

Full Length Research Paper

Child maltreatment as predictors of suicidal ideas and attempts in a general female population

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Child maltreatment has been investigated as a suicide risk for decades. The aim of this study was to evaluate the prevalence of women from the general population with suicidal ideas or attempts and add to the actual literature a larger perspective of different types of maltreatment in regards to experiences such as neglect, psychological, physical or sexual abuse, and its association to risk factor for suicide ideas and attempts. Data were collected during a telephone survey held between March and April, 2009 among a sample of 1,001 female adult respondents from the province of Quebec (Canada). Questions were selected to investigate childhood maltreatment as a risk factor for probable depression, and actual post-traumatic stress disorders, and suicidal behaviours in the course of their lives. Regression analysis indicates a positive association between sexual abuse and suicidal ideations, as well as a positive association between sexual abuse, psychological abuse, probable depression and suicide attempts. Respondents, who attempted suicide, were two to three times more likely to have experienced the presence of sexual or psychological abuse in the past and four times more likely to have been screened for a probable depression. Interventions that target the early reduction of sexual or psychological abuse, may translate into ulterior reduction in mental health and suicidal behaviours.

Key words: Suicide attempt, suicidal ideas, child maltreatment, neglect, abuse.

INTRODUCTION

Suicide is a major public health concern and it ranks among the top ten causes of death for individuals of all ages in most Western countries [World Health Organization (WHO), 2005]. Suicidal ideas and attempts have been found as more often associated with women. For example, in the Quebec population of 2005, 14.4% of the people that are 15 years and older had been acknowledged to have suicidal ideas during their lives (12.6% for men and 16.1% for women), and 3.5% said they had made a serious suicide attempt in their lifetime.

In 2005, 1.9% of the Quebec population that are 15 years old and older had seriously thought of suicide within the past 12 months: 1.8% for men and 2% for women; and 0.5% of the population had made a serious attempt: 0.4% for men and 0.5% for women (Kairouz et al., 2008).

Over the past 40 years, numerous studies have examined the relationship between suicide and mental disorders (Barracough et al., 1974; Lesage et al., 1994; Zhang et al., 2003). These studies have identified numerous clinical risk factors for suicide completion: previous suicide attempts, male sex, a family history of suicide, presence of psychiatric problems, as well as inadequate treatment of mental disorders and addictive behaviours (Arsenault-Lapierre et al., 2004). Psychiatric

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problems that are most commonly associated with suicide, have been characterized as affective disorders (McGirr et al., 2007), dependence disorders (Séguin et al., 2006), anxiety disorders (Sareen et al., 2005), as well as the presence of post-traumatic stress disorder (PTSD), which has been proposed to be associated with ulterior personality disorders (Oquendo et al., 2003; Vaiva et al., 2008). As for the presence of suicide ideation, a wide range of mental disorders have been found to increase the odds of experiencing suicide ideation, but the disorders have been characterized by anxiety and poor impulse-control predict, which an individual with suicide ideation would act on such thoughts (Nock et al., 2010).

Besides the unequivocal importance of mental disorders, other experiential and environmental factors have also been supposed to contribute to the onset and persistence of suicidal behaviour (Bruffaerts et al., 2010). In the wake of the interest in epigenetic and resilience (McGowan et al., 2009), some variables are again capturing the attention of researchers and clinicians. Early adversity, violence, and sexual abuse have been established to be among the most common risk factors, associated with ulterior mental health problems and suicide behaviour (Kessler et al., 1997; McGirr et al., 2007; McGowan et al., 2009). The proportion of mental health outcomes attributable to physical abuse, sexual abuse, witnessing domestic violence or being a victim of domestic violence varies between studies. A study by Dube et al. (2001) have found that any one of these adverse childhood experiences: emotional, physical and sexual abuse; household substance abuse, mental illness, and incarceration; as well as parental domestic violence, separation or divorce, increased the risk of suicide attempted 2- to 5-fold. Molnar et al. (2001) noted that 7 to 12% of serious suicide attempts were attributable to rape or molestation in a nationally representative US sample.

