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Child Maltreatment and Polyvictimization as Predictors of Intimate Partner Violence in Women From the General Population of Quebec

Audrey Brassard[1], Marc Tourigny[1], Caroline Dugal[2], Yvan Lussier[3], Stéphane Sabourin[4], and Natacha Godbout[2]

Abstract

This study aimed to (a) evaluate the prevalence of intimate partner violence (IPV) and revictimization among a representative sample of 1,001 women living in Quebec, Canada; (b) examine whether IPV was predicted by experiences of child maltreatment; and (c) explore the role of polyvictimization on IPV beyond the effect of any type of exposure. Results indicate the prevalence rates of lifetime IPV (10.5%), IPV over the last year (2.5%), and revictimization (7.2%). All forms of child maltreatment predicted an increased risk of IPV victimization, yet polyvictimization was related to IPV beyond the effects of specific forms of child maltreatment.

Keywords

child maltreatment, intimate partner violence, revictimization, polyvictimization

Despite extensive prevention campaigns, victimization by a male romantic partner (i.e., psychological, physical, and sexual abuse; coercive control) is one of the most widespread forms of violence against women (World Health Organization, 2012) and

[1]Université de Sherbrooke, Québec, Canada
[2]Université du Québec à Montréal, Canada
[3]Université du Québec à Trois-Rivières, Canada
[4]Université Laval, Québec, Canada

Corresponding Author:
Audrey Brassard, Département de psychologie, Université de Sherbrooke, 2500, boulevard de l'Université, Sherbrooke, Québec, Canada J1K 2R1.
Email: A.Brassard@usherbrooke.ca

has been associated with long-lasting negative mental and physical health consequences (Dichter, Marcus, Wagner, & Bonomi, 2014; Gilroy et al., 2014; Lussier et al., 2013). Although evidence suggests that intimate partner violence (IPV), especially minor forms of IPV, is experienced by both women and men (Dugal, Godbout, Bélanger, Hébert, & Goulet, 2018; Lussier et al., 2013), empirical data show that women are generally victimized more often than men (Desmarais, Reeves, Nicholls, Telford, & Fiebert, 2012; Gerstenberger & Williams, 2013) and tend to report more sequelae (Hellemans, Loeys, Dewitte, De Smet, & Buysse, 2015; McCall-Hosenfeld, Winter, Heeren, & Liebschutz, 2014; Rogers & Follingstad, 2011).

Among women, IPV is associated with posttraumatic stress and psychological distress (Antai & Anthony, 2014; Edwards, Dardis, Sylaska, & Gidycz, 2015; Lilly, Howell, & Graham-Bermann, 2015), insomnia (Gyorffy, Torza, Sandor, Csoboth, & Kopp, 2013; Ornat, Martinez-Dearth, Chedraui, & Perez-Lopez, 2014), physical injuries (Eshelmen & Levendosky, 2012; Sprague et al., 2014), chronic pain (Cesario, McFarlane, Nava, Gilroy, & Maddoux, 2014; McCall-Hosenfeld et al., 2014), and even death (David, 2017; Parks, Johnson, McDaniel, & Centers for Disease Control and Prevention, 2013). According to the 2011 National Intimate Partner and Sexual Violence Survey (Breiding et al., 2014), 31.5% of American women have experienced lifetime physical IPV. In Canada, where the present study took place, national epidemiological surveys report that 14% of women have experienced IPV in their lifetime (Statistics Canada, 2016), and 4% of women have experienced IPV over the past 5 years (David, 2017), highlighting the need to further explore this issue in women.

Experiencing or witnessing parental violence as a child has been found to be one of the most consistent predictors of adult IPV (Aakvaag, Thoresen, Wentzel-Larsen, & Dyb, 2017; Dugal et al., 2018; Godbout, Dutton, Lussier, & Sabourin, 2009). However, most of these studies were conducted in samples of male victims or perpetrators of IPV (e.g., Singh, Tolman, Walton, Chermack, & Cunningham, 2014; White & Smith, 2009). The present study aims to assess whether these findings can be generalized to a representative sample of women from the general population of Quebec, Canada.

