

Research Paper

Interplay of Childhood Trauma, Mental Health, and Substance Use: A Demographic Analysis

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ABSTRACT

Childhood trauma is a significant public health problem and has been repeatedly associated with negative psychological outcomes and an elevated risk for substance use. The present study investigated the associations between childhood trauma, mental health and substance use and differences in mental health and substance use by educational attainment and socioeconomic status (SES). A cross-sectional research design was used with a convenience sample of 100 participants, aged 18–35 years, from selected de-addiction and rehabilitation centers across Delhi. Data were collected using the Childhood Trauma Questionnaire (CTQ), Mental Health Continuum Short Form (MHC-SF), Drug Abuse Screening Test (DAST-10) and Kuppaswamy Socioeconomic Scale. Pearson product-moment correlation and one-way analysis of variance (ANOVA) were conducted using SPSS version 27. The results revealed that childhood trauma was negatively and significantly associated with mental health and positively and significantly associated with substance use. Substance use was significantly and negatively associated with mental health. The mental health and substance use also differed significantly by educational attainment and SES groups. The results emphasize the necessity of using trauma-informed prevention and intervention strategies that consider both mental health and substance use, while also considering demographic differences.

Keywords: *Childhood Trauma, Mental Health, Substance Use, Educational Attainment, Socioeconomic Status*

Childhood trauma including abuse, neglect, and household dysfunction experienced before age 18, is one of the most widespread and established forms of early adversity affecting human development. Trauma in early life is not temporary or self-limiting but has lasting effects on emotion regulation, interpersonal functioning and health behaviors into adulthood (Hughes et al., 2017; McLaughlin et al., 2020). The effects of childhood trauma are not abstract psychological concepts, but manifest as actual increases in risk for depression, anxiety, post-traumatic stress disorder (PTSD) and critically, substance use disorder (SUD). Thus, understanding the importance of childhood trauma as an important determinant of psychological well-being and substance use has become popular in clinical

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psychology and public health research. Child maltreatment continues to be a major public health problem worldwide.

This is a priority due of the magnitude of the problem worldwide. Child abuse and neglect is still an enormous public health problem worldwide. According to the World Health Organization (WHO, 2026), approximately 1 billion children are physically, emotionally or sexually abused every year globally. This tendency is almost reflected in the Indian context, Kacker et al. (2007) in the *Study on Child Abuse: India 2007*, reported substantial levels of child abuse in India. The study found that two out of every three children were physically abused, 53.22% of children reported having experienced one or more forms of sexual abuse, and every second child reported facing emotional abuse. The Adverse Childhood Experiences (ACEs) paradigm, informed by these prevalence figures, demonstrates that cumulative exposure to childhood adversity is linked to higher risk of depressive symptoms, suicidal behavior, and substance use (Sebalo et al., 2023).

The consequences of childhood trauma on mental health are thoroughly explored and the ramifications of childhood trauma are manifold. The World Health Organization (WHO, 2022) defines mental health as a state of mental well-being that enables individuals to cope with the stresses of life, realize their abilities, learn and work well, and contribute to their communities. Childhood trauma is systematically detrimental to all 3 aspects of this description. It limits the realization of potential, it exceeds coping capacities and it reduces the social trust that facilitates community participation. There are several studies that have found that childhood maltreatment is associated with higher levels of depression, anxiety, psychological distress, emotional dysregulation, and lower levels of psychological well-being in adulthood (Gardner et al., 2019; Gruhn & Compas, 2020; Herrenkohl et al., 2012). Many traumatized individuals will have emotional problems which will affect their overall mental health negatively.

Another concern for the health of populations around the world is substance use due to its negative physical, psychological and social repercussions and its close association with mental health. The challenge is enormous: in 2022, approximately 292 million people aged between 15 and 64 years used drugs – a 20% rise over the last decade – and nearly 64 million people had drug use disorders (United Nations Office on Drugs and Crime [UNODC], 2024). The burden is also apparent in India, where the *Magnitude of Substance Use in India* survey identified alcohol, cannabis, and opioids as major substances of public health concern and documented substantial levels of substance use and substance use disorders across the country (Ambekar et al., 2019). There is growing evidence of an association between substance use and poor mental health. People reporting depressive symptoms may be more likely to use substances later on, and substance use problems may lead to problems with depression later on, suggesting a reciprocal longitudinal association between depression and substance use (Kim et al., 2022; Amendola et al., 2022). The common association emphasizes the importance of identifying psychosocial issues that contribute to both poor mental health and substance use.

