



Alexithymia as a Mediator between Intimate Partner Violence and Post-Traumatic Stress Symptoms in Mothers of Children Disclosing Sexual Abuse

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Abstract

Purpose The unveiling of child sexual abuse (CSA) can elicit symptoms of post-traumatic stress disorder (PTSD) in non-offending parents. The impact of disclosure is stronger for mothers who have already experienced interpersonal trauma, such as CSA or intimate partner violence (IPV). Alexithymia often serves as a coping mechanism in the aftermath of a trauma, as it creates a distance between oneself and distressing events. It could prevent individuals from resolving their trauma, be a risk factor for PTSD symptoms and compromise mothers' capacity to support their child. The objective of this study was to examine whether alexithymia mediated the relationship between the experiences of interpersonal violence (IPV and CSA) of mothers of sexually abused children, and mothers' PTSD symptoms following disclosure of their child's abuse.

Method A sample of 158 mothers of sexually abused children completed questionnaires assessing CSA and IPV and the *Toronto Alexithymia Scale*, which measures the capacity to identify and express emotions. The *Modified PTSD symptom Scale-Self-Report* evaluated PTSD symptoms related to their child's disclosure of sexual abuse.

Results Results of a mediation model revealed that alexithymia significantly mediated the relationship between IPV and PTSD symptoms. Mothers' CSA was directly associated with higher levels of PTSD following their child's disclosure of abuse, but the relationship was not mediated by alexithymia.

Conclusions Our findings highlight the importance of assessing mothers' history of interpersonal trauma and ability to recognize and identify emotions as well as the need to offer support and specific intervention programs to mothers.

Keywords Child sexual abuse · Intimate partner violence · Alexithymia · Post-traumatic stress symptoms

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Child sexual abuse (CSA) is a worldwide problem that affects many children. The disclosing of sexual abuse by a child can be very distressing for the family, leaving non-offending parents wondering why they didn't suspect it and how they could have better protected their child. The disclosure can therefore prompt physical and mental health difficulties such as psychological distress, major depressive disorder, and post-traumatic stress disorder (PTSD) symptoms in non-offending parents, more particularly in mothers. Indeed, studies conducted with mothers and fathers of children who disclosed CSA revealed that mothers were more likely to report more functional impairment, psychological distress and PTSD symptoms (Cyr et al., 2016, 2018). Regarding PTSD symptoms related to the CSA disclosure, Cyr et al. (2016) found that the rates were almost twice as high in mothers compared to fathers (13.1% versus 7.3%). Considering the high rate of psychological difficulties reported by mothers, it is especially important to understand

which factors could contribute to non-offending mothers' PTSD symptoms. As described in the DSM-5, PTSD symptoms can include intrusive thoughts, avoidance, repetitive nightmares, altered cognitions and emotions, and more, and can occur after traumatic events like CSA (American Psychiatric Association, 2013). In sum, the disclosure of the CSA experienced by the child could particularly affect mothers who have suffered interpersonal trauma.

Factors Influencing PTSD Symptoms

Intimate Partner Violence Some risk factors may contribute to the development of PTSD symptoms in mothers of sexually abused children, such as experiencing intimate partner violence (IPV). Previous studies have reported that among families where IPV is tolerated, children are at a greater risk of being victims of sexual abuse (Bidarra et al., 2016) and percentages of co-occurrence can vary from 12% to 62.3% (Dong et al., 2004; Kennedy et al., 2012; Martin et al., 2007). Baril and Tourigny (2016) also identified physical IPV as a predictor of intergenerational CSA. IPV is linked to a myriad of physical and psychological consequences including chronic disorders, chronic pain, sleep disorders, depression, and PTSD (Dillon et al., 2013). More specifically, the results of different studies revealed that women with IPV histories had 2.3 to 3 times the odds of meeting the criteria for PTSD (Fedovskiy et al., 2008; Nerøien & Schei, 2008; O'Campo et al., 2006). Furthermore, Langevin et al. (2021) identified higher levels of psychological distress, including higher levels of PTSD symptoms and dissociation, in mothers of sexually abused children who were victims of IPV than in mothers who did not experience IPV.

Mother's History of Child Sexual Abuse It is well known that the intersection of IPV and CSA are frequent in individuals. A history of CSA was associated with a 2 to 4-fold odds of IPV victimization for women (Daigneault et al., 2009). Mothers who have been victims of sexual abuse in their childhood are at greater risk for IPV later in life, and both represent risk factors in CSA victimization for their own children (Baril & Tourigny, 2016; Langevin et al., 2021). In fact, it is estimated that 45 to 50% of mothers of sexually abused children have also been victims of sexual abuse in childhood (e.g., Baril et al., 2016; Cyr et al., 2006; Kim et al., 2007). Furthermore, cumulative trauma, which is defined as the exposition to multiple different forms of traumatic events in the lifespan, has been identified as a contributing factor to the development of mental health difficulties. Baril et al. (2016) found that, in mother-child dyads that had both experienced CSA, mothers were more susceptible to report other forms of maltreatment in their childhood and more psychological difficulties than dyads in which only the

child had been abused. Moreover, adult survivors of CSA can frequently experience negative repercussions, such as more visits to the doctor for physical health concerns, poorer life satisfaction, lower self-esteem, and higher rates of PTSD symptoms (Fergusson et al., 2013). Prevalence of PTSD symptoms is higher in adult survivors of CSA than non-abused adults. Indeed, CSA was found to be associated with a 2 to 4.3-fold odds of PTSD symptoms in a Canadian sample of adults (Afifi et al., 2014). Hence, mothers who have experienced cumulative trauma, including IPV and CSA, could be particularly prone to display symptoms of psychopathology, and most particularly PTSD symptoms.

