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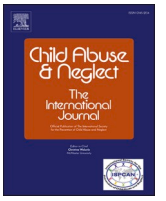

Childhood maltreatment, sexual desire and sexual distress in couples: the role of touch aversion

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ABSTRACT

Background: Childhood maltreatment (CM), experienced by about 40 % of adults, is associated with romantic relationship challenges like instability, sexual dissatisfaction, and dysfunction. While CM has been linked to lower sexual desire and higher distress, its impact within couples and underlying mechanisms remain underexplored. Touch aversion, where partner touch feels unpleasant, may explain how CM relates to lower sexual desire and higher sexual distress.
Objective: This study explores the mediating role of touch aversion in the associations between CM, sexual desire and sexual distress in couples.
Methods: A sample of 363 adult couples completed self-reported online questionnaires on CM, partner-focused sexual desire, sexual distress and touch aversion.
Results: A person's CM is indirectly associated with their own lower sexual desire ($b = -0.07$, 95 % bootstrap CI = [−0.08, −0.02]), their partner's higher sexual desire ($b = 0.01$, 95 % bootstrap CI = [0.000, 0.02]), and both their own ($b = 0.06$, 95 % bootstrap CI = [0.01, 0.03]) and their partner's higher sexual distress ($b = 0.02$, 95 % bootstrap CI = [0.003, 0.013]) through their own higher touch aversion.
Conclusions: These findings provide theoretical support for the role of touch aversion in the sexual dynamics of couples reporting CM, underscoring the interdependent nature of partners' sexual desire and distress. Clinically, understanding how individuals with a CM history respond to touch may highlight a modifiable psychological process that could help couples navigate their sexual desire and distress.

1. Introduction

Childhood maltreatment (CM), encompassing physical, emotional, and sexual abuse as well as physical and emotional neglect, is retrospectively reported by 35 to 40 % of the population, often involving multiple instances of victimization (Cyr et al., 2013; Macdonald et al., 2016). Extensive research indicates that CM may affect a person's personal and interpersonal dynamics and shape their perception and expression of sexuality (Bergeron et al., 2022). Indeed, CM is related to sexual dissatisfaction and sexual dysfunction in

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both men and women, such as lower sexual desire, difficulties related to orgasm, erectile dysfunction, and pain during sexual intercourse, with more negative outcomes linked to repeated victimization (Bergeron et al., 2022; Corsini-Munt et al., 2017; Vaillancourt-Morel et al., 2021). Some studies show that partners of individuals with a CM history may also experience higher psychological distress and lower relationship satisfaction (Vaillancourt-Morel et al., 2023).

In clinical settings, where around 60 % of couples and 80 % of men and women seeking sex therapy report a CM history (Berthelot et al., 2014; Bigras et al., 2017; Nelson & Wampler, 2000), low sexual desire is the most commonly reported sexual problem often emerging as a primary concern among couples (McCabe et al., 2016; Péloquin et al., 2019). Most couples from the general population will face a sexual desire discrepancy at one point, which may result in significant sexual distress, defined as the negative emotional response related to sexuality or sexual function (Jodouin et al., 2021; Santos-Iglesias et al., 2018). Although sexual desire and distress are influenced by interpersonal dynamics as they may arise from persistent negative couple dynamics (Rosen & Bergeron, 2019), few studies have explored the link between CM and these issues, though some suggest a connection (Kaplan, 1990; O'Loughlin et al., 2020). These findings, based solely on women, could be expanded by studying couples to reveal potential secondary trauma effects, where partners of individuals with a CM history might also experience similar symptoms affecting their sexual desire and distress (Nelson & Wampler, 2000; Vaillancourt-Morel et al., 2023). In addition, while available studies point to a link between CM and issues of sexual desire and distress in couples, the underlying mechanisms of this association remain largely unexplored. Understanding these processes is key to assessing sexual dynamics in couples with a history of CM and developing effective clinical interventions. While past studies examining mediating processes of the CM-sexuality link have focused on interpersonal or psychological factors (Girard et al., 2020; Vaillancourt-Morel et al., 2019), the role of somatic factors has been overlooked. Touch aversion —where partner touch is perceived negatively (Brennan et al., 1998), could be a potential factor linking CM and sexual desire and distress. Touch aversion may arise in individuals who have experienced CM (Maier et al., 2020) and contribute to the development and maintenance of sexual difficulties (Hinchliff et al., 2012; Rancourt et al., 2017). However, its role in the associations between CM, sexual desire, and sexual distress has yet to be examined empirically. Thus, this study aimed to examine whether CM is related to sexual desire and sexual distress in couples through touch aversion.

