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Cumulative Childhood Maltreatment and Subsequent Psychological Violence in Intimate Relationships: The Role of Emotion Dysregulation

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Cumulative maltreatment or exposure to multiple types of child abuse or neglect increases the risk of perpetrating and sustaining intimate partner violence (IPV) in adulthood and is associated with deficits in emotion regulation, which are considered as robust determinants of psychological IPV. Yet, no research has evaluated this relationship by distinguishing the cognitive and behavioral components of emotion dysregulation. Thus, the goal of the present study was to examine the mediating role of cognitive and behavioral emotion dysregulation in the relationship uniting cumulative childhood maltreatment and psychological IPV. A total of 162 adults consulting in sexology completed self-report questionnaires assessing their experiences of cumulative trauma, emotion dysregulation, and psychological IPV. The majority (86%) of participants experienced more than one type of childhood maltreatment, whereas half of them reported having perpetrated (51%) and sustained (54%) psychological IPV. Path analyses confirmed the mediational role of emotion dysregulation in the relationship between cumulative maltreatment experiences and psychological IPV. The hypothesized model was also invariant across gender. Results highlight the necessity to assess child maltreatment and IPV experiences thoroughly in individuals consulting for sexual or relational problems.

KEYWORDS: child maltreatment; cumulative trauma; affect regulation; intimate partner violence

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Psychological intimate partner violence (IPV) is defined as the use of verbal and nonverbal communication with the intent to mentally or emotionally harm and/or exert control over one's partner (Breiding, Basile, Smith, Black, & Mahendra, 2015). Psychological IPV is the most prevalent form of partner violence, especially in clinical populations where it affects up to 84% of individuals (Bhandari, Dosanjh, Tornetta, Matthews, & Violence Against Women Health Research Collaborative, 2006; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The study of psychological IPV has generated a great interest in the scientific community in the last decades as its deleterious and pervasive effects (e.g., poor physical health, higher incidence of depressive symptoms, post-traumatic stress disorder, substance use problems, and risk factor for physical IPV) became more documented (Baker & Stith, 2008; Straight, Harper, & Arias, 2003; Taft, Schumm, Marshall, Panuzio, & Holtzworth-Munroe, 2006). The current study addresses the need to identify the antecedents and risk factors of this particular type of violence by examining the mediational role of emotion dysregulation in the well-established relationship uniting childhood maltreatment and psychological IPV.

CHILDHOOD MALTREATMENT AND IPV

A large body of literature has reported an association between childhood maltreatment (i.e., physical, sexual or psychological abuse, neglect, bullying, and witnessing IPV) and an increased risk of being victimized or perpetrating IPV in adulthood (Daisy & Hien, 2014; Godbout, Dutton, Lussier, & Sabourin, 2009; Lilly, London, & Bridgett, 2014). Most victims of IPV (Desai, Arias, Thompson, & Basile, 2002), the majority of convicted batterers (Lee, Walters, Hall, & Basile, 2013), and individuals from clinical samples who report perpetrating IPV (Berthelot et al., 2014) disclose high rates of childhood maltreatment, ranging from 30% to 80%. However, not all victims of child maltreatment become IPV perpetrators nor are revictimized. Indeed, several authors have found a weak-to-moderate association between child maltreatment and later IPV, with an overall effect size of .16 across 31 studies (Stith et al., 2000). This high proportion of unexplained variance calls for further studies exploring the mechanisms that might explain why some survivors of childhood maltreatment experience IPV during adulthood while others do not. Perhaps the experience of multiple types of childhood maltreatment, known to generate more important and complex repercussions than a single type of abuse (Arata, Langhinrichsen-Rohling, Bowers, & O'Farrill-Swails, 2005), could partly explain these different trajectories. Indeed, IPV would be more strongly related to cumulative types of maltreatment, such as the experience of both emotional and physical abuse (Berzenski & Yates, 2010).

Cumulative Childhood Maltreatment

Past research on the effects of childhood maltreatment has frequently failed to consider the effects of cumulative types of abuse or neglect on psychological IPV, even

though studies increasingly recognize that individuals exposed to one category of maltreatment are likely to also have experienced other types of victimization (Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009). For instance, individuals who have sustained childhood sexual abuse are likely to have also experienced physical or psychological abuse at the same period (Arata et al., 2005; Elliott et al., 2009; Higgins & McCabe, 2001). Thus, it would appear that children who have experienced interpersonal trauma are at an increased risk of additional victimization (Finkelhor, Ormrod, & Turner, 2007; Hodges et al., 2013). Studies have referred to this experience as cumulative childhood maltreatment, which is operationalized as the total number of different types of interpersonal victimization experienced by a given individual (Briere, Hodges, & Godbout, 2010; Cloitre et al., 2009).

In the interpersonal maltreatment literature, results are generally consistent in finding that experiencing multiple types of maltreatment may be particularly detrimental since it is related to greater psychosocial maladjustment than experiencing a single type of abuse (Briere et al., 2010; Hodges et al., 2013). Indeed, according to studies on cumulative maltreatment exposure (e.g., Briere et al., 2010; Cloitre et al., 2009), the number of different types of interpersonal trauma experienced, over and above the frequency or severity of each specific type of trauma, would act as a robust predictor of subsequent negative psychological and relational outcomes.

