



# Slapping and spanking in childhood and its association with lifetime prevalence of psychiatric disorders in a general population sample

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## Abstract

**Background:** Little information is available in Canada about the prevalence of and outcomes associated with a history of slapping and spanking in childhood. The objectives of this study were to estimate the prevalence of a history of slapping or spanking in a general population sample and to assess the relation between such a history and the lifetime prevalence of psychiatric disorders.

**Methods:** In this general population survey, a probability sample of 9953 residents of Ontario aged 15 years and older who participated in the Ontario Health Supplement was used to examine the prevalence of a history of slapping and spanking. A subgroup of this sample ( $n = 4888$ ), which comprised people aged 15 to 64 years who did not report a history of physical or sexual abuse during childhood, was used to assess the relation between a history of slapping or spanking and the lifetime prevalence of 4 categories of psychiatric disorder. The measures included a self-administered questionnaire with a question about frequency of slapping and spanking during childhood, as well as an interviewer-administered questionnaire to measure psychiatric disorder.

**Results:** The majority of respondents indicated that they had been slapped or spanked, or both, by an adult during childhood "sometimes" (33.4%) or "rarely" (40.9%); 5.5% reported that this occurred "often." The remainder (20.2%) reported "never" experiencing these behaviours. Among the respondents without a history of physical or sexual abuse during childhood, those who reported being slapped or spanked "often" or "sometimes" had significantly higher lifetime rates of anxiety disorders (adjusted odds ratio [OR] 1.43, 95% confidence interval [CI] 1.04–1.96), alcohol abuse or dependence (adjusted OR 2.02, 95% CI 1.27–3.21) and one or more externalizing problems (adjusted OR 2.08, 95% CI 1.36–3.16), compared with those who reported "never" being slapped or spanked. There was also an association between a history of slapping or spanking and major depression, but it was not statistically significant (adjusted OR 1.64, 95% CI 0.96–2.80).

**Interpretation:** There appears to be a linear association between the frequency of slapping and spanking during childhood and a lifetime prevalence of anxiety disorder, alcohol abuse or dependence and externalizing problems.

Spanking remains one of the most hotly debated issues among professionals working with children and families and among the general public.<sup>1</sup> Whether or not to spank and, if so, under what conditions, how and at what age are questions that have been the focus of several recent articles,<sup>2</sup> including a policy statement from the Canadian Pediatric Society.<sup>3</sup> Yet most of our information about the prevalence of spanking and associated outcomes arises from studies in the United States. Such research suggests that physical punishment is common. Using data from a 1985 US national survey, Straus<sup>4</sup> found that about 90% of children were hit by their parents at some time, most commonly during the preschool years. A 1995 Gallup Poll based on parental reports indicated that 74% of children less than 5 years old were hit or slapped by their parents.<sup>5</sup> In another US study, 80% of randomly selected adults reported being spanked as a child.<sup>6</sup>

## Evidence

## Études

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Researchers have repeatedly highlighted the ambiguity that exists for the expressions “physical punishment” and “corporal punishment as well as for the term “spanking.”<sup>7,8</sup> For some, corporal punishment or physical punishment includes physical behaviour used for discipline that is not severe enough to be considered physical abuse. Others include abusive behaviours such as punching and beating in their definition of corporal or physical punishment. Straus<sup>8</sup> emphasized that spanking to some means repeated slapping on the buttocks, whereas for many contemporary Americans it means any slapping or hitting. For the purposes of our study, the vocabulary used in referring to other studies reflects the language used in the original citation.

Most studies have measured spanking from the perspective of the person committing the act, based generally on parents’ recall of their discipline behaviour.<sup>9</sup> Few surveys have gathered information about the experiences of those exposed to physical punishment, particularly using general population samples.

