

Original article

Are There Detrimental Effects of Witnessing School Violence in Early Adolescence?

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Abstract

Purpose: We prospectively tested the extent to which witnessing school violence predicts psychosocial and school adjustment in students while accounting for their prior psychosocial characteristics and peer victimization. We also explored the role of feelings of insecurity in explaining this relationship.

Methods: Questionnaires were administered to 1104 students (52% boys) from five high schools from the Montreal area (Quebec, Canada) at the beginning, middle, and end of seventh grade. Self report measures included sociodemographic characteristics, victimization, witnessing violence, feelings of insecurity, internalizing and externalizing behavior problems, and measures of engagement, achievement, and truancy as indicators of school adjustment.

Results: Witnessing school violence was a comparatively better predictor of subsequent externalizing problems and school adjustment than actual victimization. Conversely, relative to having experienced violence as a witness, actual victimization more reliably estimated later internalizing problems. Feelings of insecurity partially explained the development of school engagement and truancy.

Conclusions: Our findings underscore the implications of school violence as a public health and safety issue, the consideration of witnessing as important in estimating its impact, and a comprehensive approach when developing and implementing strategies that aim to prevent this form of community violence. © 2008 Society for Adolescent Medicine. All rights reserved.

Keywords:

Adolescent development; Crime victims; Juvenile delinquency; Mental disorders; Motivation; Safety management; School; Underachievement; Violence; Witness

School violence has become a worldwide public health concern. The World Health Organization [1] reports that 40%, 38%, and 36% of 13-year-olds from 35 countries had respectively fought, bullied others, and been bullied by others at school in the preceding months. Cultural and geographic variations are noteworthy. For example, Canadian rates of bullying (47%) and victimization (40%) do not differ much from those of the United States but are

noticeably higher than in many Northern European countries.

Being a victim or perpetrator is not the only means of school violence exposure, as students may also witness its occurrence. A Canadian study identified an average of four peer witnesses in 85% of school bullying incidents [2]. The prevalence of students having witnessed school violence is disconcerting, as rates in the United States [3,4] and Europe [5] hover at approximately 80% for verbal aggression and 75% for physical violence. By contrast, relative to the literature on school bullying or victimization, little is known about the impact of witnessing school violence on psychosocial adjustment in youth.

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Research on school bullying and peer victimization has consistently implied a threat to developmental outcomes. These include, but are not limited to, internalizing and externalizing behavior problems [6,7]. Although the consequences for academic achievement have generated some debate [6,8], there is compelling evidence of negative effects indicating perceptions of self-efficacy, interest in school activities, and associations with school truancy and dropout [6,9,10]. One can only wonder whether such consequences extend to individuals who are exposed to school violence but who are not perpetrators or victims.

It is plausible that witnessing school violence might affect learning processes and social adjustment in students. Witnessing violence or its end-product on a regular basis may induce a mental state of "institutional" victimization and generate feelings of insecurity or distress, which in turn can lead to school avoidance and disengagement [11]. The perception that one could be easily victimized at school could also influence preemptive antisocial behavior as a coping strategy. Repeated observations of violence can induce externalizing problems through a process of normalization, where individuals become psychologically and morally desensitized to violence. As such, aggressive reflex strategies in the face of conflict become increasingly perceived as justified [12,13]. Despite the vast number of bystanders implicated in cases of school violence, there remains a scant amount of research addressing its impact on school and psychosocial adjustment in students.

Much of the pertinent literature has focused on direct

observations of highly violent acts within the community (e.g., witnessing someone injured by a gunshot, assaulted, or chased) and not within schools *per se* [14–16]. It has been established that this kind of "at large" exposure to violence is associated with internalizing and externalizing problems in youth [17]. Interestingly, when it comes to seriously violent events, schools are considered to be much safer environments than homes and neighborhoods [18]. Nevertheless, for an important number of students, frequent yet less dramatic manifestations of violence constitute a commonplace experience in school [3,19].

