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Violence Among Arab Elementary School Pupils in Israel

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This article examines the prevalence of violence in primary schools attended by Arab children in Israel and the relationship between such exposure and violent behavior among these children. Participants are 388 Arab children (aged 10 to 12 years) living in three localities in Israel. The research focuses on three of the child's roles in relation to violence: witness, victim, and perpetrator. An adapted Arabic translation of the Violence Exposure Scale–Revised is administered to children in group settings. The children report more exposure to moderate levels than to severe levels of violence. Boys are exposed to more violence as victims, and witness and perpetrate more violence than girls do. Multiple regression analysis shows that the experience of being a victim predicts violent behavior in the children, above the effects of age and gender. The limitations of the study and its implications for future research and theory development are discussed.

Keywords: *school violence, Arab children, victimization, Arab schools in Israel*

In recent years, violence in schools has become a major issue of concern both in public discourse and in education systems around the world. Most of the research on exposure of children to school violence has dealt with adolescents, but recently there have been studies on children in elementary schools. The previous research has not paid attention to some important populations of children. Much of the research on this topic has been performed on lower-class children, many of them from ethnic minorities in the inner areas of large cities in the United States (Moore, 1990; Osofsky, Wevers, Hann, & Fick, 1993; Richters & Martinez, 1993). There is a relative lack of

research on exposure to violence in other groups, including different cultures and different sizes of localities. The present study attempts to address these issues and report on the exposure to violence of Arab elementary school children in Israel. Research on the different roles related to violence—being a victim, witness, or perpetrator—is also scarce for elementary schoolchildren. Previous studies have found relationships among various combinations of witnessing violence, being a victim, and perpetrating violence (Evans, Marte, Betts, & Silliman, 2001; Fitzpatrick, 1997b; Freeman, Mokros, & Poznanski, 1993; Osofsky, 1995; Osofsky et al., 1993; Raviv, Raviv, Shimoni, Fox, & Leavitt, 1999; Raviv et al., 2001; Schwab-Stone et al., 1995; Xu, Farver, Schwartz, & Chang, 2003). To the best of our knowledge, the present study is the first one that considers all three roles related to violence (witnessing, being a victim, and perpetrating) among children of elementary-school age.

Theoretical Considerations in Research on School Violence

The dominant psychological theories of aggressive or violent behavior, including Berkowitz's (1989) Revised Frustration-Aggression Theory, Bandura's (1973, 1989) Social Learning Theory, and Crick and Dodge's (1994) Social Information Processing Theory, have received empirical support. We suggest that the processes posited in these theories (frustration, imitation, and faulty information processing by the child concerning another's acts) may all be involved in the violent behavior of children at school. There is no research evidence regarding the relative importance of one process over the other.

At the same time, there is extensive theoretical and empirical literature, including the present study, which has attempted to identify and understand the relevance of personal and contextual risk factors to the development of violent behavior. This approach is common to a number of conceptualizations of the contextual factors and risks to adaptive child development (Belsky, 1997; Bronfenbrenner, 1999; Cummings, Davies, & Campbell, 2000; Greenbaum & Auerbach, 1998). In the present study, we attempt to

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determine some of the important risk factors for violent behavior in elementary schoolchildren.

Arab Children, The Israeli Context, and School Violence

The Israeli context provides a number of unique opportunities for studying the social processes involved in the development of violent behavior in schools. The population of Israel is made up of a Jewish majority and an Arab Palestinian minority, the latter including Moslems, Christians, and Druze. Most Jewish and Arab schoolchildren study in separate school systems, and each group is taught in its own language, Hebrew or Arabic. The Israeli school system provides universal education to children from the ages of 5 to 16 so that there are no selection biases in the actual population of schoolchildren. At the same time, the system serves a number of cultures and different income groups: Jewish children (who are the majority), some of whom come from veteran families, whereas others are recent immigrants and Arab Palestinian children whose compulsory education is carried out in separate schools from those of the Jewish children.

Even though education is available to all, different sectors of the population are not equally served. Arab children stay in school for a shorter time and their achievements are lower than those of Jewish children (Kopp, 2002). In addition, problems related to infrastructure in Arab society, teacher training, and large class size in Arab education have not been overcome (Defense for Children International, 2002).

It is therefore important to understand the development of Arab children in Israel to determine possible influences on their social development, including exposure to violence in this environment. These findings may be relevant to other countries where disparities in education exist within a universal education system. In this connection, research conducted in the United States indicates that violence in educational settings is more acute among lower class groups and in cultures that are being discriminated against (Bell & Jenkins, 1993; Richters & Martinez, 1993).

Notwithstanding the wide recognition of the importance of the problem of school violence in Israel and the media attention that it has received, there are only a few studies on the impact of school violence on young children in Israeli elementary schools. In the State of Israel, recent data suggest an increase in school violence in recent years. About 14% of Israeli schoolchildren have reported that violence in schools is a serious or very serious problem (Degani & Degani, 1990). Data from the Israeli Ministry of Police show an increase in the number of files opened for school pupils involved in violent

incidents in schools and a constant decrease in the age of the children involved in such incidents. The increase in absolute number of files concerning violence that were opened in the early 1990s is greater than that expected on the basis of the natural increase in the population (Hadari-Meir, 1995).

There have been a number of systematic attempts to assess the frequency and the dimensions of school violence in Israel (Benbenishty, Zeira, & Astor, 2000; Raviv et al., 1999; Raviv et al., 2001). There is a particular lack of research on the problem of violence exposure in Arab elementary schools in any country, differences between the sexes in violent behavior in such schools, and the possible effects or correlates of such violence regarding the behavior and emotional state of the child. The present study investigates the exposure of Arab children of elementary school age to moderate and severe violence in schools and the relationship between the children's exposure to violence and their perpetration of violent acts. The study was conducted in three Arab towns of varying size in Israel. We will briefly review the research on exposure of children to everyday violence in schools, in Israel, and in the world.

