011$ ], depression [ $X^2(1, N = 990) = 27.45, p < 0.00011$ ], dissociation [ $X^2(1, N = 990) = 57.05, p < 0.00011$ ], and posttraumatic stress [ $X^2(1, N = 990) = 44.73, p < 0.00011$ ] than high-school males in the low violence exposure at school group. Overall, rates of clinically significant trauma symptoms were higher for elementary-school students than for high-school students (Table 5).

## DISCUSSION

Rates of exposure to violence at school remain unacceptably high for children, regard-less of gender, age, type of school, or the geographic location of the school. Rates of witnessing violence ranged from over half of the youngest elementary-school students witnessing someone else being beaten up at school to nearly 9 of 10 high-school students reporting they had witnessed someone else being hit, slapped, or punched at school. Rates of student victimization were lower, but remain unacceptably high, with nearly half of all middle-school youths reporting they were threatened with harm by a peer at school at least once during the past year.



Witnessing violence and being a victim of violence at school were found both positively and significantly associated with child psychological trauma symptoms and self-reported violent behavior, even after controlling for the effects of various demographic factors. Witnessing school violence explained the most variance in trauma symptoms and violent behavior, suggesting that serious emotional and behavioral consequences can occur for young people who are merely witnesses to high levels of violence in their environment. Being victimized by violence adds to the risk for experiencing problem outcomes, but is not a “required” condition for problems to occur.

Our examination of high versus low levels of violence exposure at school high-lighted these effects. For both elementary- and high-school students, those in the “high violence exposure” group were significantly more likely to report clinical levels of psychological trauma symptoms than students exposed to low levels of violence at school. Young students were not immune. In fact, the highest percentages of clinically significant symptoms were reported by elementary-grade students ages 6 to 12 years.

Previous research has suggested that youths who witness high levels of violence or bullying at school can suffer psychological or academic harm (Reardon, 1997). Hazler (1996) suggested that students who witness violence at school can feel powerless because they are unable to do anything to help the victim, have fear of becoming the brunt of the perpetrators’ attacks, or they feel that they might make things worse for the victim if they try to intervene. Where school violence is prevalent, students tend to be more cautious in order to avoid becoming the next victim. They can become hyper-vigilant and wary of people around them. The entire school suffers, not just perpetrators and victims. Where violence is prevalent, the climate of the entire school can be affected and can contribute to the continuation of the cycle of violence exposure, victimization, and perpetration of violence on school grounds.

Youths who experience high levels of victimization in any setting are more likely to experience clinical levels of psychological trauma, such as anger, depression, anxiety, and dissociation (Flannery et al., 2001). Higher levels of anger and depression increase students’ risk for self-harming behavior and the perpetration of violence against others (Flannery et al., 2001). Mental-health issues and a fear of exposure to violence and victimization may impact students’ behavior at school and their academic performance. Students have reported academic problems and an inability to learn in school (Hazler, 1996; Hoover & Oliver, 1996), and some students have even refused to go to school at all because of harassment and violence that occurs in the school setting (Cullingford & Morrison, 1995). It is hard to concentrate on academic subjects unrelated to daily life when students are constantly worrying about the next time they will be harassed, what they can do to get revenge on their tormentor, or if they will become the next victim. Students may become withdrawn, isolated, or inattentive in class. These effects will negatively impact their motivation and ability to learn, as well as their socialization with peers and the quality of their relationships with adults at their school. Harper and Ibrahim (1999) suggested violence by quiet and withdrawn youths might be driven by a constant feeling of psychological hurt or isolation, followed by an impulse to hurt the world or those that are believed to be responsible for the pain.

School personnel and counselors should be cognizant of the impact exposure to violence at school has on students and their academic functioning, behavior, and mental health. Violence that occurs at school was not found to differ drastically in urban and non-urban locations, by gender, or by age groups (i.e., elementary to high school). Thus, intervention programs that are introduced into the schools should address more than just interventions with perpetrators and victims, but also should address the needs of students who witness threats, fights, and other aggressive and violent events in school. Witnessing these events may have severe consequences for students that will affect their academics, behaviors, and mental health, particularly if rates of exposure are high or if exposure is persistent over time.

Even differences in levels of exposure to violence among children of different ethnic groups should not necessarily cause us to fashion differential prevention or intervention programs based solely on individual child characteristics. Rowe and colleagues have clearly demonstrated, for example, that with respect to a multitude of behavior outcomes, academic achievement, and IQ, youths of different ethnic back-grounds are more similar

than different regarding the developmental processes that contribute to the outcomes (Rowe, Vazsonyi, & Flannery, 1994, 1995).

Most interventions, such as counseling and conflict management, focus on the victim and the perpetrator while ignoring the students who have witnessed the violent event. The students who witness violent incidents do not tend to report the incident, nor do they seek out help. One study found that less than 30% of students reported they would seek help from a teacher or other adult if they witnessed someone being threatened at school (Gregory, Erez, & Wester, 2000). Adolescents, in general, rarely seek out teachers or counselors as a way to cope with stressors in their environment (Flannery, Singer, & Wester, in press).

Although research has revealed that schools tend to be safe places with lower levels of violence than homes or neighborhoods (U.S. Department of Education, 2001a, 2002a), schools still pose notable risks to the mental health of students when they witness aggressive, violent behavior on a daily basis (Thomerson & Ferrell-Smith, 2001). Findings from this study support the notion that violence exposure at school, whether as a witness or victim, is associated significantly with self-reported psychological trauma symptoms and violent behavior. Our findings were maintained across a large ethnically and geographically diverse population, and we expand previous research on adolescents in this arena by including young children in elementary school. School personnel and counselors should take the relation between violence exposure and emotional and behavioral problems seriously.

Despite its strengths, the current effort does have several limitations. First, this study used anonymous child self-reports of violence exposure and behavior and did not include other reports of behavior or official records from schools or other sources (e.g., juvenile court, police calls for service to a school). A second limitation is that the data was cross-sectional; thus, conclusions are limited to temporal associations rather than causal inferences. Finally, the current study did not control for witnessing or being victimized by violence in other contexts, such as home and neighborhood, which also could influence individual child mental health and violent behavior. Laub and Lauritsen (1998) pointed out that schools tend to inherit the difficulties and the problems of the surrounding community; thus, crime in the schools is a reflection of crime in the community. School violence is largely dependent upon neighborhood and family characteristics; however, it is difficult, if not impossible, to distinguish the influence of neighborhood characteristics from the influence of school characteristics (Laub & Lauritsen, 1998).

The No Child Left Behind Act of 2001 stated that any program that is implemented in schools must meet Principles of Effectiveness. One of these principles indicates that school-based violence-prevention programs must be based on an assessment of objective data regarding the incidence of violence in the elementary and secondary schools adopting the program (U.S. Department of Education, 2002b). This study adds to our understanding of how elementary- and high-school personnel can determine what needs to be addressed in intervention and prevention programs that create a safe school environment conducive to learning. Schools are an important part of a community, and most young children spend a significant portion of their time in the school setting, where they are exposed to many experiences, both positive and negative. School is a logical public health setting for changing the factors that place children at risk for violence and mental-health problems (Flannery et al., 2003). Effective prevention and policy should be based on sound information about student needs and behaviors at the local level. Assessment of child rates of exposure to violence at school can help guide decisions about the need for school-based mental-health services and, once these services are implemented, provide the basis for an examination of the effectiveness of such services for students over time.

Notes:

1For both total trauma symptoms and violent behavior, the amount of variance explained did not change when the order of entry of variables in the model was reversed.

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