

Health and Use of Health Services of Children Exposed to Violence in Their Families

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ABSTRACT

Objective: To obtain baseline data on the health status and use of health services of children exposed to violence in their families.

Method: The study used data from the first cycle of the National Longitudinal Survey of Children and Youth (1994/95). According to parental reports, 8.6% of children (n = 1,648; representing 329,657 children) aged 2 to 11 years witnessed some violence in their families. They were compared to children who were reported to have never witnessed any violence at home.

Findings: Children exposed to domestic violence had lower health status and more conditions or health problems which limited their participation in normal age-related activities than children in non-violent families. Despite this, they had no more contacts with family practitioners in the previous year and even fewer contacts with pediatricians than comparison children. They did, however, have more contacts with "other medical doctors," public health nurses, child welfare workers, and other therapists than comparison children. In addition, more child witnesses regularly used prescription medication than children not exposed to violence at home.

Conclusion: These baseline findings suggest that exposure to domestic violence has an adverse impact on children's health and use of health services. As future cycles become available, these children will be followed to determine the long-term impact on these outcomes.

In the last 20 years, considerable evidence has accumulated regarding the harmful effects of children's exposure to domestic violence. Evidence suggests that children exposed to violence in their families have more emotional and behavioural problems than non-exposed children.¹⁻⁴ While individual children vary in their symptom severity, problems in the clinical range are seen at far greater rates in these children than in children from non-violent families. Exposure to domestic violence also has an adverse influence on children's social competence and school achievement.

Although research has made important contributions to empirical knowledge, most research has focussed on children's social, emotional, and behavioural problems.⁵⁻¹⁹ Relatively few studies have examined a broader range of indicators of the health status of this population to further advance our understanding of the immediate or long-term impact of witnessing violence on children's overall health and well-being. However, the few studies that have examined health outcomes have shown that children's health is compromised.²⁰⁻²⁵ Attala and Summers reported that preschool children living in a shelter for battered women scored significantly lower on a measure of physical health status than other children in the same age range, region, and social strata.²⁰ Kérouac and her associates found that shelter children had more diagnosable health problems than provincial norms (Quebec), and were absent from school more often than the national average (10 days vs 6.5 days in the previous year).²¹ Despite these facts, the majority of mothers perceived that their children enjoyed normal health.

The physical symptoms commonly reported for these children are allergies and respiratory infections, gastrointestinal disorders (e.g., vomiting, diarrhea), sleep disturbances (e.g., insomnia, nightmares) as well as somatic complaints (e.g., stomach-aches, headaches).²⁰⁻²⁶ There are no data on the use of health services for Canadian children, but researchers found that children in violent families in one health management organization in the United States used health services six to eight times more often than comparison children.²⁷

Studies on the health implications of children's exposure to domestic violence

La traduction du résumé se trouve à la fin de l'article.

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are not only few in number, most were conducted on children residing in shelters for battered women.²⁰⁻²⁷ These samples may not represent children exposed to domestic violence in the general population and the problems noted in these select children may well reflect the situational stressors of the crisis period.²⁸

Thus, the objective of this study was to build on and extend earlier work by examining the health status and the use of health services in children exposed to domestic violence in a representative sample of children. The study is based on data from the first cycle of the National Longitudinal Survey of Children and Youth.²⁹ The survey is the first in Canada to monitor the development and well-being of children from infancy to adulthood and the first to inquire about children witnessing violence at home (i.e., seeing adults or teenagers in their house physically fighting, hitting, or otherwise trying to hurt others). Findings of this analysis will provide baseline data on which to compare the long-term effects on the health and use of health services of children in violent families in future cycles.

METHOD

Sample

In total, 22,831 children aged newborn to 11 years participated in the first cycle of the survey (response rate = 86%) collected between November 1994 and June 1995.²⁹ The person most knowledgeable about the child (PMK), typically the mother (91.3%), provided all the information. This study is based on 17,673 children aged 2 to 11 years who lived with a parent. According to parental reports, 8.6% of children witnessed some violent behaviour in their families ($n = 1,648$ child witnesses; representing 329,657 children). They were compared to children who were reported to have never witnessed any violence in their families ($n = 16,025$ non-witnesses; representing 3,501,935 children).