Given this bidirectional association, it is crucial to determine what, in fact, is linking early trauma and later substance use. The self-medication hypothesis is one of the hypotheses put out. It suggests that adults could self-medicate with drug to cope with the psychological repercussions from childhood neglect and abuse. These implications involve dissociation as a consequence of the difficulties in processing traumatic situations (Schimmenti et al., 2022). This is supported by the fact that higher substance use has been linked to childhood

trauma, and positive mental health has been found to be a protective factor against problematic substance use (García Muelas et al., 2024). Taken together, suggest that childhood trauma, mental health and substance use are intertwined within a strongly interconnected psychological network and highlight the need for simultaneous addressing these issues.

Demographic characteristics may also influence mental health and drug use effects beyond the childhood trauma itself. For example, higher levels of education have been linked to better mental health and a reduced risk for substance use. Higher education levels predict lower eventual risk for depression (Patria, 2022) while lower education levels have been related with a greater potential of developing substance-use disorders (Erickson et al., 2016). Some of the benefits of education that could operate as protective factors for mental health, including enhanced coping abilities, better career possibilities, and increased access to health information and services (Idaiani et al., 2026).

Socioeconomic status (SES) is another important determinant of mental health and substance use. Socioeconomically disadvantaged populations are more likely to face financial hardship and have fewer psychological and structural resources, which are linked with poorer mental health outcomes (Frankham et al., 2020; McAllister et al., 2018). However, more recent data also suggest that substance use is not exclusive to economically disadvantaged people. More drug usage is expected among the higher socioeconomic stratum because of the financial ability to access the drug, occupational stress, and social situations where drug use is acceptable (Malaiarasan et al., 2025). The data represent that the relationship between SES and substance use is complex and requires further study.

There is growing evidence of connections between childhood trauma and mental health, substance use, educational attainment and socio-economic status, but these have been mostly investigated in isolation from each other. There is an insufficient of research investigating the association between childhood trauma, mental health and substance use, with educational attainment and socioeconomic background. Combining these into one paradigm could provide a better understanding of the psychosocial aspects of mental health and substance use. Therefore, the present study aims to analyze the association between childhood trauma, mental health and drug use and to examine the disparities in mental health and substance use by educational attainment and socioeconomic level.

Objectives

The present study was undertaken with the following objectives:

- To study the relationship between childhood trauma, mental health and substance use among individuals.
- To study the mean differences on mental health and substance use along with their dimension with regard to education.
- To study the mean differences on mental health and substance use along with their dimension with regard to socio economic status.

Hypotheses

The following hypotheses were formulated for the study:

- **H₁:** There will be relationship between childhood trauma, substance use and mental health along with its dimensions among individuals.
- **H₂:** There will be significant differences among individuals on substance use and mental health along with dimension with regard to their education.

- **H₃:** There will be significant differences among individuals on substance use and mental health along with dimension with regard to their socio economic status.

METHOD

Research Design

The present study used a quantitative, cross-sectional research approach to analyze the links between childhood trauma, mental health and drug use, and to examine disparities in mental health and substance use across educational attainment and socioeconomic level (SES). The cross-sectional strategy was appropriate as it is useful for exploring connections between research variables and comparisons between demographic groups at a single point in time.

Participants

The sample includes 100 psychoactive substance users aged 18-35 years ($M = 25.69$). Participants were recruited through convenience sampling from selected de-addiction and rehabilitation centers in Delhi based on their accessibility and willingness to participate. The inclusion criteria were users of psychoactive substances, age range of 18 to 35 years, enrolled in rehabilitation centers, voluntary willingness to participate, and male and female participants. We excluded participants aged younger than 18 or older than 35 years, those who refused or withdrew consent, and those with incomplete or missing data. Only questionnaires with complete responses were included in the final analysis. The sample was educationally diverse. Of the 100 participants, 11 (11%) were illiterate, 22 (22%) had primary education, 33 (33%) had secondary education, and 34 (34%) had higher education. Regarding socioeconomic status, as assessed using the Kuppaswamy Scale, 47 participants (47%) belonged to the upper-middle class, 31 (31%) to the lower-middle class, and 22 (22%) to the upper-lower class.