Alexithymia as a Mediator

Not everyone who suffers trauma will develop PTSD symptoms (Hébert et al., 2022; Martinez-Torteya et al., 2017; Masten, 2018). Alexithymia represents one of the variables that may explain the link between different forms of interpersonal trauma and the development of PTSD symptoms. Alexithymia is a multidimensional construct which includes difficulties identifying feelings, expressing feelings, as well as externally oriented-thinking strategies. It can be conceptualized as a relatively stable personality trait, but also as a coping mechanism following trauma (Taylor, 2018). In the face of trauma, high emotion intensity could be threatening for the individual. As a result, there could be a regression in affect functioning. In order to protect themselves, alexithymia could be used as a way to cope by victims of trauma. By not being able to recognize and express emotions, it could help create a distance between oneself and the distressing events. However, in the long term, alexithymia could prevent individuals from resolving their trauma, as understanding internal processing, feelings, and being able to express them is necessary to process the trauma. Therefore, alexithymia could influence people affected by interpersonal trauma and be a risk factor in the development of PTSD symptoms.

Studies have indeed found an association between alexithymia and PTSD symptoms. Authors have found that alexithymic individuals usually report an increase in symptoms of various conditions, such as PTSD, major depressive disorder, obsessive-compulsive disorder, and others (De Berardis et al., 2014, 2020; Honkalampi et al., 2001). Furthermore, a study conducted by Boisjoli and Hébert (2020) has revealed higher levels of alexithymia in children aged 6 to 12 years old who have been sexually abused compared to their non-abused peers. Furthermore, IPV victimization was also identified as a risk factor regarding alexithymia in Italian women aged between 18 and 65 years old (Signorelli et al., 2020). Moreover, Signorelli et al. (2020) identified alexithymia as a potential factor in the development of PTSD in women who have been abused by a partner. However, little is known about the mechanism underlying the association

between alexithymia and PTSD symptoms. Some studies suggest that there could be other factors at play, like specific coping strategies, but others also propose a direct causal relationship. Alexithymia affects emotion memory processing and attentional processes and could resemble symptoms found in PTSD (Sopp et al., 2019). As stated before, PTSD is defined by a difficulty accessing memories from the trauma and experiencing uncontrollable intrusive thoughts. Thus far, the association between alexithymia and PTSD has remained unclear.

The Current Study

Understanding the factors that influence the psychological reactions of non-offending mothers to their child's disclosure of CSA is particularly relevant considering the fact that mothers play a key role in their child's recovery from this traumatic experience. In fact, PTSD symptoms could potentially impede mothers' capacities to support their child. Support of the parent has been widely recognized as an important factor in the recovery and well-being of children victims of CSA (Cohen et al., 2016). Hence, intervening on factors amenable to change in mothers could not only allow them to process their history of trauma but also optimize their capacity to sustain their child's recovery. However, little is known about the factors behind the well-being of mothers to CSA victims. The association between interpersonal traumas in the mother and the PTSD symptoms developed subsequently to the disclosure of CSA by their child is still unclear. Accordingly, the objectives of the current study were to: (a) determine the prevalence of IPV and CSA in non-offending mothers of sexually abused children; (b) investigate the prevalence of clinically significant PTSD symptoms among these mothers; (c) examine the role of mothers' alexithymia in the relationship between mothers' own trauma (CSA and IPV) and PTSD symptoms.

Method

Participants and Procedure

Participants of this study were non-offending mothers of children who disclosed an experience of sexual abuse and were seeking services for their child in specialized centers in the province of Québec, Canada. The sample was recruited through convenience sampling. After their initial visit at the intervention centers, parents were invited by the clinicians to participate in the study. They were asked to sign a consent form before completing the questionnaires. They were informed that if they refused to participate this would not impact the delivery or quality of services provided. The

sample is comprised of 158 mothers ($M_{age} = 36.8$, $SD = 5.97$). These mothers were mostly Caucasian (87.6%), had a college degree (39.1%) or an undergraduate degree (42.3%), and most families had an annual income below \$60,000 CAN (68.4%). Almost half of the sample was single parents (38.6%), while others were part of intact (29.1%) or step-families (29.1%), and few of the respondents were foster families (3.2%). Non-offending parents and their children were recruited from specialized treatment centers for sexually abused children and their families in Québec, Canada. Parents were asked to sign a consent form before completing the questionnaires. Parents and their children were invited to complete the questionnaires in separate rooms with the help of a research assistant. To be included in this study, participants needed to be the biological or adoptive mothers of the children, and fathers were excluded from the analyses ($n = 1$). Parents were excluded if the clinicians assessed important intellectual limitations or their inability to answer the questionnaire. Their child had to be aged between 6 and 12 years old to participate. Participants needed to understand and speak French or English to participate. This research project was approved by the ethics committees of the Centre Hospitalier Universitaire (CHU) Sainte-Justine and the Université du Québec à Montréal Ethics Board.

Measures

Socio-Demographics Mothers filled a sociodemographic questionnaire to obtain information on their age, ethnicity, level of education, family structure and family income.