Measures

Health Outcomes

- **General Health Status.** A single item, "In general, would you say your child's health is excellent, very good, good, fair or poor?" was used to assess general health status. This measure is a reliable

TABLE I

Socio-Demographic Characteristics of Child Witnesses and Non-Witnesses

	Child Witnesses† %	Non-Witnesses‡ %
Child age** (years)		
2-3	14.1	20.6
4-7	36.5	40.2
8-11	49.4	39.2
Child gender*		
Boys	54.6	50.8
PMK's age** (years)		
15-24	4.0	2.7
25-29	12.9	13.1
30-34	27.9	32.3
35-39	28.7	32.4
≥ 40	26.5	19.5
PMK's education**		
Less than high school	21.5	15.5
Graduated high school	16.2	18.3
Beyond high school	32.2	28.6
College or university	30.1	37.6
Family structure**		
Two-parent	73.3	84.6
One-parent	26.7	15.4
Family size**		
No siblings	11.8	16.6
One sibling	34.1	49.9
Two siblings	34.3	23.5
Three or more siblings	19.8	10.0
Family income **		
Lowest	3.4¶	2.2
Lower-middle	26.0	14.4
Middle	37.3	31.2
Upper-middle	22.0	35.9
Highest	11.3	16.3

Note: Percentages in table may not add to 100 due to rounding

† Weighted percentages based on $n = 1,648$ children

‡ Weighted percentages based on $n = 16,025$ children

§ Person most knowledgeable about child

|| Families are classified as middle income when the household income is \$15,000 to \$29,999 for one or two persons, \$20,000 to \$39,999 for three to four persons, or \$30,000 to \$59,999 for five or more persons

¶ Estimate less reliable due to high sampling variability

* $p < 0.01$; ** $p < 0.001$

and valid measure of self-reported health in adults, positively correlated with clinical assessments, and a major predictor of morbidity, mortality, and health services utilization.^{30,31}

- **Functional Health Status.** Functional health status was assessed using the Health Utility Index (HUI), an index that describes overall functional health based on eight attributes: vision, hearing, speech, mobility, dexterity, cognition, emotion, and pain.³² The single summary measure, which ranges from 0 (highly impaired) to 1 (high overall functioning), has been used to monitor the health of clinical and general populations. Investigations of the psychometric properties of the HUI have shown that it meets generally accepted standards. The HUI discriminates between healthy and medically-compromised subjects in both adult and pediatric populations.^{33,34} Test-retest reliability was reported as 0.77 using the intraclass correlation coefficient.³⁵

- **Long-term Health Conditions.** Parents were asked whether their child had any health conditions or problems which prevented or limited their participation in school, at play, or in any other activity normal for a child of their age. Response choices were "yes" or "no" (YES/NO).
- **Injuries.** Parents reported whether their child was injured in the past 12 months (YES/NO).

Use of Health Services

- **Contacts with Professionals.** Parents reported the frequency of contacts in the previous year with the following professionals: general practitioners, pediatricians, other medical doctors, public health nurses, dentists, child welfare workers, and other therapists (e.g., social workers) trained to provide counselling.
- **Overnight Hospital Stays.** Parents were asked if their child had any overnight hospitalizations in the previous year (YES/NO).

TABLE II
Health Status of Child Witnesses and Non-Witnesses

	Child Witnesses† %	Non-Witnesses‡ %
General health status**		
Excellent	50.8	60.9
Very good	32.1	27.6
Good	12.6	10.0
Fair/Poor	4.5	1.5
Conditions/health problems which limit activities**	7.4	3.8
Injured in previous year	12.3	11.1
	Mean (SD)	Mean (SD)
Functional health status ^{§*}	0.95 (0.09)	0.97 (0.06)

