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Cumulative childhood trauma, sex motives and sexual satisfaction among emerging adults

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ABSTRACT

Background: To better understand sexual satisfaction in emerging adults, previous research has emphasized the importance of considering the role of developmental experiences, such as cumulative childhood trauma (CCT; the number of different forms of abuse and neglect sustained during childhood). However, the mechanisms by which CCT and sexual satisfaction are related remain unknown. Sex motives are suggested as an explanatory mechanism given the previously found associations between sex motives and both sexual satisfaction and CCT.

Objective: This study examined the direct associations between CCT and sexual satisfaction, as well as indirect associations through sex motives, in emerging adults.

Participants and setting: A sample of 437 French Canadian emerging adults (76 % women, mean age of 2.3) were recruited.

Methods: Participants completed online self-reported validated questionnaires assessing CCT, sex motives and sexual satisfaction.

Results: Results from a path analysis revealed that CCT was associated with a higher endorsement of the self-affirmation sex motive ($\beta = 0.25, p < .001$) which was linked to lower sexual satisfaction ($\beta = -0.13, p < .001$). CCT was also associated with a higher endorsement of the coping ($\beta = 0.25, p < .001$) and partner approval ($\beta = 0.09, p < .05$) sex motives. A higher endorsement of the intimacy ($\beta = 0.28, p < .001$) and pleasure ($\beta = 0.24, p < .001$) sex motives, and a lower endorsement of the partner approval sex motive ($\beta = -0.13, p < .001$) were linked to greater sexual satisfaction.

Conclusions: Results suggest education and intervention targets to improve emerging adults' sexuality.

Emerging adulthood refers to a developmental period, mostly present in occidental societies, during which young adults aged 18 to 25 can explore various facets of their lives without having to assume adult responsibilities and decision-making related to finances, love, work, or parenthood (Arnett, 2014; Nelson et al., 2004). Since this period is characterized by a decrease in parental control paired with low pressure to find a permanent partner (Arnett, 2014), emerging adulthood allows greater sexual and romantic exploration.

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Thus, engaging in sexual activities becomes normative in emerging adults (Lefkowitz & Gillen, 2006). Interestingly however, very few studies have attempted to understand the factors associated with emerging adults' sexual well-being: past research with this population has mostly focused on risky sexual behaviors, health-related attitudes (e.g., use of contraceptives), or sexual health indicators (e.g., sexually transmitted infections; Higgins et al., 2011). Yet, this only allows a partial comprehension of sexuality in emerging adulthood. Sexual satisfaction, which is an integral part of sexual health (World Health Organization, 2015), describes the subjective and emotional assessment of the positive and negative aspects of a person's sexual life, with or without a sexual partner (Lawrance & Byers, 1995). Past studies have emphasized that sexual satisfaction is determinant of one's psychological (Davison et al., 2009), physical (Sánchez-Fuentes et al., 2014), and relational well-being (Sprecher, 2002). Yet, we know little of the determinants of sexual satisfaction in emerging adults. Considering that sexual experiences during emerging adulthood are known to influence later sexual behaviors and well-being (Connolly et al., 2021), studies that allow uncovering the factors that explain emerging adults' sexual satisfaction are needed (Leveque & Pederson, 2012). Research and intervention efforts in the past decade have also accentuated that the examination of the determinants of sexuality in emerging adults must consider the roles of developmental relational experiences (Connolly et al., 2021). For instance, research into the transition toward adulthood has emphasized the need to consider the direct and indirect contribution of childhood interpersonal trauma (or maltreatment) on emerging adults' psycho-social functioning and development (McMahon, 2014). The current study follows these recommendations in its examination of emerging adults' sexual satisfaction.

1. Childhood interpersonal trauma and sexual satisfaction

Studies have shown that sexual satisfaction and behaviors are heavily influenced by developmental experiences, such as the affection received by parental figures, witnessing parental violence, and the experience of childhood abuse (Seehuus et al., 2014). Childhood interpersonal trauma defines all the committed (i.e., abuse) and omitted (i.e., neglect) behaviors that harm, or have the potential to harm, the mental or physical integrity of a child (Briere & Scott, 2014; Gilbert et al., 2009). It includes psychological, physical, and sexual abuse, physical and psychological neglect, as well as witnessing physical or psychological violence between parental figures (World Health Organisation, n.d.; Tanaka et al., 2012).