Literature on the links between spanking (and other types of physical punishment) and adverse outcomes has been conflicting. Some authors emphasized the associations between physical punishment in childhood and one or more of a range of negative outcomes, including aggression, antisocial behaviour, depression, adult violence and other crime.<sup>10-12</sup> Others highlighted the lack of good evidence for negative outcomes resulting from “nonabusive” physical punishment, including spanking.<sup>13,14</sup> Most studies explored the association between physical punishment and behaviour using samples of young children.<sup>13</sup>

A few studies examined the relation between retrospective reports of physical punishment and emotional or behavioural problems in adults.<sup>15-19</sup> However, the samples typically were not representative of the general population for a variety of reasons, including use of study samples restricted by sex or age<sup>15,16</sup> or a focus on a specific segment of the population such as college students.<sup>17,18</sup> In addition, some studies included punitive experiences that reached the threshold of physical abuse.<sup>15-17,19</sup> For example, in Fergusson and Lynskey’s longitudinal study of a cohort of New Zealand respondents,<sup>16</sup> the measure of physical punishment included being treated “in a harsh and abusive way.” Similarly, in a case-control study involving adult respondents in the St. Louis Epidemiological Catchment Area Study, the analyses focused on the relation between disorder and harsh discipline, a category that included experiences such as beatings.<sup>19</sup>

Straus<sup>8</sup> examined the relation between self-reports of corporal punishment and depressive symptoms in adulthood using a nationally representative sample of American couples; however, the question focused on experiences of punishment during adolescence. Corporal punishment was defined as slapping or hitting; respondents were asked to think about the frequency of these experiences in a 1-year period when “this happened the most.” Increased rates of corporal punishment during adolescence were associated with an increased probability of having depressive symptoms in both

men and women. Unfortunately, as Straus emphasized, it was not possible to exclude from the sample respondents who also experienced physical abuse during childhood. When examining the relation between spanking or slapping and psychiatric disorder, it is essential to control for the confounding of physical punishment with abuse.

In our study we used data from the Ontario Health Supplement (OHSUP) to present findings on the prevalence of slapping and spanking during childhood as recalled by OHSUP participants. We also examined the relation between these behaviours and the lifetime prevalence of 4 categories of psychiatric disorder. The OHSUP is the largest survey to date to examine retrospective reports of slapping and spanking during childhood in a general population sample.<sup>20-22</sup> This information was collected along with data about child physical and sexual abuse;<sup>22</sup> however, it was analysed separately because of the widespread debate that continues in Canada and elsewhere about whether slapping and spanking fall within the spectrum of experiences classified as physical abuse.<sup>12</sup>

## Methods

A comprehensive population health survey known as the Ontario Health Survey (OHS) was carried out in 1990 and sponsored by the Ontario Ministry of Health. The aim of the OHS was to collect information about the distribution and determinants of the physical health of Ontario residents. The OHSUP was conducted as a supplement to the OHS to provide data about the epidemiology of psychiatric disorders and their correlates. Ethics approval for the OHSUP was received from the Chedoke-McMaster Hospitals Ethics Review Committee.

For the OHSUP, a probability sample of OHS participants selected from the second half of the data collection period was re-interviewed between November 1990 and March 1991. The survey methodology is described in detail elsewhere.<sup>20</sup> Excluded from the OHS were homeless people, people in institutions, foreign service personnel, First Nations people living on reserves and people residing in extremely remote locations. The OHSUP respondents were aged 15 years or more, and one person was selected randomly from each household that participated in the OHS. Of 14 758 respondents eligible for the OHS, 13 002 participated. Of this latter group, 9953 (76.5%) took part in the OHSUP; the net response, taking into account sample loss in the OHS, was 67.4% (9953/14 758). Based on OHS data, nonrespondents tended to be male, to be older, to live in urban settings, to have been born outside Canada, to have fewer health problems and to speak a language other than English at home. However, on key measures of health status, employment, income level and marital status, there were few differences between the respondents and nonrespondents.<sup>20</sup> Data reporting on the prevalence of slapping and spanking are based on the entire sample of 9953.

