Violence Exposure and Mental Health of Adolescents in Small Towns: An Exploratory Study

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ABSTRACT

This study explores the impact of violence exposure on the mental health of the adolescents in a rural small town. A structured questionnaire was used to survey 347 adolescents. Violence experienced and witnessed by the adolescents at school, in the neighbourhood, and at home was measured. Mental health was represented by the psychiatric symptoms, depression level, and self-esteem. The level of violence perpetrated by the adolescents was also explored. Results of the multiple regression analysis show that adolescents who have been exposed to more violence, either as a victim or as a witness, report more psychiatric symptoms, higher levels of depression, and more problems of self-esteem. Being a witness of violence also contributes significantly to the variance of violence committed by the adolescents. The implications of the findings to violence prevention are discussed in the conclusion.

ABRÉGÉ

Cette étude examine l'impact de la violence par rapport à la santé mentale des adolescents d'une petite ville rurale. Un questionnaire structuré fut utilisé pour sonder 347 adolescents. La violence qu'éprouvent et que témoignent les adolescents à l'école, dans leurs quartiers, et au foyer, fut mesurée. La santé mentale est représentée par les symptômes psychiatriques, le niveau de dépression psychologique, et l'estime de soi. Le niveau de violence commise par l'adolescent fut aussi exploré. Les résultats de l'analyse de régression multiple démontrent que les adolescents qui ont été touchés par plus de violence, soit en tant que victimes soit en tant que témoins, rapportent plus de symptômes psychiatriques, des niveaux plus élevés de dépression psychologique, et plus de problèmes d'estime de soi. Le fait d'être témoin d'actes violents contribue de facon significative à la variance de la violence commise par l'adolescent. Les implications des résultats en ce qui concerne la prévention sont discutées.

Exposure to violence is believed to have negative impacts on the mental health of adolescents. Significant association has been observed between the level of exposure to violence of the adolescents and psychological trauma.[1] Similarly, adolescents who are exposed to violence often display more Post Traumatic Stress Disorder (PTSD) related symptoms than those who are not.[2,3]

In most circumstances, adolescents are exposed to violence either at school, at home, or in their neighbourhood. No matter where the violence occurs, research findings generally support that exposure to violence often creates a negative impact on the mental health of the adolescents.

Students who have been robbed, threatened, or beaten in school have lower self-esteem than their unvictimized counterparts.[4] Chronic exposure to violence not only results in decreased cognitive performance and school achievement[5] but also increases the level of depression,[6,7] anxiety,[8] aggression,[9] and self-destructive behaviours among the adolescents.[10] Adolescents who are exposed to domestic violence at home often report decreased social competence levels,[11] decreased self-esteem,[12] increased physical aggression,[13] and increased conduct problems.[14] Children who are exposed to community violence also report more depressive symptoms.[6,15]

Most studies documenting violence exposure have focused on youth in urban or suburban settings. Research on the impact of violence exposure on the adolescents in small towns in Canada is unavailable. This may be due to the myth that small towns are relatively safer and violence very seldom occurs. This study attempts to explore the relationships between violence exposure and mental health of adolescents in a small town setting. Two research questions are expected to be answered. First, what is the extent of violence exposure among adolescents in a small town? Second, to what degree is violence exposure associated with mental health problems among adolescents residing in a small town?

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METHODS

A cross-sectional survey design using a 30-minute, anonymous, self-administered questionnaire was employed in this study. The structured questionnaire consisted of questions measuring violence exposure, violence behaviours, mental health status, and demographics of the respondents.

Violence exposure was conceptualized as the frequency of violence experienced and witnessed by the adolescents. In this study, violence was operationalized by the nine types of specific intimidating or violent incidents including: 1) having things damaged, 2) having things stolen, 3) having things taken by force or threat of force, 4) being verbally put down or bullied, 5) being threatened with hurt, 6) being slapped/punched, or kicked, 7) getting beaten up or mugged, 8) being threatened with a weapon, and 9) being attacked or beaten up by a group. Along a four-point Likert scale ranging from "never" (0), once (1), twice (2), and "three times or more" (4), the respondents were asked to rank the frequency of each of these incidents that

they had experienced over the past year at school, in the neighbourhood, and at home. Three separate scores of VICTSCH, VICTNEIG, and VICTHOME were computed to represent the total level of violence experienced by the adolescents at each of these three different settings. Along the same Likert scale, the adolescents were also asked to rank the frequency of the violence incidents they witnessed personally over the past year at school, in the neighbourhood, and at home, resulting in the scores of WITSCH, WITNEIG, and WITHOME.