Astonishingly, this issue has yet to be addressed using the compelling nature of a prospective design. Two cross-sectional studies report relationships between witnessing school violence and externalizing and internalizing problems [3,19]. One study also found that witnessing school violence was a stronger predictor of both outcomes than being actually victimized. Unfortunately, the design of both studies precludes any appropriate controls for prior behavioral or mental health difficulties that could in fact explain the predictive influence of witnessing violence. Focusing exclusively on direct witnessing (e.g., seeing an incident) may also be too restrictive when measuring the social experience of violence in an enclosed environment, such as the school setting. Violence reported by others (referred to as vicarious witnessing [20]) and ambient violence [21] contribute to perceptions of a generally dangerous or hostile environment. Vicarious witnessing in the community is predictive of adverse child outcomes [21] and is highly

Table 1
Distribution of exposure to school violence: Victimization and witnessing

Victimization (N = 1104)	Count within row (%)									
	Never		1 Time		2 Times		3 Times		≥4 Times	
	n	%	n	%	n	%	n	%	n	%
Insults	629	(57.0)	196	(17.8)	79	(7.2)	29	(2.6)	170	(15.4)
Thefts	754	(68.3)	219	(19.8)	83	(7.5)	22	(2.0)	26	(2.4)
Verbal threats	822	(74.5)	136	(12.3)	55	(5.0)	22	(2.0)	69	(6.2)
Physical assault	923	(83.6)	105	(9.5)	34	(3.1)	11	(1.0)	31	(2.8)
Extortion	1022	(92.6)	46	(4.2)	18	(1.6)	9	(.8)	9	(.8)
Threats and assaults involving gang membership	1032	(93.5)	39	(3.5)	16	(1.4)	9	(.8)	8	(.7)
Armed threats	1045	(94.7)	29	(2.6)	15	(1.4)	6	(.5)	8	(.7)
Witnessing violence (N = 1104)	Never		Several times during the year		Several times a month		Several times a week		Almost every day	
	n	%	n	%	n	%	n	%	n	%
	Insults	131	(11.9)	234	(21.2)	176	(15.9)	178	(16.1)	385
Fights	175	(15.9)	497	(45.0)	261	(23.6)	114	(10.3)	57	(5.2)
Verbal threats	372	(33.8)	349	(31.7)	152	(13.8)	109	(9.9)	120	(10.9)
Older students bothering younger ones	394	(35.7)	361	(32.7)	161	(14.6)	94	(8.5)	93	(8.4)
Thefts	439	(39.8)	411	(37.2)	153	(13.9)	61	(5.5)	40	(3.6)
Vandalism	469	(42.5)	355	(32.2)	166	(15.0)	64	(5.8)	50	(4.5)
Weapon bearing	715	(64.8)	231	(20.9)	69	(6.3)	45	(4.1)	44	(4.0)
School intruders causing trouble	740	(67.0)	187	(16.9)	82	(7.4)	47	(4.3)	48	(4.3)
Conflicts among students who are members of a gang	742	(67.2)	222	(20.1)	75	(6.8)	28	(2.5)	35	(3.2)

Table 2
Inter-correlations and descriptive statistics of controls, independent and dependant variables in regression analyses

Variable	1	2	3	4	5	6	7	8
1 Sex ^a								
2 Mother's education	.00	n/s						
3 Ethnicity ^b	-.04	n/s	.10	**				
4 Type of school ^c	-.08	**	.25	***	.20	***		
5 Victimization T2	-.15	***	-.02	n/s	-.01	n/s	-.02	n/s
6 Witnessing violence T2	-.11	***	-.20	***	-.09	*	-.17	***
7 Feelings of insecurity T2	-.11	***	-.14	***	-.01	n/s	-.23	***
8 Internalizing problems T1	.20	***	-.07	*	-.06	m	-.02	n/s
9 Internalizing problems T3	.17	***	-.08	**	-.03	n/s	-.07	*
10 Externalizing problems T1	-.26	***	-.08	**	-.04	n/s	-.07	*
11 Externalizing problems T3	-.20	***	-.12	***	-.03	n/s	-.07	*
12 School engagement T1	.20	***	.07	*	.05	m	.11	***
13 School engagement T3	.16	***	.12	***	.05	m	.09	**
14 Academic achievement T1	.04	n/s	.22	***	-.01	n/s	.18	***
15 Academic achievement T3	.09	**	.15	***	-.01	n/s	.13	***
16 Truancy T1	-.11	***	-.12	***	-.04	n/s	-.09	**
17 Truancy T3	-.01	n/s	-.20	***	-.02	n/s	-.19	***
Mean		7.12				-.001	-.19	2.84
S.D.		2.71				.12	.87	.81