1.1. CM, sexual desire and related sexual distress

Trauma theoretical models (Briere, 2002; Finkelhor & Browne, 1985; Goff & Smith, 2005) suggest that all forms of CM have the potential to foster the development of a distorted representation of self and others, through which individuals with a history of CM may perceive themselves as inadequate and defective, and view others as ill-intentioned and malicious. These trauma-related thought patterns may carry over into adulthood, particularly into intimate situations, and misinterpretation of even caring interaction may be fueled by previous feelings of fear, powerlessness, and betrayal (Afifi et al., 2014; Berthelot et al., 2014). Trauma-related thoughts may also affect how partners experience sexuality (Briere, 2002; Diamond et al., 2007; Finkelhor & Browne, 1985), as the vulnerability inherent to sexual interactions requires that partners feel safe and comfortable with one another. Feelings of discomfort stemming from past traumatic experiences can lead to heightened insecurity and fear related to betrayal. These emotions may influence how individuals with a CM history, as well as their partner, experience sexual desire for each other (i.e., partner-focused sexual desire, which is the level of interest or wish to engage in sexual activity with their romantic partner; Moyano et al., 2017), as well as their reactions to their partner's sexual needs. These emotions may also impact the level of distress these individuals and their partners feel in response to this potentially challenging relational and sexual dynamic.

While most studies have focused on childhood sexual abuse (Wang et al., 2023) and its link to various sexual difficulties (Girard et al., 2020; Vaillancourt-Morel et al., 2016), the experience of sexual desire and distress in individuals with a CM history has been less addressed. First, a study showed that women with a CSA history reported greater difficulties with sexual desire compared to women without CSA history (Kaplan, 1990). More recent studies have shown that women diagnosed with low sexual desire also report higher levels of CM compared to those without such diagnoses (O'Loughlin et al., 2020; O'Loughlin & Brotto, 2020). While these findings highlight the impact of CM on sexual desire, they focus solely on women and overlook its effects on men. Given the established gender differences in sexual outcomes (Abrams et al., 2019; Gershon et al., 2008), it is important to explore whether these effects are the same for both men and women. These results also fail to consider the participants' relationship status and its effects on their partner's sexual desire. This is important because women in relationships with low sexual desire are nearly five times more likely to experience distress than those without partners (Rosen et al., 2009). Examining these factors could offer a more comprehensive understanding of how CM relates to relational dynamics and sexual function within couples. They also did not investigate whether individuals with a history of CM reported higher sexual distress. In the only study among couples examining how CM is related to sexual function, which includes sexual desire and distress, results among 269 couples followed over 12 months showed that some specific types of CM were related to a person's and their partner's lower sexual function and their own higher sexual distress in men and women (Vaillancourt-Morel et al., 2021). This study highlights the need to understand the underlying psychological processes to develop trauma-informed treatments that address sexual desire difficulties more effectively.

1.2. The mediating role of touch aversion

Interpersonal touch, particularly within a romantic relationship, may represent a traumatic trigger for individuals with a history of CM (Maier et al., 2020). According to Briere (2002), a recurring intrusion-avoidance cycle may develop in response to CM, resulting in the experience of partner touch being perceived as negative (Brennan et al., 1998) – also known as touch aversion. Moreover, Porges' theory about the role of the nervous system in social contexts, not specifically addressing childhood abuse, suggests that for individuals

with a history of CM, touch in adulthood may elicit a dysregulated nervous system response, characterized by heightened sympathetic arousal and altered parasympathetic regulation (Porges, 2001, 2009). These neurobiological reactions may influence their experience of touch, contributing to heightened sensitivity, aversion, or dissociation, and affect their capacity for physical intimacy and connection (Ogden, 2021). Thus, touch by a partner may trigger CM-related affects, flashbacks, and intrusive thoughts, which is thought to be the mind's attempt to process unresolved distressing memories within a secure context (Briere, 2002). However, in most cases, these CM-related memories are still not processed adequality in the present, and in contrary lead to overwhelming emotions, dissociation, and avoidance responses, such as touch aversion, to protect oneself. Additionally, factors such as attachment patterns, where CM-related attachment injuries may heighten sensitivity to touch, causing individuals to perceive it as threatening even in safe contexts, sexual motivations, where individuals with a CM history may feel compelled to comply with their partner's desires, and post-traumatic stress disorder symptoms, in which touch may trigger hyperarousal and intrusive memories, may all contribute to the complex ways in which individuals with a CM history experience touch in romantic relationships (Gewirtz-Meydan & Lahav, 2020a, 2020b, 2021). Moreover, the trauma-related touch aversion in individuals with a CM history may potentially lead to partner's lower sexual desire and higher distress due to constant feelings of rejection, frustration, or emotional distress. As touch is intrinsically intertwined with sexuality, touch aversion is likely to affect individuals with a CM history and their partner's sexuality, in particular partners' sexual desire, as touch is frequently used to stimulate or express sexual desire between partners (Gonzaga et al., 2006).