Cumulative Childhood Maltreatment and IPV

To our knowledge, only three studies have examined the impact of cumulative childhood maltreatment on IPV and these studies only examined its impact on IPV perpetration (Berthelot et al., 2014; Green et al., 2005; Maguire et al., 2015). However, considering that childhood maltreatment has consistently been associated with interpersonal revictimization (Lilly et al., 2014), attention must also be paid to its impact on IPV victimization.

In addition, most studies that have examined the effects of childhood maltreatment on IPV have investigated the specific impact of different types of abuse and neglect or have depicted the presence or absence of childhood maltreatment as a dichotomous variable rather than examining the correlates of cumulated types of child maltreatment (Edwards, Dixon, Gidycz, & Desai, 2014; Elmquist et al., 2016; Messing, La Flair, Cavanaugh, Kanga, & Campbell, 2012; Widom, Czaja, & Dutton, 2014). Yet, according to Elmquist et al. (2016), the combination of different types of childhood maltreatment could be related to more frequent IPV in adulthood. As such, the examination of the impact of cumulative childhood maltreatment on later psychological IPV offers an innovative approach to the study of the intergenerational transmission of violence.

Furthermore, while cumulative child maltreatment has somewhat consistently been associated with later IPV, the mechanisms underlying this relationship remain unclear. By reflecting the complex repercussions of cumulative maltreatment and by acting as a known risk factor for both IPV perpetration and victimization,

disturbances in childhood maltreatment survivors' affective and interpersonal self-regulatory capacities might help explain the link between childhood maltreatment and IPV.

EMOTION DYSREGULATION AS A MEDIATOR OF THE RELATIONSHIP BETWEEN CHILDHOOD MALTREATMENT AND IPV

Emotion Dysregulation

Emotion regulation refers to an individual's capacity to control and tolerate strong and negative affect, without resorting to avoidance strategies that distract, soothe, or draw attention away from emotional distress (Briere, 2002). Specifically, emotion regulation can be conceptualized as a multidimensional construct (Gratz & Roemer, 2004), composed of a cognitive and a behavioral dimensions (Berzenski & Yates, 2010). The cognitive dimension of emotion regulation is based on the regulation of affects and refers to the inhibition of mood swings or of the expression of anger. The behavioral dimension of emotion regulation is reflected by the ability to refrain from externalizing negative emotions through avoidance or dysfunctional behaviors (Briere & Runtz, 2002). These behavioral strategies manifest as tension reduction behaviors, the most common of which are self-destructive and risky sexual behaviors, binge/purge eating, impulsivity, and aggressive behaviors (Briere & Runtz, 2002). Since emotion regulation is a multidimensional construct (Gratz & Roemer, 2004), researchers suggest that the cognitive capacities to accurately identify and express emotions must be investigated as potentially distinct from the behavioral capacities to control one's response to emotions (Berzenski & Yates, 2010). Yet, very few studies have included both the cognitive and behavioral dimensions of affect dysregulation in the same integrative model (Berthelot et al., 2014; Gratz, Paulson, Jakupcak, & Tull, 2009), a shortcoming that is addressed in the current study.

Emotion Dysregulation and Cumulative Childhood Maltreatment

Researchers have suggested that the experience of maltreatment during childhood may interfere with the development of adaptive emotion regulation by exposing children to overwhelming or extreme emotional demands while simultaneously failing to teach them how to regulate emotional arousal, to control their behaviors in the context of emotional arousal, or to tolerate emotional distress (Gratz et al., 2009). Others have also suggested that the experience of violence, hostility, or indifference in childhood might foster affective predispositions to aggression by hindering the capacity to get rid of negative feelings with adequate coping mechanisms (Allen, 2011; Berthelot et al., 2014). Essentially, when faced with insufficient affect regulation skills or overwhelming negative emotions, adult survivors of childhood maltreatment are often unable to cope and tend to resort to avoidance strategies to reduce the impact and duration of their negative experiences (Briere & Lanktree, 2008).

Empirical data have supported those theoretical propositions by showing that adult survivors of child maltreatment tend to exhibit emotion dysregulation as reflected by emotional instability, problems in inhibiting the expression of strong affects, and the use of tension-reduction behaviors (i.e., self-injury, binge–purge eating, impulsivity, excessive risk-taking, and aggression; Briere, 2002; Briere & Rickards, 2007). Exposure to cumulative childhood maltreatment has been specifically proposed to result in an intricate pattern of affective and interpersonal disturbances that might reflect self-regulatory disturbances (Briere & Scott, 2015; Cloitre et al., 2009), which was confirmed in several empirical studies (Briere et al., 2010, 2008; Dugal, Godbout, Bigras, & Bélanger, 2015; Elliott et al., 2009).

Emotion Dysregulation and IPV

Emotion regulation is central to adaptive coping in relational settings, as the capacity to deal with emotionally straining situations is critical for successful intimate relationships (Berzenski & Yates, 2010). Thus, emotion dysregulation could be at the root of negative relational interactions and lead to psychological IPV as a way to cope when faced with negative or intense emotions (Allen, 2011; Bliton et al., 2015). For instance, women in treatment for IPV often cite nonregulated negative emotions, arising during couple conflicts, as precipitants to their use of violence toward their partner (Stuart et al., 2006). Yet, studies exploring these issues rather emphasize the importance of emotion dysregulation as a predictor for IPV in men, given that IPV perpetrated by women is more likely used in a context of self-defense (Hamberger, 2005). Still, empirical data have confirmed that both male and female survivors of childhood maltreatment are more vulnerable to resort to aggression when relational problems challenge their ability to regulate negative emotions (Berthelot et al., 2014).