N = 1104. ^m $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

^a Males were coded as 0 and females as 1.

^b Students from non Caucasian origins were coded as 1.

^c Public schools were coded as 0 and private schools as 1.

correlated to witnessing real-life events [20]. When asked, students include violent incidents reported by others in their subjective experience of school violence [22].

The present study extends this previous cross-sectional work by examining the psychological and academic impact of violence exposure at school in typically developing students attending their first year of high school. Our work is prospective in that we estimate this influence while discounting the presumed effect of prior personal or school-related difficulties. To be relevant to past work, we include both direct and reliable third-party witnessing in our conceptualization. In light of the previous findings, we expected that witnessing violence and being actually victimized would both predict psychosocial and school adjustment, but that witnessing violence would be a stronger predictor of student adjustment than victimization. It was also hypothesized that feelings of insecurity would explain the relationship between witnessing violence and later student adjustment.

Methods

Participants

Participants (51.6% boys) were aged 11–15 years (mean = 12.8, SD = .72) when recruited in 2000 at the beginning of seventh grade. In Québec, high schools include students from grade 7–11 (i.e., those 12–17 years old). The participants came from two private ($n = 192$ and $n = 137$) and three public French-Speaking schools ($n = 296$, $n = 231$, and $n = 248$; 70.2% of total sample) from the Montreal area (Quebec, Canada). This sample ($N = 1104$) comprised

mainly students of Caucasian background (87.2%, of whom 3.9% came from English-speaking families). Ethnic origin of the remaining sample was diverse: Asia (2.7%); Latin-America and the Caribbean (2.5%); Arab countries and Africa (2.2%); and other countries (5.4%). Boys were more numerous in private schools (58.1% vs. 48.9%), maternal education was higher (college degree on average vs. high school degree on average) and there were more students of non-Caucasian origins (28.3% vs. 11.7%).

Procedures

Self-reported questionnaires were administered in class by trained research assistants at the beginning (T1), middle (T2), and end (T3) of the school year with students from whom parental consent was obtained (99%). Approval to conduct this research was obtained from the Institutional Ethical Board of the University of Montreal.

Independent measures (T2)

School violence can be defined as any verbal, physical, psychological, or visual manifestation intended to directly or indirectly threaten, harm, or control the physical or psychological integrity, rights, or property of others within the school setting [18]. This study embraces such conceptualization of school violence although our measures focus mainly on its verbal and physical manifestations.

Witnessing violence. Students were asked, "Since the beginning of the school year, how often have you observed or have you been informed of the following problems at your school?" on a nine-item violence scale (theft, vandalism,

using a four-item scale (T1 $\alpha = .66$ and T3 $\alpha = .75$) from a French adaptation of the Student's Perception of Control Questionnaire [27]. These items, rated on a four-point Likert-type scale (not really true, somewhat true, true, certainly true), assessed student attitudes and efforts toward learning (liking school, going to school because it is an obligation, studying everyday, doing homework everyday). School truancy was measured with two items (T1 $\alpha = .69$ and T3 $\alpha = .73$) assessing the frequency of absenteeism since the beginning of the school year (T1) or during the past 6 months (T3) (i.e., Have you skipped a class/Have you missed school without justification) on a four-point scale (never, once or twice, several times, very often).