Two studies conducted in the United States dealt with the everyday exposure of elementary school children to moderate (e.g., yelling, pushing) and severe (e.g., beating, knifing) school and community violence in the United States. Richters and Martinez (1993) studied exposure to violence in the school and the community of a sample consisting largely of African American children in the southeastern neighborhoods of Washington, DC. The results showed high rates of exposure to violence, and these rates were higher for the older children aged 9 to 10 (72% were witnesses of violence and 32% were victims) than for the younger children aged 6 to 8 (61% and 19%, respectively). A large proportion of the violence was severe: 30% of the children saw stabbings, and 40% saw shootings. The majority of children reported being victimized more in their schools than in their communities and reported witnessing more violence in their communities than in their schools. These results may be due to the possibility that in the community, children were exposed in the community to violence between adults and violence toward children, whereas in school, children were most frequently the victims of violence. Osofsky et al. (1993) obtained similar results for children in New Orleans, Louisiana.

Other research has shown that high rates of children's exposure to severe school violence are not limited to the inner city but that size of locale may be a factor. Bell and Jenkins (1993) found that 30% of middle-class urban children were exposed to stabbings. These rates appear to be higher than those obtained in schools in rural settings (Sherman, 1992). The larger size of urban schools and the larger number of children from disadvantaged backgrounds in those schools may contribute to the larger number of children

with behavior problems there. This situation could expose schoolchildren in urban schools to negative (e.g., aggressive, intrusive) models of behavior among their peers. In accordance with social learning theory (Bandura, 1973), children in urban schools may therefore be at high risk for exposure to violence and for externalized (aggressive) behavior (Attar, Guerra, & Tolan, 1994). In addition, such children may be at risk for internal feelings of distress (Martinez & Richters, 1993).

Two recent studies have investigated exposure of urban Jewish Israeli schoolchildren to violence. Raviv et al. (1999) and Raviv et al. (2001) used a pictorial instrument, the Violence Exposure Scale–Revised (VEX–R) developed by Fox and Leavitt (1995). This measure, an adaptation of which was used in the present study, presents the child with drawings of incidents of violence and asks the child to respond on a 4-point scale reflecting the frequency of exposure as witness or as victim of the act depicted in school, home, or community settings. Both studies report that a majority of children were exposed as witnesses to moderate violence, and a small minority, less than 5%, reported exposure to acts of severe violence in school settings.

Benbenishty et al. (2000) conducted a survey of violence in Israeli schools based on a large national sample that confirmed the results obtained from the smaller samples just mentioned. According to their findings, a majority of students (58%) reported being victims of moderate violence such as pushing during the month preceding the survey, and 6.5 % reported being threatened with a knife. Moreover, the study revealed that Arab children in Arab schools reported being victimized more than Jewish children in Jewish schools were. The differences between Arab and Jewish children were found at all ages but increased with age; that is, the difference was greater for high school students than for those in elementary schools.

The present study uses a measure of exposure to violence (the VEX–R; Fox & Leavitt, 1995) similar to that used by Raviv et al. (1999) for Israeli Jewish children, thus allowing for comparisons of the results on exposure and victimization in Jewish and Arab schools in Israel.

Gender Differences in Exposure to and Perpetration of School Violence

Most studies of school and community violence have found that boys are more likely to be perpetrators, witnesses and victims of physical violence than girls are (Fitzpatrick & Boldizar, 1993; Raviv et al., 1999; Schwab-Stone et al., 1995). Regarding perpetration, research conducted in various settings has found that boys are more likely to be perpetrators of physical violence (Maccoby & Jacklin, 1980), whereas girls may engage in high fre-

quencies of nonphysical violence such as shunning and insulting (Krick, Casas, & Nelson, 2002). In an African American sample, Fitzpatrick (1997a) found that boys were more likely to be perpetrators of school violence. In a study of children aged 7 to 15, Bell and Jenkins (1993) found that boys were more likely than girls to be victims. Boys were also more likely to witness children hitting one another but not more likely to witness shooting and stabbing. The results of these studies suggest that, in general, boys are more likely to be involved in physical violence. In addition, these findings point to the need for further research on the relationship between gender differences and different types and degrees of violence. One goal of the present study was to investigate this relationship.

Age Differences in School Violence Behavior

Existing data on the relationships between age and violent behavior in schools have yielded inconsistent results. Richters and Martinez (1993) found that 9- to 10-year-old children are more likely than 6- to 8 year-olds to report being witnesses or victims of violence. Raviv et al. (1999) found similar results among Israeli 10-year-olds (fourth graders), who reported more exposure as witnesses and victims than 8-year-olds (second graders). Cooley-Quille, Turner, and Beidel (1995) reported a positive relationship between age and exposure to violence for children aged 9 to 15.

Other research did not find a strong relationship between the child's age and exposure to violence. Fitzpatrick and Boldizar (1993) studied children ages 7 to 18 and did not find age effects in exposure to violence. However, witnessing other children being hit was linearly related to the child's age, whereas no such relationship was found for witnessing shooting or stabbing. These results suggest that the relationship between exposure to violence and age may be related to the type of violence to which the child is exposed.

Exposure to Violence, Emotional Problems, and Violent Behavior

Osofsky (1995) reported that the exposure of elementary schoolchildren to everyday violence in their communities (including the school) as witnesses and victims is related to a variety of psychological problems. Similar results were found among Jewish elementary schoolchildren in Israel (Benbenishty et al., 2000; Raviv et al., 1999; Raviv et al., 2001). Previous research suggests that there are negative effects of exposure to violence in the community on the mental and physical health, the social development, and the academic success of children who are victims or witnesses. This conclu-

sion is supported by studies in the United States (Fitzpatrick & Boldizar, 1993) and Israel (Raviv et al., 1999; Raviv et al., 2001).

Children spend a great deal of time in school. In that setting, they not only acquire knowledge, values, and social skills, but they also become socialized to various forms of behavior among peers, including aggressive behavior (Osofsky, 1995). Group contexts that are particularly likely to lead to the socialization and encouragement of violent behavior include those with high levels of physical activity, aggressive behavior, and competitiveness (Derosier, Cillessen, Coie, & Dodge, 1994; Dodge, Bates, & Pettit, 1990; Osofsky, 1995).

The few studies on children's exposure to everyday violence in the community, including the school, have shown that children's exposure to violence as witnesses and victims is positively related to violent behavior. Some of these studies were conducted among adolescents (Adler & Kraus, 1985; Schwab-Stone et al., 1995), and others were conducted among children in elementary schools (Attar et al., 1994; Bell & Jenkins, 1993; Fitzpatrick 1997a, 1997b). The results of these studies show that the children's exposure to high levels of community violence is related to risky behavior, including carrying weapons and fighting.