Although several studies have concluded to the existence of a relationship between emotion dysregulation and IPV, very few have examined how emotion dysregulation may be related to psychological IPV victimization. According to those studies, difficulties in emotion regulation could contribute to interpersonal victimization through defective risk detection abilities (i.e., inability to identify and respond effectively to dangerous situations or people; Iverson, McLaughlin, Adair, & Monson, 2014) and deficits in effective coping strategies (i.e., the emotional control necessary to resolve conflicts in an appropriate manner; Lilly et al., 2014). Difficulties in emotion regulation could thus hamper one's ability to deal with domestic disputes, a known risk factor for conflicts between partners turning violent (Johnson, 2006), thereby increasing the possibility of being victimized by a romantic partner. Indeed, a growing body of research has ascertained that bidirectional violence, in which partners are both perpetrators and victims of IPV, is a prevalent type of IPV in the general population (Archer, 2000; Straus, 2011). Consequently, researchers suggest that both IPV perpetration and victimization should be included in models examining IPV (Bélanger, Mathieu, Dugal, & Courchesne, 2015).

Cumulative Childhood Maltreatment, Emotion Dysregulation, and Psychological IPV

To our knowledge, only a few studies have examined the relationship between childhood maltreatment, emotion dysregulation, and IPV. A study conducted by Berthelot et al. (2014) reported that, in a clinical population of men and women consulting for sexual or relational problems, the experience of childhood maltreatment increased the risk of IPV perpetration through elevated Post-traumatic stress disorder (PTSD) symptoms and anger personality traits. These authors, along with others such as Iverson et al. (2014), suggested that a lower threshold for anger combined with PTSD-related fear and hypervigilance could underlie emotion regulation difficulties. Hence, emotion dysregulation might be at the heart of partner violence since it increases the risk of experiencing IPV perpetration and victimization. However, this hypothesis needs further empirical validation.

In a sample of undergraduate students, Gratz et al. (2009) found evidence for the mediational role of emotion dysregulation in the relationship between childhood maltreatment and physical IPV perpetration as committed by men toward women. However, this mediational model did not apply to women from their sample. In a sample of undergraduate women, Berzenski and Yates (2010) found that emotion dysregulation acted as a partial mediator of the relationship between child maltreatment and physical, psychological, and sexual IPV victimization and perpetration. Finally, in a sample of women survivors of childhood maltreatment and IPV, Lilly et al. (2014) reported similar results, showing that disturbances in emotion regulation resulting from childhood maltreatment increased the risk of physical, psychological, and sexual IPV victimization. However, previous studies primarily relied on nonclinical samples of students (Berzenski & Yates, 2010; Gratz et al., 2009) did not examine both IPV perpetration and victimization in the same model (Berthelot et al., 2014; Gratz et al., 2009; Lilly et al., 2014), did not differentiate cognitive from behavioral indicators of emotion dysregulation (Gratz et al., 2009), did not specifically examine psychological IPV (Berzenski & Yates, 2010), and did not examine those variables through a multivariate integrative model (Gratz et al., 2009).

THE CURRENT STUDY

In light of these gaps in the literature and taking into account the difficulty to generalize results derived from college samples to clinical samples, usually composed of individuals who are older and who present more severe maltreatment exposure, the present study sought three objectives. First, it aims to determine whether cumulative childhood maltreatment is associated with deficits in emotion regulation and psychological IPV in patients consulting for sexual or relational problems. It is expected that all variables will be correlated. The second objective is to test a multivariate model in which two indicators of emotion dysregulation, affect regulation and tension-reduction activities, act as mediators of the relationship between

cumulative childhood maltreatment and psychological IPV. It is expected that the experience of cumulative maltreatment leads to less affect regulation capacities and higher use of tension-reduction activities, which in turn lead to higher levels of IPV perpetration and victimization. In line with literature on the bidirectionality of IPV (Straus, 2011), it is also expected that perpetrating and sustaining psychological IPV will be related in the model. The third aim of the study is to test a gender moderation hypothesis within the proposed mediational model to determine whether the strength of the associations between the study variables vary across gender. On the basis of previous findings, it is expected that these associations will be similar for men and women. By testing an integrative conceptual model aiming to address the shortcomings observed in previous studies, this study will bring a significant contribution to knowledge on IPV as experienced by individuals from clinical populations. In addition, results from this study will inform clinical practice by identifying key variables that could be addressed in treatment with childhood maltreatment or IPV survivors.