Control measures

Measures at T1 of all outcomes (T3) were introduced as control variables to isolate the specific influence of witnessing violence. Furthermore, baseline internalizing and externalizing problems were systematically used as controls, as they are known to be related to peer victimisation [6,28] and school adjustment [29]. Because the experience of victimization could have a strong impact on perceived violence [18], student victimization (T2) was also included as a control. The victimization index ($\alpha = .67$) consisted in the average frequency of seven different forms of victimization (theft, verbal insult, verbal threat, extortion, physical attack, armed threat or attack, gang threat or attack) for which students were asked, "Since the beginning of the school year, how often have you experienced the following problems at your school?" Responses ranged on a five-point scale (never, once, two times, three times, four times or more). Gender, ethnicity, and maternal education served as additional controls, given that school violence and school adjustment have been linked to gender, ethnicity, and poverty [30–32]. Finally we included the type of school as a control, because students from private schools reported higher academic achievement and engagement, lower feelings of insecurity, lower internalizing and externalizing symptoms, less truancy, and less witnessing of violence. There were also more boys in those schools.

Attrition analyses

Complete data were available for 1104 of the 1274 surveyed students. Cases of attrition were more often boys or from ethnic minorities. They also reported greater feelings of insecurity, externalizing symptoms, truancy, and underachievement. Attrition analyses [33] indicated that students with incomplete data on the witnessing violence scale reported more externalizing problems. Students with incomplete data on the victimization scale reported less internalizing and achievement problems. Overall the sample attrition biases were not problematic given the controls in our data analytic strategy.

Data analysis

Given the highly skewed distribution of the victimization scale, we applied two logarithmic transformations ($\log_{10}(X+1)$) to respect the assumptions of multiple regression [34]. We then conducted a series of hierarchical multiple regressions to investigate the predictive relationships between witnessing school violence and psychosocial adjustment. Control variables were first introduced (Model 1), with the exception of student victimization, which was included in Model 2 to disentangle its specific contribution and facilitate the comparisons with the effects of witnessing violence. Witnessing violence was added in Model 3 to test its predictive contribution beyond victimization. We included feelings of insecurity in Model 4 to test its mediating effect. Identification of a mediation effect must meet four conditions [35]: (1) the predictor and the mediator must be related; (2) the predictor and the outcome must be related; (3) the mediator and the outcome must be related while controlling for the predictor; (4) the significant association between the predictor and the outcome must diminish or disappear upon addition of the mediator variable. Significance of the fourth condition was verified with the Aroian version of the Sobel test [35].

Results

Table 1 reports the distribution of the participants according to the frequencies of having been victimized and witnessed school violence. Results underscore that witnessing violence was much more prevalent than victimization. A majority of students were never victims of school violence, but most of them witnessed or had heard about incidents. For the most violent acts, witnessing violence was limited to a few times during the year or during the past months. However other conducts were observed more frequently at school: (a) half of the students reported having frequently (several times a week or almost every day) observed incidents of verbal abuse; (b) one student of five reported having frequently witnessed students threatening others; (c) and one student of six reported having frequently witnessed incidents in which older students harassed younger school mates. Overall most students (~90%) were exposed to school violence as witnesses.

Table 2 reports intercorrelations between all variables as well as their means and standard deviations. All correlations were in the expected direction. The moderate relationships between victimization, witnessing violence and feelings of insecurity confirm that they likely represent distinct constructs. Correlations between predictors and student psychosocial adjustment varied from low to moderate ($r = .15-.32$, $p < .05$). These results suggest that an increase in psychosocial problems is associated with more incidents of witnessing violence and insecurity. However the relationships between school violence exposure and student outcomes

varied according to the nature of the problem. There was a small tendency for victimization to be more related to internalizing problems ($r = .26$ and $.30, p < .05$) whereas witnessing violence seemed to be more related to externalizing problems ($r = .28, p < .05$). Nevertheless, the correlations with academic achievement, school engagement, and truancy were twice as high for witnessing violence and feelings of insecurity as for victimization.