Degree of Violence in School Settings

Most of the above-mentioned studies that have investigated the relationship between exposure of children to community and school violence and violent behavior in children have concentrated on severe violence. However, moderate violence has been reported as more frequent than severe violence (Raviv et al., 1999; Raviv et al., 2001; Richters & Martinez, 1993). According to a social learning theory (Bandura, 1973, 1989), interpretation of acquisition of violent behavior and the amount of exposure to violence could be a strong factor in learning and acquiring violent behavior. If exposure to moderate violence is greater than that of exposure to severe violence, then the effects of moderate violence may be particularly noteworthy. Most of the existing studies on the relationship between children's exposure to violence and its perpetration do not consider the possible effects of cumulative exposure to moderate violence on the perpetration of violence. In an attempt to fill this gap, the present study examined the relationships between witnessing, suffering, and perpetrating both moderate and severe violence among elementary schoolchildren. The study investigated the extent of violent behavior in each role (witness, victim, and perpetrator) from the perspectives of age and gender, according to the children's self-reports, because previous research has shown the potential importance of these two variables. The study also examined the relationships among the different roles involved.

Finally, the study was conducted among Arab children in Israel in three localities of different sizes in an attempt to obtain as broad a sample as possible and to use locality size as a basis for comparison of pupils in the sample.

Research Hypotheses and Research Questions

The research hypotheses and research questions reflect an initial attempt to determine whether the relationships found in the above-mentioned studies of other populations, which differ from the population of the present study in terms of age and culture, would be revealed for Arab children.

1. Children will report experiencing more moderate than severe violence in schools as witnesses, victims, and perpetrators.
2. Boys will report more experience of school violence than girls as witnesses, victims, and perpetrators.
3. There will be a positive relationship between a child's exposure to school violence as witness or victim and his or her own violent behavior.

In addition, the study examined the following questions:

1. Are there differences between younger (10-year-old) and older (12-year-old) children in their reports of experience as victims, witnesses, or perpetrators of violence?
2. Are there differences in children's experience of violence in localities of three different sizes: small, medium-sized, or large?

Method

Population and Sample

Participants in the study were Arab children living in Israel. The sample consisted of 388 elementary schoolchildren from two groups: one group comprised 194 fourth grade children, of whom 100 were girls (aged 9.5 to 10.5, mean age 10); and the other comprised 194 sixth grade children, of whom 87 were girls (aged 11.5 to 12.5, mean age 12). Participants were selected from three state elementary schools located in three Arab localities in northern Israel. The localities were of different sizes: 110 children attended a school in a large city numbering about 60,000 residents; 172 children attended a school in a medium-size city (i.e., town) numbering about 25,000 residents; and 106 children attended a school in a village numbering about 10,000 residents.

The choice of schools from different sized localities in Arab society was intended to provide a comprehensive and representative view of the population of children examined. We decided to sample pupils from three localities of different sizes—small, medium, and large—in an attempt to reach a population that was as heterogeneous as possible in terms of the social and structural characteristics of the locality of residence. As for social characteristics, the small localities (villages) in Arab society are considered to be traditional. They emphasize values such as social and family solidarity, mutual assistance, and support, based on an orientation toward the best interests of the community. By contrast, large localities (cities) in Arab society are considered to be more modern and emphasize social values such as independence and competition, based on an orientation toward the best interests of the individual. Medium-sized localities are considered to be transitional and fluctuate between traditionalism and modernity. Thus, they emphasize the values of solidarity, mutual support, and collective interest although they do not have full control over the independence of individuals and personal well-being is not viewed as conflicting with the interests of the collective (Barakat, 1993). From the structural perspective, Arab villages in Israel have low-quality welfare, health, and educational services as well as high unemployment and poor informal education programs. By comparison, although welfare, health, and educational services provided by urban localities in Arab society in Israel are not considered to be high quality, they are more available to residents. In addition, informal education programs are relatively more abundant in urban localities than in villages (Haidar, 1997).

Brochures and informed consent forms were distributed to all the children in both of the age groups examined (fourth and sixth grades) at all three of the schools, bringing the total sample to 708 children. Consent forms were received from 401 parents (i.e., a 56.6% response rate). The final sample consisted of 388 children whose parents agreed to let them participate in the study and who attended school on the day the questionnaires were distributed. This rate of participation is similar to that obtained by Raviv et al. (1999). Table 1 presents the distribution of the sample by class, gender, and location of the school.

Instrument Package

The instrument package included the following sections:

Questions related to background variables of the children and their families. This section of the questionnaire included demographic and background variables, including age of the child and each of the parents, the parents'

Table 1
Characteristics of the Sample: Grade (Age), Gender, and Place of School (*N* = 388)

	Place of School							
	Village		Town		City		Total	
Grade (Age)	*N*	%	*N*	%	*N*	%	*N*	%
Female								
4th grade (10)	31	8	41	11	28	7	100	26
6th grade (12)	23	6	40	10	24	6	87	22
Total	54	14	81	21	52	13	187	48
Male								
4th grade (10)	22	6	42	11	30	8	94	26
6th grade (12)	30	8	49	13	28	7	107	26
Total	52	13	91	23	58	15	201	52
Total	106	27	172	44	110	28	388	100

social status, parents' religiosity, years of schooling for each parent, employment status and workplace of each parent, number of siblings, and number of people residing in the household.

Violence Exposure Scale for children group administration–Revised Version (VEX–R). The VEX-R is a self-report instrument that measures children's exposure to violence, based on Fox and Leavitt's (1995) scale. In the present study, it was used to evaluate children's exposure to violence in the school environment. The scale consists of 30 items: 12 pairs of pictures that depict different types of moderate violence in the school environment as defined by Raviv et al. (1999; i.e., shouting at another child, throwing a stone at another child, pushing another child, hitting another child, threatening or cursing at another child, theft, etc.). One of the pictures in each pair portrays a child witnessing a violent act. Using this picture as a trigger, participants were asked how many times they had witnessed a similar act themselves. The other picture in each pair portrays a child as the victim of the same violent act as in the first one. Based on this picture, participants were asked two questions: How many times had they experienced a similar violent act? And how many times had they perpetrated the same type of act themselves? The second question was added to the original questionnaire and used in this study to examine whether the participant was a perpetrator of violence. It does not appear in the original questionnaire nor is it found in the questionnaire used by Raviv et al. (1999). Children's responses are based on a 4-point scale

ranging from 1 = *never* to 4 = *many times* as follows: Children were shown pictures of four thermometers depicting the respective frequencies in the scale. Children were asked to circle one of the four ranks in the scale