Although responses of individuals with a CM history to their partner's touch in the context of sexuality have never been examined, some studies suggest that interpersonal touch might elicit discomfort and be deliberately avoided. In a cross-sectional study conducted among 30 male combat veterans, results showed that men with PTSD may have difficulties processing non- threatening sensory information, leading to a reduced activity or altered response to gentle touch, which may contribute to a general aversion or discomfort toward touch that is meant to be non- threatening (Badura-Brack et al., 2015). Moreover, cross-sectional studies have shown that CM is related to a preference for greater interpersonal distance, aversion to interpersonal touch, and disrupted body boundaries (e.g., boundaries that are overly porous or rigid). Additionally, CM is associated with higher discomfort when the individual is subjected to fast touch, and a reduced soothing response to affective touch (Maier et al., 2020; Strauss et al., 2019; Talmon & Ginzburg, 2017). While these studies hint that CM may be associated with touch aversion, direct examination of this link, especially concerning touch from a romantic partner, remains unexplored. This oversight needs to be addressed as it may represent an important target for prevention and intervention strategies aimed at sexual desire and distress in couples.

1.3. Current study

The overall aim of this study was to examine the associations between CM and two sexual outcomes, i.e., sexual desire and distress, via touch aversion in adult couples. We predicted that a person's CM would be associated with their own lower sexual desire and higher sexual distress through their own higher touch aversion. For the partner effects, building on prior findings that a person's CM is associated with their partner's sexuality (Vaillancourt-Morel et al., 2021; Vaillancourt-Morel et al., 2023), we predicted that a person's CM would be associated with their partner's lower sexual desire and higher sexual distress through their own higher touch aversion. Most studies linking CM to sexual desire focus on women, yet evidence suggests that CM-related sexual difficulties differ between women and men (i.e., women often experience negative reactions to sexual activity, such as fear and disgust, as well as lower sexual satisfaction, while men are more likely to report performance-related issues and higher sexual distress; Bergeron et al., 2022; DiLillo et al., 2007; Vaillancourt-Morel et al., 2021). This study will therefore examine potential gender differences in the proposed mediation model.

2. Method

2.1. Participants

A convenience sample of 363 adult couples (695 participants) was recruited through online advertisements posted on various social networks between January 2022 and August 2022. Participants' mean age was 32.81 years old ($SD = 9.00$). A total of 357 (51.5 %) participants identified as cis women, 313 (45.2 %) participants identified as cis men, and 23 (3.3 %) participants identified as gender diverse (i.e., trans men, trans women, non-binary, indigenous or another cultural gender minority identity, agender, gender not listed). As for their education degree, 0.3 % ($n = 2$) reported having a primary school degree, 1.4 % ($n = 10$) reported having an uncompleted secondary school degree, 7.5 % ($n = 52$) a completed secondary school degree, 10.5 % ($n = 73$) a vocational degree, 25.2 % ($n = 175$) a college degree, 32.1 % ($n = 223$) a bachelor's degree, 16.5 % ($n = 115$) a master's degree, 3.6 % ($n = 25$) a doctorate degree, 0.3 % ($n = 2$) a post-doctoral degree, and 2.6 % ($n = 18$) reported having completed another level of education. A total of 69.6 % ($n = 484$) of participants reported being employed, 17.4 % ($n = 121$) being students, 1 % ($n = 7$) being retired, 4.6 % ($n = 32$) being on parental leave, 2.3 % ($n = 16$) being a homemaker, 1.6 % ($n = 11$) being unemployed, and 3.5 % ($n = 24$) reported having another occupation. Regarding household income, 17.9 % of couples ($n = 65$) reported an annual household income below $49,999, 28.1 % of couples ($n = 102$) between $50,000 and $99,999, 27.6 % of couples ($n = 100$) between $100,000 and $149,999, 17.6 % of couples ($n = 64$) over $150,000, and 8.8 % of couples ($n = 32$) did not provide an answer. Most participants (71.4 %, $n = 496$) identified themselves as heterosexual, 4.6 % ($n = 32$) as homosexual, 0.4 % ($n = 3$) as homoflexible, 7.3 % ($n = 51$) as heteroflexible, 7.8 % ($n = 54$) as bisexual, 1.6 % ($n = 11$) as Queer, 3.2 % ($n = 22$) as pansexual, 0.9 % ($n = 6$) as asexual, and 2.9 % ($n = 20$) reported not knowing yet, currently questioning their sexual orientation, or having an orientation not listed. Most participants (99.0 %, $n = 688$) reported currently living in Canada whereas 0.4 % ($n = 3$) are currently living in the United States, 0.4 % ($n = 3$) in Europe and 0.1 % ($n = 1$) in Asia. Regarding

their ethnic and racial background (multiple responses possible), 91.9 % ($n = 639$) of participants described themselves as White, 1.7 % ($n = 12$) as Arab, 1.2 % ($n = 8$) as Black, 0.6 % ($n = 4$) as Caribbean, 3.8 % ($n = 26$) as Asian, 1.9 % ($n = 13$) as Indigenous, 1.0 % ($n = 7$) as Latin American, and 0.7 % ($n = 5$) reported a mixed ethnic background. Participants' mean relationship duration was 7.60 years ($SD = 7.16$). Most participants (75.1 %, $n = 522$) were cohabitating with their partner, but were not married and 24.9 % ($n = 173$) participants were married.