Violence committed by the adolescents was measured by asking them to self-report, along a four-point Likert scale ranging from "never" (0), to "three times or more" (4), the frequency of committing the nine specific types of violence mentioned above in the previous year. A total score (TCOMMIT) representing the overall level of violence committed was computed.

Mental health of the respondents was measured by three standardized instruments. The psychological symptoms were measured by the 53-item Brief Symptom Inventory (BSI)[16] which assesses nine primary symptom dimensions of somatization (SOM), obsessive-compulsiveness (OC), interpersonal sensitivity (IS), depression (DEP), anxiety (ANX), hostility (HOS), phobic anxiety (PHOB), paranoid ideation (PAR), and psychoticism (PSY), as well as a global index of Global Severity Index (GSI) which represents the overall psychiatric symptoms one has experienced. Depression level of the respondents was measured by the 27-item Children Depression Inventory (CDI).[17] Self-esteem was measured by the Index of Self-Esteem (ISE).[18] For all of these measures, higher scores represent a more serious concern with the mental health issue assessed. Demographic information collected in the questionnaire includes the respondents' age, gender, grade level, and race/ethnicity.

TABLE I
Demographics of the Adolescents (N=347)

		Percent	n
Gender	Female	53.4	182
	Male	47.6	165
Age (years)	11-13	33.7	117
	14-16	51.9	180
	17-20	14.1	50
	Mean = 14.48 years Median = 14 years SD = 1.71 years		
Grade	7-8	44.7	155
	9-10	32.3	112
	11-12	23.0	80
Ethnicity	Native/Métis/Aboriginal	22.5	78
	White	73.8	256
	Other culture	3.7	13

The study sample consists of grade 7 to grade 12 adolescents in a small Northern Alberta town, population approximately 5,000. The respondents were from the only two high schools in the community. All the classes from grade 7 to grade 12 in one of the schools were included in the study; in the other, due to the large student population, some of the classes in each of the grades were selected. In selecting the classes, the author endeavoured to maintain an appropriate balance of students from both the academic and vocational streams.

RESULTS

A total of 347 students from grade 7 to grade 12 successfully completed the questionnaire. The demographics of the respondents are presented in Table I.

Table II shows that the majority of the adolescents in this study have been victims of violence of some sort within a 12-month period. At school, over two thirds of the adolescents have been verbally put down or bullied. Approximately 7 of 10 adolescents have had something stolen. At home, about half of the adolescents have been verbally put down or bullied, and almost half have been slapped, punched, or kicked. About 15% of them have been threatened with a weapon at home as well. In general, the adolescents have experienced violence most frequently at school, then at home, and then in the neighbourhood.

Again, as shown in Table II, the adolescents generally have witnessed more violence than they have been a victim. Nine of ten adolescents have seen someone being verbally put down or bullied at school and almost the same proportion of the respon-

TABLE II
Violence Exposure of the Adolescents in a 12-Month Period (N=347)

	Being victimized at least once (%)			Being a witness at least once (%)		
	At School	In Neighbourhood	At Home	At School	In Neighbourhood	At Home
1. Something damaged	53.3	41.2	57.6	87.3	52.7	49.6
2. Something stolen	69.7	50.4	45.2	84.4	57.3	45.2
3. Something taken by force or threat of force	22.5	8.4	25.1	59.1	26.2	27.4
4. Verbally put down or bullied	68.0	36.9	5.1	94.5	60.2	59.7
5. Threatened with hurt	46.7	22.8	35.7	89.9	43.8	35.4
6. Slapped, punched or kicked	51.6	25.1	47.3	87.6	50.4	44.4
7. Beaten up or mugged	8.9	7.5	8.6	65.4	30.5	15.9
8. Threatened with a weapon	6.6	9.8	15.0	24.2	19.0	13.0
9. Attacked or beaten up by a group	9.5	5.2	11.5	48.1	21.0	10.4
Mean	6.79	3.55	6.45	15.19	7.33	6.42
SD	5.72	4.50	6.83	6.95	7.56	7.00