In addition to the 12 pairs of pictures that portrayed moderate violence, 6 pictures portrayed different types of severe violence, such as taking something from another child by force, stabbing another child with a knife, shooting another child, and buying or selling drugs. The pictures depicting different types of severe violence represented only situations in which a child had witnessed such violence. VEX-R (the group evaluation index) was used in a study conducted in Israel on exposure to violence in schools (for Jewish children). The index was found to have high validity and internal reliability. Cronbach's alpha reliability coefficients for the Hebrew version of the scales that measured witnessing and experiencing moderate violence were .75 and .80, respectively. The reliability coefficient for the measure of severe violence was moderate (.39), and test-retest reliability coefficients for the Hebrew version were significant: They were .61 and .79 for witnessing and experiencing moderate violence, respectively, and .59 for witnessing severe violence (Raviv et al., 1999).

The measure used in the present study was an Arabic translation of the Hebrew version of the VEX–R with additional questions related to situations in which the child perpetrates violence. The scale was translated from Hebrew into Arabic and then back translated into Hebrew. In addition, a pretest was conducted to obtain feedback on the Arabic version of the questionnaire. Accordingly, in the Arabic version, the name *Hamido* was used instead of the Hebrew name *Nitzan*. The pretest was administered by research assistants who were studying for a graduate degree in psychology.

Mean VEX–R scores on each type of violence in this study (witnessing moderate violence, witnessing severe violence, experiencing moderate violence, and perpetrating moderate violence) were calculated for each participant. In addition, Cronbach's alpha reliability tests were conducted for each of the scales that measured these patterns of violence. All the reliability coefficients for moderate violence were high: witnessing moderate violence = .90, experiencing moderate violence = .81, and perpetrating moderate violence (aggressor) = .89. The reliability coefficient for witnessing severe violence was .65—a result that may be attributed to the low incidence of such cases (see Table 2). The internal reliability scores and confirmation of the research hypotheses contribute toward the internal validity of the Arabic version of the questionnaire (for further details on the Arabic version of the instrument, see Marie-Alsana, 2000).

Table 2
Exposure to (Witnessing and Experiencing) and Involvement in (Perpetrating) Different Patterns of Moderate Violence (N = 388)

	Percentage of Exposure and Perpetrating (Once)			Percentage of Exposure and Perpetrating (More than Once)		
The Violent Act	Witnessing	Experiencing	Perpetrating	Witnessing	Experiencing	Perpetrating
Screaming	95	71	76	89	34	50
Throwing objects	85	56	41	67	25	18
Pushing	93	70	51	76	32	26
Chasing	95	69	55	82	37	28
Slapping	81	39	53	54	17	24
Hitting or punching	82	41	46	61	18	28
Threatening or cursing	93	56	44	79	30	20
Stealing	65	65	11	37	36	4
Blocking	92	75	53	77	42	30
Spanking	68	29	—	45	14	—
Shaking	79	47	46	62	19	22
Kicking	91	62	59	77	34	34

Note: The missing numbers of children who did not respond to a particular question ranged from 0 to 3.

Procedures

The investigators submitted a request to the Ministry of Education and received approval to conduct the study in schools in the northern region of Israel. Three state elementary schools were chosen in three localities. The schools were selected to represent localities of different sizes (a large city, an average-size city, and a village). After selecting the schools, their principals were contacted and advised of the nature, importance, and aims of the study. The data were collected from March to June, 1999.

The research questionnaires were administered by the principal investigator. At each school, the investigator described the study to the children and explained its importance. The children were told that the questionnaires are part of a study on violence in Arab schools, and that their school was selected to participate. Afterwards, they were given brochures with information about the study as well as informed consent forms to be signed by their parents and a background questionnaire, which the children were asked to complete together with their parents (in cases where the parents agreed to let their children participate in the study). The distribution method and time allotted for completion of questionnaires were arranged with the school principals. It should be mentioned that the questionnaires were distributed during a period when the children did not have exams.

The questionnaires examining exposure to violence (VEX–R) were administered in small groups (consisting of 12 children on the average) at the school, in empty classrooms allocated by the school principal for that purpose. The instructions were read to the children by the principal investigator, and one example was provided. Afterwards, the investigator read the questions out loud and asked the children to write down their answers on the answer sheet. The investigator went around the classroom to answer any questions the children had and offer them assistance. After all the children completed the questionnaires, about 15 min were allotted for a discussion, which gave the participants an opportunity to talk about the experience and describe the emotions aroused in them as a result of their participation in the study. The questionnaires took about 30 to 45 min to fill out. Anonymity was ensured by giving each child a numerical code. The first and last names of the children did not appear on the questionnaire.

Results

The presentation of research findings is divided into three phases. The first phase presents descriptive findings on the incidence of children's exposure to violence as witnesses and victims and the extent of their involvement

in acts of violence as perpetrators, regardless of the different variables. The second phase presents findings based on the research hypotheses and questions. This phase presents mean scores for exposure to violence and significance tests for all groups. The third phase presents regression analyses of the different variables.

Children's Exposure to Different Patterns of Violence at School

In the first step, the percentages of children who reported that they had been exposed to violence as witnesses and victims and involved as perpetrators of each of the various acts of moderate violence once or more than once are presented in Table 2. In addition, the percentages of children who reported witnessing each type of severe violent acts either once or more than once are presented in Table 3.

In addition to calculating the percentages of children's exposure and involvement in each of the specific acts of violence examined, the average rate of children's exposure to violence was calculated, including witnessing moderate violence, witnessing severe violence, and being a victim of violence, as well as their average rate of involvement as perpetrators of violence. Average rates of exposure to and perpetration of violent acts were scored by calculating the mean of VEX–R scores for every incident of witnessing moderate violence: witnessing severe violence, experiencing moderate violence, and perpetrating moderate violence. Mean scores ranged from 1 = *never* to 4 = *many times*. We also calculated the percentage of children who witnessed different types of moderate violence at least once (i.e., the percentage of children for whom the mean score on the scale was at least 2), the percentage of children who witnessed the different types of severe violence at least once on the average, the percentage of children who were victims of the different types of moderate violence at least once on the average, and the percentage of children who perpetrated different types of moderate violence at least once on the average. The findings derived from these analyses are not presented in the table because of space limitations and can be obtained from the authors if necessary.