2.2. Procedure

Data used in this study were collected as part of a larger research project, the Calypso project, advertised as a self-report survey about how perceptions and attitudes within the couple contribute to the sexual and relational well-being of each partner. To be eligible, both partners had to be at least 18 years of age and cohabitating for at least six months. Interested participants first completed a brief eligibility questionnaire. Then, they were contacted by a research assistant for a brief telephone interview and to receive more information about the project. Eligible couples were then assigned an identifying code to pair each participant with their partner and were independently directed to a confidential survey hosted on Qualtrics Research Suite, which included the study description and an informed consent form. Three attention-testing questions were included in the survey. Participants failing at least two of them were excluded from the study, and their data were deleted. Each partner received CAN$10 after completing the survey. This study was approved by the Université du Québec à Trois-Rivières Institutional Review Board.

Of the 1072 interested couples, 690 did not give their contact information, could not be reached, were not eligible, or one of both partners were not interested to participate. Of the remaining 382 eligible couples (764 participants), 60 participants dropped out before starting the survey and 9 participants failed two out of three attention-testing questions, resulting in a final sample of 363 couples ($n = 695$), as we retained participants even if their partner did not complete or were removed.

2.3. Measures

2.3.1. Sociodemographic characteristics

Participants were asked to provide sociodemographic information including their sexual orientation (response options: Heterosexual, Homosexual, Heteroflexible, Homoflexible, Bisexual, Asexual, Pansexual, Queer, Other, Prefer not to say), which was recoded as 0 = *Heterosexual* and 1 = *Sexual diversity*, their relationship status (response options: currently married (1), cohabitating but not married (0)), their annual income (response options were all income brackets in $10,000 increments up to $200,000 and over), their principal occupation (response options: Working full-time, Working part-time, Studying, Retired, Parental leave, Homemaker, Unemployed), which was recoded as 0 = *Working*, and 1 = *Not working*, and their highest education level (response options: Elementary, High school with uncompleted studies or completed studies, Vocational training or trade school, College, University, bachelor's degree, University, master's degree, University, doctoral degree, Post-doctoral degree).

2.3.2. Childhood maltreatment

The 25-item short form of the Childhood Trauma Questionnaire (Bernstein et al., 2003) was used to retrospectively assess the extent of five types of CM with five items for each type of CM: emotional, physical, and sexual abuse as well as emotional and physical neglect. Emotional abuse was defined as verbal assaults on a child's sense of worth or well-being or any humiliating or demeaning behavior directed toward a child by an older individual. Physical abuse was defined as bodily assaults on a child by an older individual that posed a risk of or resulted in injury. Sexual abuse was defined as sexual contact or conduct between a child younger than 18 years of age and an older individual. Emotional neglect was defined as the failure of caretakers to meet children's basic emotional and psychological needs, including love, belonging, nurturance, and support. Physical neglect was defined as the failure of caretakers to provide for a child's basic physical needs, including food, shelter, clothing, safety, and health care (Bernstein & Fink, 1998). Participants were asked to indicate the frequency with which these experiences took place when they were growing up, using a Likert-type scale ranging from 1 = *never true* to 5 = *very often true*. Scores were summed to obtain a total score ranging from 25 to 125, with higher scores indicating multiple chronic victimization given it combines the frequency of each type of CM and the cumulative experience of multiple types of CM. The CTQ demonstrates good internal consistency (Cronbach's $\alpha = 0.61$ to 0.95), measurement invariance across four samples including a community sample, good temporal stability over a 2- to 6-month interval ($r = 0.79$ to 0.95), and good convergent and discriminant validity with a structured trauma interview (Bernstein et al., 1994; Bernstein et al., 2003). In the current study, Cronbach's α was 0.94.

2.3.3. Partner-focused sexual desire

The partner-focused dyadic sexual desire subscale (Moyano et al., 2017) of the Sexual Desire Inventory-2 (SDI; Spector et al., 1996) was used to assess participants' level of interest or their wish to engage in sexual activity with their romantic partner in the last month (e.g., “When you have sexual thoughts, how strong is your desire to engage in sexual behaviors with your partner?”). This subscale includes 7 items rated on an 8-point Likert scale ranging from 0 = *not at all* to 7 = *more than once a day*, or 9-point Likert scales ranging from 0 = *no desire* to 8 = *strong desire*, from 0 = *not at all important* to 8 = *extremely important*, or from 0 = *much less desire* to 8 = *much more desire*. Items are summed to obtain a total subscale score ranging from 0 to 54 with higher scores indicating higher levels of sexual desire toward their romantic partner.

The SDI demonstrates good internal consistency (Cronbach's $\alpha = 0.80$ to 0.88 for partner-focused dyadic desire subscale; Moyano et al., 2017), good temporal stability over a one-month period ($r = 0.76$; Spector et al., 1996), and strong concurrent validity with the

frequency of partnered sexual behavior (Spector et al., 1996). In the current study, Cronbach's α was 0.88.