For our analyses of the relation between reports of slapping or spanking and 4 categories of psychiatric disorder, we excluded people over 64 years of age ( $n = 1837$ ), people who reported a history of physical or sexual abuse or both ( $n = 2419$ ), respondents who did not answer the abuse questions ( $n = 395$ ) and respondents with any missing information on the relevant variables ( $n = 414$ ). Participants aged 65 and older were administered a shortened diagnostic interview because of concern about response burden for older respondents.<sup>21</sup> People reporting a history of physical or sex-



ual abuse were excluded to remove the confounding effects of those experiences from the analyses. (Spanking was not included as a criterion for physical abuse. The categories of physical and sexual abuse are discussed in the "Measurements" section.) The final sample available for analyses of the relation between exposure to slapping or spanking and psychiatric disorder was 4888.

The University of Michigan Composite International Diagnostic Interview (UM-CIDI), a revised version of the CIDI,<sup>23</sup> was used to measure the prevalence of the following 4 psychiatric disorders, as described in the *Diagnostic and Statistical Manual of Mental Disorders*, third edition, revised:<sup>24</sup> anxiety disorder (including one or more of social phobia, simple phobia, agoraphobia, panic disorder and generalized anxiety disorder); major depressive disorder; alcohol abuse or dependence; and externalizing problems that included one or more of illicit drug abuse or dependence and antisocial behaviour. (The last condition consisted of conduct disorder in those 15–17 years of age, and antisocial personality disorder or adult antisocial behaviour among those 18–64 years of age.) The UM-CIDI was administered by lay interviewers, most of whom had extensive interviewing experience in previous community surveys. The World Health Organization had carried out field trials of the CIDI and demonstrated good test–retest reliability, interrater reliability and validity of most psychiatric diagnoses except psychoses.<sup>23</sup>

A brief self-administered questionnaire, the Child Maltreatment History Self-Report, was used to collect information about experiences of being physically or sexually abused by an adult during childhood.<sup>22</sup> Physical abuse was defined as exposure to acts ranging from being pushed, grabbed or shoved to being physically attacked. The definition of sexual abuse ranged from repeated indecent exposure to being sexually attacked. Within this section was a question about being slapped or spanked that was not included in the definition of physical abuse. The stem question read "When you were growing up, how often did any adult do any of the things on this list to you: often, sometimes, rarely, or never?" The item was phrased "slapped or spanked you." A detailed description of the instrument is available in another publication.<sup>22</sup>

Although most of the interview was conducted using a face-to-face format, the Child Maltreatment History Self-Report was completed by respondents in private and returned in a sealed envelope to the interviewer. This approach was used to protect interviewer liability and respondent confidentiality.<sup>20</sup> Before the start of the interview, verbal consent was obtained. After completion of the questionnaire all participants were given a list of local

mental health resources that they could contact if necessary.

Prevalence estimates of slapping and spanking and of the 4 categories of psychiatric disorder were weighted to obtain unbiased point estimates, based on the probability of selection in the sample.<sup>20</sup> The prevalence estimates were calculated using SUDAAN for Windows (release 7.0, Research Triangle Institute, Research Triangle Park, NC), and the remaining analyses were done using SPSS-PC for Windows (version 8.0, SPSS Inc., Chicago). In the OHSUP, sampling weights were rescaled for the analysis in SPSS-PC so that the average weight was 1.0. Furthermore, the weights were divided by 2.2 to account for the design effect in the OHSUP. This reduced the effective sample size for analyses so that it reflected more accurately the statistical power available in the study.<sup>20</sup>

Data from participants who responded "often" or "sometimes" to the question about slapping and spanking were combined to ensure sufficient power for the analysis of the relation between such exposure and psychiatric disorder. To determine whether lifetime prevalence rates of the 4 categories of psychiatric disorder showed linear increases by frequency of reported slapping and spanking, a  $\chi^2$  test for linear trend was performed. Crude odds ratios and 95% confidence intervals were derived from logistic regression models predicting each of the 4 categories of psychiatric disorder based on the following slapping and spanking variables: "rarely" compared with "never," and "often" or "sometimes" compared with "never." To assess the extent to which associations between reported slapping and spanking could be accounted for by sex, age, current family income and level of parental education, adjusted odds ratios were derived from logistic regression models using forward stepwise methods. Significant covariates were retained in the model, and nonsignificant covariates were eliminated.

