

## Childhood Traumatic Events, sexual functioning and Post-traumatic Stress Among College Students

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### ABSTRACT

**Background:** Sexual functioning is an integral part of one's mental and psychological health. Childhood trauma of any sort might put an individual for development of post-traumatic symptoms which in turn might affect the sexual functioning of an individual. The present study aims to investigate the role of adverse childhood experiences and post-traumatic symptoms in determining sexual functioning.

**Methods:** As part of this correlational research, 200 students pursuing Undergraduate and Postgraduate of the age range 18-25 years, selected through convenience sampling, completed the questionnaires via Google survey. The data was collected using self-report tools including PTSD Checklist 5 (PCL-5), Adverse Childhood Experiences Questionnaire (ACE-Q), and Arizona Sexual Experience Scale (ASEX). The data was analysed using Jamovi (2.3.28 Slod version for desktop), an open-source software.

**Results:** Results revealed that sexual difficulties were not related to post-traumatic symptoms or adverse childhood experiences. Higher rates of adverse childhood experiences were associated with higher post-traumatic symptoms. Age, relationship status, and gender are significant predictors of sexual functioning. Lower age, being female and being in a relationship were predictors of poorer sexual functioning.

**Keywords:** *Adverse childhood experiences, sexual functioning, post-traumatic stress, sexuality, gender*

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### INTRODUCTION

The transition to college marks a pivotal period in an individual's life, characterised by newfound independence, academic challenges, and the formation of critical social relationships. Yet, beneath the surface of this transformative experience, many college students carry the burden of childhood traumatic events, which have the potential to significantly impact their mental health, interpersonal dynamics, and, notably, sexual functioning. This research aims to delve into the intricate relationships between childhood traumatic events, sexual functioning, and post-traumatic stress among college students, recognizing the need for a nuanced understanding of these interconnected dimensions.

Childhood traumatic events encompass a spectrum of experiences, ranging from physical and sexual abuse to neglect and family dysfunction. The impact of such events extends far beyond the immediate circumstances, shaping the psychological landscape of individuals well into adulthood (Felitti et al., 1998; Fergusson, Lynskey, & Horwood, 1996). The prevalence of childhood trauma is not insignificant, with studies indicating that a substantial proportion of college students may have encountered adverse events during their formative years (Beitchman et al., 1992; Dube et al., 2001). Understanding the lasting consequences of these events is crucial for promoting the mental well-being of college students.

Sexuality is a fundamental aspect of human identity and a key component of overall well-being (World

Health Organization, 2006). Research suggests that individuals who have experienced childhood traumatic events may encounter challenges in the development of healthy sexual functioning (Classen, Palesh, & Aggarwal, 2005). Issues such as difficulties with intimacy, arousal, and satisfaction have been reported among survivors, raising questions about the intricate connections between early-life trauma and sexual well-being during the critical period of college life (Paolucci, Genius, & Violato, 2001).

The aftermath of childhood traumatic events often manifests in the form of post-traumatic stress symptoms, a complex psychological response that includes intrusive memories, avoidance behaviours, and heightened arousal (Cloitre et al., 2009). While the impact of trauma on mental health has been extensively studied, its specific connection to sexual functioning within the unique context of college students remains underexplored. Recognizing and addressing post-traumatic stress symptoms in relation to sexual experiences is essential for providing comprehensive support to individuals who may be navigating the challenges of both trauma and academic life (Nelson, Terrell, & Smith, 2016).

While existing literature has examined the consequences of childhood traumatic events on sexual functioning and post-traumatic stress in clinical, veteran and specific populations like just men or women, there is a noticeable gap in research focusing specifically on college students. College life introduces distinct stressors and opportunities for growth, making it imperative to understand how childhood trauma may influence the sexual and psychological well-being of this population (Arnett, 2000). This study seeks to bridge this gap by conducting an in-depth exploration of the relationships between childhood traumatic events, sexual functioning, and post-traumatic stress in college students.