2.3.4. Sexual distress

The 5-item form of the Female Sexual Distress-Revised (FSD-R), which has been validated with men (Derogatis et al., 2008; Santos-Iglesias et al., 2018), was used to assess sex- related personal distress. Participants were asked to indicate how often each sexual problem has bothered them or caused them distress during the past 30 days (e.g., "How often do you feel distressed about your sex life?"), using a 5-point Likert scale ranging from 0 = *never* to 4 = *always*. Items are summed to obtain a total score ranging from 0 to 20 with higher scores indicating higher levels of sexual distress. The FSD-R demonstrates good internal consistency (Cronbach's α = 0.88), good test-retest reliability over 28 days (ICC = 0.88), and adequate convergent validity with sexual bother and concerns (Derogatis et al., 2008; Santos-Iglesias et al., 2018). In the present study, Cronbach's α was 0.88.

2.3.5. Touch aversion

The Touch Aversion subscale of the Seven Touch Scales (Brennan et al., 1998) consists of 9 items assessing the extent to which the partner's touch is perceived as aversive or annoying (e.g., "I generally don't like my partner to touch me"; "I sometimes find my partner's touch intolerable"; "I often have to remind my partner to stop touching me"). Participants were asked to indicate how much each statement describes them in the past three months, using a 7-point Likert scale ranging from 1 = *not at all like me* to 7 = *very much like me*. A mean subscale total score is calculated with higher scores indicating greater touch aversion. The touch aversion subscale demonstrates good internal consistency (Cronbach's α = 0.78; Samples-Steele, 2011). In the current study, Cronbach's α was 0.88.

2.4. Statistical analyses

Descriptive and correlation analyses were computed using the Statistical Package for the Social Sciences (SPSS 28.0) to describe the sample characteristics, study variables, and bivariate associations between study variables. Using MPlus version 8.10 (Muthén & Muthén, 2017), two actor-partner interdependence mediation models (APIMeM; Kenny et al., 2006; Ledermann et al., 2011) were conducted to examine the hypothesized associations between partners' CM and their own and their partner's partner-focused sexual desire and distress via their own and their partner's touch aversion including relationship status, highest education level, annual income, sexual orientation, and principal occupation as control variables. The APIM accounts for the interdependence between partners and allows for the examination of actor effects (e.g., the association between a person's CM and their own sexual distress) and partner effects (e.g., association between a person's and their partner sexual distress). Covariances between partners' independent variables and residual variances were included in the APIMeM. As the sample included both mixed-gender and sexually or sex/gender-diverse couples (i.e., gender or sex could not distinguish all partners within all dyads), the dyads were considered indistinguishable. Thus, we randomly assigned each partner to "partner 1" and "partner 2", and all parameters were constrained to be equal between partners (i.e., means, variances, covariances, actor effects, and partner effects; Kashy et al., 2008). All models were estimated using maximum likelihood parameter estimates with robust standard errors (MLR). Score-level missing data, which ranged from 0.0 % to 0.3 %, were handled using the full information maximum likelihood (FIML) method.

Model fits were considered satisfactory when they met recommended guidelines (Kline, 2016): a statistically non-significant chi-square value, a comparative fit index (CFI) value of 0.95 or higher, a root–mean-square error of approximation (RMSEA) below 0.06, and a standardized root-mean-square residual (SRMR) below 0.08 (Kline, 2016). As Preacher and Hayes (2008) recommended to determine the significance of indirect effects, 95 % bootstrap confidence intervals around the estimate of the indirect effect (a*b) were computed using 5000 bootstrapping samples. If zero is not in the interval, the indirect effect is considered significant. To verify the potential moderating role of gender (0 = men and 1 = women) in the associations between CM, touch aversion, and partner-focused sexual desire and distress, the interaction effects (i.e., CM*gender and touch aversion*gender) were included in the model. Simple slope tests were used to report the association for women and men when the association between the interaction and outcome was significant. Although efforts were made to include as many gender-diverse participants as possible, the limited sample size (n = 23) prevented us from including these participants in the gender difference analyses.

Table 1
Descriptive Statistics and Bivariate Correlations of Childhood Maltreatment, Touch Aversion, Partner-Focused Sexual Desire, and Sexual Distress.

	M (SD)	Range	1	2	3	4
1. CM	39.41 (14.94)	25–123	**0.07**	0.05	0.02	−0.04
2. Touch aversion	2.07 (1.14)	1–7	0.16***	**−0.16*****	0.16***	0.08
3. PFSD	37.40 (10.25)	0–54	−0.03	−0.50***	**0.04**	−0.07
4. Sexual distress	4.60 (4.34)	0–20	0.16***	0.41***	−0.37***	**0.33*****

Note. CM = child maltreatment; PFSD = partner-focused sexual desire; *M* = mean; *SD* = standard deviation. Correlations presented below the diagonal represent the actor associations (i.e., the association between an individual X and their own Y), correlations presented above the diagonal represent the partner associations (i.e., the association between an individual X and their partner Y), and correlations in bold represent between partners correlations.
*$p < .05$. **$p < .01$. ***$p < .001$.