## Results

Findings on the prevalence of a history of slapping or spanking, or both, during childhood as recalled by the OHSUP participants are summarized in Table 1. After exclusion of respondents 15–24 years old, all of whom were not yet through the period of risk for exposure to these experiences "while growing up," we found an inverse association between age and slapping and spanking: respondents 65 years of age and older reported the highest rates of

**Table 1: Reported frequency of being slapped or spanked, or both, during childhood as recalled by 9953 people who participated in the Ontario Health Supplement**

Characteristic	Reported frequency of slapping or spanking: % of respondents (and 95% CI)			
	Never	Rarely	Sometimes	Often
<b>Age, yr</b>				
15–24	18.6 (16.0–21.3)	46.6 (43.2–50.0)	30.8 (27.7–34.0)	3.9 (2.9–5.0)
25–44	16.0 (14.0–18.0)	41.7 (39.1–44.2)	35.7 (33.4–38.0)	6.6 (5.4–7.9)
45–64	20.5 (17.6–23.5)	40.0 (36.0–43.9)	33.4 (29.7–37.2)	6.1 (4.5–7.6)
≥ 65	36.1 (31.9–40.3)	31.9 (28.3–35.5)	29.0 (25.0–33.0)	3.1 (2.0–4.2)
<b>Sex</b>				
Male	16.4 (14.7–18.1)	41.5 (38.9–44.1)	36.7 (34.4–39.1)	5.3 (4.3–6.4)
Female	23.9 (21.9–25.8)	40.3 (38.1–42.5)	30.1 (28.1–32.1)	5.7 (4.8–6.7)
Total	20.2 (18.9–21.6)	40.9 (39.2–42.6)	33.4 (31.7–35.0)	5.5 (4.8–6.2)

Note: CI = confidence interval.



“never” being slapped or spanked and the lowest rates of “often” being slapped or spanked.

Significantly more female than male respondents reported “never” being slapped or spanked by an adult while growing up (23.9% v. 16.4%) (Table 1). Similar proportions of males and females indicated that they had been slapped or spanked “rarely” (41.5% and 40.3% respectively) or “often” (5.3% and 5.7% respectively), whereas significantly more males than females responded “sometimes” (36.7% v. 30.1%).

Findings on the relation between the reported frequency of slapping or spanking among respondents 15–64 years of age without a history of child abuse and the lifetime prevalence of the 4 categories of psychiatric disorder are summarized in Table 2. The lifetime prevalence estimates for the 4 categories were highest among respondents who reported being slapped or spanked “often” or “sometimes” and lowest among those who reported “never” experiencing this behaviour. The linear trend analyses showed statistically significant associations between increasing frequency of reported slapping or spanking and increasing rates of lifetime psychiatric disorder. Only the association with major depression did not reach the statistically significant level of 0.05; however, there was a trend in this direction ( $p = 0.08$ ).

Table 3 presents the crude and adjusted odds ratios from

the logistic regression analyses, the reference group being those who reported “never” being slapped or spanked. The strongest associations were between exposure to slapping or spanking and alcohol abuse or dependence and one or more externalizing problems. Positive associations were also found for anxiety disorders and major depression, but they were weaker and, for major depression, not statistically significant. Adjustment for sex, age, current family income and parental education minimally reduced the strength of association for some disorders and increased it for others, but not substantially.

## Interpretation

Data from this Ontario community survey indicate that retrospective self-reports of slapping or spanking during childhood are common and that there is a linear association between the reported frequency of these experiences and lifetime prevalence of psychiatric disorder. The association is weak for major depression and anxiety, and stronger for alcohol abuse or dependence and externalizing problems.