More recently, a number of large-scale studies have investigated the link between specific types of childhood maltreatment, and future suicidal ideas and attempts (Afifi et al., 2008; Bebbington et al., 2009; Belik et al., 2007; Bruffaerts et al., 2010; Enns et al., 2006; Nock et al., 2010). Each study used a public dataset, including wide range of specific types of socio-demographic groups, and most studies have explored at least one or more type of childhood maltreatment and some additional traumatic experiences. The relationship between childhood past adverse events, and poor adult mental health and suicide attempts has been widely acknowledged in the clinical population (Bebbington et al., 2009), as well as in the general population (Belik et al., 2007; Bruffaerts et al., 2010). Enns et al. (2006) noted that childhood neglect, psychological abuse and physical abuse were strongly

associated with news onset of suicidal ideation and attempts. Other study has identified sexual and physical abuse (Hardt et al., 2008; Bruffaerts et al., 2010) as the strongest risk factor for onset and persistence of suicidal behaviour. Other results suggested that a combination of exposure to three or more types of traumatic events were associated with suicidal behaviour (Belik et al., 2007).

The aim of this study is to add to the actual literature a larger perspective on different types of maltreatment. First, our objective is to have a better understanding of the early environmental factors associated with the suicidal behaviour in a Quebec female population, by detailing the individual types of childhood maltreatment, such as different degree of neglect, of psychological, physical or sexual abuse, and their relation to future suicidal behaviour. Secondly, our goal is to explore the specific experience, or the cumulative experiences, which add risk for development of suicidal ideas and behaviours. We hypothesized: 1) a positive link between child maltreatment (neglect, psychological, physical, and sexual abuse) and suicide attempts or suicidal ideas; and 2) sexual violence would be a predictor of suicidal ideas and suicide attempts among a general population of female respondent.

METHODOLOGY

Procedures

Data were collected via a telephone survey, conducted between March 23 and May 21 of 2009, among a sample of 1,001 female adult respondents from the province of Quebec (Canada). Two steps were carried out to select without substitution of respondent. Households were first selected by a technique called "random digit dialling" among those having a telephone number all over the province of Quebec. Then, in each selected household, a woman was chosen using a random selection schedule among those aged 18 years and over, and who could complete the survey in either French or English. No substitution of respondent was allowed.

In 2006, 86.4% of the households in Quebec owned a permanent telephone line in their houses, which suggests that majority of the population have been included using this methodology (Statistics Canada, 2006). The responses rate was calculated using the methods proposed by MRIA¹ (MRIA, 2011). Using this empirical method, we obtained a response rate of 45.5%, but taking into account the calculation of the estimation method, the response rate becomes 73%. This last rate gives a secondary measure to assess the quality of the survey data.

Verbal consent of respondents was requested at the time of the interview, and the study received approval from the Institutional Review Board (IRB) of the Faculty of Education of the University of Sherbrooke. Each interviewer received specific training regarding the study's objectives, the questions and possible answers from

¹Marketing Research and Intelligence Association (MRIA) is a leading national association for professional in Canada, and its definitions and methods are the ones most widely applied by private industry in Canada, and also by the Government of Canada and Statistics Canada (Government of Canada, 2007)

one of the researchers. In addition, a portion (around 10%) of the interview was subjected to an audio systematic review in order to check the quality of the interview.

Sample

Data from 1,001 female respondents were weighted by education level and age based on the 2001 Canada census data of adults aged 18 years and over (Institut de la Statistique du Québec, 2001). Afterward, a correction for design effect was applied. Design effect is equal to $1/(1 + \text{variance of weighting coefficients})$, and each weighting coefficient was multiplied by 0.62 (or $1/1.61$), in order to correct the weighting effect on statistical accuracy (Kish, 1965). The initial sample of 1,001 respondents corresponded, following this correction, to a sample of 620 respondents with the same characteristics of the Quebec population in terms of distribution by education level and age. This weighting and correction for design effect thus reduced disparities between characteristics of the sample and those in the population. It also prevented over-estimating data.

Measurements

Socio-demographic variables were identified using questions regarding age, geographic region of residence and academic level. These variables were selected from a questionnaire, developed by Tourigny et al. (2006), for a previous prevalence study of child maltreatment. Other questions were selected to investigate early childhood abuse, as well as to screen for the presence of probable depression, actual post-traumatic stress disorders, and actual suicidal behaviours.

Independent variables

Neglect, psychological, physical and sexual abuse in childhood neglect: Neglect during childhood was measured using items from the Comprehensive Child Maltreatment Scale for Adults (CCMS) (Higgins and McCabe, 2001). These questions evaluated the lack of basic care (food, bathing, clean clothes, and medical attention) and the experience of being locked-up for a long period of time; or experience of being ignored for a long period of time. These questions were answered using a Likert's scale, ranging from "never" to "very often". Obtaining an above-average score was a positive indication of neglect.