The findings indicate that school-age Arab children are exposed to high levels of moderate violence. The children participating in the study reported a high rate of witnessing, experiencing, and perpetrating acts of moderate violence at least once. A higher percentage of children in each locality reported witnessing different types of moderate violence at least once (see Table 2). Apparently, even after using the stricter criteria of exposure *at least once* and *at least several times* on the average to specific acts of violence

Table 3
Witnessing Severe Violence (N = 388)

The Violent Act	Once (%)	More Than Once (%)
Stealing by force	74	47
Threatening with a knife or pistol	20	7
Stabbing	12	5
Shooting	6	3
Arrest by police	14	5
Selling or buying drugs	10	3

Note: The missing number of children who did not respond to a particular act ranged from 0 to 1.

(eliminating the cases of exposure to only one act), the percentages of children's exposure to violence as witnesses and victims and the percentage of children who are perpetrators of moderate violence are still high (see Table 2). The most frequent violent acts that the children reported witnessing and experiencing were screaming, chasing, and pushing. The acts less frequently witnessed and experienced by the children were stealing or slapping. The most frequent acts perpetrated by children were screaming, kicking, blocking, and chasing. Acts perpetrated less frequently by the children were stealing, threatening, cursing, and throwing objects (see Table 2). However, a low percentage of children reported that they had witnessed severe violent behavior at least once on the average (8.3%). Besides the act of stealing by force, which 74% of the children reported witnessing, low percentages of exposure to specific acts of severe violence were reported (e.g., shooting, stabbing, and buying or selling drugs; see Table 3).

Comparison of Different Types and Situations of Exposure to and Perpetration of Violence

The first research hypothesis was tested by t tests. The findings support the hypothesis, and the total number of children who reported witnessing moderate violence (M = 2, 83) was significantly greater than that of children who reported witnessing severe violence: $p < .01$, $t(365) = 50.23$, $M = 1.37$. In addition, the findings indicate that the total number of children who reported witnessing moderate violence was significantly higher than the number of children who had experienced such violence or the number of children who had perpetrated moderate violence: $p < .01$, $t(355) = 30.96$, $M = 1.92$, and $p < .01$, $t(359) = 28.26$, $M = 1.81$ for experiencing and perpetrating violence, respectively. Comparison of experiencing moderate violence (victimization) and perpetrating such violence showed a significantly greater

tendency to report experiencing moderate violence than to report perpetrating such violence: $p < .01$, $t(364) = -3.01$ (for further information, see Marie-Alsana, 2000).

Types of Exposure to Violence, by Age, Gender, and Size of Locality

The second hypothesis and related research questions deal with exposure to violence in relation to demographic characteristics (age, gender, and place of residence). To examine these variables, ANOVAs were conducted for the children's VEX scores (see Table 4). Table 5 presents the means and standard deviations for witnessing moderate and severe violence. Table 6 presents means and standard deviations for experiencing and perpetrating violence.

The findings in Tables 4 through 6 support the first part of Hypothesis 2: The boys participating in the study showed a greater tendency to report witnessing violence than did the girls. Thus, significant differences between the sexes were found for witnessing severe violence as well as for witnessing moderate violence. The boys gave significantly more reports of witnessing both moderate and severe violence than did the girls: $p < .05$ and $p < .01$, for moderate and severe violence, respectively (see means and standard deviations in Table 5). Furthermore, the findings support the second part of Hypothesis 2: Significantly more boys than the girls reported experiencing moderate violence ($p < .01$, see means and standard deviations in Table 6).

To examine the first research question, the ANOVAs carried out for the children's VEX–R scores revealed a main effect for age only with regard to witnessing moderate violence: $F(1, 365) = 9.7$, $p < .01$ (see Table 4). Thus, children above the age of 12 reported witnessing moderate violence significantly more than did 10-year-old children (see means and standard deviations in Table 5). By contrast, no main effect for age was found for witnessing severe violence, experiencing moderate violence, and perpetrating moderate violence. Thus, the children in the older group were not significantly different from those in the younger group with respect to witnessing severe violence, experiencing moderate violence, and perpetrating moderate violence.

To examine the second research question, the ANOVA was carried out to test the effect of place of residence on moderate and severe violence. ANOVAs revealed significant differences between the respective localities examined in the study with respect to witnessing severe violence and experiencing moderate violence: $F(2, 381) = 3.35$, $p < .05$, and $F(2, 369) = 3.19$, $p < .05$ for witnessing severe violence and experiencing moderate violence, respectively (see Table 4). No main effects for place of residence were found for witnessing moderate violence and perpetuating moderate violence.

Table 4
Analysis of Variance for Exposure to and Perpetration of Moderate and Severe Violence, by Gender, Grade (Age), and Place of Residence

	Witnessing Moderate Violence			Witnessing Severe Violence			Experiencing (Victim of) Moderate Violence			Perpetrating Moderate Violence		
Independent Variables	*df*	*F*	*p*	*df*	*F*	*p*	*df*	*F*	*p*	*df*	*F*	*p*
Grade (age)	1	9.70	.002	1	1.46	.227	1	0.220	.641	1	3.44	.061
Gender	1	3.88	.050	1	28.25	.001	1	23.12	.001	1	133.05	.001
Place of residence	2	0.99	.370	2	3.35	.036	2	3.19	.042	2	0.30	.744
Grade × Gender	1	2.09	.140	1	0.16	.694	1	1.64	.202	1	2.56	.110
Grade × Place of Residence	2	12.41	.001	2	3.87	.022	2	6.13	.002	2	5.15	.006
Gender × Place of Residence	2	0.94	.390	2	3.79	.024	2	0.34	.711	2	0.54	.584
Grade × Gender × Place of Residence	2	0.66	.520	2	4.36	.013	2	1.31	.270	2	1.13	.324

Table 5
Means and Standard Deviations for Witnessing Moderate and Severe Violence, by Grade (Age) and Gender

Grade (Age)	Gender	Severity	*M*	*SD*	*N*
4th grade (10)	Female	Moderate	2.64	.53	95
		Severe	1.28	.25	98
	Male	Moderate	2.84	.71	86
		Severe	1.50	.55	93
	Total (female and male)	Moderate	2.74	.63	181
		Severe	1.39	.44	191
6th grade (12)	Female	Moderate	2.91	.46	84
		Severe	1.26	.20	86
	Male	Moderate	2.96	.45	102
		Severe	1.42	.40	107
	Total (female and male)	Moderate	2.94	.45	186
		Severe	1.35	.33	193
Total (4th and 6th grade)	Female	Moderate	2.76	.51	179
		Severe	1.27	.22	184
	Male	Moderate	2.91	.59	188
		Severe	1.64	.48	200
	Total (female and male)	Moderate	2.83	.56	367
		Severe	1.37	.39	384

Post hoc analyses were conducted for the comparisons, using appropriate contrasts for witnessing severe violence and experiencing moderate violence. For experiencing moderate violence, the findings indicated that children residing in the village experienced moderate violence significantly more than their counterparts from the large city: $F(1, 360) = 6.20$, $p < .05$. In addition, more children from the moderate-sized city experienced moderate violence than their counterparts from the large city. However, significant differences were not found between victims of violence from the village and moderate-sized city.