Previous studies have reported that the experience of childhood interpersonal trauma is related to various aspects of sexuality in adulthood, including lower sexual satisfaction in women, men (Godbout et al., 2020; Vaillancourt-Morel et al., 2016), and in members of the gender diversity (Lindley et al., 2020). Yet, studies that have examined the role of childhood interpersonal trauma on adult sexuality, including sexual satisfaction, have mainly focused on childhood sexual abuse (e.g., Nielsen et al., 2018; Vaillancourt-Morel et al., 2016). Since sexual abuse rarely occurs in a context free from other forms of interpersonal victimization (Dugal et al., 2016), it is imperative to consider other types of abuse and neglect as well. Cumulative childhood trauma (CCT) refers to the accumulation of different forms of childhood interpersonal trauma and would be associated with more severe repercussions in adulthood than the experience of a single type of trauma, even if it is repeated (Finkelhor et al., 2007). For instance, Godbout et al. (2020) observed, in a sample of 410 patients consulting in sex therapy, that the more survivors reported different forms of victimization during childhood, (i.e., higher CCT), the lower they reported their sexual satisfaction. Bigras et al. (2017) found similar results in a sample of 620 adults from the general population. Yet, since these studies were conducted with samples of adults, we still lack data on the sexual repercussions of CCT in emerging adults. Considering emerging adulthood is a period during which individuals explore and consolidate their sexual selves (Lefkowitz & Gillen, 2006), the impacts of CCT on sexuality could be especially salient during this time. Past studies have also suggested that the identification of mechanisms that underlie the associations between childhood interpersonal trauma and sexual satisfaction (e.g., affect regulation; Bigras et al., 2017; mindfulness; Godbout et al., 2020) could offer potential targets to reduce the repercussions of childhood interpersonal trauma and promote sexual satisfaction in survivors. Yet, potential mechanisms that are specific to the experience of emerging adults remain unknown. Since they are known to be linked to the subjective evaluation of one's sexuality (Mitchell et al., 2020), and are associated with the experience of childhood interpersonal trauma (Layh et al., 2019), sex motives might act as an explanatory mechanism for the links between CCT and sexual satisfaction among emerging adults.

2. Sex motives

Cooper et al. (1998) describe sex motives as the reasons why one engages in sexual activities and the goals that are met by these activities. They conceptualized sex motives along two continuums (Cooper et al., 1998): one describes whether sex is motivated by the pursuit of positive experiences or outcomes (i.e., approach motives) or the avoidance of aversive ones (i.e., avoidance motives); and the other distinguishes whether sex is motivated by a need to manage agentic needs (i.e., self-focused) or to manage relational needs (i.e., other-focused). These two continuums are combined to create six different sex motives. The intimacy sex motive (i.e., approach other-focused motive) refers to having sex to feel close to a partner whereas the pleasure sex motive (i.e., approach self-focused motive) describes the motivation to have sex for physical or emotional well-being. The self-affirmation sex motive (i.e., avoidance self-focused motive) describes the motivation to have sex to feel confident or attractive, and the coping sex motive (i.e., avoidance self-focused motive) refers to having sex to deal with negative emotions. The peer approval sex motive (i.e., avoidance other-focused motive) describes having sex to avoid others' negative judgement and the partner approval sex motive (i.e., avoidance other-focused motive) refers to engaging in sex to avoid the partner's anger or rejection.

3. Childhood interpersonal trauma and sex motives

A handful of studies have explored how experiences of childhood interpersonal trauma can influence the sex motives one will endorse later in life. Results from these studies, either conducted with teenagers (Wekerle et al., 2017) or emerging adults (Layh et al., 2019; Neilson et al., 2022) all point to similar conclusions: child sexual abuse is associated with a higher endorsement of avoidance self-focused (i.e., coping and self-affirmation) and avoidance other-focused (i.e., partner and peer approval) sex motives and is unrelated to the endorsement of approach sex motives. Wekerle et al. (2017) also found that the endorsement of certain sex motives, such as peer approval, was only significant in young men, raising the possibility that sex motives might differ depending on one's gender. However, all of these studies only examined child sexual abuse and none considered the potential role of other forms of victimization.

4. Sex motives and sexual satisfaction

Studies on the link between sex motives and sexual satisfaction point to a general conclusion: approach sex motives are related to higher sexual satisfaction, and avoidance sex motives are associated with lower sexual satisfaction. For instance, Gewirtz-Meydan and Finzi-Dottan (2018) found that men and women who reported endorsing the intimacy and pleasure sex motives (i.e., approach motives) reported higher sexual satisfaction. In men in particular, a higher endorsement of the coping and self-affirmation sex motives (i.e., avoidance self-focused motives) was associated with lower sexual satisfaction. Another study found that in women, a higher endorsement of the intimacy sex motive (i.e., approach other-focused motive) would be associated with greater sexual satisfaction (Sanchez et al., 2011). However, these previous studies did not consider the specific experience of emerging adults. In a sample of undergraduates (mean age of 18 years), Stephenson et al. (2011) found that the endorsement of approach sex motives was associated with greater sexual satisfaction and the endorsement of avoidance sex motives was related to lower sexual satisfaction. Yet, they did not differentiate the various forms approach and avoidance sex motives can take. In addition, Cooper et al. (1998) and Gravel et al. (2016) have suggested that the endorsement of sex motives, and their significance for a person's experience of sex, might differ according to relationship status. For instance, those in a committed relationship might not endorse the self-affirmation sex motive as much as those who are single (Gravel et al., 2016). Yet, past studies have not controlled for relationship status when examining the associations between sex motives and sexual satisfaction.