Note: Percentages in table may not add to 100 due to rounding

† Weighted percentages based on n = 1,648 children

‡ Weighted percentages based on n = 16,025 children

§ Based on children 4 to 11 years

|| Estimate less reliable due to high sampling variability

*p < 0.01; **p < 0.001

TABLE III
Use of Health Services for Child Witnesses and Non-Witnesses

	Child Witnesses† %	Non-Witnesses‡ %
Contacts with professionals in the last year		
General practitioners		
No contacts	30.0	30.5
1 to 6 contacts	64.2	63.4
More than 6 contacts	5.8	6.1
Pediatricians**		
No contacts	78.4	74.2
1 to 6 contacts	19.5	24.5
More than 6 contacts	2.1 [§]	1.3
Other medical doctors*		
No contacts	73.4	76.5
1 to 6 contacts	26.2	22.9
More than 6 contacts	—	0.6
Public health nurses**		
No contacts	84.6	88.8
1 to 6 contacts	15.2	11.1
More than 6 contacts	—	—
Dentists		
No contacts	31.6	32.0
1 to 6 contacts	67.0	66.4
More than 6 contacts	1.5 [§]	1.6
Child welfare workers**		
No contacts	96.3	98.6
1 to 6 contacts	2.4	1.1
More than 6 contacts	1.3 [§]	0.3 [§]
Other therapists (e.g., social workers)**		
No contacts	91.3	94.1
1 to 6 contacts	5.2	3.9
More than 6 contacts	3.5 [§]	2.0 [§]
Overnight hospital stays	4.3 [§]	4.3
Regular use of prescription medication*	12.6	9.8

Note: Percentages in table may not add to 100 due to rounding

† Weighted percentages based on n = 1,648 children

‡ Weighted percentages based on n = 16,025 children

§ Estimate less reliable due to high sampling variability

— Amount too small to be expressed

*p < 0.01; **p < 0.001

- Regular Use of Prescription Medication. Parents reported whether their child used prescription medication on a regular basis (YES/NO).

DATA ANALYSIS

Descriptive statistics were calculated for all socio-demographic and outcome measures weighted to better reflect the population of children in the ten provinces.²¹

Chi-square tests of homogeneity (and independence) were used to test the distribution (and association) between witness status (child witnesses vs non-witnesses) and variables measured on a categorical scale while Mann-Whitney tests were used to test the distributions of variables measured on a continuous scale. Non-parametric tests were used rather than their more powerful parametric counterparts because the assumptions of normality and

homogeneity of variance were violated. In all inferential analyses, unit weights, rescaled to yield the proper sample size, were applied to subject responses to reduce any potential bias in the variance estimates.²² All statistical tests used a conventional but stringent alpha (0.01) to partially account for the larger variance estimates that would have been obtained if full account had been taken of the survey design.

FINDINGS

Demographic characteristics of child witnesses and non-witnesses

Table I reports the demographic characteristics of each group. Chi-square tests showed significant relationships between witness status and all socio-demographic variables. There were more older children and boys among child witnesses. More child witnesses lived with parents who were either young (15-24 years) or older (40 years and over). Although over 60% of children in both groups lived with parents who had some education beyond high school, more child witnesses lived with parents who had less than a high school education and fewer lived with a university-educated parent. While the vast majority of children in both groups lived in two-parent families, and in families classified as middle or upper-middle income, more child witnesses lived in one-parent and lower-middle or middle income families than comparison children. Finally, relative to non-witnesses, more child witnesses had two or more siblings and fewer were only children.

Health status and use of health services

As shown in Table II, the majority of children in both groups enjoyed very good to excellent health; however, fewer child witnesses were reported to have excellent health than non-witnesses ($\chi^2 = 120.78$, $p < 0.001$). In addition, significantly more child witnesses had health conditions or problems which affected their participation in developmentally appropriate activities ($\chi^2 = 46.87$, $p < 0.001$). There was no significant association between witness status and the percentage of children injured in the previous year. Although child witnesses scored only slightly lower on functional health status than non-witnesses, the dif-

ference was statistically significant ($Z = -9.68, p < 0.001$).

There were no significant differences between the groups in the number of visits to family practitioners or dentists (Table III). Child witnesses had fewer contacts with pediatricians ($\chi^2 = 23.09, p < 0.001$) but more contacts with other medical doctors ($\chi^2 = 9.20, p < 0.01$), public health nurses ($\chi^2 = 23.52, p < 0.001$), child welfare workers ($\chi^2 = 50.97, p < 0.001$) and other therapists ($\chi^2 = 20.82, p < 0.001$) than non-witnesses. More child witnesses regularly used prescription medication than non-witnesses ($\chi^2 = 11.71, p < 0.001$). There was no difference in overnight hospital stays.