TABLE III
Percentage of Adolescents Reported to Have Committed Violence in a 12-Month Period (N=347)

		Once	Twice	3 Times or more	Total
1.	Damaged something of others	26.8	12.4	20.7	59.9
2.	Stole something	18.7	9.2	25.1	53.0
3.	Took something of others by force	18.2	6.3	12.1	36.6
4.	Put down or bullied someone	16.4	10.1	55.0	81.6
5.	Threatened to hurt someone	23.3	9.2	29.1	61.7
6.	Slapped, punched, or kicked someone	17.9	9.5	37.2	64.6
7.	Beat up or mugged someone	6.6	6.1	6.9	19.6
8.	Threatened someone with a weapon	5.2	1.4	3.5	10.1
9.	Attacked or beat up someone with a group	6.3	3.5	7.5	17.3

TABLE IV
Zero-order Correlation Coefficients* Between the Mental Health Measures and Violence Exposure Variables (N=347)

	VICTSCH	VICTNEIG	VICTHOME	WITSCH	WITNEIG	WITHOME
GSI	0.24	0.2	0.32	0.23	0.25	0.24
SOM	0.19	0.16	0.25	0.23	0.24	0.17
OC	0.17	0.14	0.24	0.18	0.2	0.2
INT	0.2	0.14	0.28	0.15	0.08†	0.17
DEP	0.17	0.12**	0.24	0.15	0.14	0.14
ANX	0.19	0.18	0.26	0.22	0.27	0.18
HOS	0.2	0.16	0.29	0.18	0.23	0.29
PHOB	0.21	0.21	0.21	0.14	0.22	0.13**
PAR	0.32	0.21	0.3	0.27	0.21	0.27
PSY	0.21	0.19	0.23	0.18	0.18	0.16
SESCORE	0.18	0.09†	0.19	0.07†	0.05†	0.11**
CDI	0.22	0.17	0.26	0.17	0.19	0.21
TCOMMIT	0.22	0.29	0.32	0.39	0.42	0.44

* $p < 0.01$ unless specified otherwise
** $p < 0.05$
† not significant

dents have seen someone being slapped, punched, or kicked. Verbal put down is also very common both at home and in their neighbourhood. At home, over 4 of 10 adolescents have witnessed someone being slapped, punched, or kicked; about 15% have seen someone being beaten up; and 13% have witnessed someone being threatened with a weapon.

Male adolescents have experienced more violence than their female counterparts both at school (8.6 vs 5.14; t=5.81, p<0.01) and in the neighbourhood (4.59 vs 2.62; t=4.08, p<0.01). At the same time, male adolescents have witnessed more violence than the female adolescents, both at school (16.52 vs 13.99; t=3.43, p<0.01) and in the neighbourhood (8.61 vs 6.18; t=3, p<0.01). The native adolescents witness more violence in the neighbourhood than the white adolescents. Both the age and grade level of the students correlate mildly (r= -0.1621 & -0.1597, p<0.01) with the level of violence they experience at school.

Table III shows the frequency of self-reported violence committed by the respondents. Almost 7 of 10 adolescents have committed at least one type of violence. About 80% of the adolescents have verbally put down or bullied someone. The male adolescents in this study commit more violence than their female counterparts (4.59 vs 3.55; t=4.04, p<0.01).

To explore the association between mental health and violence exposure, both bivariate and multivariate analyses were used. Table IV shows the zero-order bivariate correlations between the mental health scores and total level of violence committed (TCOMMIT), and the variables measuring violence exposure. In general, the more an adolescent has been victimized, the more psychological symptoms and mental health concerns are recorded. This relationship exists no matter whether the victimization happens at school, in the neighbourhood, or at home. At the same time, the bivariate results show that the more violence an adolescent has been exposed to, either as a victim or as a witness, the more violence he or she will commit.