Measures

- **Childhood Trauma Questionnaire Short Form (CTQ-SF).** Childhood Trauma Questionnaire–Short Form. The Childhood Trauma Questionnaire–Short Form (CTQ-SF; Bernstein et al., 2003) is a retrospective self-report questionnaire that assesses five types of childhood maltreatment, including Emotional Abuse, Physical Abuse, Sexual Abuse, Emotional Neglect, and Physical Neglect. Items are rated on a 5-point Likert scale from 1 (never true) to 5 (very often true). Higher scores indicate greater exposure to childhood maltreatment. The CTQ-SF also has three items assessing minimizing or denial. The scale showed good psychometric qualities, with Cronbach's alpha coefficients ranging from .61 to .95 across the five subscales, and evidence of criterion-related validity and measurement invariance across clinical and nonclinical groups (Bernstein et al., 2003). In the present study, the CTQ-SF had strong internal consistency (Cronbach's alpha coefficient = .87).
- **Drug Abuse Screening Test-10 (DAST-10).** The Drug Abuse Screening Test-10 (DAST-10; Skinner, 1982) is a self-report screening test for problems related to drug use (excluding alcohol) in the past 12 months. Items are scored as Yes/No and combined to get a total score ranging from 0 to 10, with higher scores indicating greater severity of drug-related problems. The DAST-10 has shown good reliability and validity across diverse populations (Yudko et al., 2007). The DAST-10 showed strong internal consistency in the current study, with a Cronbach's alpha coefficient of .87.
- **Mental Health Continuum-Short Form (MHC-SF).** The Mental Health Continuum–Short Form (MHC-SF; Keyes, 2009) is a 14-item self-report instrument

for positive mental health. Items are assessed on a 6-point scale, ranging from 0 (never) to 5 (every day). It includes the following three dimensions: Emotional Well-being (3 items), Social Well-Being (5 items), and Psychological Well-Being (6 items). Total scores range from 0 to 70 with higher scores indicating better mental health. The MHC-SF has shown good internal consistency with Cronbach's alpha coefficients of .83 for Emotional well-being, .74 for Social Well-Being, .83 for Psychological Well-Being and .89 for the total scale, and evidence for convergent, discriminant, and construct validity (Lamers et al., 2011). In the current study, the MHC-SF showed good internal consistency, with a Cronbach's alpha coefficient of .87.

- **The Modified Kuppuswamy Socioeconomic Status Scale:** The Modified Kuppuswamy Socioeconomic Status Scale (Mandal & Hossain, 2025) was used to measure the socioeconomic status of the individuals. The scale measures socioeconomic status on three dimensions; education of head of family, occupation of head of family and monthly family income. Scores assigned to the three components are summed to obtain a total socioeconomic status score ranging from 3 to 29. Participants are categorized into five categories based on the overall score: Upper (26–29), Upper Middle (16–25), Lower Middle (11–15), Upper Lower (5–10), and Lower (<5). The scale is widely used for the purpose of socioeconomic classification in the Indian context and has shown its content validity by providing standardized measures of education, occupation and family income.

Procedure

The ethical and institutional approval was obtained from the Chairperson, Department of Psychology, Aligarh Muslim University, Aligarh before data collection. After that, the administrative authorities of the chosen de-addiction and rehabilitation centers granted formal permission for the conduct of the study. Participants who fulfilled the inclusion criteria were approached personally and briefed about the aims and procedures of the study. Written informed consent was obtained, after which the questionnaires were administered individually. Participants were told that their responses would be kept anonymous and used for research purposes only. They were also explained that their participation was voluntary and they could quit from the study at any moment with no repercussions.

Statistical Analysis

The data were coded and analyzed using Statistical Package for the Social Sciences (SPSS) version 27. Descriptive statistics were obtained for participant characteristics and study variables. Pearson product moment correlation analysis was conducted to analyze the links between childhood trauma, mental health, and substance use. One-way analysis of variance (ANOVA) was used to explore differences in mental health and drug use by educational attainment and socioeconomic status groups.

RESULT

Table 1 Descriptive Statistics of the Study Variables (N = 100)

Variables	<i>M</i>	<i>SD</i>
Emotional Well-being	8.22	2.59
Social Well-being	13.50	2.66
Psychological Well-being	15.98	4.54
Overall Mental Health	37.70	8.98
Emotional Abuse	14.60	4.42
Physical Abuse	14.63	5.55

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Variables	<i>M</i>	<i>SD</i>
Sexual Abuse	15.62	5.13
Emotional Neglect	16.13	5.47
Physical Neglect	15.26	4.81
Overall Childhood Trauma	76.24	24.43
Substance Use	6.94	1.87

Note. *M* = Mean; *SD* = Standard Deviation.