METHODS

Participants

A total of 162 adults (65 men, 97 women) consulting for sexual or relational problems participated in the study. Their mean age was 38.2 years (SD = 12.5, range = 17–70). Participants were full-time workers (64.2%), students (12.3%), unemployed (7.5%), stayed at home (6.6%), or retired (8.5%). They were either married (21.6%, n = 35), in a common-law partnership or cohabiting (42.6%, n = 69), or in a relationship with a regular partner (22.2%, n = 36). Some participants were in a relationship during the past year but were now single/with occasional partner(s) (3.1%, n = 5) or single/not committed to a relationship (10.5%, n = 17). The majority of participants reported being heterosexual (87.6%), whereas 5.0% reported being homosexual and 6.2% bisexual. As for education, 17.8% of participants held a high school diploma, 39.5% attained a college or professional studies degree, 25.3% completed undergraduate studies, and 15.4% completed graduate studies. A total of 40.6% reported an annual income of CAD $19,999 or less, 28.8% reported an income between CAD $20,000 and CAD $39,999, and 30.7% reported an income of CAD $40,000 or more, which indicate a high proportion of low-income participants in this sample. With regards to the experience of trauma before and after the age of 18 years, such as death of a family member or natural disaster, it was reported by 40.1% (before the age of 18 years) and 43.2% (after the age of 18 years) of participants. The current sample presents characteristics (i.e., low sexual desire in women and erectile dysfunction in men as main reasons for consultation, high level of psychological distress in both men and women) that are consistent with other studies that have included participants consulting for sexual or relational problems (Godbout, Lafrenaye-Dugas, Hébert, & Goulet, 2015).

MEASURES

Childhood Maltreatment

A self-report questionnaire assessing eight types of childhood maltreatment (i.e., sexual, physical and psychological abuse, physical and psychological neglect, witnessing physical and psychological violence, and bullying) was administered to participants. For childhood sexual abuse, participants indicated, on a yes/no scale, if they experienced any unwanted sexual contact (e.g., touching and penetration) or any sexual contact with a person 5 years older or in a position of authority before the age of 18 years (2 items, r = .69). For the other types of maltreatment, participants were asked to report how many times they experienced each event in a typical year (before the age of 18 years), on a 7-point Likert scale ranging from 0 (*never)* to 7 (*almost every day*). Physical and psychological abuse were assessed using indicators derived from the Early Trauma Inventory-Self-Report (ETISR-SF; Bremner, Bolus, & Mayer, 2007). Physical abuse referred to having been slapped, burned, punched or kicked, hit, or shoved (5 items, Cronbach's α = .72). Psychological abuse referred to having been put down, degraded, ridiculed, insulted, made to feel like you did not count, or told you were no good by a caregiver (3 items Cronbach's α = .89). Neglect was assessed using items derived from the Comprehensive Child Maltreatment Scale for Adults (Higgins & McCabe, 2001). Psychological neglect referred to having been ignored or not felt loved nor understood by a caregiver (3 items Cronbach's α = .84). Physical neglect referred to not having received regular meals, baths, clean clothes, needed medical attention, or being confined in a room alone for extended periods of time. Witnessing interparental violence was assessed by 2 items derived from the Childhood Maltreatment Questionnaire (Godbout, Lussier, & Sabourin, 2006; Godbout et al., 2009): (a) witnessing psychological violence ("My parents insulted each other or shouted at each other") and (b) witnessing physical violence ("My parents shoved, hit or fought each other with hands, feet or objects"). One item, based on the recommendations of the *Centers for Disease Control and Prevention* (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014), assessed bullying by asking participants the typical annual frequency at which they experienced intimidation or harassment by peers. For the purpose of this study, each scale was dichotomously coded (0 = absence, 1 = presence) and the results were added to obtain a continuous score of cumulative maltreatment, ranging from 0 to 8, indicating the number of different types of child maltreatment experienced.

Emotion Dysregulation

Affect regulation and tension-reduction activities were assessed using the Inventory of Altered Self-Capacities (IASC; Briere, 2000). The affect regulation scale included 9 items and evaluated affect instability and affect skills deficits by examining problems in affect regulation and control expressed by mood swings, problems in inhibiting the expression of anger, and inability to regulate dysphoric states without externalization. The tension-reduction activities scale included 9 items and referred to the

tendency to react to painful internal states with potentially dysfunctional externalizing or avoidant behaviors that distract, soothe, or reduce internal distress (e.g., self-mutilation and sexual acting-out). Participants indicated the frequency with which they experienced each of the items in the last 6 months on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). Total scores of each scale ranged from 9 to 45, with higher scores reflecting more important emotion regulation difficulties. To determine whether participants were above or below the clinical cut-off, scores were transformed into T-scores (Briere, 2000). The psychometric qualities of the original standardized and validated measure (Briere & Runtz, 2002) were satisfactory. In the current sample, Cronbach's α was .88 for the affect dysregulation scale and .62 for the tension-reduction activities scale.

Intimate Partner Violence

A self-report questionnaire was administered to assess inflicted and sustained psychological IPV. Three questions assessing psychological IPV were derived from the French adaptation (Hébert & Parent, 2000) of the Revised Conflict Tactics Scale (CTS-2; Straus et al., 1996). Participants were asked whether they experienced insulting, yelling, threatening, or calling names with their partner. An additional question, specifically evaluating control of the partner, was derived from an instrument assessing violence against women in intimate relationships (Lavoie & Vézina, 2001) and was incorporated as part of psychological IPV. The severity of violence was also examined as descriptive statistics using the subscales of the psychological intimate partner violence scale of the CTS-2: one of the items referred to "minor" IPV, whereas three items indicated "severe" IPV. For each item, participants were asked to report the frequency, during the last year, at which they perpetrated and sustained these psychologically violent behaviors on a 6-point Likert scale ranging from 0 (*this never happened)* to 6 (*more than 20 times during the past 12 months*). For the purpose of this study, scores were averaged into continuous scores, ranging from 0 to 6 and indicating the annual frequency of psychological IPV perpetration (Cronbach's $\alpha = .80$) and victimization (Cronbach's $\alpha = .78$), as per the authors' recommendations (Straus et al., 1996). Although the severity of psychologically violent acts was examined by this measure, it was not accounted for in the final model since we were interested in examining the chronicity or frequency of exposure to psychological violence in cumulative maltreatment survivors' romantic relationships, as cumulative maltreatment has been shown to lead to more frequent IPV in adulthood (Elmquist et al., 2016).