Child Maltreatment and IPV

The phenomenon in which experiencing child abuse increases the risk of violence in adulthood is frequently referred to as revictimization (Kimerling, Alvarez, Pavao, Kaminski, & Baumrind, 2007). Empirical evidence suggests that revictimization is relatively common. In fact, a recent Canadian study has shown that those who report IPV victimization in adulthood are more likely to also report having been physically or sexually abused and to have witnessed parental violence as children (Statistics Canada, 2016). Several other studies conducted with clinical (e.g., Berthelot et al., 2014; Dugal et al., 2018), student (e.g., Kaukinen, Buchanan, & Gover, 2015), and specific samples (e.g., female veterans, Iverson, Mercado, Carpenter, & Street, 2013; female nurses, Messing, La Flair, Cavanaugh, Kanga, & Campbell, 2012) have reported a link between childhood sexual abuse (CSA) and sexual, physical, or psychological abuse in adolescent (dating) and adult intimate relationships. In their

analysis of 94 studies, Classen, Gronskaya Palesh, and Aggarwal (2005) concluded that almost two thirds of CSA survivors were sexually revictimized as adults. The prevalence of revictimization in American women from the general population was found to be 12% (Kimerling et al., 2007). The Europe-wide survey on violence against women (European Union Agency for Fundamental Rights, 2014) also highlighted that approximately one third (30%) of women who experienced sexual victimization in their former or current romantic relationship also reported experiences of childhood sexual violence. In a Canadian study that surveyed more than 15,000 adults in romantic relationships, it was found that women who reported CSA were 2-5 times more at risk of experiencing psychological, physical, or sexual violence in their relationship (Daigneault, Hébert, & McDuff, 2009). However, studies have traditionally focused on a single type of child abuse, often child sexual abuse, and limited data are available on adult revictimization related to multiple forms of child maltreatment (Aakvaag et al., 2017).

The necessity to examine multiple types of child maltreatment in revictimization studies is supported by findings that (a) children who suffer one type of victimization are also likely to experience other types (e.g., Finkelhor, Ormrod, & Turner, 2007; Kessler et al., 2010), and (b) survivors of multiple victimization or "polyvictimization" report more severe and complex consequences than those who experienced a single abusive incident (Briere, Agee, & Dietrich, 2016; Briere, Hodges, & Godbout, 2010; Hodges et al., 2013; Turner, Shattuck, Finkelhor, & Hamby, 2016). Among the few large population-based studies exploring the association between polyvictimization and IPV in women, Bensley, Van Eenwyk, and Simmons (2003) showed that the co-occurrence of multiple forms of child maltreatment predicted IPV, whereas a history of CSA alone did not. Their study, however, did not assess childhood neglect or psychological maltreatment. A more recent study conducted with a large sample of Norwegian women (Aakvaag et al., 2017) reports similar conclusions, with results suggesting a relationship between the number of experienced child maltreatment categories and IPV victimization, in which the odds of adult victimization increase with the number of child maltreatment categories. It has yet to be determined whether similar results are observable in women from Quebec, Canada.

Limitations of Previous Studies

Population-based studies allow us to identify accurate rates of repeated victimization and may lead to the development of prevention programs that can be generalized to different populations and communities. To date, there has not been a victimization study that surveyed a random, nationally representative sample of women in Quebec, Canada. Although available studies suggest that child maltreatment is a key risk factor for IPV in adulthood, the majority of research has been conducted with clinical populations, undergraduate students, or community convenience samples mainly originating from the United States or Europe. These demographic features limit our capacity to provide generalizable and valid estimates of revictimization prevalence and to identify relevant risk factors generalizable to the Canadian population. Moreover,

the landmark studies on child maltreatment and IPV have typically focused on an incomplete range of childhood victimization experiences (i.e., sexual and physical abuse), thus overlooking neglect and psychological abuse. Finally, very few studies have examined the role of early polyvictimization in predicting long-term consequences such as adult IPV victimization in women (e.g., Aakvaag et al., 2017; Smith & Stover, 2016).

The Current Study

The purpose of our study was to use a nationally representative sample to identify whether experiences of child maltreatment (neglect; witnessed parental violence; psychological, physical, and sexual abuse) would substantially increase women's risk of victimization in adulthood. The first objective of this study was to assess the prevalence of IPV (lifetime and 12 months) and revictimization among a representative sample of women living in Quebec, Canada. The second objective was to examine whether adult IPV was predicted by a wide spectrum of child maltreatment experiences. The third objective was to explore the cumulative effect of multiple traumas (or polyvictimization) beyond the unique effect of each form of maltreatment. We hypothesized that exposure to any form of child maltreatment would increase the likelihood of IPV, and that polyvictimization would predict IPV, beyond each type of exposure.