Psychological abuse during childhood: Direct and indirect psychological abuse before the age of 18 years old was evaluated: direct psychological abuse aimed at the child (that is, being threatened, humiliated or ridiculed "often" or "very often" in childhood) and indirect psychological violence was defined as having witnessed inter-parental violence, respectively. These questions were used in the 1999 Quebec Health Survey. Prevalence of psychological abuse was defined as having experienced either direct or indirect psychological abuse (Clément et al., 2000).

Physical abuse during childhood: Questions were used to evaluate childhood physical abuse (mild and severe), experienced by the respondent. Respondents indicated their answers on a four-point Likert's scale, ranging from "no, never" to "yes, very often".

Mild physical abuse was defined as receiving a spanking "often" or "very often", while severe physical abuse was defined as being hit harder than a spanking at least once (Clément et al., 2000). In the 1999 Quebec Health Survey, mild physical abuse was defined as "adult conduct toward a child that aims to modify behaviours through the use of corporal punishment or physical force". These conducts may provoke discomfort or pain without hurting the child; they are generally admitted by law, and even, as indicated by Section 43 of the Criminal Code of Canada, may be recognized as a right in the exercise of the parental role" (page 20).

For severe physical abuse, Clément et al. (2000) referred to "[...] disciplinary conducts or corporal punishments of such a nature that they are likely to hurt the child. These conducts may be similar to abusive forms of conduct toward the child" (page 20). The prevalence of physical abuse is defined as having experienced either mild or severe physical abuse.

Sexual abuse during childhood: Items measured the presence of sexual abuse during early childhood. Questions concerning forced sexual relations (either complete sexual relations or fondling before the age of 18) were part of the interview. These items were selected from a study by Finkelhor et al. (1990), which permitted the identification of a dichotomized variable.

Screening for symptoms of depression: The screener included the items for assessing major depressive and dysthymic disorders from the 12-month Composite International Diagnostic Interview (CIDI), and items assessing depression symptoms in the past month (Essau and Wittchen, 1993; Pez et al., 2010).

We defined people as having a probable disorder if they experienced at least two weeks of being depressed or having lost interest in pleasurable activities during the last year, or persistent depression over the year, plus having at least one week of depression within the last 30 days. Based on a sample of 1,485 study patients, who underwent the full CIDI affective disorders section, the positive predictive value of this self-administered screener is about 55%. In other words, in the population of patients identified by the screening questionnaire, about half have clinical depression.

Symptoms of post-traumatic stress disorders: Symptoms of post-traumatic stress disorders were screened using four questions in the Primary Care Post-Traumatic Stress Disorder (PC-PTSD). This screening has been used to identify the presence of symptoms by first-line clinicians (Prins et al., 2003). Questions, concerning flashbacks, dissociative reactions, hypervigilance and avoidance behaviours, were assessed. This measurement has had good psychometric properties and high test-retest fidelity (Prins et al., 2003). Its diagnostic validity has been good (Prins et al., 2003). With this screening test, three positive responses out of four were needed to be considered as a clinical threshold for the presence of PTSD.

Dependant variables

Suicidal behaviours: Questions regarding the presence of suicidal behaviours were based on questions taken from the Quebec Epidemiological Study (Kairouz et al., 2008). The questions were: (1) Did you ever think of committing suicide? (2) Have you ever made a suicidal attempt that did not require a visit to the hospital? (3) Have you ever made a suicidal attempt that did require a visit to the hospital? Other questions that were assessed focused on the

Table 1. Characteristics of the sample, expressed in percentage before and after weighting for design effect.

Characteristic	Unweighted sample (n = 1001) (%)	Weighted sample corrected for design effect (n _w = 621) (%)
Regions		
Island of Montreal	22.5	21.2
Other metropolitan regions of Montreal	34.4	32.7
Metropolitan region of Quebec city	9.0	9.7
Other regions of Quebec	34.2	36.4
Age		
18-24	5.7	10.3
25-44	35.1	33.7
45-64	40.5	35.8
65 plus	18.7	20.3
Income level		
<\$20,000	10.7	15.5
\$20,000–\$39,999	19.0	23.0
\$40,000–\$59,999	19.2	19.0
\$60,000–\$79,999	14.4	12.4
\$80,000 plus	23.4	16.0
Refused to answer	13.4	14.1
Schooling		
High school or lower	35.3	67.7
College	28.7	14.8
University	35.5	17.0
Refused to answer	0.4	0.4

age at which the first suicidal ideas appeared, the age of the first suicide attempt, the number of suicide attempts requiring a visit to the emergency unit of a hospital, as well as the number of attempts that did not require a visit to the emergency unit of a hospital.