PROCEDURE

Graduate students completing a supervised internship in clinical sexology were invited to recruit their patients in different clinical settings, during the assessment phase of therapy. Patients who were interested in participating were invited to complete a

consent form and the self-report questionnaires alone, without consulting their partner. The Institutional Review Board (authors' University) approved this study.

Analytic Strategy

Correlations and multiple regressions were first conducted to assess the associations among the study variables. Then, path analysis was used to test the hypothesized model that cumulative childhood maltreatment increases the risk of presenting affect dysregulation and tension-reduction activities, which in turn lead to the experience of psychological IPV. Path analyses were conducted using M*plus*, version 7 (Muthén & Muthén, 1998-2012) and the Maximum Likelihood Estimation with Robust Standard Errors (MLR), which is robust to non-normality and protects against heteroscedasticity (White, 1980). To examine the mediational role of emotion dysregulation indicators, we computed direct effects (i.e., path coefficient from child maltreatment to perpetrated IPV and from child maltreatment to sustained IPV) and indirect effects (i.e., the product of the path coefficients from childhood maltreatment to affect dysregulation and from affect dysregulation to perpetrated or sustained IPV). To examine the magnitude and significance of the indirect effects, 95% bootstrap confidence intervals were computed (Mackinnon & Fairchild, 2009). This bias-corrected method is based on the distribution of the product of coefficients and generates confidence limits for the true value of coefficients for indirect effects. When zero is not in the confidence interval, the indirect effect is considered significant. To examine the gender moderation hypothesis, a multiple-group, gender-invariance analysis was conducted. Overall model fit was tested by considering together the comparative fit index (CFI; Bentler, 1990), the root mean square error of approximation (RMSEA; Steiger, 1990), the standardized root mean square residual (SRMR), the chi-square statistic, and the ratio of chi-square to degrees of freedom (X^2/df). A combination of a nonstatistically significant chi-square value, a CFI value of .90 or higher, RMSEA and SRMR values below .06, and a ratio of chi-square to *df* less than 3 are thought to represent a good fit (Hu & Bentler, 1999; Kline, 2011; Ullman, 2001).

RESULTS

Objective 1: Descriptive Statistics and Bivariate Correlations

Childhood Maltreatment. In the present sample, 8.6% (n = 14) of participants reported the experience of a single type of child maltreatment, 32.1% (n = 52) experienced two to three types of maltreatment, and 53.7% (n = 87) reported polyvictimization, with four or more types of maltreatment (Finkelhor et al., 2007). The average number of different types of maltreatment sustained was 3.93 (SD = 2.20). There was no difference across gender as to the number of different types of maltreatment experienced, $t(160) = .19$, *ns*. Precisely, 50.0% (n = 81) of participants reported

physical abuse, 61.7% (n = 100) psychological abuse, 41.6% (n = 67), sexual abuse, 71.6% (n = 116) psychological neglect, 29.6% (n = 48) physical neglect, 57.4% (n = 93) witnessed psychological violence, 18.5% (n = 30) witnessed physical violence, and 63.0% (n = 102) experienced bullying. Types of maltreatment were similar across gender, except for child sexual abuse, which was reported by 20.3% of men compared 55.7% of women, $\chi^2(1) = 19.84$, $p < .001$.

Emotion Dysregulation. Participants presented a mean score of 19.75 (SD = 7.84) on the affect dysregulation scale and 14.80 (SD = 4.39) on the tension-reduction activities scale. Data indicated that 45.1% of participants (n = 73) were above the clinical cut-off for affect dysregulation and 35.2% (n = 57) for tension-reduction activities. The scores for affect dysregulation and tension-reduction activities did not differ across gender, respectively, $t(160) = 1.87$, *ns* and $t(160) = -.67$, *ns*.

Intimate Partner Violence. Among participants, 50.9% (n = 84) reported perpetration of at least one act of psychological violence toward their partner at least once over the past 12 months, while 53.7% (n = 87) reported victimization. Mean scores were 1.10 (SD = 1.51) for IPV perpetration and 1.15 (SD = 1.44) for IPV victimization, reflecting a frequency of one to two experiences of psychological violence in the past year. The severity of the violent acts was examined. Within patients reporting psychological IPV victimization, 36.6% (n = 37) reported "minor" IPV (i.e., "My partner insulted, swore, shouted or yelled at me"), while 63.4% (n = 64) experienced "severe" IPV (i.e., "My partner destroyed something belonging to me or threatened to hit me"). In addition, 47.5% (n = 47) of those who reported having perpetrated psychological violence exerted minor IPV toward their partner, whereas 52.5% (n = 52) exerted severe IPV. There was no difference across gender as to the frequency of psychological violence perpetrated, $t(160) = .45$, *ns*, nor sustained, $t(137) = .97$, *ns*.