Method

A sample of 1,001 randomly selected female adult respondents from the province of Quebec, Canada, was surveyed via telephone. A two-step procedure was carried out to select respondents (selection without substitution). First, a "random digit dialing" technique was used to select households among those having a telephone number in the province of Quebec. Second, a random selection schedule was used to choose a woman in each selected household among those aged 18 years and above who could complete the survey in either French or English. No respondent substitution was allowed.

In 2006, 86.4% of the households in Quebec had a permanent telephone line, suggesting that a majority of the population was surveyed using this method (Statistics Canada, 2006). The response rate was calculated using the methods proposed by the Marketing Research and Intelligence Association (MRIA; 2011). These methods are recognized by the Government of Canada and Statistics Canada (Government of Canada, 2013). Using this empirical method (Response rate = Responding units/(Unresolved + In-scope nonresponding + Responding units)), we obtained a response rate of 45.5%. This empirical response rate is similar to the average rate of 49% for prevalence studies with adult populations (Gorey & Leslie, 1997).

The respondents' verbal consent was requested at the time of the interview, and the study received approval from the institutional review board (IRB) of a Canadian university. Each interviewer received specific training from one of the researchers regarding the study's objectives, questions, and possible answers. In addition, a portion

(around 10%) of the interviews was subjected to systematic audio reviews for quality control purposes.

Sample

Data from 1,001 female respondents were weighted by education level and age based on the 2001 Canadian census data of adults aged 18 years and above (Institut de la Statistique du Québec, 2001). Afterward, a correction for design effect was applied. Design effect is equal to 1/(1 + variance of weighting coefficients), and each weighting coefficient was multiplied by 0.62 (or 1/1.61) to correct for its effect on statistical accuracy (Kish, 1965). Following this correction, the initial sample of 1,001 respondents corresponded to a sample of 621 respondents with the same characteristics as the Quebec population in terms of distribution by education level and age. This weighting and correction for design effect reduced disparities between characteristics of the sample and those of the population. It also prevented overestimating data.

Instruments

Sociodemographic variables were identified using questions regarding age, geographical region of residence, income, and education level. Other questions were selected to investigate child maltreatment.

Neglect. Neglect during childhood was measured using three items from the *Comprehensive Child Maltreatment Scale for Adults* (CCMS; Higgins & McCabe, 2001). These questions evaluated the lack of basic care (food, bathing, clean clothes, and medical attention) and the experience of being locked up or ignored for a long period of time ($\alpha = .74$). These questions were answered using a 4-point Likert-type scale: 0 = "no, never," 1 = "yes, occasionally," 2 = "yes, often," and 3 = "yes, very often." Scores used in the analyses were dichotomized (0 = no neglect; 1 = at least one experience of neglect).

Psychological abuse and witnessed parental violence during childhood. Psychological abuse aimed at the child (i.e., being threatened, humiliated, or ridiculed "often" or "very often" in childhood) and witnessed parental violence (defined as having witnessed parental violence) were each assessed with one specific question used in the 1999 Quebec Health Survey (Clément, Bouchard, Jetté, & Laferrière, 2000). The same 4-point Likert-type scale was used.

Physical abuse during childhood. Two questions were used to evaluate childhood physical abuse experienced by the respondent, with the same 4-point Likert-type scale. Mild physical abuse (e.g., receiving a spanking "often" or "very often") and severe physical abuse (being hit harder than a spanking at least once) were assessed ($\alpha = .81$). In the 1999 Quebec Health Survey, mild physical abuse was defined as

> any adult conduct toward a child that aims to modify behaviors 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. (p. 20)

For severe physical abuse, Clément et al. (2000) refer to ". . . disciplinary conducts or corporal punishments of such a nature that they are likely to injure the child" (p. 20). The prevalence of physical abuse is defined as having experienced either mild or severe physical abuse.

CSA. Two items measured the experience of sexual abuse during childhood. These questions concerned forced sexual relations (either complete sexual relations or fondling) before the age of 18, with an adult or an older child (three or more years older), and without the respondent's consent. Respondents answered on a 3-point scale: 0 = "no," 1 = "yes, once," and 2 = "yes, more than once." These items were selected from a study by Finkelhor, Hotaling, Lewis, and Smith (1990) and allowed the creation of a dichotomized variable (0 = no CSA; 1 = CSA).