Intimate Partner Violence (IPV) To assess the experience of IPV, mothers were asked to complete four items derived from an unpublished French adaptation (Hébert & Parent, 2000) of the *Conflict Tactics Scale 2* (CTS-2; Straus et al., 1996). The CTS-2 questionnaire measures individuals' experiences of psychological or physical violence in a romantic relationship. Sample items are: "My partner did something to spite me, he/she insulted me, yelled at me or swore at me". Scores were dichotomized (yes = 1; no = 0). To be considered as IPV, at least one of the four items had to be answered by yes, even if it happened only once in their lifetime. Reliability of the questionnaire was high for this sample ($\alpha = .88$).

History of Child Sexual Abuse To gather information on the mother's childhood experience of child sexual abuse, a homemade item was used: "In your childhood, have you ever been sexually abused?". In order to be considered as CSA, mothers had to have experienced a form of sexual abuse before they turn 18.

Alexithymia Participants completed a French adaptation (Loas et al., 1995) of the *Toronto Alexithymia Scale* (TAS-20; Bagby et al., 1994). The questionnaire is composed of

20 self-report items (e.g., “I am often confused about what emotion I am feeling.”) with a Likert-type scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Mothers were asked to answer by referring to the last two weeks. Total scores ranged from 20 to 100 and provided information about mothers’ alexithymia level. A higher score indicates that mothers have difficulty identifying and expressing their emotions. In other words, the higher the score, the more the person is alexithymic, and the lower the score, the less the person is alexithymic. The internal consistency of this questionnaire for this sample was high ($\alpha = .84$). The continuous score was used in the analyses because alexithymia is increasingly understood as a dimensional construct rather than a dichotomous construct (Sekely et al., 2018).

Mothers’ PTSD Symptoms Related to their Children Disclosing Sexual Abuse PTSD symptoms were assessed using the *Modified PTSD symptom Scale-Self-Report* (MPSS-R; Falsetti et al., 1993). It is a well-validated 17 item (e.g., “Having upsetting thoughts or images about the disclosure of SA that came into your head when you didn’t want them to?”) measure assessing PTSD symptoms described in the DSM-IV PTSD diagnosis. In the present study, the items referred to the symptoms experienced by mothers in the last two weeks in regard to their child’s disclosure of sexual abuse. Symptoms are rated on two scales, namely severity and frequency. The frequency measures the number of times the symptoms are experienced within a week, while severity measures the disturbance felt from experiencing these symptoms. Both scales are rated on a Likert-type scale, frequency ranging from 0 (Not at all) to 3 (5 or more times per week/ almost always) and severity ranging from 0 (Not disturbing at all) to 4 (Extremely disturbing). Total scores were calculated with the sum of the frequency and severity items and ranged from 0 to 119. The internal consistency of this questionnaire for this sample was high ($\alpha = .95$).

Data Analysis

Preliminary analysis including descriptive analysis and bivariate correlations were performed using SPSS 27.

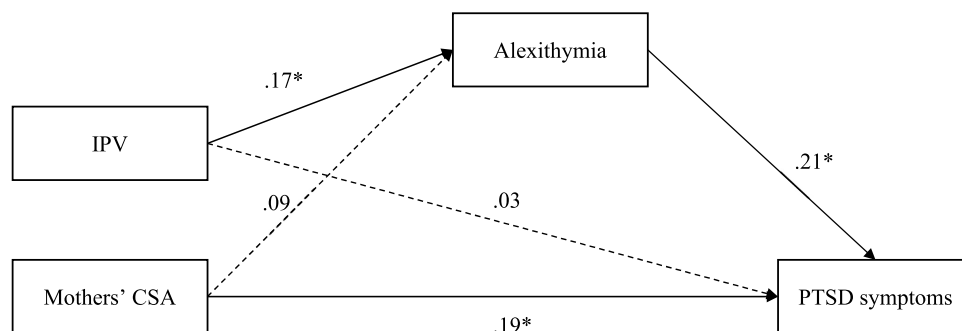
Bivariate correlations were used to examine the associations between the variables in this study. Variables that were not significantly associated with the main variables model were not included in the primary analysis. Normality tests were conducted to examine variables distribution. In a second step, primary analysis was conducted using *Mplus* 8.7 (Muthén & Muthén, 2017). We first tested direct links between the predictors (IPV and CSA of the mother) and the outcome (PTSD symptoms). As seen in Fig. 1, a path analysis model including mothers’ past experiences of interpersonal violence was tested. More specifically, a history of maternal CSA and IPV was included as predictors, alexithymia as the mediator and PTSD symptoms as the outcome. Analyses revealed that less than 2% of the data was missing. Because the missing completely at random (MCAR; Little, 1988) assumptions were met, the full information maximum likelihood (FIML) method allowed us to estimate the missing data without bias. The MLR estimator was used to account for non-normality of the variables and for missing data (Muthén & Muthén, 2017). The MLR estimator is usually preferred and more robust than ML estimator when variables are not normally distributed. It estimates standard errors using a sandwich estimator and a chi-square test statistic. To test the mediating role of alexithymia in the association between IPV and PTSD symptoms, and CSA of the mother and PTSD symptoms, links between each variable were included in the model. Indirect effects were tested with bias-corrected bootstrap confidence intervals of 95%. We also tested the fit of the model using multiple indices. The cut-off criteria for models fit were nonsignificant χ^2 , RMSEA below 0.06, SRMR below 0.08, CFI over 0.95, and TLI over 0.95 (Hu & Bentler, 1999; Kline, 2015).