3. Results

3.1. Descriptive and correlational analysis

Means (M), standard deviations (SD), range, and actor and partner bivariate correlations for partners' CM, touch aversion, partner-focused sexual desire, and sexual distress are presented in Table 1. Correlations showed that a person's CM was positively associated with their own touch aversion and their own sexual distress. A person's touch aversion was negatively associated with their own partner-focused sexual desire and positively associated with their own sexual distress and their partner's partner-focused sexual desire. A person's partner-focused sexual desire was negatively associated with their own sexual distress. A person's touch aversion was negatively associated with their partner's touch aversion and in contrast, a person's sexual distress was positively associated with their partner's sexual distress.

3.2. Actor-partner interdependence mediation models

3.2.1. Partner-focused sexual desire

An APIMeM was tested to examine the actor and partner associations between CM, touch aversion, and partner-focused sexual desire including sexual orientation, relationship status, annual income, principal occupation and highest education level as control variables. This model fits the data well with satisfactory fit indices: $\chi 2(63) = 41.99$, $p = .981$; RMSEA = 0.00, 90 % CI = [0.00, 0.00]; CFI = 1.00; SRMR = 0.03. Results, presented in Table 2, showed that a person's CM was associated with their own higher touch aversion whereas it was not significantly related to their partner's touch aversion. A person's touch aversion was associated with their own lower partner-focused sexual desire whereas it was not significantly related to their partner's partner-focused sexual desire. Overall, the model explained 5 % of the variance in touch aversion and 28.8 % of the variance in partner-focused sexual desire.

Results of bootstrapping indirect effects showed that a person's CM was associated with their own lower partner-focused sexual desire through their own higher touch aversion, $b = -0.07$, 95 % bootstrap CI = [−0.08, −0.02]. A person's CM was also associated with their partner's higher partner-focused sexual desire through their own higher touch aversion, $b = 0.01$, 95 % bootstrap CI = [0.000, 0.02]. Indirect effects between a person's CM and their own partner-focused sexual desire through their partner's touch aversion, $b = 0.003$, 95 % bootstrap CI = [− 0.001, 0.01], as well as between a person's CM and their partner's partner-focused sexual desire through their partner's touch aversion were non-significant, $b = -0.02$, 95 % bootstrap CI = [− 0.05, 0.01].

Results of moderation analysis showed that the actor and partner associations between CM, touch aversion, and partner-focused sexual desire did not significantly differ between women and men as all interactions were statistically non-significant ($p > .217$). Thus, only the models including all participants and without the gender moderation is presented.

3.2.2. Sexual distress

A second APIMeM was tested to examine the actor and partner associations between CM, touch aversion, and sexual distress including relationship status, highest education level, annual income, sexual orientation, and principal occupation as control variables. This model fits the data well with satisfactory fit indices: $\chi 2(63) = 41.26$, $p = .985$; RMSEA = 0.00, 90 % CI = [0.00, 0.00]; CFI = 1.00; SRMR = 0.03. Results, presented in Table 3, showed that a person's CM was associated with their own higher levels of touch aversion, whereas it was not significantly related to their partner's touch aversion. A person's touch aversion was associated with their own and their partner's higher sexual distress. Overall, the model explained 4.8 % of the variance in touch aversion and 23.7 % of the variance in sexual distress.

Results of the bootstrapping indirect effects showed that a person's CM was associated with their own higher sexual distress through their own higher touch aversion, $b = 0.06$, 95 % bootstrap CI = [0.01, 0.03]. A person's CM was also associated with their partner's higher sexual distress through their own higher touch aversion, $b = 0.02$, 95 % bootstrap CI = [0.003, 0.013].

Indirect effects between a person's CM and their own sexual distress through their partner's touch aversion, $b = 0.01$, 95 % bootstrap CI = [−0.001, 0.01], as well as between a person's CM and their partner's sexual distress through their partner's touch aversion were non-significant, $b = 0.02$, 95 % bootstrap CI = [−0.003, 0.02].

Results of moderation analysis showed that the actor and partner associations between CM, touch aversion, and sexual distress did not significantly differ between women and men as all interactions were statistically non-significant ($p > .176$). Thus, only the models including all participants and without the gender moderation is presented.

4. Discussion

This research extends current knowledge of the relational and sexual dynamics of couples reporting a CM history by exploring the links between CM and sexual desire and distress in couples, as well as the mediating role of touch aversion, using a dyadic design. A primary finding showed that a person's CM was associated with their own lower sexual desire and higher sexual distress though their own higher touch aversion. The second main finding was that a person's CM was associated with their partner's higher sexual desire and sexual distress through their own higher touch aversion. Overall, these findings contribute to the growing body of literature on the effects of CM on couples' sexual lives by emphasizing the importance of how touch is perceived and experienced within the context of romantic relationships.