Bivariate Correlations Between Childhood Maltreatment, Emotion Dysregulation, and Intimate Partner Violence. Bivariate correlations among cumulative maltreatment, affect dysregulation, tension-reduction activities, and psychological

TABLE 1. Correlations Among Cumulative Childhood Maltreatment, Affect Dysregulation, Tension-Reduction Activities, and Psychological IPV

Variables	1	2	3	4	5
1. Cumulative maltreatment	–				
2. Affect dysregulation	.20*				
3. Tension-reduction activities	.40***	.63***			
4. Perpetrated psychological IPV	.17*	.35***	.31***	–	
5. Sustained psychological IPV	.25**	.25**	.29***	.76***	–

Note. IPV = intimate partner violence.
*$p < .05$. **$p < .01$. ***$p < .001$.

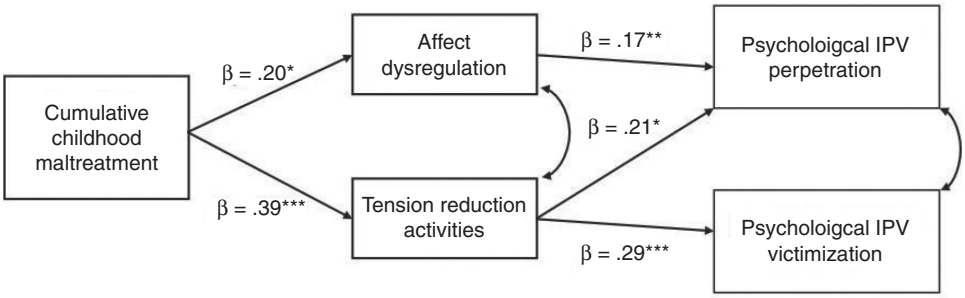

Figure 1. Path analysis of the role of affect dysregulation and tension -reduction activities in the relationship between cumulative childhood maltreatment and psychological intimate partner violence (IPV) perpetration and victimization.
*$p < .05$. **$p < .01$. ***$p < .001$.

IPV perpetration and victimization are presented in Table 1. Statistically significant correlations were observed between all variables.

Objective 2: Integrative Model of the Role of Affect Dysregulation and Tension-Reduction Activities in the Relationship Between Cumulative Maltreatment and Psychological IPV Perpetration and Victimization

The proposed model adequately fitted the data, CFI = .99, RMSEA = .08, CI [.00, .20], $\chi^2[2] = 4.57$, $p = .10$, ratio $\chi^2/df = 2.29$, and SRMR = .03. However, in line with the principle of parsimony, a nonsignificant association between affect dysregulation and psychological IPV victimization (β = .13, *ns*) was removed. The adjusted model provided slightly improved fit to the data: CFI = .99, RMSEA = .07, CI [.00, .16], $\chi^2[3] = 5.64$, $p = .13$, ratio $\chi^2/df = 1.88$, and SRMR = .03. As presented in Figure 1, this model indicated that cumulative childhood maltreatment was positively associated with both the affect dysregulation and the use tension-reduction activities, which in turn increased the risk of experiencing psychological IPV. More specifically, the use of tension-reduction activities in trauma survivors increased the risk of experiencing both psychological IPV perpetration and victimization, whereas affect dysregulation only increased the risk of perpetrating psychological IPV. The covariance between the residual terms of affect dysregulation and tension-reduction activities was .61 ($p < .001$). The covariance between the residual terms of perpetrated and sustained psychological IPV was .74 ($p < .001$). To confirm the generalizability of the mediational model across age, especially since the range of participants' ages was wide (17–70), an additional analysis was conducted to control for age of participants. Results yielded a well-fitting model, and adding age to the mediational model did not change the significance and strength of the associations between variables.

Results indicated that the indirect effect of cumulative childhood maltreatment through affect dysregulation was significant for perpetrated psychological IPV (β=

.04, 95% CI .00 to .04), which suggests a mediational effect between these variables. The indirect effects of cumulative childhood maltreatment via the use of tension-reduction activities was also significant for both perpetrated psychological IPV (β = .08, 95% CI .01, .08) and sustained psychological IPV (β = .11, 95% CI .04, .17). Results suggested mediational effects of tension-reduction activities in the relationship between cumulative childhood maltreatment and perpetrated psychological IPV and in the relationship between cumulative childhood maltreatment and sustained psychological IPV. Overall, the final model explained 12.0% of the variance for psychological IPV perpetration and 8.3% for psychological IPV victimization. Standardized coefficients are presented in Figure 1.

Objective 3: Gender Moderation of the Integrative Model

Gender Invariance. The path analysis model was first assessed simultaneously in women and men, allowing all paths to be estimated freely (i.e., configural invariance), to ensure that the model held for both genders. Results revealed a good-fitting multigender model: CFI = .99, RMSEA = .06, 90% CI [.00, .17], $\chi^2(6) = 7.99$, $p = .24$, $X^2/df = 1.33$, and SRMR = .05. This model was then compared with a more restrictive model in which all paths and covariances were constrained to be equal across men and women. Models were compared using a chi-square difference test; a significant univariate incremental chi-square value ($p < .05$) indicates evidence of differences across men and women. Results indicated a nonsignificant chi-square difference between the freely estimated model and the fully constrained model ($\Delta\chi^2(12) = 9.15$, $p = .69$), suggesting that the model was gender invariant.