Results

Preliminary Analyses

Descriptive analyses revealed that approximately half of the mothers had experienced sexual abuse as a child (45.0%) and most of the sample had experienced at least

Fig. 1 Mediation model tested



one episode of psychological or physical intimate partner violence (IPV) in their lifetime (80.1%). Furthermore, 19.3% of the mothers were experiencing clinically significant PTSD symptoms. Bivariate correlations revealed that IPV status was positively associated to alexithymia ($r = .19, p = .02$) but was not significantly correlated to PTSD symptoms ($r = .03, n.s.$). A moderate correlation was found between alexithymia and PTSD symptoms ($r = .44, p < .001$). A small but significant association was found between a history CSA of the mother and PTSD symptoms ($r = .21, p = .012$). CSA of the mother was not correlated to IPV ($r = -.01, n.s.$) nor alexithymia ($r = .12, n.s.$).

Mediating Role of Alexithymia

To test the mediational model, a path analysis was conducted (see Fig. 1). The direct path from IPV to PTSD symptoms was found to be non-significant, $\beta = 0.03, SE = 0.08, 95\% CI [-0.12, 0.18], n.s.$ We also tested the direct path from CSA of the mother to PTSD symptoms and it was found to be significant, $\beta = 0.21, SE = 0.08, 95\% CI [0.06, .37], p = .012$. We then tested the complete model as depicted in Fig. 1. When alexithymia was added as a mediator, the direct path from CSA of the mother to PTSD symptoms remained significant, $\beta = 0.19, SE = .08, 95\% CI [0.04, .34], p = .012$. The results did not show a statistically significant association between CSA of the mother and alexithymia, $\beta = 0.09, SE = 0.09, 95\% CI [-0.08, .26], n.s.$ Hence, the mediation between CSA and PTSD symptoms through alexithymia could not be tested.

The indirect association between IPV and PTSD symptoms was significantly mediated by alexithymia, $\beta = 0.07, SE = .03, 95\% CI [0.01, .12], p = .03$, with significant bootstrap confidence intervals, $B = 0.07, 95\% CI [0.02, 0.14]$. To test the fit of the model, the indices of fit from a model with the path from IPV to PTSD symptoms constraints to zero was used (Hu & Bentler, 1999; Kline, 2015). The indices showed an adequate fit (Santorra-Bentley $\chi^2(1) = 1.06, p > .05$; RMSEA = .02 [.00, .23]; CFI = 1.00; SRMR = .02), meaning the model adequately fit the data. Mothers who had experienced IPV were more likely to experience alexithymia. In turn, alexithymia predicted more PTSD symptoms in relation to their child's disclosure of CSA. Additionally, having experienced CSA was directly associated with more PTSD symptoms in mothers, but had no effects on alexithymia levels. Overall, the model accounted for 22.7% of the variance in PTSD symptoms. The model was tested with all insignificant paths constraint to zero and it showed a similar adjustment. The complete model was retained since the variance declined to 20.5% without the insignificant paths.

Discussion

To our knowledge, this study is the first to investigate alexithymia as a possible mediator between mothers' history of interpersonal trauma and PTSD symptoms related to their child's disclosure of sexual abuse. The current study sought to evaluate the role of alexithymia in the association between mother's interpersonal trauma (i.e., IPV and mother's experience of CSA) and PTSD symptoms following the unveiling of sexual abuse of their child. The results revealed that alexithymia did mediate the association between IPV and PTSD symptoms.

The indirect influence of IPV victimization on PTSD symptoms could be explained by the association between alexithymia and PTSD symptoms. Studies suggest that alexithymia could be used as a potential defense mechanism and create a distance between the conscience and the distressing event. Therefore, as stated by Signorelli et al. (2020), alexithymia could potentially contribute to the development of PTSD symptoms. In regard to the relationship between IPV, alexithymia and PTSD symptoms, these results are comparable to those obtained by Signorelli et al. (2020). Our study offers more insight by adding another form of interpersonal trauma, the mother's own experiences of CSA.

In this sample, 19.3% of the mothers were experiencing clinically significant levels of PTSD symptoms. Previous studies have shown that PTSD symptoms in mothers are related to less maternal sensitivity (Schechter et al., 2015). Moreover, Schechter et al. (2015) have found that alexithymia is associated with less maternal sensitivity. Yet, maternal support has been identified as a crucial predictor of recovery for children (Cohen et al., 2016). Research has found convincing evidence of the effectiveness of joint mother-child therapy sessions with the Trauma-focused cognitive behavioral therapy (TF-CBT; de Arellano et al., 2014; Hébert & Amédée, 2020). With the help of the therapist, the non-offending parents learn to adopt adequate support strategies to help their children who suffered trauma. While working on the child's trauma, therapists also use the attachment relationship between the child and his parents as a fundamental element. However, mothers who have themselves lived through hardship such as CSA or IPV could be less available and less equipped to fulfill this role.