Statistical analysis

Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS), version 15.0 (SPSS Inc., Chicago, IL). Chi-squared analysis was performed to analyze the demographics and to compare the proportion of the population against the presence of clinical variables. Logistic regression (odds ratio and 95% confidence interval) was used to identify the variables mostly associated with the presence of suicidal behaviours.

RESULTS

Socio-demographic variables

A sample of 621 respondents was selected from the initial population of 1,001 respondents in order to ensure

representation of female respondents in the Quebec population by age, education and geographical region (Table 1). Respondents were living in different parts of the province with 69.5%, in age between 25 and 64 years old. Their incomes varied from \$20,000 to more than \$80,000, and 31.8% had either a college or university education.

Prevalence of suicidal behaviours

The results indicate rates of suicidal ideation and attempt similar to those found in epidemiologic studies for the Quebec population. The rates for women having experienced suicidal ideations alone is 15.0% when compared with 16.1% found in epidemiologic studies from Quebec (Kairouz et al., 2008). The rates for suicide attempts are slightly higher, reaching 8.2% when taking into account all types of suicidal attempts (with and without hospitalization), while the rates found in

Table 2. Prevalence of suicide attempts or ideas among female respondents (n = 622).

Variable	n	Percentage	IC	Min.	Max.	Mean age
Suicidal ideas only	92	15.0	2.8	12.2	17.8	24.7
During adolescence	40	6.4	1.9	4.5	8.4	13.6
During adulthood	52	8.4	2.2	6.2	10.6	33.3
Total attempts	51	8.2	2.2	6.0	10.4	22.9
During adolescence	22	3.5	1.5	2.1	5.0	13.0
During adulthood	27	4.3	1.6	2.7	5.9	31.0
Attempt without hospital	35	5.6	1.8	3.8	7.4	21.4
Attempt with hospital	31	5.0	1.7	3.3	6.7	23.6

epidemiologic studies were closer to 5.3% (Kairouz et al., 2008).

The suicidal ideas or attempts were present at a relatively young age: 24.7 and 22.9 years old, respectively (Table 2). When identifying suicide attempts that required a visit to an emergency room (ER) of a hospital, 5.0% of respondents indicated having gone at least once, compared with the 5.6%, who attempted suicide and did not need to go to an ER ($p = ns$).

Prevalence of child maltreatment and mental health problems

The results indicate a significant difference between the prevalence of people having experienced child maltreatment and mental health difficulties (neglect, psychological, physical and sexual abuse, as well as symptoms of depression and symptoms of PTSD) when compared with those with no experiences of these adverse situations. Respondents had experienced psychological abuse range from 11 to 18.5%: direct violence 11%, indirect violence 13%, and both types of violence 18.5%, respectively (Table 3). Physical abuse ranged between 9.5 and 12.4%: mild 9.5%, severe 9.8%, and 12.4% experienced both types. Respondents, who were exposed to childhood neglect, were among 11.6% of the population. The range for sexual abuse varied between 6.5 and 21.2%. Respondents, who were victims of fondling, were among 20.2% of the population, and those who were victims of rape were among 6.5% of the population, respectively.

As for the presence of mental disorders, using a screening questionnaire, we identified that 12.6% of the population have been screened for probable depression, and 7.7% had three or more symptoms of PTSD.

As for the respondents who attempted suicide, we

found a positive association for the presence of all clinical variables (Table 3). Those, who experienced one or more types of adversity, were significantly more at risk of a suicide attempt over their lives (psychological, physical and sexual abuse, neglect were screened for probable depression, and symptoms of PTSD).

As for the respondents with lifetime suicidal ideas, we found a positive association for the presence of neglect, fondling and rape, and they were screened for probable depression.

Predictors of suicide attempts and suicidal ideas

Logistic regression analysis revealed that respondents who attempt suicide (with or without a medical visit) were more likely to have been exposed to the presence of specific clinical variables (Table 4). Respondents who attempted suicide were two to three times more likely to have experienced the presence of sexual violence (OR = 2.93; $CI_{95\%} = 1.074 - 9.020$) or psychological violence (OR = 2.72; $CI_{95\%} = 0.999 - 5.827$) in their earlier years. They were almost four times more likely to have been screened for probable depression (OR = 3.79; $CI_{95\%} = 1.333 - 11.083$).