Prediction of psychosocial adjustment

The first condition for a mediation effect of feelings of insecurity was established for all outcomes controlling for gender, maternal education, type of school, ethnicity, and victimization: an increase in witnessing school violence was associated to an increase of insecurity ($\beta = .33, t = 11.60; F_{Change} (1, 1097) = 135.51, p < .001$).

Internalizing problems. Table 3 reports the standardized beta weights and R^2 changes of the regression between internalizing problems and the different controls and predictors. Model 1 indicated that being a girl and baseline behavioral problems predicted internalizing problems at T3 ($F_{Change} (6, 1097) = 107.34, p < .001$). In Model 2, victimization increased the predictive power of the previous model ($F_{Change} (1, 1096) = 40.24, p < .001$). The subsequent contribution of witnessing violence (Model 3) was margin-

ally significant ($F_{Change} (1, 1095) = 3.23, p < .10$). Victimization thus exerted a greater influence than witnessing violence on the increase of internalizing symptoms. The introduction of feelings of insecurity in Model 4 confirmed its significant relation to later internalizing symptoms ($F_{Change} (1, 1094) = 7.75, p < .01$), but the conditions were not met to test its mediating effect over witnessing violence.

Externalizing problems. Results regarding the prediction of externalizing problem behaviors (Table 3) offer a different picture. The results from the first model indicate that T1 externalizing and internalizing problems, male gender, and maternal education predicted later externalizing difficulties ($F_{Change} (6, 1097) = 55.82, p < .001$). Examination of Models 2 and 3 indicates that witnessing violence was a stronger predictor of externalizing problems than victimization. Feelings of insecurity did not significantly add to the prediction (Model 4).

School engagement. Female gender, maternal education, externalizing problems, and student engagement at T1 all predicted student engagement (Table 4) ($F_{Change} (7, 1096) = 85.64, p < .001$). Victimization was associated with decreases in student engagement ($F_{Change} (1, 1095) = 9.02, p < .01$), as well as witnessing violence ($F_{Change} (1, 1094) = 28.19, p < .001$). The contribution of witnessing violence to

Table 3
Beta (β) weights and r^2 changes in regressing internalizing and externalizing behavioral problems on victimization, witnessing violence, and feelings of insecurity

Variable	Model 1		Model 2		Model 3		Model 4	
	Standardized β weights							
Internalizing problems T3								
Gender ^a	.10	***	.12	***	.13	***	.13	***
Ethnicity ^b	.02	NS	.02	NS	.02	NS	.02	NS
Mother's education	-.03	NS	-.03	NS	-.02	NS	-.02	NS
Type of school ^c	-.04	NS	-.03	NS	-.03	NS	-.01	NS
Externalizing problems T1	.14	***	.12	***	.11	***	.11	***
Internalizing problems T1	.55	***	.50	***	.50	***	.49	***
Victimization T2			.16	***	.15	***	.13	***
Witnessing violence T2					.05	†	.02	NS
Feelings of insecurity T2							.08	**
r^2 change	.370	***	.022	***	.002	†	.004	**
Externalizing problems T3								
Gender ^a	-.10	***	-.09	**	-.08	**	-.08	**
Ethnicity ^b	.00	NS	.00	NS	.01	NS	.01	NS
Mother's education	-.08	**	-.08	**	-.06	*	-.06	*
Type of school ^c	-.03	NS	-.03	NS	-.01	NS	-.01	NS
Externalizing problems T1	.42	***	.41	***	.39	***	.39	***
Internalizing problems T1	.06	*	.04	NS	.02	NS	.02	NS
Victimization T2			.08	**	.04	NS	.04	NS
Witnessing violence T2					.13	***	.13	***
Feelings of insecurity T2							-.00	NS
r^2 change	.234	***	.005	**	.013	***	.000	NS

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.
^a Male students were coded as 0 and female students as 1.
^b Non-Caucasian students were coded as 1.
^c Public schools were coded as 0 and private schools as 1.