DISCUSSION

The current findings extend previous work on the long-term effects of childhood maltreatment by demonstrating that the experience of cumulative child maltreatment is associated with deficits in emotion regulation, which are, in turn, associated with increased risk of psychological IPV. Also, by examining the indirect effect of cumulative childhood maltreatment on psychological IPV through emotion regulation difficulties specific to individuals consulting for sexual or relational problems, this study helps to identify and unravel the pathways through which violence toward a romantic partner may occur in a clinical population.

Analyses showed that 53.7% of participants reported having experienced four or more types of childhood maltreatment, a prevalence rate somewhat higher than those usually reported in clinical settings (Berthelot et al., 2014; Zhang et al., 2013); this might be explained by the more comprehensive measures of child maltreatment used in the present study. As for psychological IPV experienced during the last 12 months, this sample's prevalence rates are lower than those usually observed in clinical samples, ranging from 10.4% to 86.2%, but higher than those of samples from the general population, ranging from 12.1% to 19.3% (Carney & Barner, 2012). However,

since the items used to measure IPV might differ from one study to the other, direct comparison of the prevalence rates in different populations might lead to inconclusive results. In the present sample, 50.9% of participants reported having inflicted psychological violence, whereas 53.7% reported having sustained psychological violence from their partner. Considering that these prevalence rates are very similar and the covariance between the residual terms of perpetrated and sustained IPV is high, we might believe that most participants from this sample report experiencing bidirectional violence within their romantic relationship. However, since there are qualitatively different forms of IPV that might explain this bidirectionality (e.g., intimate terrorism, which is part of a general strategy of power and control, violent resistance, which is in response to a violent and controlling partner, and situational couple violence, which is a product of the escalation of conflict into violence), further studies should be conducted before drawing meaningful conclusions on this subject (Johnson, 2006).

Consistent with our hypotheses, results demonstrated that affect dysregulation and tension-reduction activities were positively associated with cumulative childhood maltreatment and psychological IPV. Specifically, affect dysregulation fully mediated the relationship between cumulative maltreatment and IPV perpetration, whereas tension-reduction activities fully mediated the relationships between cumulative childhood maltreatment and both IPV perpetration and victimization. The second hypothesis of the study was thus partially confirmed. In agreement with the results of Berzenski and Yates (2010), the present findings suggest that the relationship between cumulative childhood maltreatment and perpetrated or sustained psychological IPV is mostly driven by the behavioral components of emotion dysregulation (i.e., tension-reduction activities) rather than by its cognitive components (i.e., affect dysregulation). As such, the tendency to use avoidance strategies or to exteriorize intense and negative affect when faced with overwhelming emotions may be at the root of the use of psychological violence toward one's partner. These findings also support previous assertions positing emotion dysregulation as a multidimensional construct that is best understood by considering its complexity (Gratz & Roemer, 2004). The present results are also very interesting since past studies have highlighted the influence of emotion dysregulation and childhood maltreatment on violence perpetration, suggesting that survivors of childhood maltreatment may be more prone to use violence when personal or relational problems hinder their ability to regulate negative emotions (Berthelot et al., 2014; Gratz et al., 2009). The present results rather emphasize the importance of maltreatment experiences and affective functioning with regards to victimization. Indeed, the results suggest that the use of tension-reduction activities in survivors of childhood maltreatment increases their risk of being psychologically victimized. Thus, by exteriorizing intense and negative emotions, individuals might inadvertently come to influence their partners to react with aggressive behaviors. Perhaps, these results refer to situational couple violence, a type of IPV that is situationally provoked and arises as conflicts between partners escalate into violence (Johnson, 2006). As such, tension-reduction activities would

affect IPV through its impact on both partners, underlining the importance of considering partner violence as a dyadic and bidirectional, rather than an individual and unidirectional phenomenon. In line with this thought, the results also confirmed our third hypothesis, stating that IPV victimization and perpetration are associated.

Given the gender-specific findings reported in the literature, the invariance of the multivariate model was examined to determine whether the strength of the associations between cumulative childhood maltreatment, emotion dysregulation, and psychological IPV varied across men and women. Although past studies on IPV have discovered that emotion dysregulation would be more relevant to the perpetration of IPV among men survivors of childhood maltreatment (Gratz et al., 2009), the mediational model presented here was invariant across women and men, thus confirming our fourth hypothesis. In line with other studies that have examined IPV perpetrated by women having experienced childhood maltreatment (Berzenski & Yates, 2010; Lilly et al., 2014), the findings suggest that IPV committed by women might not only result from a need for self-defence. Perhaps self-defence as a motive for the use of violence against one's partner is better suited for physical violence, as psychological violence is less likely to protect oneself from a violent partner. Indeed, empirical studies over recent years have emphasized anger and lack of emotion regulation as motives for the perpetration of psychological IPV in women (Leisring, 2013; Shorey, Febres, Brasfield, & Stuart, 2011).

The present results are also in line with other studies documenting that cumulative childhood maltreatment leads to repercussions that are not simply more severe than those of a single maltreatment incident, but are qualitatively different and more complex since they affect multiple areas of affective and interpersonal functioning (Choi & Oh, 2014; Cloitre et al., 2009).