5. Childhood interpersonal trauma, sex motives, and sexual satisfaction

The association between childhood interpersonal trauma and sexual satisfaction through the explanatory mechanisms of sex motives has been explored partially by Layh et al. (2019), although these authors only examined the role of sexual abuse. Their results, based on a sample of emerging adult women, indicate that four avoidance sex motives—self-affirmation, coping, partner approval, and peer approval—act as intermediate variables in the negative indirect links between sexual abuse (experienced during childhood or university) and sexual satisfaction. Although this study targeted emerging adults and supported the relevance of exploring sex motives as an explanatory variable between past victimization experiences and sexual satisfaction among young adults, it focused solely on sexual abuse and only included heterosexual women. This limits our understanding of the role of CCT in the sexual satisfaction of emerging adults, both women and men. The study from Layh et al. (2019) was also limited by the lack of distinction between the experience of child sexual abuse versus adult sexual assault. Sexual trauma experienced in childhood or in adulthood are distinct types of victimization, that occur in different contexts and that are associated with distinct repercussions (Cyr & Payer, 2011; Polucci et al., 2001; Putnam, 2003). Therefore, conclusions from this study might not reflect the true associations among CCT, sex motives and sexual satisfaction. In addition, past studies on the links between childhood interpersonal trauma and sexual satisfaction have been conducted with participants who reported being cisgender and heterosexual (e.g., Godbout et al., 2020; Layh et al., 2019). They are thus limited by their under-representation of members of the gender diversity, including people who identify as non-binary. Since a high prevalence of childhood interpersonal trauma is reported by those who identify as LGBTQ+ (Rojas et al., 2019) and considering determinants of sexual satisfaction can differ for trans and non-binary individuals (e.g., gender dysphoria triggered in partnered activities; Lindley et al., 2021), it is crucial to conduct studies that consider their reality. Some authors have also shown that the repercussions of childhood interpersonal trauma on sexuality might differ depending on the survivors' relational status with their sexual partner. Indeed, Vaillancourt-Morel et al. (2016) showed that the experience of child sexual abuse is related to patterns of sexual compulsion in single adults, and avoidant sexual behavior in married or cohabiting adults, suggesting that the sexual impacts of traumatic experiences could vary depending on the level of commitment and emotional involvement with a partner. Although sexual behaviors are different from sex motives, behaviors can be considered as a manifestation of underlying motives. It is thus possible that sex motives in CCT survivors, and their links to sexual satisfaction, are expressed differently depending on emerging adults' relationship status.

6. The current study

Complementing past research, this study aimed to examine the direct and indirect associations between CCT and sexual satisfaction through sex motives in emerging adults. This examination will allow to identify prevention and intervention targets to minimize the consequences of CCT and promote sexual satisfaction in emerging adults. Based on previous studies, it was expected that CCT would be associated with lower sexual satisfaction (H1) and a higher endorsement of avoidance sex motives (e.g., coping, self-affirmation, peer and partner approval) (H2). Because no study has found significant associations between CCT and approach sex motives, no hypotheses are formulated regarding these associations, but they will still be explored. It was also expected that avoidance sex motives

would be related to lower sexual satisfaction and approach sex motives would be related to higher sexual satisfaction (H3). Regarding indirect effects, it was expected that CCT would be related to lower sexual satisfaction through higher avoidance sex motives and lower approach sex motives (H4). Since differences regarding the sexuality of trauma survivors were documented regarding gender and relationship status, we also considered gender and relationship status in this study.

7. Method

7.1. Participants

The sample consisted of 437 emerging adults aged between 18 and 25 years ($M = 22.8$, $SD = 1.9$) that reported they had at least one sexual or romantic partner in the last six months. Participants included 83 men (19.0 %), 331 women (75.9 %), and 22 individuals who identified as non-binary (2.5 %), agender (0.2 %), queer (0.9 %), genderfluid (0.9 %), trans (0.2 %), or neutrois (0.2 %). Participants reported their sexual orientation was either heterosexual (60.0 %), homosexual (6.9 %), bisexual (10.8 %), pansexual (10.5 %), queer (3.7 %), asexual (0.9 %), or other (0.9 %). Within the sample, 53.5 % did not live with their partner, whereas 46.5 % of them did. The mean age at first sexual intercourse was 16.2 years ($SD = 2.3$) and 9.6 % reported that their first sexual intercourse could be considered as sexually precocious (i.e., before the age of 14; Lambert et al., 2017). At the time of the study, participants reported having had an average of 8.9 ($SD = 12.0$) different sexual partners. Regarding education, the average amount of school years completed was 15.5 ($SD = 2.7$), which means most of them completed a university degree. Most of the participants indicated being full-time (53.2 %) or part-time students (1.4 %), whereas some reported working full-time (36.3 %) or part-time (3.9 %). A few participants were unemployed (2.5 %) or on parental leave (2.5 %). The sample size was larger than the minimum required ($n = 264$) to ensure a statistical power of 80 % with the chosen statistical analyses (for small size indirect effects [$f^2 = 0.03$], nine concomitant predictors, and an alpha of 0.05), according to the G*Power software (Faul et al., 2009).