The findings indicate that children from the large city witnessed severe violence significantly more than their counterparts from the moderate-sized city: $F(1, 372) = 6.69$, $p < .01$. Children from the large city showed a greater tendency to report experiencing severe violence than their counterparts from the village did. However, this difference was not significant. In addition, no significant difference was found between the moderate-sized city and the village regarding witnessing severe violence. Interactions were found between age, gender, and place of residence, and findings on perpetrating, witnessing, and experiencing violence. In general, the findings indicate that boys in the younger age groups (10-year-olds) were more involved in violence than their

Table 6
Means and Standard Deviations for Experiencing (Victim) and Perpetrating Moderate Violence, by Grade (Age) and Gender

Grade (Age)	Gender	Victim or Perpetrator	*M*	*SD*	*N*
4th grade (10)	Female	Victim	1.73	.46	98
		Perpetrator	1.44	.41	98
	Male	Victim	2.07	.56	87
		Perpetrator	2.03	.62	90
	Total (female and male)	Victim	1.89	.53	185
		Perpetrator	1.72	.60	188
6th grade (12)	Female	Victim	1.85	.45	83
		Perpetrator	1.46	.35	83
	Male	Victim	2.03	.53	104
		Perpetrator	1.90	.70	188
	Total (female and male)	Victim	1.95	.50	187
		Perpetrator	1.90	.70	188
Total for 4th and 6th grade (10 and 12)	Female	Victim	1.78	.46	181
		Perpetrator	1.45	.38	181
	Male	Victim	2.05	.54	191
		Perpetrator	2.15	.68	195
	Total (female and male)	Victim	1.92	.52	372
		Perpetrator	1.81	.66	376

counterparts in the older group were (12-year-olds). This finding, however, depends on the participant's place of residence (for further information and explanations of these interactions, see Marie-Alsana, 2000).

Correlation Between Exposure to Violence and Family Variables

Pearson correlations were calculated to examine the correlation between mean VEX–R scores and witnessing moderately violent behavior, experiencing moderate violence, perpetrating moderately violent behavior, and witnessing severe violence on one hand, and demographic and family background variables on the other hand.

In addition, the results indicate that out of the family background variables, only mother's education level was related to children's exposure to violence as victims. The mother's religiosity, number of siblings, and housing density were found to be related to exposure of children as witnesses of severe violence. None of the family background variables was related to

exposure to moderate violence or to children's own violent behavior as perpetrators of moderate violence (for further information, see Marie-Alsana, 2000).

Correlation Between Exposure to Violence and Violent Behavior

To test the third research hypothesis, correlations were examined between the children's reports of witnessing moderate violence, witnessing severe violence, and experiencing moderate violence on the one hand, and perpetrating moderate violence on the other. Accordingly, Pearson's correlations were calculated between the children's mean VEX–R scores for witnessing moderate violence, witnessing severe violence, experiencing moderate violence, and their mean VEX–R scores for perpetrating moderate violence. The correlations were calculated separately for each of the two age groups, as well as for boys and girls.

The findings support the hypothesis that there would be a significant positive correlation between witnessing moderate violence and perpetrating such violence: $r(359) = .37, p < .01$. A positive correlation was also found between experiencing moderate violence and perpetrating such violence: $r(364) = .43, p < .01$. In addition, a significant correlation was found between witnessing severe violence and perpetrating moderate violence: $r(374) = .35, p < .01$. Furthermore, significant positive correlations were found for the boys and girls (as separate groups), between witnessing moderate violence, witnessing severe violence, experiencing moderate violence on one hand, and perpetrating moderate violence on the other. Correlations ranged from .17 to .52, and all of them were significant ($p < .01$; for further information, see Marie-Alsana, 2000).

Regression Analyses for Predicting Violent Behavior (Perpetrating Violence), Witnessing Violence, and Experiencing Violence Among Schoolchildren

Hierarchical multiple regression analyses were conducted for the dependent variable (i.e., perpetrating violence). The analyses examined the contribution of the demographic variables toward explaining the variance in children's violent behavior (perpetrating violence) as well as the contribution of exposure to (witnessing and experiencing) violence as a predictor of children's violent behavior over and above the contribution of the demographic variables (age, gender, and place of residence). The analysis was conducted

in two steps: demographic variables (age, gender, and place of residence) were entered first, followed by the rest of the variables (see Table 7).

As shown in Table 7, the demographic variables and the variables that reflect witnessing and experiencing violence explained 42.4% of the variance in children's violent behavior (as reflected in their perpetrating violence). The findings indicate that 30.4% of the variance in the children's violent behavior can be attributed to their gender and age. The scores show that the rates of perpetrating violence were higher for boys than for girls and for children in the younger age group (10-year-olds) compared with their counterparts in the older age group (12-year-olds). The finding relevant to the third hypothesis is that witnessing and experiencing violence explained 12% more of the variance in violent behavior (perpetrating violence) among children, above and beyond the variance in violent behavior explained by age and gender.

The regressions found for predicting children's violent behavior were similar to those found for witnessing and experiencing violence (for further details, see Tables 7 and 8).

Discussion

This study documents the experience of Arab children in Israel with violence in elementary schools. The results support the basic hypotheses: Children reported more exposure as witnesses to moderate violence than severe violence; boys were exposed to more violence than girls were overall, both moderate and severe, as witnesses, victims, and perpetrators; and there were positive correlations between witnessing violence, being a victim of it, and perpetrating it. The results are mixed regarding the questions we posed concerning the effects of age and locale of school: The main effects of age, in which the older children are more exposed to moderate violence than the younger ones are, were found in the smaller and middle-size town, but in the large town, it was the younger children who reported more exposure to moderate and severe violence as witnesses and to moderate violence as victims.