Table 4
Beta (β) weights and r^2 changes of regressing school adjustment on victimization, witnessing violence, and feelings of insecurity

Variable	Model 1		Model 2		Model 3		Model 4	
	Standardized β weight							
School engagement T3								
Gender ^a	.05	*	.04	NS	.03	NS	.03	NS
Ethnicity ^b	.01	NS	.02	NS	.01	NS	.01	NS
Mother's education	.07	**	.07	**	.05	*	.05	†
Type of school ^c	.02	NS	.01	NS	-.00	NS	-.02	NS
Externalizing problems T1	-.08	**	-.07	*	-.05	†	-.05	†
Internalizing problems T1	-.05	†	-.03	NS	-.01	NS	-.01	NS
Engagement T1	.53	***	.53	***	.51	***	.51	***
Victimization T2			-.08	**	-.03	NS	-.02	NS
Witnessing violence T2					-.15	***	-.12	***
Feelings of insecurity T2							-.08	**
r^2 change	.354	***	.005	**	.016	***	.004	**
Academic achievement T3								
Gender ^a	.05	†	.04	NS	.04	NS	.04	NS
Ethnicity ^b	-.02	NS	-.02	NS	-.02	NS	-.01	NS
Mother's education	.03	NS	.03	NS	.02	NS	.02	NS
Type of school ^c	.03	NS	.03	NS	.03	NS	.02	NS
Externalizing problems T1	-.10	***	-.09	***	-.09	**	-.09	**
Internalizing problems T1	-.02	NS	-.01	NS	-.00	NS	-.00	NS
Academic achievement T1	.51	***	.51	***	.51	***	.50	***
Victimization T2			-.05	†	-.04	NS	-.03	NS
Witnessing violence T2					-.04	NS	-.03	NS
Feelings of insecurity T2							-.03	NS
r^2 change	.319	***	.002	†	.001	NS	.001	NS
Truancy T3								
Gender ^a	.03	NS	.04	†	.04	NS	.05	*
Ethnicity ^b	.04	NS	.04	NS	.04	†	.04	NS
Mother's education	-.12	***	-.12	***	-.10	***	-.10	***
Type of school ^c	-.13	***	-.13	***	-.11	***	-.10	***
Externalizing problems T1	.11	***	.10	**	.09	**	.09	**
Internalizing problems T1	.11	***	.09	**	.08	**	.08	**
Truancy T1	.35	***	.35	***	.34	***	.34	***
Victimization T2			.06	*	.02	NS	.01	NS
Witnessing violence T2					.13	***	.11	***
Feelings of insecurity T2							.07	*
r^2 change	.263	***	.004	*	.013	***	.003	*

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

^a Male students were coded as 0 and female students as 1.

^b Non-Caucasian students were coded as 1.

^c Public schools were coded as 0 and private schools as 1.

the prediction of school engagement was higher than that of victimization. Nevertheless feelings of insecurity made a significant additional contribution ($F_{Change}(1, 1093) = 7.36, p < .01$). The Aroian test confirmed a partial mediation effect of feelings of insecurity in the relationship between witnessing violence and student engagement ($t = -2.62, p < .01$).

Academic achievement. Baseline externalizing problems and academic achievement (T1) were the only meaningful predictors of academic achievement (Table 4) ($F_{Change}(7, 1096) = 73.22, p < .001$).

Truancy. Maternal education, baseline behavioral problems, truancy, and type of school predicted truancy at T3 ($F_{Change}(7, 1096) = 55.87, p < .001$). The inclusion of student

victimization accounted for a small significant additional portion of the variance ($F_{Change}(1, 1095) = 5.27, p < .05$). Witnessing violence did significantly add to the prediction ($F_{Change}(1, 1094) = 19.81, p < .001$) in a larger proportion than did victimization. Finally, student feelings of insecurity were related to truancy ($F_{Change}(1, 1093) = 4.68, p < .05$) and presented a partial mediating effect ($t = 2.15, p < .05$).