7.2. Procedure

French-speaking emerging adults who had at least one sexual or romantic partner in the last six months were recruited using social networks, posters in universities, colleges, and in public spaces (i.e., coffee shops, restaurants) to participate in a study on emerging adults' sexuality. The data collection took place between March 2019 and March 2020. A few LGBTQ+ associations were solicited to ensure the representation of sexual and gender diversity in the sample. Voluntary participation required completing a series of questionnaires through the secure Qualtrics online platform, leaving the possibility to refrain from answering any questions or to quit at any time. A consent form preceded the presentation of the questionnaires. To ensure confidentiality, no information allowing the identification of the participants was collected. By submitting their email address in a second survey, participants were eligible to win a CAN\$100 prepaid credit card. Considering the delicate topics included in the study, a list of support services was offered at the end of the survey. The project was approved by the research ethics committee of the researchers' institution.

7.3. Measures

All participants completed a short questionnaire assessing sociodemographic characteristics (i.e., age, gender, orientation, relational status, education) and sexual history (i.e., age of first sexual intercourse, number of sexual partners). They also completed questionnaires assessing each study variable. All measures were in French.

Cumulative childhood trauma was measured by the *Cumulative Childhood Trauma Questionnaire* (CCTQ; Godbout, Bigras, & Sabourin, 2017), which includes 17 self-report items evaluating seven types of interpersonal trauma experienced before the age of 17 (physical, psychological and sexual abuse, physical and psychological neglect, and witnessing physical or psychological violence between parents). In this measure, childhood sexual abuse is defined as any unwanted sexual act before the age of 18, or any sexual act before the age of 16 involving an adult who is 5 years older or in a position of authority. To create a total score of CCT, ranging from 0 to 7, and referring to the number of different types of childhood interpersonal trauma reported by participants, each type of trauma was dichotomised (0 = absence of trauma, 1 = presence of trauma) and then summed. Previous studies support the psychometric qualities of the CCTQ with alpha coefficients ranging from 0.83 to 0.90 (Dugal et al., 2019; Godbout, Daspe, et al., 2017), which was replicated in this study ($\alpha = 0.88$).

Sex motives were measured using the *Sex Motives Scale* (SMS; Cooper et al., 1998). The SMS includes 29 items measuring six different sex motives (intimacy, pleasure, self-affirmation, coping, partner approval, and peer approval). The frequency at which each participant engaged in sexual activities for each of those motives is rated on a scale ranging from 1 (not often/never) to 5 (often/always). Scores for each sex motive are then averaged, with a high score indicating a more frequent use of the motive. Cooper et al. (1998) demonstrated the adequate internal consistency for the sex motives of intimacy ($\alpha = 0.90$), pleasure ($\alpha = 0.87$), self-affirmation ($\alpha = 0.87$), coping ($\alpha = 0.82$), partner approval ($\alpha = 0.84$), and peer approval ($\alpha = 0.87$). They also supported the criterion validity of the SMS by correlating the scales with measures that are theoretically related to sex motives. Internal consistency was also adequate in this sample (intimacy $\alpha = 0.89$, pleasure $\alpha = 0.86$, self-affirmation $\alpha = 0.92$, coping $\alpha = 0.90$, partner approval $\alpha = 0.92$, peer approval $\alpha = 0.93$).

Sexual satisfaction was measured using the *Global Measure of Sexual Satisfaction* (GMSEX; Lawrance & Byers, 1995). The GMSEX assesses five dimensions of sexual satisfaction rated on 7-point bipolar scales (i.e., good-bad, pleasant-unpleasant, positive-negative, satisfying-unsatisfying, valuable-worthless), to measure a global score of sexual satisfaction that ranges from 5 to 35, with higher

scores indicating greater satisfaction. Previous research supports the psychometric properties of the GMSEX, including an adequate internal consistency within samples of students ($\alpha = 0.90$; Lawrance & Byers, 1992) and adults in a long-term relationship ($\alpha = 0.96$; Lawrance & Byers, 1995). In this sample, internal consistency was adequate ($\alpha = 0.89$).

7.4. Data analysis strategy

Descriptive statistics and preliminary bivariate correlations were computed using SPSS 26. To answer our study objective, a path analysis was conducted using the Mplus software, version 8 (Muthén & Muthén, 1998–2017), which allowed us to calculate the simultaneous direct and indirect associations between CCT and sexual satisfaction through sex motives, while controlling for participants' gender and relationship status (the cohabitation status of couples was used as a proxy to account for the level of commitment in the relationship). This software also includes a robust estimator to correct for the non-normality in the data and accounts for missing values using the maximum likelihood estimation with robust standard errors (MLR). Four fit indices (Hu & Bentler, 1999; Kline, 2016) were used to verify whether the theorized model adequately represented the data: the chi-square statistic, the Root Mean Square Error of Approximation (RMSEA; Browne & Cudeck, 1993), the Comparative Fit Index (CFI; Bentler, 1990) and the Standardized Root Mean Square Residual (SRMR). Adequate model fit is supported by a nonstatistically significant chi-square value, RMSEA value under 0.06, a CFI value of 0.95 or higher and an SRMR value below 0.08 (Hu & Bentler, 1999; Tabachnick & Fidell, 2019). Following Hayes' (2009) recommendation, a one-step bootstrapping approach was chosen to estimate direct and indirect associations simultaneously, because this approach allows testing models in which intermediary variables can explain direct associations that are not necessarily statistically significant. Specifically, the indirect effects of sex motives in the link between CCT and sexual satisfaction were estimated using 95 % bootstrap confidence intervals on 10,000 bootstrapped random samples (MacKinnon & Fairchild, 2009).