The objective of the study is to examine the relationships between childhood traumatic events, post-traumatic stress and sexual functioning among college students. By employing validated measures

and adopting a multidimensional approach, we intend to unravel the nuanced connections between early-life trauma and subsequent sexual and psychological outcomes. Childhood traumatic events, including abuse, neglect, and family dysfunction, are prevalent among college students, with studies indicating a significant portion experience adverse events during their formative years (Beitchman et al., 1992; Dube et al., 2001). These traumatic experiences become a foundational element shaping the mental health landscape of individuals well into adulthood. Research consistently demonstrates a substantial association between childhood traumatic events and altered sexual functioning in college students (Classen et al., 2005; Paolucci et al., 2001). Survivors of early-life trauma often encounter difficulties in forming intimate relationships, experiencing arousal, and achieving sexual satisfaction, underscoring the profound influence of past trauma on psychosexual development during the college years.

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subsequent challenges in sexual functioning. A developmental approach to complex post-traumatic stress disorder (C-PTSD) suggests that cumulative trauma experiences during childhood and adulthood contribute to a more complex presentation of post-traumatic stress symptoms (Cloitre et al., 2009). Exploring gender differences is paramount for tailoring interventions to the specific needs of both male and female college students (Kendall-Tackett et al., 1993; Paolucci et al., 2001). Studies indicate that females who experienced childhood sexual abuse may be more vulnerable to difficulties in sexual satisfaction and functioning compared to their male counterparts. While the literature emphasizes the negative impact of childhood traumatic events, some studies have explored the role of resilience and coping mechanisms (Nelson et al., 2016). Understanding how resilience factors contribute to healthy sexual functioning in college students who have experienced childhood trauma is an emerging area requiring further exploration.

Hypothesis:

1. Higher levels of post-traumatic stress due to adverse childhood events will be associated with lower levels of sexual functioning among college students.
2. Gender will moderate the relationship between childhood traumatic events, post-traumatic stress, and sexual functioning, with females exhibiting stronger associations compared to males.

## METHODOLOGY

### Study Design and Sample

The current study uses a correlational study designed to examine the relationship between traumatic childhood experience, post-traumatic stress and sexual satisfaction among college students. Using a convenience sampling technique this study was conducted through Google Forms with 200 participants of the male and female gender where 140 (77.3%) were women and 41 (22.7%) were men. The participants must fall under the age of 18-25 years and must be full-time UG/PG students currently enrolled in any Indian

University. Married individuals and people with a history suggestive of Mental/Neurological Illness are excluded from this study.

### Procedure

The study was approved by the Institutional Review Board (IRB) of the concerned university. The data was collected via Google Forms in June. The Google forms were circulated to the sample population. An informed consent form was also attached to the form. Answering all the questions was mandatory, and the subjects could withdraw from the study anytime they wanted. It was mentioned in the consent form that the data collected from the participants will be kept anonymous and used only for research purposes.

### Measures used

#### *PTSD Checklist 5 (PCL-5) (Weathers et al., 2013)*

The PCL-5 is a 20-item self-report measure of the 20 DSM-5 symptoms of Post Traumatic Stress Disorder (PTSD). Included in the scale are four domains consistent with the four criteria of PTSD in DSM-5:

Re-experiencing (criterion B)

Avoidance (criterion C)

Negative alterations in cognition and mood (criterion D)

Hyper-arousal (criterion E)

Respondents are asked to rate how bothered they have been by each of 20 items in the past month on a 5-point Likert scale ranging from 0-4 (0 = Not at all, 1 = A little bit, 2 = Moderately, 3 = Quite a bit, 4 = Extremely). Items are summed to provide a total severity score (range 0-80). PCL-5 validation studies show all four criterion scales demonstrate high internal consistency (Cohen et al., 2015).

#### *Adverse Childhood Experiences Questionnaire (ACE-Q) (Felitti et al., 1998)*

In 1998, Felitti and colleagues published this 10-item scale used to correlate childhood abuse and adverse parenting situations with adult health outcomes. Negative childhood experiences include Emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, maternal abuse, domestic substance abuse, domestic mental illness, parental separation or divorce, and

incarcerated household members. This questionnaire was designed to measure the incidence of unwanted experiences a person had before the age of 18. The ACE is a reliable, valid and economical screen for retrospective assessment of adverse childhood experiences. It has adequate internal consistency (Cronbach's alpha = .88).

***Arizona Sexual Experience Scale (ASEX) (C. A. McGahuey et al., 2000)***

A user-friendly 5-item rating scale that quantifies sex drive, arousal, vaginal lubrication/penile

erection, ability to reach orgasm, and satisfaction from orgasm. Possible total scores range from

5 to 30, with the higher scores indicating more sexual dysfunction. ASEX showed good internal consistency (Cronbach's alpha's 0.89 and 0.90) and test-retest reliability ( $r=0.88$ ,  $P<0.001$ ).