A second logistic regression analysis revealed that respondents who had suicidal ideas were more likely to have been exposed to the presence of sexual abuse (Table 4). They were 2.5 times more likely to have experienced the presence of sexual violence.

DISCUSSION

Methodologically, many precautions were taken to make sure that the population investigated in the current study was representative of the Quebec female population

Table 3. Prevalence of adversity, mental health problems, suicide attempts and suicidal ideas among female respondents.

Parameter	Total		Suicide attempts				Prob.	Suicidal ideas				Prob.
	N	%	Without		With			Without		With		
			N	%	N	%		N	%	N	%	
Psychological violence												
Direct												
Presence	68	11.0	44	7.7	24	52.0	0.000	62	10.9	7	14.0	n.s.
Absence	551	89.0	525	92.3	26	48.0		508	89.1	43	86.0	
Total	619	100.0	569	100.0	50	100.0		570	100.0	50	100.0	
Indirect												
Presence	81	13.0	59	10.4	22	43.1	0.000	71	12.5	10	19.6	n.s.
Absence	540	87.0	511	89.6	29	56.9		449	87.5	41	80.4	
Total	621	100.0	570	100.0	51	100.0		570	100.0	51	100.0	
Direct or indirect												
Presence	115	18.5	86	15.1	29	56.9	0.000	101	17.7	14	28.0	0.072
Absence	506	81.5	484	84.9	22	43.1		470	82.3	36	72.0	
Total	621	100.0	570	100.0	51	100.0		571	100.0	50	100.0	
Physical violence												
Mild violence												
Presence	59	9.5	41	7.2	18	35.3	0.000	50	8.8	9	18.0	0.034
Absence	560	90.5	527	92.8	33	64.7		518	91.2	41	82.0	
Total	619	100.0	568	100.0	51	100.0		568	100.0	50	100.0	
Severe violence												
Presence	61	9.8	42	7.4	19	37.3	0.000	53	9.6	8	16.0	n.s.
Absence	559	90.2	527	92.6	32	62.7		517	90.7	42	84.0	
Total	620	100.0	569	100.0	51	100.0		570	100.0	50	100.0	
Mild or severe												
Presence	77	12.4	55	9.7	22	43.1	0.000	67	11.8	10	20.0	0.090
Absence	543	87.6	514	90.3	29	56.9		503	88.2	40	80.0	
Total	619	100.0	569	100.0	51	100.0		570	100.0	50	100.0	

Table 3. Contd.

Neglect												
Presence	72	11.6	51	8.9	29	58.8		60	10.5	12	24.0	
Absence	549	88.4	519	91.1	21	41.2	0.000	510	89.5	38	76.0	0.004
Total	621	100.0	570	100.0	51	100.0		570	100.0	50	100.0	
Sexual violence												
Fondling												
Presence	125	20.2	69	16.8	29	58.0		106	18.6	20	40.0	
Absence	495	79.8	474	83.2	21	42.0	0.000	465	81.4	30	60.0	0.000
Total	620	100.0	570	100.0	50	100.0		570	100.0	50	100.0	
Rape												
Presence	40	6.5	23	4.1	17	33.3		29	5.1	11	22.4	
Absence	578	93.5	544	95.9	34	66.7	0.000	539	94.9	38	77.6	0.000
Total	618	100.0	567	100.0	51	100.0		568	100.0	49	100.0	
Fondling or rape												
Presence	131	21.2	101	16.8	30	60.0		110	19.2	21	42.0	
Absence	490	78.9	470	83.2	20	40.0	0.000	462	80.8	29	58.0	0.000
Total	621	100.0	571	100.0	50	100.0		572	100.0	50	100.0	
Mental health												
Affective disorders (actual)												
Presence	78	12.6	55	9.6	23	45.1		66	11.6	11	22.0	
Absence	543	87.4	515	90.4	28	54.9	0.000	505	88.4	39	78.0	0.032
Total	621	100.0	570	100.0	51	100.0		571	100.0	50	100.0	
PTSD (clinical threshold of 3)												
Presence	48	7.7	31	5.4	17	33.3		41	7.2	7	13.7	
Absence	573	92.3	539	94.6	34	66.7	0.000	530	92.8	44	86.3	0.093
Total	619	100.0	570	100.0	51	100.0		571	100.0	51	100.0	

n.s.: Non significant.

(Kish, 1965). Our results indicate almost the same prevalence for suicidal ideas and attempts

as those, found in epidemiologic studies in the province of Quebec (Institut de la Statistique du

Québec, 2010) and those, found in two literature review, who have concluded that 22.3 and 19.7%

Table 4. Logistic regression coefficients.