IPV. One question derived from the Revised Conflict Tactics Scales (CTS-2: Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to assess 12-month and lifetime IPV among women who reported having been in a relationship during the past 12 months. Physical violence was measured with the question, "During the past 12 months, did your partner or ex-partner slap, push, or shove you in a way that could have hurt you?" Respondents answered on a 4-point scale: 1 = "no, never," 2 = "yes, once or twice," 3 = "yes, 3 times or more," and 4 = "not during the past 12 months, but it did happen before." Scores used in the analyses were dichotomized for 1 year (0 = no IPV; 1 = at least one episode) and lifetime IPV (0 = no IPV; 1 = at least one episode). This information, however, was not gathered in interviews with women who reported not having been in a relationship during the past 12 months (n = 137). As such, women who were single in the past year were automatically classified as "no current IPV" but were attributed a missing value for lifetime IPV.

Statistical Analyses

Statistical analyses were performed using the SPSS statistical package, version 20.0 (SPSS Inc., Chicago, IL). Chi-square analyses were performed to examine the associations between demographic variables and child maltreatment, as well as to compute the prevalence of adult revictimization. Hierarchical multivariate logistic regressions (adjusted odds ratio and 95% confidence interval) were used to determine the associations between each type of childhood maltreatment (Step 1), polyvictimization (Step 2), and IPV experiences in adulthood (lifetime and recent) while controlling for relevant demographic covariates. For each IPV variable, analyses were conducted

Table 1. Sample Characteristics Before and After Weighting for Design Effect.

Characteristics	Unweighted sample (n = 1,001), %	Weighted sample corrected for design effect (n_w = 621), %
Region		
City 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	18.7	20.3
Income (Can$)		
<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	23.4	16.0
Refused to answer	13.4	14.1
Education		
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

separately for the five types of trauma to account for the high shared variance between childhood trauma experiences.

Results

Sociodemographic Variables

A representative sample of 621 women was selected from the initial population of 1,001 respondents to ensure representation of female respondents in the Quebec population by age and education level (see Table 1). Respondents were living in different parts of the province, and 69.5% were between the ages of 25 and 64. Their incomes varied from Can$ 20,000 to more than Can$ 80,000, and 31.8% had either a college or a university education. Preliminary chi-square analyses were conducted to identify potential covariates that could be controlled for in subsequent analyses (age, education, income). Age was the only significant covariate.

Table 2. Prevalence of Child Maltreatment Experiences Across Lifetime Victims and Nonvictims of IPV.

Child maltreatment	Not victim of lifetime IPV (%)	Victim of lifetime IPV (%)	χ^2	*p*
Neglect			35.88	<.001
No	91.9	64.0		
Yes	8.1	36.0		
Psychological abuse			32.65	<.001
No	92.2	66.0		
Yes	7.8	34.0		
Witnessed parental violence			54.24	<.001
No	90.3	52.9		
Yes	9.7	47.1		
Physical abuse			28.53	<.001
No	90.6	64.7		
Yes	9.4	35.3		
Sexual abuse			11.66	.001
No	80.9	60.0		
Yes	19.1	40.0		
Number of child maltreatments (polyvictimization)			78.84[a]	<.001
0	68.4	31.4		
1	18.5	19.6		
2	7.4	13.7		
3	3.7	7.8		
4	1.4	11.8		
5	0.7	15.7		

Note. Statistics for recent IPV are not shown due to a small expected frequency. IPV = intimate partner violence.

[a]Chi-square value is not valid because 33.3% of cells have an expected frequency <5.

Prevalence of Child Maltreatment and IPV

The prevalence rate of women who had experienced physical violence in an intimate relationship during the last year was 2.5%, whereas lifetime IPV was 10.5%. The rate of childhood psychological abuse was 11.1%, and 13.0% of respondents indicated witnessing parental violence. The prevalence of childhood physical abuse was 12.4%, whereas 21.1% of women experienced sexual abuse and 11.6% reported neglect during their childhood. With regard to revictimization, 7.2% of the women experienced at least one form of child maltreatment combined with at least one episode of lifetime IPV.