8. Results

8.1. Preliminary analyses

Descriptive statistics and preliminary bivariate correlations are presented in Table 1. A number of variables (i.e., coping, partner and peer approval sex motives, sexual satisfaction) had non-normal distributions, which justified the use of a robust estimator (MLR) in the main analysis. The correlations show that CCT is not related to sexual satisfaction, but it is associated with a higher endorsement of the self-affirmation and coping sex motives. The intimacy and pleasure sex motives are associated with higher sexual satisfaction, whereas the self-affirmation, partner approval, and peer approval sex motives are associated with lower sexual satisfaction. Correlations between the study variables and the categorical control variables of gender and relationship status were also examined. Significant correlations indicated that being a woman or a member of gender diversity was associated with higher CCT, and a higher endorsement of the intimacy, self-affirmation and coping sex motives. Being in a cohabiting relationship was associated with a higher endorsement of the coping sex motive. The prevalence of each type of childhood interpersonal trauma and of the number of different types of trauma experienced are shown in Table 2. The results indicate that only a minority of participants have never experienced childhood interpersonal trauma.

8.2. Path analysis

All four hypotheses were verified through the examination of one path analysis model including all direct and indirect links between the variables and the covariances between the six sex motives. To assess the generalizability of the model across gender and

Table 1
Descriptive statistics and bivariate correlations.

Variables	1	2	3	4	5	6	7	8	9	10
1. Cumulative childhood trauma	–									
2. Intimacy sex motive	–.04	–								
3. Pleasure sex motive	.01	.27***	–							
4. Self-affirmation sex motive	.25***	.17**	.11*	–						
5. Coping sex motive	.25***	.12*	.26***	.59***	–					
6. Partner approval sex motive	.09	.03	–.20***	.37***	.17***	–				
7. Peer approval sex motive	.01	.08	–.07	.30***	.20***	.53***	–			
8. Sexual satisfaction	–.07	.30***	.31***	–.15**	–.09	–.23***	–.12*	–		
9. Gender	.24***	.10*	.03	.15**	.12*	.06	.02	.03	–	
10. Relationship status	.01	–.08	–.02	–.06	–.10*	–.00	–.07	–.02	.00	–
<i>M</i>	2.9	3.4	3.3	1.7	1.4	1.6	1.1	29.9	–	–
<i>SD</i>	1.9	1.1	1.0	0.9	0.7	0.8	0.5	5.4	–	–
Skewness	0.28	–0.31	–0.30	1.72	2.69	2.13	5.39	–1.86	–	–
Kurtosis	–0.73	–0.78	–0.59	2.59	8.57	4.83	33.24	4.59	–	–

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

Table 2
Prevalence of childhood interpersonal trauma.

Prevalence of childhood interpersonal trauma	% (n)
Child sexual abuse	34.1 % (149)
Physical abuse	36.4 % (159)
Psychological abuse	52.4 % (229)
Physical neglect	18.5 % (81)
Psychological neglect	72.3 % (316)
Witnessing physical abuse between parents	13.1 % (57)
Witnessing psychological abuse between parents	58.5 % (254)

Number of types of childhood interpersonal trauma reported	% (n)
0	13.5 % (59)
1	14.2 % (62)
2	17.8 % (78)
3	17.6 % (77)
4	16.5 % (72)
5	10.1 % (44)
6	6.2 % (27)
7	4.1 % (18)

relationship status, four dichotomous variables indicating whether participants identified as women (0 = no, 1 = yes), men (0 = no, 1 = yes), members of the gender diversity (0 = no, 1 = yes) and as a cohabiting couple (0 = no, 1 = yes) were added as control variables in the model. Results from the path analysis indicate that the model was well adjusted to the data: $\chi^2(5) = 3.16, p = .675$; CFI = 1.00; RMSEA = 0.00, CI 95 % [0.00, 0.05]; SRMR = 0.01. Fig. 1 shows the associations and standardized coefficients that were significant in the model, as well as percentages of explained variance (H2 to H3). Table 3 shows the direct and indirect associations between the variables. The direct association between CCT and sexual satisfaction was not significant (H1). Because they showed no significant association with the other variables, the control variables are not included in the figure. Only the control variable *women* was associated with the intimacy ($\beta = 0.14, p = .004$) and the pleasure ($\beta = -0.13, p = .008$) sex motives but not with the outcome variable.

Results of the bootstrapping analyses (Table 3) revealed the presence of one significant indirect effect of CCT on sexual satisfaction through the self-affirmation sex motive (H4). Results suggest that having experienced more CCT events was associated with more frequent use of the self-affirmation sex motive (i.e., avoidance self-focused motive), which was linked to lower sexual satisfaction. Although direct associations between CCT and the partner approval sex motive, and between the partner approval sex motive and sexual satisfaction were significant, the indirect effect was not significant.