To further explore the predicting power of violence exposure on the mental health problems, a series stepwise multiple regression analysis was employed, using the GSI and the 9 subscales, CDI, ISE, and TCOMMIT as the dependent variables in separate analysis. The predicting variables are the six variables measuring violence experienced and witnessed by the adolescents at school, in the neighbourhood, and at home, and also the demographic factors of age, gender, race/ethnicity, and grade level of the respondents.

Results in Table V show the predictors of the different mental health scores. Two general observations are obtained. First, all but one of the violence exposure variables are significant in predicting the mental health scores, in a positive direction. This means, regardless of the setting, adolescents who have experienced or witnessed more violence have more psychiatric symptoms, higher levels of depression, and more self-esteem problems. Second, having witnessed violence is the most important predictor of amount of violence committed by the adolescents. The more violence one witnesses at school, in the neighbourhood, and at home, the more violence one commits.

DISCUSSION

Findings from this study are consistent with much previous research,[4,6-9,11-15] Adolescents who are exposed to more violence have more mental health problems. To be specific, those who have witnessed and experienced more violence tend to report more psychiatric symptoms, higher levels of depression, and more self-esteem problems.

An interesting aspect of this study is that it reports the situation of the adolescents in a rural small town setting. The findings give further support to the fact that the impact of violence exposure is universal. The results show that no matter in which setting violence takes place, its impact on the mental health of adolescents is often negative.

Another interesting discovery of this study is that violence committed by adolescents is explained significantly by the level of violence they witness rather than the violence they experience. The impacts on the mental health of the adolescents are different depending on whether they are victims or witnesses of violence. Having experienced violence either at school, in the neighbourhood, or at home, has a significant effect in explaining all 10 measures of psychiatric symptoms, depression, and self-esteem problems. However, having witnessed violence either at school or in the neighbourhood is only significant in explaining 7 of the 12 mental health indicators in this study. Further research is suggested to examine the differential impacts of being a victim and being a witness of violence.

Consistent with previous research findings, violence occurrence at home has a negative impact on the adolescents, both psychologically and socially. However, further research on the context in which violence at home has taken place is needed. Details such as the conditions under which violence has occurred, the relationship between the victim and the perpetrator(s), and the meanings of violence as defined by different family members, would be useful to devise appropriate violence prevention strategies at home.

The frequency of violence experienced and witnessed by the adolescents at school is alarming. However, some of the schools still have difficulties in admitting the problem. Sometimes, school administrators and teachers may be led to believe that violence at school is only perpetrated by a small group of "problem students," and do not recognize that much of the violence takes place when teachers and staff are not around to see it. From the prevention perspective, more well-organized efforts to educate the students are needed. Recognizing and acknowledging the problem are the initial steps. Before any violence prevention strategies can be effective, it is important for the school authorities to understand more about the adolescent subculture, and to create an open and safe atmosphere to discuss the issue of violence with the students.

Due to the significant impact of violence exposure on the mental health of the adolescents, more support services and counselling to students who are affected by violence of any kind should be made available and accessible to this population group, both at school and in the community. The focus of the services should also be extended to include not only victims of violence but also adolescents who have witnessed violence. Parents or caregivers of the adolescents should be aware of the impact of violence exposure and detect the issues at an early stage. Open discussion of the issues of violence with the adolescents by the parents/caregivers should be encouraged as the first step to deal with the problems.