Table 2
Actor-Partner Interdependence Mediation Model of the Associations Between Childhood Maltreatment and Partner-Focused Sexual Desire Through Touch Aversion ($n = 695$ participants; 363 couples).

	Touch Aversion						Partner-Focused Sexual Desire					
	Actor effect			Partner effect			Actor effect			Partner effect		
	b (SE)	β	*p*	b (SE)	β	*p*	b (SE)	β	*p*	b (SE)	β	*p*
CM	**0.01 (0.01)**	0.14	< 0.01	0.004 (0.01)	0.05	0.222	0.04 (0.02)	0.05	0.152	0.02 (0.02)	0.02	0.521
Touch aversion							**−4.38 (0.35)**	−0.48	< 0.001	0.54 (0.29)	0.06	0.065

Note. CM = childhood maltreatment. b = unstandardized coefficient. SE = standard error. β = standardized coefficient. The effects of sexual orientation, relationship status, annual income, principal occupation and highest education level on partner-focused sexual desire and touch aversion were included as covariates. Evidence of statistically significant associations at $p < .05$ are in bold.

Table 3
Actor-Partner Interdependence Mediation Model of the Associations between Childhood Maltreatment and Sexual Distress Through Touch Aversion (n = 695 participants; 363 couples).

	Touch Aversion						Sexual Distress					
	Actor effect			Partner effect			Actor effect			Partner effect		
	b (SE)	β	*p*	b (SE)	β	*p*	b (SE)	β	*p*	b (SE)	β	*p*
CM	**0.01 (0.003)**	0.14	< 0.01	0.004 (0.003)	0.05	0.248	0.02 (0.01)	0.06	0.142	**−0.03 (0.01)**	−0.11	<0.01
Touch aversion							**1.60 (0.16)**	0.42	< 0.001	**0.63 (0.15)**	0.17	< 0.001

Note. CM = childhood maltreatment. b = unstandardized coefficient. SE = standard error. β = standardized coefficient. The effects of sexual orientation, relationship status, annual income, principal occupation and highest education level on sexual distress and touch aversion were included as covariates. Evidence of statistically significant associations at p < .05 are in bold.

4.1. Associations between a person's CM, touch aversion and sexual desire and distress

Our findings showed that a person's CM was associated with their own lower sexual desire and higher sexual distress via their own higher touch aversion. This result aligns with previous research indicating that a history of CM is linked to lower sexual desire and higher sexual distress in adulthood (Kaplan, 1990; O'Loughlin et al., 2020; O'Loughlin & Brotto, 2020; Vaillancourt-Morel et al., 2021). Our study extends these findings by showing that these CM- related negative sexual outcomes are partly explained by higher touch aversion. For individuals with a CM history, trauma-related thoughts in romantic relationships may be triggered by the physical sensations of touch, leading to discomfort, aversion, and heightened anxiety (Lloyd, 2009; Maier et al., 2020). This response could be accompanied by dysregulated nervous system activity, similar to the autonomic hyperarousal seen in post-traumatic stress disorder, where the body reacts to perceived threats even in safe contexts (Gupta et al., 2005; Porges, 2001, 2009). These reactions may lead to hypervigilance, fight-or-freeze responses, dissociation, or numbness that may interfere with intimacy, making it difficult to engage in erotic or affectionate touch (Gewirtz-Meydan & Godbout, 2023). These issues may contribute to lower sexual desire and higher sexual distress, often associated with self-perceptions of inadequacy and unworthiness (Akhavan Akbari et al., 2018; Dürr, 2014).

4.2. Associations between CM, touch aversion and partners' sexual desire and distress

The second main finding was that a person's CM was indirectly associated with their partner's higher sexual desire and sexual distress through their own higher touch aversion. The association with higher sexual distress is in line with past results showing that a person's CM is related to their partner's lower sexual function and higher sexual distress (Corsini-Munt et al., 2017; Vaillancourt-Morel et al., 2021), as well as with the concept of secondary trauma, which suggests that those who are close with trauma survivors may report symptoms that are similar to the primary victim's trauma response (Nelson & Wampler, 2000; Vaillancourt-Morel et al., 2023). Sexual desire also showed significant indirect cross-partner associations, but while individuals with a CM history indirectly reported lower sexual desire, their partners showed higher desire via the victim's touch aversion, highlighting the interdependent nature of sexual dynamics in couples. This contrasting pattern for sexual desire suggests a more complex dynamic, in which partners may report higher sexual desire as a compensatory or relational response to the victim's lower sexual desire, rather than mirroring. In addition, our results showed that these sexual outcomes in partners of individuals with a CM history are explained by the victim's higher touch aversion. According to secondary trauma theory (Nelson & Wampler, 2000), the emotional and psychological effects of trauma-related touch aversion may be felt by their partner, leaving the partner's sexual needs unmet, increasing their desire for intimacy, and causing distress due to a lack of reciprocity. This imbalance may lead to sexual dissatisfaction and feelings of rejection in partners (Dewitte, 2014). However, a person's CM was not significantly associated with their partner's touch aversion, suggesting that this bodily experience is primarily an individual trauma response that is not mirrored by the partner.