Table 2 shows the proportion of these five types of child maltreatment experiences among women who did or did not report lifetime IPV victimization. Results of the preliminary chi-square analyses indicated a significantly higher prevalence of all types

of child maltreatment (i.e., neglect, physical abuse, psychological abuse, witnessed parental violence, and sexual abuse) among victims of IPV. When compared with nonvictims, IPV victims experienced 4 times more neglect, psychological abuse, and physical abuse. The rate of sexual abuse was twice as high in IPV victims. Victims of IPV also reported more polyvictimization (i.e., number of different forms of trauma experienced) compared with nonvictims. For example, 15.7% of the IPV victims reported all five types of trauma compared with less than 1% in women without IPV. As the number of experienced child maltreatment types increased, so did the reported rates of IPV (not shown). More precisely, 5.1% of women who did not experience any type of child maltreatment were victims of IPV, compared with 11.1% (one type), 17.9% (two types), 20.0% (three types), 50.0% (four types), and 72.7% of women reporting all five types of child maltreatment.

Predictors of IPV

Lifetime IPV. Hierarchical logistic regression analyses, using age as a covariate, revealed that women who experienced child maltreatment and polyvictimization were more likely to have also experienced lifetime IPV (Table 3, left panel). In the first step of the analyses, results indicated that women who have been neglected or victimized through psychological violence were 6 times more likely to report adult IPV. They were also 5 times more likely to report IPV if they had been physically abused in their earlier years. Witnessing parental violence during childhood also generated an eightfold increase in the likelihood of reporting lifetime IPV. Women who were sexually abused during childhood were almost 3 times more likely to report adult (lifetime) IPV. When the number of types of child maltreatment experienced (polyvictimization) was entered in the regression models (Step 2), the effect of all forms of child maltreatment but one (witnessed parental violence) became nonsignificant, whereas the effect of polyvictimization was significant. These results suggest that only witnessed parental violence still directly predicts an increased risk of lifetime IPV beyond the effect of polyvictimization.

Twelve-month IPV. A second series of hierarchical logistic regression analyses (see Table 3, right panel) revealed that women who had experienced physical abuse, neglect, parental violence, and psychological violence during their childhood were 6-12 times more likely to report IPV victimization over the last 12 months. Child sexual abuse, however, did not predict 12-month IPV. When polyvictimization was entered into the regression models (Step 2), the effect of all types of child maltreatment became nonsignificant, but polyvictimization did not consistently predict 12-month IPV. In fact, results revealed that polyvictimization only predicted an increased risk of 12-month IPV beyond the unique effect of early physical and sexual abuse.

Polyvictimization and IPV. To understand these results, we ran logistic regressions, treating polyvictimization as a categorical variable. When compared with no child

Table 3. Hierarchical Logistic Regression Analyses of Child Maltreatment Predicting Adult IPV Victimization.

	Lifetime IPV victimization		12-month IPV victimization	
Model/Predictors	AOR	95% CI	AOR	95% CI
1 Neglect	6.35***	[3.24, 12.44]	9.90***	[2.99, 32.75]
2 Neglect	1.05	[0.36, 3.04]	2.25	[0.28, 18.45]
Polyvictimization	1.96***	[1.46, 2.64]	1.63	[0.96, 2.77]
1 Psychological abuse	6.20***	[3.14, 12.24]	12.33***	[3.69, 41.19]
2 Psychological abuse	0.68	[0.22, 2.17]	3.70	[0.40, 34.61]
Polyvictimization	2.15***	[1.57, 2.96]	1.45	[0.82, 2.58]
1 Witnessed parental violence	8.19***	[4.32, 15.53]	8.11***	[2.48, 26.50]
2 Witnessed parental violence	2.67*	[1.08, 6.58]	1.56	[0.22, 10.95]
Polyvictimization	1.63***	[1.24, 2.14]	1.76*	[1.07, 2.90]
1 Physical abuse	5.22***	[2.69, 10.13]	6.64***	[2.03, 21.69]
2 Physical abuse	0.58	[0.19, 1.79]	0.39	[0.04, 4.38]
Polyvictimization	2.23***	[1.63, 3.06]	2.36**	[1.28, 4.35]
1 Sexual abuse	2.85**	[1.55, 5.26]	2.64	[0.81, 8.63]
2 Sexual abuse	0.75	[0.34, 1.67]	0.38	[0.07, 1.97]
Polyvictimization	2.08***	[1.64, 2.64]	2.26***	[1.50, 3.39]
Polyvictimization				
No trauma	1.0	[Referent]	1.0	[Referent]
1 type of trauma	2.39*	[1.04, 5.46]	0.58	[0.04, 9.56]
2 types of trauma	4.34**	[1.68, 11.21]	5.30	[0.86, 32.65]
3 types of trauma	4.62*	[1.36, 15.69]	12.01*	[1.76, 81.79]
4 types of trauma	16.05***	[4.57, 56.38]	0.00	—
5 types of trauma	45.32***	[10.90, 176.59]	29.23***	[5.91, 144.63]