Contrary to our expectations, alexithymia did not mediate the relationship between CSA and PTSD symptoms. Indeed, CSA and PTSD symptoms were only directly related. It is possible that alexithymia did not influence the relationship between CSA and PTSD symptoms because the mechanisms at play could be different. For mothers who have experienced CSA, more significant factors could

contribute to their PTSD symptoms including their feelings of guilt. Furthermore, the indirect path could also apply differently based on the mother's CSA characteristics. Unfortunately, the questionnaire did not identify more information regarding the severity, the chronicity, or the abuser's identity in the cases of mothers' CSA. The link might have been detectable for specific individuals with more severe, prolonged CSA who did not receive support or therapy. A third possible explanation could be the proximity in time and the importance of the IPV victimization, this relationship could be masking the influence of mothers' CSA on PTSD symptoms. Furthermore, another hypothesis is that alexithymia could impact the person differently depending on the development period in which the trauma occurred. Meaning that, in this case, alexithymia following IPV in adulthood does mediate the relationship between the trauma and PTSD symptoms, while alexithymia that emerges after a trauma in early life, like CSA, does not mediate the relationship between CSA and PTSD symptoms.

Surprisingly, in our study, mothers' CSA was not correlated to IPV. Previous studies demonstrated a link between CSA and later victimization in a romantic context (e.g., Godbout et al., 2009; Jennings et al., 2015; Langevin et al., 2020). Again, this discrepancy could be attributed to the lack of information regarding mothers' CSA. The item might cause us to underestimate the prevalence of CSA in the sample because of its subjectivity. Sexual abuse is not clearly defined and therefore mothers might not identify the situation they experienced as CSA. Additionally, the CTS2 might not be measuring every intricacy of the IPV victimization, explaining the lack of correlation between CSA and IPV.

Strengths and Limitations

Despite it being the first study to include two forms of interpersonal traumas and alexithymia as a mediator in analyzing outcomes in mothers of sexually abused children, it has a few limitations. First, it is a cross-sectional study and mothers reported their own history of past trauma. Therefore, the passage of time could be a confounding variable. Some mothers might have received support or therapy related to this trauma, thus adding another confounding variable. Also, the model did not include any information or characteristics about mothers' CSA. Results could have been different if the model included variables such as severity, chronicity, and identity of the abuse perpetrator. Using a single item to measure CSA is also a limit of this study since it did not define CSA. There is a lack of consensus on the definition of sexual abuse, in research as well as in popular culture (Bouffard & Goodson, 2017). As stated previously, this could be causing the results to underestimate the prevalence of CSA. Therefore, future studies should include a definition

of CSA and include more items about the CSA characteristics. A second limitation of this study is the reliance on self-reports for the assessment of PTSD symptoms, while using clinician rating scales in evaluating PTSD symptoms could have limited the risks of shared method variance bias. Future research should also replicate this analysis using the TAS-20 subscales, as these specific subscales could contribute differently to PTSD symptoms. Another limitation to consider is the fact that the present study did not include fathers. Even though studies report more psychological distress in mothers of child victims of sexual abuse, fathers are also an important part of children's lives, and they can be involved in the therapy process and contribute to the child's recovery (Hébert et al., 2018). Furthermore, non-offending fathers also experience distress following the disclosure of their child's victimization (Cyr et al., 2016, 2018), and previous studies suggest that children's alexithymia mediate the relationship between the perceptions of security towards the father and behavior problems (Boisjoli et al., 2019). Nonetheless, this study also has some strengths. This study includes a relatively high number of mothers, considering that this population is difficult to recruit. It also allows a better understanding of the role of alexithymia in the mothers' well-being. Future research should include more detailed measures to better understand the characteristics of the traumatic experiences. Additional studies to better understand the key tenets of the relation between alexithymia and PTSD symptoms are required. Other studies should also replicate this model, alexithymia as a mediator between CSA and PTSD symptoms, in children or adolescent victims of sexual abuse.

Conclusion and Clinical Implications

These new findings are of great importance and are obtained at a critical time in this field of study, as the incidence rate of IPV rose with the imposed lockdown measures from the COVID-19 pandemic (e.g., Agüero, 2021; Jetelina et al., 2021; Mahase, 2020). Concerns were raised surrounding the families at risk of IPV as clinicians and researchers expected an increase in the consequences on victims' psychological and physical well-being. Therapists and clinicians should continue to screen for IPV and discuss safety practices to ensure victims' safety if another lockdown were ever to happen (Evans et al., 2020). Our findings also highlight the importance of assessing mothers' history of interpersonal trauma and ability to recognize as well as identify emotions, and the need to offer support and specific intervention programs to mothers of children victims of CSA. Children's emotional competencies develop in reciprocity and synchronicity with their caregivers' feedback (Abe & Izard, 1999; Izard et al., 2002). Their caregivers are the first agents of socialization and young infants rely on them to

regulate themselves, amongst other things. Sexual abuse and exposure to IPV have been linked to difficulties in emotion regulation, emotion recognition and alexithymia in children (e.g., Boisjoli & Hébert, 2020; Langevin et al., 2016; Pfaltz et al., 2019). Hence, children's emotional competencies could potentially be influenced by their own caregiver's emotional competencies. Future studies need to investigate the role of parental emotional competencies as a factor in the adaptation profile of child victims of sexual abuse and children who are exposed to IPV. Moreover, since it is well established that caregivers' support and presence in therapy sessions are two of the most important factors in children's recovery, clinicians could pay particular attention to mothers who disclose IPV, as the adversity they experienced could hinder their capacity to support their child. More specifically, to promote children's recovery and reduce their PTSD symptoms, clinicians should offer support and address the mothers' ability to recognize and identify emotions.