4.3. Associations between CM, touch aversion and couples' sexual desire and distress

Interestingly, combining both results—namely, the association between a person's CM with their own lower sexual desire and higher sexual distress, and their partner's increased sexual desire and distress through touch aversion—reveals contrasting responses in sexual desire suggesting that couples with a history of CM may experience a pursuer-distancer dynamic, where one partner actively seeks closeness while the other withdraws (Fogarty, 1979). A study has shown that the pursuer-distancer dynamics are common in single-trauma couples, with one partner intensely pursuing while the other avoids, leading to control issues and interpersonal difficulties (Nelson et al., 2002). Consistent with our findings, partners of individuals with a CM history may seek physical intimacy and pursue them to initiate sexual activity, which may explain their higher sexual desire toward their partner via the victim's touch aversion. This sexual approach from their partner may elicit a traumatic reaction in response to touch, leading to lower sexual desire for individuals with a CM history. While these observations suggest that CM could be related to this dynamic of partners' sexual desire specifically through the victim's higher touch aversion, this interpretation needs to be formally verified through further research. The person with a CM history may withdraw from physical contact and sexual activity due to past trauma, leading their partner to increase their efforts to connect physically and sexually, potentially interpreting the withdrawal as a signal of disinterest and a need to bridge the gap. This cycle may exacerbate both emotional and physical disconnect, as the pursuer's efforts might result in further withdrawal by the distancer. Moreover, this dynamic and the resulting discrepancies in sexual desire between the partners via the victim's higher touch aversion may contribute to heightened sexual distress for both. Research indicates that sexual desire discrepancy in couples is associated with higher sexual distress daily and across time (Jodouin et al., 2021). Thus, touch aversion in the individual with a CM history may intensify the emotional and physical disconnect with their partner, as they might tend to avoid touch and sexual intimacy, increasing the sexual desire discrepancy in the couple and leading to amplified sexual distress for both partners. However, these hypotheses should be explored in future studies.

4.4. Limitations and directions for future research

This study has some limitations that should be considered when interpreting the results. First, the study's cross-sectional design does not allow for inferences about the direction of associations. Thus, the association may be bidirectional with sexual desire and distress also contributing to higher touch aversion in individuals with a CM history. Second, as all data were collected through retrospective self-report measures, there is a potential for recall biases that could affect the accuracy of the responses. There could also be potential recall biases in retrospective CM assessment due to trauma-related distress. However, studies indicate these biases do not

affect the evaluation of CM's impact on later outcomes (Brewin et al., 1993). Third, the generalizability of our results may be limited by our convenience sample of couples recruited through advertisements where self-selection biases may occur. Our findings should be interpreted considering the sample's characteristics: relatively young couples with little cultural, sexual, and gender diversity. Future studies should aim to include samples that encompass a more diverse range of couples to enhance the generalizability and applicability of findings. While we controlled for the variability in relationship status, we did not explore whether our associations varied across different stages of relationships. Finally, the current study did not examine in detail how individuals with a CM history perceive and respond to touch from their partner, suggesting an important avenue for future research.

4.5. Clinical implications

The findings emphasize the need to assess all forms of CM in clinical settings, as it could be related to couples' sexual dynamics. A strong therapeutic foundation is essential before addressing touch. Building trust through a therapist-client alliance helps individuals with a CM history feel safe and understand how their trauma affects their emotional, cognitive, and physical reactions (Ogden, 2021). Once this is established, touch could be introduced gradually to help victims regain control over distressing sensations. Partners of individuals with a CM history may experience their own sexual issues, making it important to assess and validate their experiences. Understanding that CM could cause heightened sensitivity, aversion, or dissociation to touch (Ogden, 2021; Porges, 2001, 2009) may help partners avoid self-blame and be more empathic to their partner's responses. Trauma-informed couple therapy (MacIntosh et al., 2020) could effectively address CM-related sexual issues and improve communication in both partners. Once they both feel secure and understand the impact of trauma on their dynamics, somatic approaches like sensorimotor psychotherapy (Ogden, 2021) or sensate focus exercises (Masters & Johnson, 1970) could help. These methods focus on regulating physical sensations and fostering emotional intimacy through mindful touch and supportive communication. Incorporating these techniques could enhance sexual desire, reduce distress, and help couples reconnect, improving both physical and emotional intimacy.

CRediT authorship contribution statement

Florence Sansoucy: Writing – original draft. **Judith Kotiuga:** Writing – review & editing. **Marie-Ève Daspe:** Writing – review & editing. **Noémie Bigras:** Writing – review & editing. **Marie-Pier Vaillancourt-Morel:** Writing – review & editing, Supervision.

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Declaration of competing interest

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Data availability

Data will be made available on request.

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