Comparison of Moderate and Severe Violence

The children participating in the study reported behaviors defined as moderate violence such as yelling, chasing, and pushing with high frequency: 65% to 95% of the children reported that they were witnesses to this kind of violence. In contrast, the children witnessed severely violent behaviors much less often but still with frequencies that could be seen as disturbing. Witnessing a robbery was frequent: Seventy-four percent reported that

Table 7
Hierarchical Multiple Regression Analysis for Perpetrating Moderate Violence

Model	Independent Variables	Beta	*t* Value	*F* Change	R^2 Change	R^2
1	Grade (age)	.105	2.299*	49.312**	.304	.304
	Gender	.530	11.656**			
	Place of residence	–.062	–1.370			
2	Grade (age)	.068	1.635	35.060**	.120	.424
	Gender	.440	10.25**			
	Place of residence	–.031	–0.748			
	Victim of moderate violence	.209	4.246**			
	Witnessing moderate and severe violence	.209	4.313**			

*$p < .05$. **$p < .01$.

they had seen a robbery at least once. The percentage of children that witnessed acts of severe violence ranged from 6% to 20%. The confirmation of the hypothesis that children would report more moderate violence than severe violence contributes to the validation of the VEX–R measure and constitutes testimony in favor of the reliability of children's reports of violence. These data are similar to those reported for Jewish elementary schoolchildren in Israel by Raviv et al. (1999), Raviv et al. (2001) and Benbenishty et al. (2000), and those of Horowitz and Frankel (1990), Degani and Degani (1990) and Harel et al. (1997) for Jewish Israeli junior high and high school children. Harel et al. (1997) report a study sponsored by the World Health Organization as part of an international comparison violence among youth in schools. They found that Israeli children reported above-average degrees of violence in schools, including bullying, provocations, harassment, and fist fights that took place on the school premises and on the way to and from school. Studies in the United States on schoolchildren's exposure to community and school violence (Fitzpatrick & Boldizar, 1993; Richters & Martinez, 1993) also show more reports of moderate violence than severe violence.

The potential effects of exposure to moderate violence should not be overlooked. Society may condemn and punish expressions of severe violence, sometimes even through legal means. However, everyday expressions of moderate violence may be ignored or viewed with forgiveness and are less likely to be reported or lead to punishment. Nonetheless, the cumulative effects of such violence may be strong, and there is evidence that links exposure to moderate violence with emotional distress (Raviv et al., 2001; Richters & Martinez, 1993).

Table 8
Hierarchical Multiple Regression Analysis for Experiencing Violence (Victim)

Model	Independent Variables	Beta	*t* Value	*F* Change	R^2 Change	R^2
1	Grade (age)	.051	0.976	10.684*	.086	.086
	Gender	.245	4.701*			
	Place of residence	–.153	–2.940*			
2	Grade (age)	–.023	–0.506	61.471*	.244	.331
	Gender	.043	0.813			
	Place of residence	–.140	–3.130*			
	Perpetrating moderate violence	.243	4.246*			
	Witnessing moderate and severe violence	.395	8.046*			

*$p < .01$.

Severe Violence

About 6% of the children in the present study reported exposure to shooting incidents, and 12% reported exposure to stabbing. Notably, the levels of exposure among Arab schoolchildren in Israel are much lower than those reported by schoolchildren in the low socioeconomic status neighborhoods of the inner city of Washington, DC. Richters and Martinez (1993) found that 40% of children in those neighborhoods of Washington, DC reported exposure to shooting, and 30% reported exposure to stabbing. However, these levels of severe violence are higher than those that were found among Jewish elementary schoolchildren, based on the same measures used by Raviv et al. (1999) and Raviv et al. (2001).

Violence in Arab and Jewish Schools

Whereas the higher rates of moderate as opposed to severe violence are consistent with the results of studies conducted among Israeli Jewish children (Raviv et al., 1999; Raviv et al., 2001), the results reported in the present study revealed high levels of overall violence, including moderate and severe violence, among Arab children compared with the levels of violence found among Jewish children in earlier studies that used the same measures. Raviv et al. (2001) found that children report being exposed to violence more in the school than in the home or the community. However, the levels of violence among Arab children were higher than those reported by Jewish children, including those who attended schools in lower socioeconomic status areas in Tel Aviv, which are considered to be at risk for high violence. These data are

consistent with the findings of Degani and Degani (1990) in Tel Aviv and Benbenishty et al. (2000) in their national survey of violence in Israeli schools, both of whom showed higher levels of violence in schools attended primarily by Arabs as compared to those attended by Jews.

These differences, which are reflected in higher rates of violence in schools attended by Arab children as compared to those attended by Jewish children, may be explained by the differences in the resources available to the school systems and to community services in each society (Haidar, 1997). Research in the United States suggests that school and community background factors may be related to school violence. These factors may include the physical and structural characteristics of schools (Gottfredson & Gottfredson, 1985) and low socioeconomic status of the families of the children in school (Cooley-Quille et al., 1995; Gottfredson & Gottfredson, 1985). Similar factors may affect Arab schools in Israel. Compared to Jewish schools, Arab schools receive less funds per child from the government, have larger classes, a shortage of classrooms, a relative shortage of school counselors and psychologists to deal with problems of violence, less informal education, and less help with supplementary education for weaker pupils. On the community level, the income level of Arab wage earners is below that of those in the Jewish sector, and the quality of life in Arab society in areas related to education, such as the existence of community centers, is not as well developed as in the Jewish sector (see Haidar, 1997). These factors could increase the chances of and risk factors for violence in schools in the Arab society in Israel.

Witnessing and Experiencing Violence

Children in the present study reported more exposure to both moderate and severe violence as witnesses than victims. This finding is consistent with the results of Richters and Martinez (1993) who examined severe violence among American inner-city school children and with the results of Raviv et al. (1999) and Raviv et al. (2001) on moderate and severe violence among Israeli schoolchildren. Clearly, children are exposed more as witnesses to violence than as victims, and the importance of this finding may lie in the correlation found by Raviv et al. (2001) between exposure to violence as witnesses (as well as victims) to measures of emotional distress.