9. Discussion

Emerging adulthood is a critical period for sexual exploration and identity development (Arnett, 2014; Lefkowitz & Gillen, 2006) but studies that have examined the links between childhood interpersonal trauma and adult sexuality have not considered emerging adulthood as a distinct period. Consequently, few studies regarding the sexuality of emerging adults and the factors associated with it are available. The present study significantly contributes to the corpus of research that aims to develop an enriched understanding of how experiences of childhood interpersonal trauma can determine the subjective experience of sexuality in adulthood, and it provides a more precise insight into a developmental period that remains understudied, namely emerging adulthood.

Results showed high prevalence rates of childhood interpersonal trauma: over half of participants reported experiences of psychological neglect or abuse or witnessing psychological abuse between parents and the mean number of different types of abuse and neglect experienced was three. Participants also reported overall high sexual satisfaction and the sex motives that were the most frequently endorsed were intimacy (i.e., approach other-focused motive) and pleasure (i.e., approach self-focused motive). In other words, although emerging adults from this sample reported high rates of childhood interpersonal victimization, they also reported that sexuality is generally positive for them, and they engage in it because they want to express their love or feel close to their partner and because it brings them emotional and physical well-being.

The main results of this study consist of the acknowledgement of CCT and sex motives as potential determinants of sexual satisfaction in emerging adults across different genders and relational statuses. Concretely, our results reveal that the experience of repeated and diversified abuse and neglect during childhood play a role in the reasons why emerging adults engage in sex, which, in turn, shapes their subjective evaluation of sexuality. Specifically, results reveal that, when all sex motives are considered, CCT is associated with a higher endorsement of avoidance sex motives (H2), and both approach and avoidance sex motives seem to color emerging adults' level of sexual satisfaction (H3). This study also emphasized that although CCT is not directly associated with sexual satisfaction (H1), it is indirectly associated with lower sexual satisfaction through a higher endorsement of the self-affirmation sex motive (H4). The model that allowed us to test our four hypotheses explained 22 % of the total variance of sexual satisfaction among emerging adults. Although this percentage is noteworthy, future studies could also examine other pertinent variables (i.e., attachment, intimacy, sexual self-esteem, sexual communication, and sexual practices; Brassard et al., 2015; Morgis et al., 2019) to explain an even higher percentage of variance in the sexual satisfaction of emerging adults.

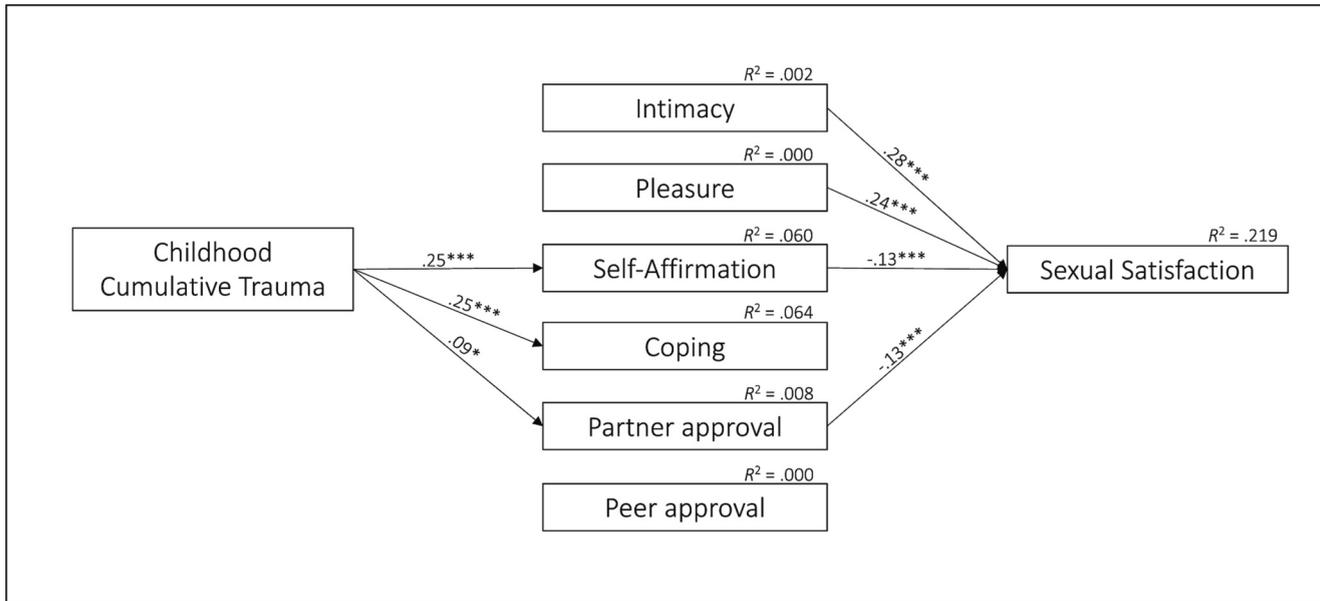


Fig. 1. Path analysis of the associations between cumulative childhood trauma, sex motives and sexual satisfaction. *Note.* Coefficients are standardized estimates. All the covariances between the sex motives were allowed to correlate but are not shown for simplicity of the figure. Non-significant paths and control variables (women, men, gender diversity, relationship status) are also not included in the figure. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Estimates of direct and indirect effects with 95 % confidence intervals and significance levels.