Discussion

The results of this study show that students need not be direct victims of school violence to suffer from it. Witnessing violence diminishes their well-being. Exposure to violent interactions makes them more likely to conduct themselves aggressively, dislike school, and even avoid it. Such

violence is not necessarily extreme or spectacular. The effects of exposure were perceptible in the context of an average school day, where violent acts are less severe yet much more frequent. The remarkable prevalence of students witnessing violence in their own institutions underscores this issue as a public health matter. Our results have clear implications for providing prevention and support for innocent bystanders and involved onlookers, beyond the typical and exclusive focus on perpetrators and victims.

Consistent with previous research [3,19], witnessing violence represents a stronger risk factor of adolescent adjustment than actual victimization. The only exception to this conclusion pertains to the development of internalizing problems, which was better predicted by victimization [10]. The nature of the baseline controls used in our prospective longitudinal design offer a strong demonstration of the relative contribution of each type of exposure according to the different outcomes observed. Furthermore by adopting a more liberal definition of witnessing, which included observations and reports from reliable third parties about violent incidents, we found that mere awareness of school violence forecasts a negative impact on student well-being.

Why would witnessing “common” school violence on a daily basis have such a deleterious impact? Some investigators have noted that witnessing violence can generate feelings of powerlessness, fear, and insecurity that might induce fight or flight responses [3]. In turn, these could give rise to negative feelings toward school and to “acting out” to fend off the source of fright [36]; they could also generate general dislike of school and could prompt avoidance behaviors [11]. The relationship between witnessing violence and later school engagement and truancy was explained in part by feelings of insecurity. However feelings of insecurity played no role in the relationship between violence exposure and later externalizing or internalizing behaviors.

An investigation of how the intensity of witnessed violence determines the emergence of emotional distress would be a worthwhile investment. The role of other intermediate processes, especially cognitive and social–cognitive processes, in the impact of witnessing school violence warrants further examination. Indeed, our test of the impact of witnessing violence on antisocial behavior is consistent with cognitive normalization theories. That is, violence exposure may develop attributions of hostility toward actions of others, techniques of neutralization (e.g., blaming the victim), and normative beliefs about violence. These are intrapsychic processes that increase the probability of choosing or justifying violent behavior during social conflict [12].

Noteworthy is the absence of a prospective association between exposure to violence and achievement. Several other studies have reported few or no relationships between school violence and achievement [6,37]. This remains surprising, considering that one of the most frequent justifications for studying and preventing school violence is its presumed damaging effect upon the academic experience.

Such violence exposure might primarily affect other important predictors of achievement, including (but not limited to) discipline, motivation, truancy, teacher practices, educational climate [8,38].

Our findings support a comprehensive and universal approach toward the prevention of school violence and its potential consequences. This strategy would capture witnesses as well as victims and perpetrators. In fact, it is not surprising that several successful school-wide prevention programs aim to improve school climate, disciplinary and educational practices, as well as offer specific support for students showing greater need [9,39]. Fostering an open climate of concern for security and explicit intolerance toward aggression is likely to diminish perceptions of the school setting as unfriendly or even dangerous [38]. To reduce the prevalence of witnesses, schools must implement effective programs against school bullying, especially given that the majority of violent interactions are seen by a multitude of school mates [2,9].

This study presents some limitations. Because our results are limited to 1 school year, they preclude speculation about longer-term outcomes and the extent to which they apply before or after seventh grade. School violence is most prevalent during early adolescence [18]. As such, the choice of seventh grade represents a chief strength of this study. Seventh grade also represents a transition point from primary to secondary school in more populated institutions, thus overlapping a critical developmental period [40]. Although it is not representative of the North American population, the province of Quebec has very a progressive social safety net and has no history of racial discrimination, both of which make our findings quite conservative, given our generous application of statistical control.

The findings from this study are sufficiently important to justify to further work on the precursors and consequences of being exposed to school violence. This study expands the reasons that school violence should be considered as an important public health issue. School bullying and victimization affect approximately 40% of the student population. This is certainly a good enough reason to endorse this perspective [1]. Being an involved onlooker or innocent bystander affects twice as many youth. This study provides compelling evidence about how this everyday life experience impedes youth development.

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