TABLE V
Stepwise Regression Models: Predictors of the Dependent Measures

	GSI	SOM	OC	INT	DEP	ANX	HOS	PHOB	PAR	PSY	CDI	ISE	TCOMMIT
VICTSCH	ß=0.20 (0.0006)	ß=0.13 (0.0283)		ß=0.20 (0.0007)	ß=0.19 (0.0018)	ß=0.13 (0.0278)		ß=0.23 (0.0001)	ß=0.26 (0.0000)	ß=0.15 (0.0058)	ß=0.15 (0.0055)	ß=0.13 (0.0211)	
VICTNEIG										ß=0.18 (0.0013)		ß=0.15 (0.0103)	
VICTHOME	ß=0.20 (0.0002)	ß=0.14 (0.0114)	ß=0.20 (0.0004)	ß=0.20 (0.0007)	ß=0.17 (0.0019)	ß=0.13 (0.0232)	ß=0.25 (0.0000)		ß=0.15 (0.0069)		ß=0.21 (0.0002)		
WITSCH	ß=0.14 (0.0077)	ß=0.18 (0.0015)				ß=0.12 (0.0339)			ß=0.17 (0.0024)				ß=0.15 (0.0049)
WITNEIG			ß=0.12 (0.0304)			ß=0.13 (0.0243)	ß=0.16 (0.0000)	ß=0.14 (0.0145)					ß=0.21 (0.0001)
WITHOME											ß=0.12 (0.0236)		ß=0.29 (0.0000)
GENDER (1=female)	ß=0.20 (0.0001)	ß=0.18 (0.0010)		ß=0.21 (0.0001)	ß=0.13 (0.0162)	ß=0.23 (0.0000)		ß=0.22 (0.0000)	ß=0.17 (0.0009)				ß=-0.14 (0.0018)
NATIVE (1=yes)													
WHITE (1=yes)	ß=-0.22 (0.0000)	ß=-0.19 (0.0002)	ß=-0.11 (0.0387)	ß=-0.11 (0.0323)	ß=-0.20 (0.0001)	ß=-0.18 (0.0006)		ß=-0.19 (0.0001)	ß=-0.15 (0.0016)	ß=-0.14 (0.006)			
OTHER RACE (1=yes)							ß =0.18 (0.0005)						
AGE	ß =0.10 (0.0392)				ß =0.13 (0.0154)								
GRADE LEVEL						ß =0.12 (0.0181)							
R^2	0.215	0.155	0.084	0.142	0.129	0.194	0.137	0.147	0.206	0.092	0.101	0.05	0.309
Adjusted R^2	0.201	0.142	0.076	0.132	0.116	0.177	0.129	0.137	0.194	0.084	0.093	0.05	0.301
F	15.49	12.49	10.49	14.11	10.09	11.66	18.12	14.77	17.69	11.57	12.80	9.39	38.29
P	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000

( )=p value

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COMING EVENTS
ACTIVITÉS À VENIR

To be assured of publication in the next issue, announcements should be received by **July 15, 1999** and valid as of **August 30, 1999.** Announcements received after **July 15, 1999** will be inserted as time and space permit.
Pour être publiés dans le prochain numéro, les avis doivent parvenir à la rédaction avant le **15 juillet 1999** et être valables à compter du **30 août 1999.** Les avis reçus après le **15 juillet 1999** seront insérés si le temps et l'espace le permettent.

40th Annual Institute on Addiction Studies
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Concerns Canada
Tel: 416-293-3400 E-mail: concerns@sympatico.ca

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Contact:
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13th Annual National Conference of Family Mediation Canada co-hosted with The Ontario Association for Family Mediation
20-24 October 1999 Toronto, ON
Contact:
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Co-hosted by BC/Yukon Society of Transition Houses and the London Family Court Clinic
27-30 October 1999 Vancouver, BC
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The Dawn of a New Era: Challenges for Baby Boomers
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The Early Years: Supporting Families & Young Children
Sponsored by Interprofessional Continuing Education, The University of British Columbia
27-29 January 2000 Vancouver, BC
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également nécessaires aux organismes bénévoles pour défendre l'élaboration de leurs politiques auprès du public et des décideurs.

Pour relever les défis posés à l'amélioration de la surveillance de la santé au Canada, il sera important d'avoir des objectifs précis et de travailler en collaboration. Avoir des objectifs précis est nécessaire pour affecter les ressources limitées aux questions d'importance nationale s'agissant de la santé publique et aux besoins des principaux utilisateurs des données produites par la surveillance de la santé. La collaboration est indispensable si l'on veut améliorer et partager de façon efficace et efficiente les données sur la santé. Espérons que nous tous, qui travaillons dans le domaine de la surveillance de la santé publique, saurons relever ce défi.

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