DISCUSSION

In the present study, the health status and use of health services of children exposed to domestic violence were examined. Results showed that these children generally fared less favourably on several measures of health than children of non-violent families. According to parental reports, child witnesses had lower general health status and more health conditions or problems which limited their normal activities than comparison children. There was also a significant difference in children's functional health status; however, since the scores were similar in both groups (0.95 vs 0.97), the finding may be more a function of the large sample size and too small to be clinically meaningful. On the other hand, the trend towards lower functional health status among child witnesses is supported by the other findings and does suggest a need to monitor these children in future cycles to determine if this trend persists over time. Overall, these findings suggest that the stress associated with living in violent environments may have consequences which extend beyond children's social, emotional, and behavioural outcomes to more general aspects of their health and well-being.

Despite child witnesses' lower health status, they did not have more contacts with family practitioners, had even fewer contacts with pediatricians than non-witnesses, but they did have more contacts with other medical doctors. It is possible that parents were referring to specialists when they reported contacts with other doctors: how-

ever, it is also possible that parents were referring to doctors in walk-in medical clinics or emergency departments. Parents in violent families may be reluctant to take their children to physician practices where there is more likelihood that domestic violence will be detected. This is somewhat problematic given that there is less potential for physicians in these facilities to become familiar with their patient's family situation and, thus, to suspect that coping with violence may be underlying some children's problems.

The findings have a number of implications. First, all health practitioners need to be aware of the adverse effects on children's health of witnessing violence. Second, clinical assessment of children in all medical facilities should routinely include questions about the existence of violence at home. Finally, violence was not the only risk factor in these children's lives. Relative to non-witnesses, child witnesses were more socially and economically disadvantaged. This is particularly noteworthy because the developmental risk literature indicates that the presence of multiple risk factors increases the risk for maladjustment exponentially.³⁶ Children who experience both chronic family dysfunction and other stressors are at substantially greater risk for maladaptive outcomes.

Some study limitations warrant discussion. First, the number of children reported to have witnessed violence is likely underestimated. Domestic violence is generally underreported.³⁷ Further, the survey excluded children living in the Yukon and Northwest Territories, children living in institutions for more than six months, and Aboriginal children living on reserves. Yet, domestic violence is known to be more prevalent in Aboriginal families and in families in remote northern communities.³⁸ Also, children may have been institutionalized for mental health problems that were associated with coping with this adversity. Second, the inability to identify abused children is an important limitation because different forms of violence generally co-exist in families.³⁹⁻⁴³ Finally, because this study is based on cross-sectional data, a causal relationship between witnessing violence and health effects cannot be inferred. As future cycles become available, these children will be followed to determine the long-term impact of witnessing

violence on their health and use of health services.

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RÉSUMÉ

Objectif : Obtenir des données de référence sur l'état de santé des enfants exposés à violence dans leur famille et sur leur recours aux services de santé.

Méthode : Nos données provenaient du premier cycle de l'Enquête longitudinale nationale sur les enfants et les jeunes (1994-1995). Selon les indications des parents, 8,6 % des enfants de 2 à 11 ans (n=1 648, représentant 329 657 enfants) auraient été témoins de violence au foyer. Nous les avons comparés aux enfants n'ayant jamais vécu d'épisodes de violence au foyer selon l'Enquête.

Constatations : Les enfants exposés à la violence au foyer avaient un moins bon état de santé et présentaient davantage de troubles ou de problèmes de santé qui limitaient leur participation aux activités normales des enfants de leur âge vivant dans des familles sans violence. Malgré cela, leurs contacts avec les médecins de famille au cours de l'année précédente n'avaient pas été plus nombreux que ceux des autres enfants, et leurs contacts avec les pédiatres, encore moins. Ils avaient cependant eu plus de contacts avec « d'autres médecins », des infirmiers et infirmières hygiénistes, des responsables de la protection de la jeunesse et autres thérapeutes. En outre, les enfants témoins de violence étaient plus nombreux à consommer régulièrement des médicaments sur ordonnance que les enfants non exposés à la violence au foyer.

Conclusion : Ces résultats de départ laissent entendre que l'exposition à la violence familiale a un effet défavorable sur la santé des enfants et leur recours aux services de santé. À mesure que seront publiés de nouveaux cycles de l'étude, nous suivrons ces enfants pour déterminer les incidences à long terme de ces résultats.