Note. IPV = intimate partner violence AOR = adjusted odds ratio. CI = confidence interval.
*$p < .05$. **$p < .01$. ***$p < .001$.

maltreatment (baseline), women who experienced one form of child maltreatment were 2 times more likely to report lifetime IPV, whereas women who experienced multiple types of child maltreatment were 4-45 times more likely to report lifetime IPV (see Table 3). The results were less consistent for 12-month IPV, where only three or five types of child maltreatment (as compared with none) were associated with a significantly greater likelihood of IPV.

Discussion

In a representative sample of women living in Quebec, Canada, our study found that women exposed to early maltreatment are significantly more at risk of IPV revictimization. This association was robust for all five types of child maltreatment. A dose–response effect was found, which showed that the cumulative exposure to different types of child maltreatment increased the risk of IPV victimization. Results also

showed that the level of polyvictimization predicted a greater likelihood of adult IPV over and above the effect of any single type of experience of trauma.

The IPV (12 months and lifetime) and revictimization prevalence rates obtained in our representative sample of women confirmed those observed in Canadian population surveys. We found that 2.5% of women experienced physical violence during the last year, compared with 1.1% reported in the 2014 General Social Survey from Statistics Canada (2016). In the present sample, lifetime IPV was 10.5%, which is similar to the 14% reported in the 2014 General Social Survey from Statistics Canada (2016). In their review of representative studies of IPV in American women, Jose and O'Leary (2009) reported a 1-year prevalence of 1.3-11.9% and a lifetime prevalence ranging from 22.1-41.1%. The difference between our findings and theirs might partly be explained by the fact that we (a) used a rather narrow definition of IPV (i.e., excluding kicking, choking, burning, and psychological or sexual violence) and (b) precluded single women from reporting on their lifetime history of IPV. As such, the current results most likely provide a conservative prevalence of lifetime IPV. Even so, this study confirms that IPV remains a significant public health problem that should be addressed through prevention programs, therapeutic interventions, social policies, and criminal laws.

Revictimization

Results highlighted that revictimization affects 7.2% of women living in Quebec, a prevalence rate that has not been measured in any other Canadian study. In other words, seven women out of 100 have experienced both child maltreatment and physical violence from an intimate partner during their adult life. Kimerling et al. (2007) found a higher prevalence of revictimization (12%) in American women from the general population, but their measure of adult victimization included physical and sexual assault and did not specify whether the abuse was perpetrated by a romantic partner. Our findings support Kimerling et al.'s claim that further study on revictimization is warranted and should not be limited to women's experiences of childhood sexual abuse.

Furthermore, this study expanded on past revictimization research by examining the associations between IPV and five distinct types of child maltreatment: neglect, sexual abuse, physical abuse, psychological abuse, and witnessing parental violence. The prevalence of childhood victimization, ranging from one in 10 women (psychological violence) to one in five women (sexual abuse) in this representative sample, is consistent with the conclusions of past studies (e.g., Pereda, Guilerab, Fornsa, & Benitob, 2009; Stoltenborgh, Bakermans-Kranenburg, Alink, & van Ijzendoorn, 2015). Moreover, results showed that among women victims of IPV, more than two thirds (68%) were victimized during their childhood, regardless of the type of experienced violence. Our findings also underscore the role of these five types of child maltreatment in revictimization in adulthood. Women who were victimized as children, physically, sexually, or psychologically, were found to be more at risk of experiencing violence in their romantic relationships. This risk was almost 3 times higher in women

survivors of childhood sexual abuse and up to 8 times higher in women victims of child physical abuse, psychological abuse, or neglect. Similarly, the rate of sexual victimization (40%) in IPV victims was more than twice as high as that of the general population (18%; Stoltenborgh et al., 2015). These results correspond to those obtained in American (Kennedy, Bybee, Palma-Ramirez, & Jacobs, 2017) and European (Aakvaag et al., 2017) samples of women. Thus, the present findings clearly demonstrate that the association between child maltreatment and IPV is not restricted to specific clinical populations suffering from posttraumatic stress disorder (PTSD) or other mental disorders. The generalizability of these results to the general population implies that child maltreatment is a valid developmental predictor of adult victimization in women.