The OHSUP is unique in that the relation between reported slapping or spanking and psychiatric disorder could be examined without the confounding effects of reported physical and sexual abuse. At the same time, this aspect of

**Table 2: Lifetime prevalence of psychiatric disorders by reported frequency of being slapped or spanked, or both, during childhood**

Disorder	Reported frequency of slapping or spanking; % of respondents with disorder			$\chi^2$ value (and $p$ value)	$\chi^2$ value for linear association (and $p$ value)
	Never $n = 996$	Rarely $n = 2455$	Sometimes/often $n = 1437$		
Anxiety	16.3	18.8	21.3	4.32 (0.12)	4.32 (0.038)
Major depression	4.6	4.8	6.9	4.02 (0.13)	3.11 (0.08)
Alcohol abuse or dependence	5.8	10.2	13.2	16.08 ( $< 0.001$ )	15.74 ( $< 0.001$ )
$\geq 1$ externalizing problems	7.5	12.6	16.7	20.28 ( $< 0.001$ )	20.16 ( $< 0.001$ )

**Table 3: Relation between reported frequency of slapping or spanking, or both, during childhood and lifetime prevalence of psychiatric disorders\***

Disorder	Crude OR (and 95% CI)		Adjusted OR† (and 95% CI)	
	Rarely slapped or spanked	Sometimes/often slapped or spanked	Rarely slapped or spanked	Sometimes/often slapped or spanked
Anxiety	1.19 (0.89–1.59)	1.38 (1.01–1.89)	1.20 (0.89–1.60)	1.43 (1.04–1.96)
Major depression	1.02 (0.63–1.76)	1.51 (0.89–2.58)	1.10 (0.66–1.85)	1.64 (0.96–2.80)
Alcohol abuse or dependence	1.83 (1.18–2.84)	2.46 (1.56–3.88)	1.57 (1.00–2.66)	2.02 (1.27–3.21)
$\geq 1$ externalizing problems	1.79 (1.21–2.66)	2.48 (1.65–3.73)	1.53 (1.02–2.30)	2.08 (1.36–3.16)

Note: OR = odds ratio.

\*Reference group = respondents who reported “never” experiencing slapping or spanking during childhood.

†Adjusted for sex, age, current family income and parental education.



the survey precludes direct comparison of the OHSUP findings with other retrospective surveys in which physical abuse was included under the broader heading of physical punishment. Other surveys focused on the relation between spanking by parents and emotional or behavioural problems. The OHSUP simply asked about slapping or spanking by any adult; no contextual information (e.g., in a situation of discipline) was included. Questions in the Child Maltreatment History Self-Report questionnaire used in the OHSUP did not allow linking of specific acts (spanking and slapping) with those who committed the acts.

The strengths and limitations of the OHSUP have been discussed in detail elsewhere.<sup>22</sup> It has a large representative sample and contains a wide array of psychiatric outcomes for studying the correlates of childhood experiences. However, measures of these experiences are taken retrospectively, and no opportunity exists to corroborate this information from independent sources.

Limitations of design and measurement in this study require caution in interpreting the findings. For example, available research suggests that corporal punishment peaks at ages 3–4 years<sup>4</sup> and that the ability to recall events that happened before age 5 is limited.<sup>25</sup> Therefore, respondents may not have recalled episodes of being slapped or spanked that occurred during the preschool years, the time of greatest risk for experiencing this behaviour. For this reason, the OHSUP findings may underestimate the prevalence of slapping and spanking. In addition, the cross-sectional nature of the survey precludes comment on the causal role of slapping and spanking for psychiatric disorder. The association between reported slapping or spanking and psychiatric disorder could be the result of behavioural continuity for childhood problems that preceded exposure to these experiences; it could be the result of other confounding variables unaccounted for in the present study; or it could indicate that exposure to slapping or spanking increases the risk for adult psychopathology.

Further research using a longitudinal, prospective design and a sample representative of the general population is needed to understand the nature of this association. The National Longitudinal Survey of Children and Youth (NLSCY),<sup>26</sup> an ongoing study of the development and well-being of Canadian children, could provide an excellent opportunity to examine these issues further, but only if data about child maltreatment were collected. Currently the NLSCY does not include self-report questions about child maltreatment. However, because data are collected at multiple points in time, the opportunity exists to add such questions in the future. This information is essential to understand the impact of physical punishment and maltreatment during childhood on mental health problems later in life.

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