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Declarations

No declarations.

Conflict of Interest We have no conflicts of interest to disclose.

References

- Abe, J. A. A., & Izard, C. E. (1999). The developmental functions of emotions : An analysis in terms of differential emotions theory. *Cognition & Emotion*, 13(5), 523–549. <https://doi.org/10.1080/026999399379177>
- Afifi, T. O., MacMillan, H. L., Boyle, M., Taillieu, T., Cheung, K., & Sareen, J. (2014). Child abuse and mental disorders in Canada. *Canadian Medical Association Journal*, 186(9), 324–332. <https://doi.org/10.1503/cmaj.131792>
- Agüero, J. M. (2021). COVID-19 and the rise of intimate partner violence. *World Development*, 137, 105217. <https://doi.org/10.1016/j.worlddev.2020.105217>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890425596>
- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto alexithymia scale—I. item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, 38(1), 23–32. [https://doi.org/10.1016/0022-3999\(94\)90005-1](https://doi.org/10.1016/0022-3999(94)90005-1)
- Baril, K., & Tourigny, M. (2016). Facteurs maternels associés au cycle intergénérationnel de la victimisation sexuelle dans l'enfance parmi des femmes de la population générale. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 48(4), 266–277. <https://doi.org/10.1037/cbs0000052>
- Baril, K., Tourigny, M., Paillé, P., & Pauzé, R. (2016). Characteristics of sexually abused children and their nonoffending mothers followed by child welfare services : The role of a maternal history of child sexual abuse. *Journal of Child Sexual Abuse*, 25(5), 504–523. <https://doi.org/10.1080/10538712.2016.1176096>
- Bidarra, Z. S., Lessard, G., & Dumont, A. (2016). Co-occurrence of intimate partner violence and child sexual abuse: Prevalence, risk factors and related issues. *Child Abuse & Neglect*, 55, 10–21. <https://doi.org/10.1016/j.chiabu.2016.03.007>
- Boisjoli, C., & Hébert, M. (2020). Importance of telling the unutterable : Alexithymia among sexually abused children. *Psychiatry Research*, 291, 113238. <https://doi.org/10.1016/j.psychres.2020.113238>
- Boisjoli, C., Hébert, M., Gauthier-Duchesne, A., & Caron, P.-O. (2019). A mediational model linking perceptions of security, alexithymia and behavior problems of sexually abused children. *Child Abuse & Neglect*, 92, 66–76. <https://doi.org/10.1016/j.chiabu.2019.03.017>
- Bouffard, L. A., & Goodson, A. (2017). Sexual coercion, sexual aggression, or sexual assault: How measurement impacts our understanding of sexual violence. *Journal of Aggression, Conflict and Peace Research*, 9(4), 269–278. <https://doi.org/10.1108/JACPR-05-2017-0292>
- Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2016). *Treating trauma and traumatic grief in children and adolescents* (2nd ed.). The Guilford Press.
- Cyr, M., McDuff, P., & Wright, J. (2006). Prevalence and predictors of dating violence among adolescent female victims of child sexual abuse. *Journal of Interpersonal Violence*, 21(8), 1000–1017. <https://doi.org/10.1177/0886260506290201>
- Cyr, M., Frappier, J.-Y., Hébert, M., Tourigny, M., McDuff, P., & Turcotte, M.-È. (2016). Psychological and physical health of nonoffending parents after disclosure of sexual abuse of their child. *Journal of Child Sexual Abuse*, 25(7), 757–776. <https://doi.org/10.1080/10538712.2016.1228726>
- Cyr, M., Frappier, J.-Y., Hébert, M., Tourigny, M., McDuff, P., & Turcotte, M.-E. (2018). Impact of child sexual abuse disclosure on the health of nonoffending parents : A longitudinal perspective. *Journal of Child Custody*, 15(2), 147–167. <https://doi.org/10.1080/15379418.2018.1460649>
- Daigneault, I., Hébert, M., & McDuff, P. (2009). Men's and women's childhood sexual abuse and victimization in adult partner relationships : A study of risk factors. *Child Abuse & Neglect*, 33(9), 638–647. <https://doi.org/10.1016/j.chiabu.2009.04.003>
- de Arellano, M. A. R., Lyman, D. R., Jobe-Shields, L., George, P., Dougherty, R. H., Daniels, A. S., Ghose, S. S., Huang, L., & Delphin-Rittmon, M. E. (2014). Trauma-focused cognitive-behavioral therapy for children and adolescents : Assessing the evidence. *Psychiatric Services*, 65(5), 591–602. <https://doi.org/10.1176/appi.ps.201300255>
- De Berardis, D., Serroni, N., Marini, S., Rapini, G., Carano, A., Valchera, A., Iasevoli, F., Mazza, M., Signorelli, M., Aguglia, E., Perna, G., Martinotti, G., Varasano, P. A., Pressanti, G. L., & Di Giannantonio, M. (2014). Alexithymia, suicidal ideation, and serum lipid levels among drug-naïve outpatients with obsessive-compulsive disorder. *Brazilian Journal of Psychiatry*, 36(2), 125–130. <https://doi.org/10.1590/1516-4446-2013-1189>
- De Berardis, D., Vellante, F., Fornaro, M., Anastasia, A., Olivieri, L., Rapini, G., Serroni, N., Orsolini, L., Valchera, A., Carano, A., Tomasetti, C., Varasano, P. A., Pressanti, G. L., Bustini, M., Pompili, M., Serafini, G., Perna, G., Martinotti, G., & Di Giannantonio, M. (2020). Alexithymia, suicide ideation, affective temperaments and homocysteine levels in drug naïve patients with post-traumatic stress disorder : An exploratory study in the everyday 'real world' clinical practice. *International Journal of Psychiatry in Clinical Practice*, 24(1), 83–87. <https://doi.org/10.1080/13651501.2019.1699575>