Independent variable	Total attempts (with or without hospitalization)			Suicidal ideas		
	B	Wald test	Exp(B)	B	Wald test	Exp(B)
Psychological violence	1.00	5.83	2.72*	-0.09	0.04	0.91
Physical violence	0.67	2.19	1.96	-0.05	0.01	0.96
Neglect	0.52	1.41	1.68	0.66	2.11	1.94
Sexual violence	1.07	9.02	2.93**	0.92	7.29	2.50**
Affective disorders actual	1.33	11.08	3.79**	0.49	1.34	1.63
PTSD 3	1.07	5.11	2.90	0.02	0.00	1.02
Constant	-3.88	178.38	0.21	-2.87	195.59	0.06
Goodness of fit	$\chi^2 = 95.32$, 6 df, $p = 0.000$ Cox and Snell $R^2 = 0.143$ Nagelkerke $R^2 = 0.330$			$\chi^2 = 16.79$, 6 df, $p = 0.010$ Cox and Snell $R^2 = 0.027$ Nagelkerke $R^2 = 0.062$		

* $p \leq 0.05$; ** $p \leq 0.01$.

of women were sexual abuse as children, respectively (Gorey and Leslie, 1997; Pereda et al., 2009).

Results from the presented study are consistent with results from other studies (Bebbington et al., 2009; Bruffaerts et al., 2010; Enns et al., 2006; Hardt et al., 2008). We observed the same association between the presence of violence, mental health problems and suicidal behaviour in a sample of the general female population.

We confirmed our hypothesis since the results indicated a positive association between the presence of suicidal attempts and of past adversity like neglect, psychological abuse, sexual abuse, as well as the presence of current mental health difficulties among a sample of the female population. Respondents, who had experienced sexual violence and psychological violence before 18 years of age and were screened for probable depression, were two to almost four times more likely to have attempted suicide. The presented results suggest the co-occurrence of difficulties among women having attempted suicide, more so than for women having suicidal ideas.

Due to the methodology, there is no way of being certain that the current symptoms of depression and PTSD are directly linked to past violence, since other events may have triggered the episode of depression or PTSD. Further research would be necessary to confirm this causal link.

The results from this study are not sufficient for establishment of a case for sequential developmental difficulties, however, it is clear that suicidal behaviour does not happen “out of the blue” (Bebbington et al., 2009), but it also emerges from a sequence of events

that may start with early adverse events with the presence of child maltreatment, whose impact on affective disorders may be long lasting and culminate at one or more times over lifetime of suicidal attempts.

LIMITATIONS

The presented study has the advantage of exploring all forms of family violence in childhood with a sufficient large representative sample of Quebec female participants. Nevertheless, there are some classical limits for this type of study, namely: 1) the sampling method by telephone number does not allow reaching respondents, who may have been particularly at-risk for childhood victimization and suicidal behaviours, such as homeless or institutionalized adults; 2) the reliance on a few questions to measure childhood victimization experiences does not permit a detailed description of the nature and severity of each form of violence, and 3) an empirical response rate of 45.5%, but an adequate estimative response rate of 75%. Even though, we used a number of best practices designed for the recruitment process in order to help maximize response rates, this empirical response rate seems to stay the same across studies. Indeed, Gorey and Leslie (1997) noted that prevalence studies of sexual violence with adult populations showed an average response rate of 49%. However, a tendency for a lower participation rate in studies relying on phone interviews has also been observed internationally in the past years (Government of Canada, 2007). Finally, another limitation is a lack of knowledge about the sequential occurrence of different adversities in the lives

of the respondents.

However, despite these limitations, the prevalence for suicidal behaviour and sexual abuse, identified in this research, are similar to those, found in epidemiologic studies. Unfortunately, lack of data concerning the sequential occurrence of events, limits the possibility of elucidating the temporal relationship between presence of clinical variables, and the onset of psychopathology and suicidal behaviours.

Conclusion

Results from this study, in agreement with the data from other studies, suggest a greater awareness for caregivers in order to investigate the presence of child maltreatment, especially psychological and sexual abuse, when evaluating suicidal behaviours or affective disorders, since the presence of these variables could warrant more specific and targeted interventions. Similarly, with a number of other studies (Bebbington et al., 2009; Enns et al., 2006; Kessler et al., 1997) that have suggested from a public health prevention perspective, interventions that target the early reduction in violence (sexual and psychological) may be translated into reduction in mental health, and, in this way, suicidal behaviours.

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