LIMITATIONS

Despite the strengths of the current study, its results must be evaluated in light of certain limitations. First, the design of this research being correlational, the direction or temporal order of the relationships examined might differ from our predictions. For instance, although theoretical literature suggests that emotion dysregulation may increase the risk of psychological IPV, the experience of this type of violence could also increase the risk of emotion dysregulation (Gratz et al., 2009). Consequently, the specific order of causation between the variables under study can only be assumed using the empirical foundation in the literature. Still, this theoretically grounded analytic strategy is recommended for causal analyses of such nature (Byrne, 2013), especially in the child maltreatment literature (Bigras, Godbout, & Briere, 2015). Only longitudinal analyses could eventually confirm the direction of the observed effects and empirically inform possible causal relationships.

The reliance on self-report measures of childhood maltreatment and IPV also makes it difficult to establish the actual occurrence of these phenomena. Indeed, self-report methodologies are susceptible to retrospective bias or distortions in recall,

which makes it possible that some participants under- or over-reported the extent of their victimization and of their emotional difficulties. For example, child maltreatment prevalence rates reported by participants in the current study are especially high, even for a clinical population. Perhaps, the measures used to evaluate these specific variables were particularly inclusive. Yet, research suggests that retrospective bias does not systematically affect the association between childhood maltreatment and later outcomes (Berthelot et al., 2014; Brewin, Andrews, & Gotlib, 1993). In addition, according to several studies, the administration of online and anonymous questionnaires may provide more reliable results when it comes to sensitive or personal topics, such as childhood maltreatment or IPV (Brock et al., 2015; Hamby, Sugarman, & Boney-McCoy, 2006; Whisman & Snyder, 2007). Furthermore, the prevalence rates for psychological IPV in the present study are similar to those observed in clinical samples (Bhandari et al., 2006; Carney & Barner, 2012), thus supporting the validity and generalization of the current results.

Furthermore, the results originate from individuals in clinical settings, they may not be generalizable to the general population, who usually report lower childhood maltreatment rates and subtler forms of IPV (Godbout et al., 2009). Yet, since the sample included men and women from a variety of clinical settings and reporting typical motive of consultations in sex and couple therapy (Berthelot et al., 2014; Godbout, Lafrenaye-Dugas, Hébert, & Goulet, 2015), the design of the current study enhances its ecological validity. Finally, since the reliability of the childhood physical abuse scale and the tension-reduction activities scale are lower than expected, one must consider these limitations when interpreting these results. For instance, the tension-reduction activities scale presents a variety externalizing behaviors that can be endorsed by participants including using sexuality to numb intense or negative emotions, hurting oneself, and eating more food than what is needed in order to calm down. Yet, it is possible that these behaviors, even though they are highly correlated in the scientific and clinical literature (Briere & Runtz, 2002), are not all exhibited by participants in the current sample. As such, perhaps those who reported using sexuality as a way to numb negative emotions did not also hurt themselves when faced with these emotional struggles, thus reducing the reliability of the scale in this particular sample.

RESEARCH IMPLICATIONS

The current findings add to the existent literature on the association between childhood maltreatment and later IPV, providing evidence that emotion dysregulation partly underlies this relationship. It also demonstrates that the experience of multiple types of maltreatment during childhood interferes with various areas of functioning many years later. More research must be conducted on this particular subject perhaps, by examining which type of maltreatment experience exerts more profound and severe repercussions during adulthood or by differentiating these repercussions according to the severity and/or frequency of maltreatment experiences.

Future studies should also examine whether childhood maltreatment and emotion dysregulation predict physical or sexual IPV. Since the majority of the variance in IPV remained unexplained, the need to examine other variables contributing to violence in intimate relationships persists. This is particularly relevant considering the modest relationship between affect dysregulation and IPV perpetration found in this sample, which could suggest that other important factors exert a stronger influence on IPV perpetration. As most studies imply, perpetration of violence in intimate relationships is a complex phenomenon; thus many variables should be considered when studying this specific type of abuse (Lussier et al., 2013). For instance, using the CTS-2 as the measure of IPV only allows for a partial understanding of this phenomenon because the context in which the acts of violence are perpetrated are not considered. Indeed, it seems impossible to understand IPV properly without considering the cultural context in which violence occurs or the motives of perpetrators (Johnson & Ferraro, 2000). Research on IPV should thus collect information on the reasons given by those who perpetrate violence toward their partner in order to better understand this phenomenon. Indeed, violence used to control one's partner or used to protect oneself from an abusive or controlling partner are very different and must be studied as such. Ultimately, research on IPV should also aim at collecting data from both partners in order to better understand the dynamics specific to this type of violence.

CLINICAL AND POLICY IMPLICATIONS

The study holds several implications for clinical practice. Results highlight the necessity to assess maltreatment and IPV experiences thoroughly in individuals consulting for sexual or relational problems due to their high prevalence and deleterious consequences. Further examination of factors that might affect interpersonal or affective functioning and behavioral precursors to IPV is also warranted for clinical practitioners. With regards to clinical interventions, this research's results also stress the usefulness of teaching effective and adaptive emotion regulation abilities to childhood maltreatment survivors in order to prevent violence in their relationships. An intervention targeting conflict resolution skills could also help childhood maltreatment survivors by impeding their tendency to react violently to internal negative affects that might arise during couple conflicts, thus hindering their risk of perpetrating or sustaining IPV. Finally, this study emphasizes the need for IPV prevention programs targeted specifically to survivors of childhood maltreatment (Foshee, McNaughton Reyes, & Wyckoff, 2009).

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