Direct associations	Estimate (B)	SE	p		
CCT–sexual satisfaction	0.008	0.118	.945		
CCT–intimacy	−0.041	0.048	.401		
CCT–pleasure	0.010	0.049	.836		
CCT–self-affirmation	0.245	0.046	.000		
CCT–coping	0.254	0.055	.000		
CCT–partner approval	0.089	0.046	.050		
CCT–peer approval	0.008	0.047	.870		
Intimacy–sexual satisfaction	0.280	0.044	.000		
Pleasure–sexual satisfaction	0.243	0.051	.000		
Self-affirmation–sexual satisfaction	−0.128	0.058	.029		
Coping–sexual satisfaction	−0.083	0.054	.135		
Partner approval–sexual satisfaction	−0.127	0.061	.035		
Peer approval–sexual satisfaction	0.002	0.054	.972		
Indirect associations	Estimate (B)	SE	p	95 % CI lower limit	95 % CI upper limit
CCT–intimacy–sexual satisfaction	−0.032	0.038	.407	−0.111	0.040
CCT–pleasure–sexual satisfaction	0.007	0.034	.841	−0.060	0.076
CCT–self-affirmation–sexual satisfaction	−0.087	0.043	.044	−0.185	−0.014
CCT–coping–sexual satisfaction	−0.058	0.041	.154	−0.151	0.010
CCT–partner approval–sexual satisfaction	−0.031	0.025	.208	−0.103	0.000
CCT–peer approval–sexual satisfaction	−0.000	0.007	.995	−0.016	0.017

Note. CI = confidence interval; CCT = cumulative childhood trauma.

Results from preliminary correlations and the integrative model reveal that contrary to our first hypothesis, CCT is not associated with sexual satisfaction. This could be explained by the fact that childhood victimization might act as a more distal determinant of sexuality in adulthood. As such, CCT might not directly determine survivors' subjective evaluation of sexuality, but as suggested by our results, it could play a role in determining what they seek when engaging in sex. In turn, it would be this more proximal variable that would play a role in survivors' subjective evaluation of sexuality (as suggested by H4).

Our second hypothesis suggested that CCT would be associated with a higher endorsement of avoidance sex motives (e.g., coping, self-affirmation, peer and partner approval). Our results show that emerging adults who report a higher number of different forms of childhood interpersonal trauma are more likely to engage in sex to escape, avoid or minimize feelings of sadness, stress, or loneliness (i.e., coping sex motive, an avoidance self-focused motive). This corroborates results found in previous studies on child sexual abuse (e.g., Layh et al., 2019; Neilson et al., 2022; Wekerle et al., 2017). This could be explained by the fact that emerging adults with higher CCT have had repeated experiences of abuse or neglect perpetrated by the parental or attachment figures who were supposed to teach them how to identify and regulate difficult emotions (Briere, 2002). Consequently, it is likely that growing up, they learned to use sex to deal with the negative emotions they are otherwise unable to regulate.

Following our second hypothesis, results also emphasized that emerging adults with higher CCT are more likely to engage in sex to avoid disapproval from their partner, upsetting their partner, or to avoid conflict in their relationship (i.e., partner approval sex motive). This result corroborates past studies that have found that survivors of child sexual abuse are more likely to endorse avoidance other-focused sex motives (e.g., Layh et al., 2019; Neilson et al., 2022; Wekerle et al., 2017). This result could be explained by the fact that those who report CCT tend to be less aware of their internal experiences and desires (Bigras et al., 2015), which, in the context of sex, could lead to other-focused motives. According to Briere (2002), few survivors of CCT have had access to parental figures that offered the support and acceptance needed for introspection, identity construction, and identification of their personal needs within a relational context. Rather, sustaining repeated interpersonal traumatic experiences would generate a state of constant hypervigilance, in which the child orients their attention on trying to guess the needs of their attachment figures to avoid making them angry or upset and minimize further victimization (Briere, 2002; Dugal et al., 2016). As such, in the context of sex with a romantic partner in early adulthood, a similar mechanism could take place. That is, the survivor engages in sex based on their perception of the sexual needs of their significant other, to avoid making them upset.

Regarding our third hypothesis, results suggest that the endorsement of avoidance sex motives, more precisely, the partner approval sex motive (i.e., avoidance other-focused sex motive), was associated with lower sexual satisfaction. As such, engaging in sex to avoid conflicts with the partner would prevent emerging adults from deriving fulfillment and satisfaction from sexuality. Indeed, engaging in sex to answer the partner's needs might prevent emerging adults from considering and expressing their own sexual needs and desires, thus hindering their ability to derive satisfaction from these sexual experiences. Approach motives were also found to be significantly associated with sexual satisfaction: our results revealed that the more emerging adults reported endorsing the intimacy (i.e., approach other-focused motive) and pleasure (i.e., approach self-focused motive) sex motives, the higher they reported their sexual satisfaction was. This confirms our third hypothesis and corroborates results from previous studies (e.g., Gewirtz-Meydan & Finzi-Dottan, 2018; Sanchez et al., 2011) according to which engaging in sex to express love, to feel close or emotionally connected with another person, or to experience emotional or physical well-being and pleasure, promotes sexual satisfaction.