Polyvictimization

Another novel contribution of the current study was to demonstrate that the cumulative effect of early childhood trauma—or polyvictimization—is a risk factor for IPV over and above each type of child maltreatment. Our results suggest that the more forms of child maltreatment women experience, the more likely they are to be revictimized in adulthood. Indeed, the odds of revictimization among victims of four to five types of child maltreatment were found to be 16-45 times higher than the odds among nonvictimized women. Our results are also consistent with those reported by Bensley et al. (2003) and Whitfield, Anda, Dube, and Felitti (2003) for American women, where it was found that two or three types of child maltreatment increased by four the likelihood of adult victimization. However, our study also supports the important effect of witnessing parental violence (Aakvaag et al., 2017; Godbout et al., 2009), which significantly increased the risk of being a victim of IPV, even after considering the impact of polyvictimization.

According to Courtois and Ford (2013), experiencing cumulative interpersonal violence, neglect, or abuse early in life is especially likely to affect women's future relationships, considering that they were harmed or neglected by primary caregivers. The combination of experiencing multiple forms of abuse and witnessing parental violence may reflect the caregiver's general lack of concern for—or responsiveness toward—the child's feelings (Bensley et al., 2003), eventually leading to helplessness, surrender, and feelings of shame or guilt in the child (Courtois and Ford, 2013). These findings provide models (of self as deserving it and/or of others as malevolent) corresponding to those observed in victims of IPV. Polyvictimization and associated features, such as a lack of positive relational models and a poor developmental environment (e.g., lack of support, substance abuse, gender equality issues, other violations of human rights), may also lead to inadequate partner selection processes, deficits in relational decision-making skills, difficulties in detecting risky situations, and personality conflicts regarding dependency and submissiveness, thus increasing the risk of IPV. Others have also demonstrated that cumulative trauma (or polyvictimization) in childhood contributes to a reduced capacity for affect regulation in adulthood (Dugal et al., 2018), higher dysfunctional avoidance (i.e., suicidality, substance abuse,

dissociation, self-injury; Briere et al., 2010), lower self-esteem (Chan, Brownridge, Yan, Fong, & Tiwari, 2011), and greater psychological distress (Hodges et al., 2013). All these consequences of trauma are likely to alter women's expectations of adult relationships and contribute to relational chaos that can lead to, or be exacerbated by, IPV.

According to Grauerholz (2000), a number of mechanisms from various theories may explain why victimized (or polyvictimized) women are at greater risk of adult revictimization: (a) dissociative disorders, (b) low self-esteem, (c) powerlessness, (d) stigmatization, (e) learned expectations related to victimization, and (f) social isolation. As such, the sequelae associated with childhood exposure to violence could lead to a tendency to expose oneself to or engage in risky situations. They might also generate a particular vulnerability, making the victims easier targets for violent perpetrators (Grauerholz, 2000). Relationship difficulties typically related to experiences of childhood violence, such as abandonment fears or dependency (Godbout et al., 2016; Godbout, Runtz, MacIntosch, & Briere, 2013), may increase the victims' risk of experiencing other forms of violence in adulthood, including violence within an intimate relationship (e.g., Smith & Stover, 2016). According to Ghimire and Follette (2011), four empirically supported factors have been identified to explain the risk of revictimization in survivors of child maltreatment: (a) symptoms of posttraumatic stress, (b) alcohol consumption, (c) risky sexual behaviors, and (d) distortions in survivors' perception of risk. The interaction of these factors could increase the victims' risk of violence in intimate relations while also reducing their skills in preventing violence. Future studies should include these indirect mechanisms.