Violence and Child's Gender

The results of the present study support the second hypothesis: Boys were exposed to more violence overall, both moderate and severe, as witnesses,

victims, and perpetrators, than girls were. These results concur with many others in Western countries (see Maccoby & Jacklin, 1980). Recent results have also shown similar sex differences in exposure to violence as witnesses for elementary schoolchildren in the United States and Israel both as witnesses (Fitzpatrick & Boldizar, 1993; Raviv et al., 1999; Schwab-Stone et al., 1993) and as victims (Raviv et al., 1999; Richters & Martinez, 1993). Raviv et al. (2001), however, found no sex differences in exposure to aggression. As for the greater tendency of boys to report perpetrating physical violence than girls, the results of this study are in accord with those of Bell and Jenkins (1993) on American schoolchildren aged 7 to 15.

The results of the present study and those of previous research concerning gender may be explained in terms of differential socialization of boys and girls. Most societies, including Arab society, legitimize aggression in boys and discourage such expression in girls (Maccoby & Jacklin, 1980). Arab society expects girls to be gentle, conformist, and passive (Haj-Yahia & Dawud-Noursi, 1998).

Age of the Child and Size of Locality

The effects of age of exposure to moderate violence in the present study interact with the size of town in which the children live: The main effects of age, in which the older children are more exposed to moderate violence than the younger ones are, were found in the smaller and middle-sized town, but in the large town, it was the younger children who reported more exposure to moderate and severe violence as witnesses and to moderate violence as victims. These results support those of previous studies on effects of age in the United States (Fitzpatrick & Boldizar, 1993) and Israel (Raviv et al., 1999), in which older children were exposed to more violence than were younger children. In Israel, however, Degani and Degani (1990) and Harel et al. (1997) found that reports of violence in middle schools and high schools showed lower levels than those found in elementary schools. Comparison among studies is difficult because the range of ages in each study is different. For example, the children in the study by Raviv et al. were younger (8 and 10 years of age) than those examined by Fitzpatrick and Boldizar, who ranged from 7 to 18 years of age.

In sum, the effects of age, in the present study and others, appear to be sensitive to the particular age range used and the context of the violence (e.g., size of town and size of school). Future research on the effects of age on violence should use extended age ranges, uniform measures, and attention to context.

Witnesses, Victims, and Perpetrators

The results of the present study confirm our third hypothesis by finding positive correlations between witnessing violence, being a victim of it, and perpetrating it. These correlations held when age, gender of the child, and size of town were accounted for in linear regression analysis. The results reported here on the relation between being a witness and being a victim are in accord with those of previous studies (Evans et al., 2001; Fitzpatrick, 1997b; Freeman et al., 1993; Osofsky, 1995; Osofsky et al., 1993; Raviv et al., 1999; Raviv et al., .2001; Schwab-Stone et al., 1995). The present study revealed relatively strong relationships among all three roles for elementary schoolchildren, indicating that being in any role related to violence, such as being a perpetrator, increases the risk of being in another role such as being a victim. The results are also consistent with those of Xu et al. (2003), who reported a positive correlation between being a victim and being an aggressor in elementary schoolchildren in mainland China, using measures different from those described here. It is possible that the relationship between being a perpetrator and being a victim is a universal one. Thus, it would be worthwhile to conduct further research in different cultures on the relationship between being a witness to violence and being a perpetrator or victim.

In addition, the results of the present study deal with moderate as well as with severe violence, whereas most of the other studies reviewed here focused specifically on severe violence in the United States, often in the contexts of severe firearm and knife use, drugs, and random violence. Although causal relationships need to be explored in longitudinal studies, the results reported here suggest that exposure to moderate violence could be an important factor in the acquisition of violent behavior in school settings.

Limitations

The results of this study are correlational in nature and are based on cross-sectional data. As such, they cannot rule out all possible influencing variables, such as parental education and socioeconomic status of the families that have been shown to be related to violence in schools (O'Keefe & Sela-Amit, 1997; Raviv et al., 2001). Such variables could affect the relationship between being a witness, a victim, or a perpetrator of violence. In addition, we could not sample all areas and sectors of the Arab population in Israel. Such problems have been characteristic of research on school violence in general. However, one interpretation of the data suggests that in addition to the possible effects found in previous studies of the effects of exposure to

moderate violence on emotional distress of children, there are also possible effects on perpetration of violence. Clearly, children who witness moderate violence or are victims of such violence are at risk for being perpetrators themselves. Finally the VEX–R measure used here deals mainly with physical aggression and does not measure social or relational aggression such as banning other children—tactics that are more characteristic of girls than boys (Crick & Grotpeter, 1995).

Implications for Research and Policy

We suggest that the results presented here have implications for future research and policy, both for the specific population of Arab schoolchildren we studied and for school systems in general. The high levels of violence found here for the Arab population of Israel raise the question of determining the factors associated with such violence. Such research could begin by studying the effects of background variables, class size, physical condition of the school, and socioeconomic status of the children's families, variables that have been associated with levels of violence in schools in the United States (Cooley-Quille et al., 1995; Gottfredsen & Gottfredsen, 1985). Change in policy could accompany such research by instituting intervention programs to reduce violence in high violence areas. Such interventions could include reconditioning schools, reducing class size, and training teachers to monitor and prevent violence. Assessing the effects of such interventions would raise the likelihood of creating better learning conditions and aid the process of learning about factors that affect violence in schools.

The findings of this study suggest possibilities for advancing theory and knowledge on the causes of school violence and its effects. Most of the existing research on school violence has focused on severe violence in the United States. Although the dynamics of such violence deserve further attention, even less is known about moderate violence in other societies, including the possible relationships of such violence to violence in the home as well as its relationship to emotional distress. There is a lack of research on this issue except for the report on Israeli children by Raviv et al. (2001). The correlations reported in the present research indicate that witnessing and being a victim of moderate violence may put a child at risk of becoming a perpetrator of violence. Such questions need to be studied longitudinally, both to gain a perspective on cause and effect relations and to determine the long-term effects of exposure. Finally, although the results of the present study support a social learning perspective on violent behavior, further research is needed to clarify which social factors (e.g., home or school) become social learning contexts for the perpetration of violence. Here, too, the combination of basic

and intervention research on the issue of violence in schools could further the development of theory to explain violence and its effects on children and determine lines of policy needed for reducing school violence.

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