Finally, in accordance with hypotheses 2, 3 and 4, results reveal an indirect association between CCT, the self-affirmation sex motive and sexual satisfaction. Specifically, the more participants report having experienced childhood interpersonal trauma, the more

they report engaging in sex to minimize feelings of inadequacy or low self-esteem and to feel confident or attractive (i.e., self-affirmation sex motive; avoidance self-focused motive), which in turn is related to lower sexual satisfaction. This is in line with the results from Layh et al. (2019) who found that a higher endorsement of the self-affirmation sex motive acts as an intermediary variable of the links between child sexual abuse and lower sexual satisfaction in adulthood. In other words, results suggest that emerging adults who have experienced repeated and diversified childhood victimization are more prone to engage in sex to enhance their self-esteem, prove their worth, feel more confident and desired. Perhaps, growing up with repeated abuse and/or neglect from caregivers would hinder some survivors' ability to build their self-esteem (Ekinici & Kandemir, 2015), which they would then attempt to consolidate using sexuality during emerging adulthood. Yet, in turn, this is associated with lower satisfaction in the sexual aspects of one's life. As such, although sex can be used by survivors to enhance their self-esteem, it would prevent them from experiencing a satisfying sexual life, as observed in previous studies (e.g., Brassard et al., 2015). Although in our fourth hypothesis, we expected approach sex motives would also explain the link between CCT and sexual satisfaction, when all sex motives are considered, only avoidance motives explain this association. Perhaps this could be explained by the fact that, when all sex motives are considered, avoidance sex motives are more relevant to the experience of CCT survivors.

To account for specificities found in previous studies regarding the potential effects of gender and relationship status on the sexuality of childhood interpersonal trauma survivors (Peplau, 2003; Vaillancourt-Morel et al., 2016; Wekerle et al., 2017), we tested whether these variables influenced the proposed model. The inclusion of gender (i.e., women, men, gender diversity) and relationship status did not significantly change the associations we observed between the study variables. This suggests that some of the mechanisms that underlie the associations between CCT and sexual satisfaction are similar for all emerging adults, no matter their gender or the level of commitment in their relationship. Yet, the roles of gender and relationship status were examined in an explanatory manner and the absence of significant effects could also be due to a lack of gender diversity in our sample or a lack of specificity in our measurement of commitment in the relationship status. Future studies should thus continue to include gender and relationship considerations when examining the sexuality of emerging adults and should aim to recruit samples that are diverse enough to allow more complex and comprehensive statistical considerations of these variables.

9.1. Implications

This study holds significant implications for prevention, assessment and intervention practices aimed at promoting emerging adults' sexual health and well-being. Indeed, considering that identity and the sexual self are still in major development between the age of 18 to 25 (Arnett, 2014), interventions during this period can be particularly beneficial for sexual well-being throughout adulthood. For practitioners, results emphasize that all forms of childhood interpersonal trauma, not just child sexual abuse, have the potential to color the experience of sexuality during emerging adulthood. This highlights the importance of not neglecting the assessment and consideration of all forms of childhood interpersonal victimization when promoting the sexual well-being of emerging adults. Second, results suggest that helping emerging adults identify, and perhaps transform, the reasons for which they engage in sex could participate in the promotion of their sexual health through an increase in sexual satisfaction. As such, prevention and intervention endeavors that help emerging adults understand why they engage in sexual relationships and the potential impacts of those choices on their sexual satisfaction could be developed. From a prevention standpoint, the use of social media for psychoeducation purposes could facilitate access to this kind of information (Lam et al., 2017), especially with this population. From an intervention standpoint, this accentuates the significance of opening a dialogue on sex motives to guide emerging adults into an introspective work on what they like and desire with regard to sex, to promote their sexual satisfaction and well-being.

9.2. Limitations

A few limitations must be highlighted. First, the overrepresentation of white Caucasian women with a university degree in the sample limits the generalization of results. Also, despite our conscious effort to include participants of the gender diversity, the 22 participants identifying as a gender minority are probably not enough to fully represent members of the gender diversity. Future studies should continue their attempts to include more diverse samples regarding gender, ethnicity, and education level. Second, data from this study is based on participants' self-reports; thus, shared method variance, recall and social desirability biases may have affected the results. Future studies combining questionnaires and interviews, self-observation grids or daily diaries could limit those biases. Third, our study being cross-sectional, it is not possible to determine the exact directionality of the links between the study variables. Future longitudinal studies could better support the sequence of those links. Finally, past studies (e.g., Ferragut et al., 2021) have revealed that the repercussions of abuse and/or neglect by a caregiver can be worse than those of abuse committed by another person (e.g., coach, teacher). In this study however, we did not consider the circumstances under which childhood interpersonal trauma occurred (i.e., relationship with the perpetrator, severity of the abuse and/or neglect, frequency of the abuse and/or neglect). We rather based our study on recent research that has demonstrated that the cumulative effect of childhood interpersonal trauma relates to adult relational difficulties above and beyond each type of trauma considered individually (e.g., Brassard et al., 2020).

Data availability

The data that has been used is confidential.

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