Clinical Implications

Clinicians working with adult survivors of child maltreatment should assess all possible forms of childhood trauma and consider their potential cumulative effect. Clinicians should also consider the possibility that a woman who has been victimized as a child may have been, or may currently be involved in, a violent relationship and should carefully assess lifetime and recent experiences of IPV. The present findings provide much needed empirically based evidence to support a systematic assessment of childhood interpersonal trauma and IPV in women who consult in clinical settings.

Preventive interventions should also be developed and offered to survivors of childhood violence early on. In fact, the risk of revictimization seems to emerge early in survivors of child maltreatment. For example, Hebert, Lavoie, Vitaro, McDuff, and Tremblay (2008) showed that among adolescent girls with a history of child sexual abuse, the prevalence of dating violence was almost twice as high (47%) as that observed in nonvictims (25%). Studies examining clinical populations yielded similar results. Youth followed by protection agency workers (typically after having been victims of abuse or neglect) reported higher rates of chronic violence in their relationships when compared with youth from the general population (Goldstein, Leslie, Wekerle, Leung, & Erickson, 2010; Wekerle et al., 2009). Previous studies have

established that support for survivors of violence must be provided early on to prevent potential chronic revictimization cycles in different contexts, particularly in close relationships.

Limitations and Future Directions

The present study was retrospective; therefore, a recall bias may be present. The response rate of 45.5% also limited the generalizability of the results, although this rate is consistent with a general tendency for a lower participation rate observed internationally in the past decade in studies relying on phone interviews (Government of Canada, 2013; Milton, Ellis, Davenport, Burns, & Hickie, 2017). In addition, we could not gather data on lifetime IPV among women who did not have a partner during the last year. Moreover, other forms of IPV, such as stalking, psychological abuse, and sexual violence, were not examined. The current study did not assess both partners' reports of violence, and thus ignored the dyadic nature of IPV. Our measure of childhood physical abuse was mostly limited to corporal punishment and did not specifically assess whether the respondents had sustained any injury. Finally, the cross-sectional nature of the study did not allow definite statements about causality. Future research should include broader measures of IPV (e.g., assessing intimate terrorism, psychological and sexual violence, motivations for IPV), longitudinal designs (e.g., Godbout et al., 2016; Widom, Czaja, & Dutton, 2014), dyadic data, and multiple mediators of the associations between child maltreatment and adult IPV. Gender invariance studies and investigations designed to examine these associations in sexual minorities are also needed. In addition, cross-national studies may help to delineate personal, familial, and social factors associated with cross-cultural variations.

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ORCID iD

Caroline Dugal https://orcid.org/0000-0001-9488-6962

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Author Biographies

Audrey Brassard, PhD, is a full professor in the Department of Psychology at the Université de Sherbrooke, Québec, Canada. She is a member of the Centre de recherche interdisciplinaire sur les problèmes conjugaux et les agressions sexuelles (CRIPCAS) and of the Sexuality and Couples (SCOUP) Research team. Her research and clinical interests include interpersonal relationships, intimate partner violence, conflict, romantic attachment, and sexuality.

Marc Tourigny, PhD, is an associate professor in the Department of Psychoeducation at the Université de Sherbrooke. He is a member of the CRIPCAS. He is interested in issues of child maltreatment and program evaluation.

Caroline Dugal is a PhD candidate in psychology at the Université du Québec à Montréal (UQAM) and a student member of the CRIPCAS. Her research interests revolve around the emotional and relational repercussions of childhood interpersonal trauma and the variables related to the experience of violence within intimate relationships.

Yvan Lussier, PhD, is a full professor in the Department of Psychology at the Université du Québec à Trois-Rivières (UQTR), Québec, Canada. He is a member of the CRIPCAS and of the SCOUP Research team. His research interests include intimate relationship initiation and maintenance processes, intimate partner violence, romantic attachment, and child maltreatment.

Stéphane Sabourin, PhD, is a full professor in the School of Psychology at Université Laval, Québec, Canada. He is a member of the CRIPCAS. His research and clinical interests include romantic relationships, psychodynamic models of couple therapy, and personality traits.

Natacha Godbout, PhD, is a professor in the Department of Sexology, UQAM, Canada, and director of TRACE—the Trauma and Couple Research Intervention Unit. She is a member of the CRIPCAS and the SCOUP Research team. Her research and clinical work center on the impacts of child interpersonal trauma on adult psycho-relational functioning.