- Dillon, G., Hussain, R., Loxton, D., & Rahman, S. (2013). Mental and physical health and intimate partner violence against women : A Review of the literature. *International Journal of Family Medicine*, 2013, 313909. <https://doi.org/10.1155/2013/313909>
- Dong, M., Anda, R. F., Felitti, V. J., Dube, S. R., Williamson, D. F., Thompson, T. J., Loo, C. M., & Giles, W. H. (2004). The inter-relatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse & Neglect*, 28(7), 771–784. <https://doi.org/10.1016/j.chiabu.2004.01.008>
- Evans, M. L., Lindauer, M., & Farrell, M. E. (2020). A pandemic within a pandemic—Intimate partner violence during Covid-19. *The New England Journal of Medicine*, 383(24), 2302–2304. <https://doi.org/10.1056/NEJMp2024046>
- Falsetti, S. A., Resnick, H. S., Resick, P. A., & Kilpatrick, D. (1993). The modified PTSD symptom scale: A brief self-report measure of post-traumatic stress disorder. *The Behavioral Therapist*, 16, 161–162. <https://doi.org/10.1037/h05175-000>
- Fedovskiy, K., Higgins, S., & Paranjape, A. (2008). Intimate partner violence : How does it impact major depressive disorder and post traumatic stress disorder among immigrant Latinas? *Journal of Immigrant and Minority Health*, 10(1), 45–51. <https://doi.org/10.1007/s10903-007-9049-7>
- Fergusson, D. M., McLeod, G. F., & Horwood, L. J. (2013). Childhood sexual abuse and adult developmental outcomes : Findings from a 30-year longitudinal study in New Zealand. *Child Abuse and Neglect*, 37(9), 664–674. <https://doi.org/10.1016/j.chiabu.2013.03.013>
- Godbout, N., Dutton, D. G., Lussier, Y., & Sabourin, S. (2009). Early exposure to violence, domestic violence, attachment representations, and marital adjustment. *Personal Relationships*, 16(3), 365–384. <https://doi.org/10.1111/j.1475-6811.2009.01228.x>
- Hébert, M., & Amédée, L. M. (2020). Latent class analysis of post-traumatic stress symptoms and complex PTSD in child victims of sexual abuse and their response to trauma-focused cognitive Behavioural therapy. *European Journal of Psychotraumatology*, 11(1), 1807171. <https://doi.org/10.1080/20008198.2020.1807171>
- Hébert, M., & Parent, N. (2000). French adaptation of a brief version of the Conflict Tactics Scale (CTS2); Straus, Hamby, Boney-McCoy & Sugarman, 1996) [Unpublished manuscript]. Department of sexology, Université du Québec à Montréal.
- Hébert, M., Daspe, M.-È., & Cyr, M. (2018). An analysis of avoidant and approach coping as mediators of the relationship between paternal and maternal attachment security and outcomes in child victims of sexual abuse. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(4), 402–410. <https://doi.org/10.1037/tra0000321>
- Hébert, M., Amédée, L. M., Théorêt, V., & Petit, M.-P. (2022). Diversity of adaptation profiles in youth victims of child sexual abuse. *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(S1), S41–S49. <https://doi.org/10.1037/tra0001090>
- Honkalampi, K., Hintikka, J., Laukkanen, E., & Viinamäki, J. L. H. (2001). Alexithymia and depression : A prospective study of patients with major depressive disorder. *Psychosomatics*, 42(3), 229–234. <https://doi.org/10.1176/appi.psy.42.3.229>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Izard, C. E., Fine, S., Mostow, A., Trentacosta, C., & Campbell, J. (2002). Emotion processes in normal and abnormal development and preventive intervention. *Development and Psychopathology*, 14(4), 761–787. <https://doi.org/10.1017/S0954579402004066>
- Jennings, W. G., Richards, T. N., Tomsich, E., & Gover, A. R. (2015). Investigating the role of child sexual abuse in intimate partner violence victimization and perpetration in young adulthood from a propensity score matching approach. *Journal of Child Sexual Abuse*, 24(6), 659–681. <https://doi.org/10.1080/10538712.2015.1057665>
- Jetelina, K. K., Knell, G., & Molsberry, R. J. (2021). Changes in intimate partner violence during the early stages of the COVID-19 pandemic in the USA. *Injury Prevention*, 27(1), 93–97. <https://doi.org/10.1136/injuryprev-2020-043831>
- Kennedy, A. C., Bybee, D., Kulkarni, S. J., & Archer, G. (2012). Sexual victimization and family violence among urban African American adolescent women: Do violence cluster profiles predict partner violence victimization and sex trade exposure? *Violence Against Women*, 18(11), 1319–1338. <https://doi.org/10.1177/1077801212470544>
- Kim, K., Noll, J. G., Putnam, F. W., & Trickett, P. K. (2007). Psychosocial characteristics of nonoffending mothers of sexually abused girls: Findings from a prospective, multigenerational study. *Child Maltreatment*, 12(4), 338–351. <https://doi.org/10.1177/1077559507305997>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (5th ed.). The Guilford Press.
- Langevin, R., Cossette, L., & Hébert, M. (2016). Emotion regulation in sexually abused preschoolers. *Child Psychiatry & Human Development*, 47(1), 1–12. <https://doi.org/10.1007/s10578-015-0538-y>
- Langevin, R., Hébert, M., & Cabecinha-Alati, S. (2020). Multilevel factors associated with the intergenerational continuity of child sexual abuse. *Children and Youth Services Review*, 113, 105007. <https://doi.org/10.1016/j.chiayouth.2020.105007>
- Langevin, R., Hébert, M., & Wallace, A. (2021). The intersection of intimate partner violence and childhood sexual abuse in mother-child dyads. *Child Abuse & Neglect*, 120, 105218. <https://doi.org/10.1016/j.chiabu.2021.105218>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198–1202. <https://doi.org/10.2307/2290157>
- Loas, G., Fremaux, D., & Marchand, M. P. (1995). The factorial structure and internal consistency of the French version of the 20-item Toronto Alexithymia Scale (TAS-20): A study among 183 normal subjects. *L'Encéphale: Revue de psychiatrie clinique biologique & thérapeutique*, 21(2), 117–122.
- Mahase, E. (2020). Covid-19 : EU states report 60% rise in emergency calls about domestic violence. *BMJ: British Medical Journal (Online)*, 369, m1872. <https://doi.org/10.1136/bmj.m1872>
- Martin, S. L., Gibbs, D. A., Johnson, R. E., Rentz, D. E., Clinton-Sherrod, M., & Hardison, J. (2007). Spouse abuse and child abuse by Army soldiers. *Journal of Family Violence*, 22(7), 587–595. <https://doi.org/10.1007/s10896-007-9110-2>
- Martinez-Torteya, C., Miller-Graff, L. E., Howell, K. H., & Figge, C. (2017). Profiles of adaptation among child victims of suspected maltreatment. *Journal of Clinical Child and Adolescent Psychology*, 46(6), 840–847. <https://doi.org/10.1080/15374416.2015.1072822>
- Masten, A. S. (2018). Resilience theory and research on children and families: Past, present, and promise. *Journal of Family Theory & Review*, 10(1), 12–31. <https://doi.org/10.1111/jftr.12255>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Nerøien, A. I., & Schei, B. (2008). Partner violence and health : Results from the first national study on violence against women in Norway. *Scandinavian Journal of Public Health*, 36(2), 161–168. <https://doi.org/10.1177/1403494807085188>
- O'Campo, P., Kub, J., Woods, A., Garza, M., Jones, A. S., Gielen, A. C., Dienemann, J., & Campbell, J. (2006). Depression, PTSD, and comorbidity related to intimate partner violence in civilian and military women. *Brief Treatment and Crisis Intervention*, 6(2), 99–110. <https://doi.org/10.1093/brief-treatment/mhj010>