**STATISTICAL ANALYSIS**

Sociodemographic data were analyzed using descriptive statistics and expressed as absolute values and percentages or as means and standard

**Table 1**

**Descriptive statistics of basic demographics**

Variable	Mean $\pm$ SD or N (%)
Age (in years)	21.8 $\pm$ 1.58
Gender	
Female	149 (74.5%)
Male	51 (25.5%)
Sexuality	
Heterosexual	164 (82%)
Others	36 (18%)
Education	
UG	119 (59.5%)
PG	81 (40.5%)
Relationship status	
Single	125 (62.5%)
In a relationship	75 (37.5%)

deviation (SD). The normality of the tools was assessed using the Shapiro-Wilk test. Pearson correlation helped us understand the significant relationships present. The primary goal of multiple linear regression is to estimate the parameters of the linear equation that best fits the observed data and can be used to make predictions or understand the nature of the relationship. Significance was kept at  $p<0.05$ .

**RESULT**

Table 1 shows the sociodemographic and clinical characteristics of the sample. The age of patients ranges from 18-25 years (mean  $\pm$  SD= 21.8  $\pm$  1.58). Hapke et al. found that the mean age of onset for women was 22 years, whereas for men it was 30. This could mean that not only gender but also age plays a significant role. The majority of the participants were female (74.5%) and most of them were undergraduate (UG) students (59.5%). All the participants were unmarried and most of them (62.5%) were single. The population was classified into several categories but the majority of the participants were heterosexual (82%) individuals.

Table 2 represents descriptive statistics for all the main study variables i.e., Sexual functioning, post-traumatic stress, and Childhood traumatic events.

**Table 2**

**Normality**

Variable	Mean $\pm$ SD	W	P
ASEX	15.2 $\pm$ 4.80	0.945	<.001
PCL	22.9 $\pm$ 15.9	0.957	<.001
ACE	2.42 $\pm$ 2.20	0.9	<.001

All three variables lead to one composite score. V1 is found to be positively correlated with V2 in such a manner that the higher the score for adverse childhood experiences higher the impact of post-traumatic stress. In Table 3, V1 (ASEX) and V2 (PCL) are significant with a value of 0.491. There is an insignificant correlation between V2 and V3, and V1 and V3 because they are less than 0.001.

**Table 3**

**Intercorrelational matrix of among ASEEX, PCL and ACE**

	ASEEX	PCL	ACE
ASEEX	-		
PCL	0.491***	-	
ACE	-0.07	-0.022	-

Note \*p<.05, \*\*p<.01, \*\*\*p<.001

The results of the multiple linear regression analysis in Table 4 suggest that age, relationship status, and gender are significant predictors of sexual functioning. Specifically, lower age is associated with higher sexual functioning scores, being in a relationship is associated with higher sexual functioning scores compared to being single and being male is associated with significantly lower sexual functioning scores. Other predictors, such as "PCL TOTAL" and "ACE TOTAL," were not found to be significant in predicting sexual

functioning. The model accounts for approximately 16% of the variance in sexual functioning. Hence, from the above tables we conclude that ASEEX (Adverse Sexual Experience) and PCL (Post Traumatic Checklist) are correlated to each other and age and gender play an important part in predicting the outcome. That means, the lower the age, the higher the scores of ACE and PCL. In gender, the PCL scores are higher in females than males.

**Table 4**  
**Multiple Linear Regression Model for Sexual Functioning**

Predictor	Estimate	P value	R2	Overall model fit
Intercept <sup>a</sup>	26.6073	<.001		
PCL TOTAL	0.0101	0.657		
ACE TOTAL	-0.2167	0.19		6.13
AGE	-0.4439	0.045	0.16	
SEXUALITY:				
Others – Heterosexual	-0.3744	0.633		
RELATIONSHIP STATUS:				
In a relationship – Single	-1.7024	0.012		
GENDER:				
Male – Female	-3.038	<.001		