- Pfaltz, M. C., Passardi, S., Auschra, B., Fares-Otero, N. E., Schnyder, U., & Peyk, P. (2019). Are you angry at me? Negative interpretations of neutral facial expressions are linked to child maltreatment but not to posttraumatic stress disorder. *European Journal of Psychotraumatology*, *10*(1), 1–15. <https://doi.org/10.1080/20008198.2019.1682929>
- Schechter, D. S., Suardi, F., Manini, A., Cordero, M. I., Rossignol, A. S., Merminod, G., Gex-Fabry, M., Moser, D. A., & Serpa, S. R. (2015). How do maternal PTSD and alexithymia interact to impact maternal behavior? *Child Psychiatry & Human Development*, *46*(3), 406–417. <https://doi.org/10.1007/s10578-014-0480-4>
- Sekely, A., Bagby, R. M., & Porcelli, P. (2018). Assessment of the alexithymia construct. In O. Luminet, R. M. Bagby, & G. J. Taylor (Eds.), *Alexithymia: Advances in research, theory, and clinical practice* (pp. 17–32). Cambridge University Press. <https://doi.org/10.1017/9781108241595.004>
- Signorelli, M. S., Fusar-Poli, L., Arcidiacono, E., Caponnetto, P., & Aguglia, E. (2020). Depression, PTSD and alexithymia in victims of intimate partner violence: A case-control study. *Archives of Clinical Psychiatry (São Paulo)*, *47*(2), 45–50. <https://doi.org/10.1590/0101-60830000000230>
- Sopp, M. R., Brueckner, A. H., & Michael, T. (2019). The prospective influence of trait alexithymia on intrusive memories: What is the role of emotional recognition memory? *Frontiers in Psychology*, *9*, 2642. <https://doi.org/10.3389/fpsyg.2018.02642>
- Straus, M. A., Hamby, S. L., Boney-McCoy, S. U. E., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *Journal of Family Issues*, *17*(3), 283–316. <https://doi.org/10.1177/019251396017003001>
- Taylor, G. (2018). History of alexithymia: The contributions of psychoanalysis. In O. Luminet, R. Bagby, & G. Taylor (Eds.), *Alexithymia: Advances in research, theory, and clinical practice* (pp. 1–16). Cambridge University Press. <https://doi.org/10.1017/9781108241595.003>

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