## DISCUSSION

The present study investigated the role of adverse childhood experiences and post-traumatic symptoms in determining sexual functioning in college students. The findings of the study reveal that age, relationship status and gender are directly related to sexual dysfunction. Adverse childhood experience and Post-traumatic stress are significantly correlated with each other. These findings are in line with the previous research where a history of childhood sexual abuse predicted higher PTSD symptoms that caused elevated sexual distress and dysfunction (Gewirtz- Meydan & Lahav, 2020). Post-traumatic stress scores were higher in females than in males which is consistent with previous literature. The participants' ages ranged from 18 to 25 most of them were postgraduate students with a mean age of 21.8 years. The primary objective of the study was to examine the mediating effect of posttraumatic stress in the relationship between adverse childhood experiences and sexual dysfunction. To arrive at the results, mediation analysis was proposed to be used. However, mediation analysis requires a strong theoretical model, and often requires data on the potential mediating variables, which might not have

been enough. Mediation analysis is more useful, particularly in experimental or longitudinal studies where researchers want to explore the causal chain of events. In the current study, we wanted to have a clear understanding of the relationship between independent variables (such as Childhood Traumatic Events) and dependent variables (such as Sexual Functioning or Post-traumatic Stress). Hence, linear regression was used as the analysis model.

From the linear regression analysis (See Table 4) it was deciphered that, PCL total, ACE total and sexuality were insignificant while age, gender and relationship status showed a significant relationship with sexual functioning meaning, the lower the age higher the scores of ACE and PCL which corroborates with Kao Ching Chen et al's study where a positive correlation between age and total CSFQ score is found, particularly in women. Single participants are more prone to sexual dysfunction than participants who are in a relationship. Females have higher PCL scores than men as a result of their higher likelihood of experiencing rape and domestic (intimate) violence, women are diagnosed

with PTSD more frequently than men and report symptoms for a longer duration (Bressler et al., 2018). As the post-traumatic stress will be higher, so will the sexual dysfunction.

The findings of this study hold important implications for both clinical practice and future research in the field of sexual health and psychology. The results suggest that sexual difficulties are not directly linked to post-traumatic symptoms or adverse childhood experiences. Instead, the study highlights the significant influence of demographic factors, including age, relationship status, and gender, on sexual functioning.

One notable implication is the need for a nuanced approach in the assessment and treatment of sexual dysfunctions. Clinicians and practitioners should consider demographic variables, such as age, gender, and relationship status, as potential predictors of sexual difficulties. Tailoring interventions based on these factors may lead to more effective and personalized treatment plans. These findings also have broader implications for public health initiatives and education. By understanding the demographic factors that contribute to sexual functioning, health professionals can design targeted interventions to address specific populations. Additionally, the study suggests that future research in the field should continue to explore the complex interplay between demographic variables and sexual health to advance our understanding and improve intervention strategies.

The study takes an interdisciplinary approach by investigating the intersection of psychology (post-traumatic stress), sexual health (sexual functioning), and childhood trauma. This holistic perspective enhances the understanding of the complex interplay between these factors and provides a more comprehensive view of mental health in college students. Working with a specific population enhances the potential applicability of

the findings across different academic levels within the college student population and then plan their interventions accordingly. The study makes a valuable contribution to the academic literature by addressing a gap in the existing knowledge regarding the relationships between childhood trauma, sexual functioning, and post-traumatic stress specifically in the college student population.

The sample size of 200 college students, while practical for the study's scope, may be considered relatively small, potentially limiting the statistical power and generalizability of the findings. The use of convenience sampling may introduce selection bias, as participants who voluntarily choose to participate may not represent the entire college student population. The study adopts a cross-sectional design, which limits the ability to establish causal relationships. Longitudinal studies would be better suited to explore the dynamic nature of the relationships between childhood traumatic events, sexual functioning, and post-traumatic stress over time. Given the sensitive nature of the topics explored, participants may be inclined to provide socially desirable responses, particularly in a college setting where there might be perceived social expectations. This bias could affect the authenticity of the reported data. The lack of cultural consideration may restrict the applicability of the findings to diverse cultural contexts.

The study explores the relationship between adverse childhood experiences and post-traumatic stress in college students, finding that age, relationship status, and gender are directly related to sexual dysfunction. Post-traumatic stress scores were higher in females than males. The study suggests that demographic factors, such as age, gender, and relationship status, are more influential on sexual functioning than adverse childhood experiences or adverse childhood experiences. This suggests a need for a nuanced approach to assessing and treating sexual dysfunctions, allowing for

targeted interventions and improved intervention strategies.

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