Table 1 represents the descriptive statistics of mental health, childhood trauma, and substance use among the participants. With regard to mental health, participants reported the highest mean score for psychological well-being ($M = 15.98$, $SD = 4.54$), followed by social well-being ($M = 13.50$, $SD = 2.66$) and emotional well-being ($M = 8.22$, $SD = 2.59$). The overall mean score for mental health was 37.70 ($SD = 8.98$). Furthermore, with respect to childhood trauma, participants reported the highest mean score for emotional neglect ($M = 16.13$, $SD = 5.47$), followed by sexual abuse ($M = 15.62$, $SD = 5.13$), physical neglect ($M = 15.26$, $SD = 4.81$), physical abuse ($M = 14.63$, $SD = 5.55$), and emotional abuse ($M = 14.60$, $SD = 4.42$). The overall mean score for childhood trauma was 76.24 ($SD = 24.43$). Lastly, regarding substance use, participants had a mean score of 6.94 ($SD = 1.87$).

Table 2 Correlations Among Mental Health, Childhood Trauma, and Substance Use

Variable	1	2	3	4	5	6	7	8	9	10	11
1 Emotional well-being	1										
2 Social well-being	.656**	1									
3 Psychological well-being	.784**	.784**	1								
4 Overall Mental health	.878**	.881**	.963**	1							
5 Emotional abuse	-.375**	-.321**	-.333**	-.372**	1						
6 Physical abuse	-.339**	-.316**	-.313**	-.349**	.906**	1					
7 Sexual abuse	-.357**	-.224*	-.272**	-.307**	.851**	.898**	1				
8 Emotional neglect	-.281**	-.269**	-.274**	-.299**	.949**	.927**	.906**	1			
9 Physical neglect	-.368**	-.302**	-.309**	-.351**	.878**	.935**	.896**	.911**	1		
10 Overall childhood trauma	-.346**	-.288**	-.302**	-.337**	.928**	.974**	.956**	.970**	.966**	1	
11 Substance use	-.646**	-.665**	-.798**	-.786**	.203*	.213*	.201*	.204*	.299*	.199*	1

Note. * $p < .05$. ** $p < .01$

Correlation between Childhood Trauma, Mental Health and Substance Use

Pearson's product moment correlation analysis was employed to investigate the relationships between mental health, childhood trauma and substance use. The results showed a substantial negative correlation between childhood trauma and mental health and its dimensions. Emotional abuse was negatively correlated with emotional well-being ($r = -.375$, $p < .01$), social well-being ($r = -.321$, $p < .01$), psychological well-being ($r = -.333$, $p < .01$), and overall mental health ($r = -.372$, $p < .01$). Physical abuse was also significantly negatively correlated with emotional well-being ($r = -.339$, $p < .01$), social well-being ($r = -.316$, $p < .01$), psychological well-being ($r = -.313$, $p < .01$) and overall mental health ($r = -.349$, $p < .01$). Sexual abuse was significantly negatively correlated with emotional well-being ($r = -.357$, $p < .01$), social well-being ($r = -.224$, $p < .05$), psychological well-being ($r = -.272$, $p < .01$), and overall mental health ($r = -.307$, $p < .01$).

Likewise, emotional neglect was negatively correlated with emotional well-being ($r = -.281$, $p < .01$), social well-being ($r = -.269$, $p < .01$), psychological well-being ($r = -.274$, $p < .01$), and overall mental health ($r = -.299$, $p < .01$). Physical neglect was also significantly negatively correlated with emotional well-being ($r = -.368$, $p < .01$), social well-being ($r = -.302$, $p < .01$), psychological well-being ($r = -.309$, $p < .01$), and total mental health ($r = -.351$, $p < .01$). Overall childhood trauma was negatively associated with emotional well-being ($r = -.346$, $p < .01$), social well-being ($r = -.288$, $p < .01$), psychological well-being ($r = -.302$, $p < .01$), and overall mental health ($r = -.337$, $p < .01$). The results suggest that higher levels of childhood trauma exposure were linked to poorer mental health across all emotional, social, and psychological dimensions.

Substance use was significantly negatively correlated with all dimensions of mental health. Specifically, drug use was adversely associated with emotional well-being ($r = -.646$, $p < .01$), social well-being ($r = -.665$, $p < .01$), psychological well-being ($r = -.798$, $p < .01$) and overall mental health ($r = -.786$, $p < .01$). Thus, greater substance use was associated with lower emotional, social and psychological well-being.

Substance use was positively correlated with emotional abuse ($r = .203$, $p < .05$), physical abuse ($r = .213$, $p < .05$) and sexual abuse ($r = .201$, $p < .05$). It also correlated positively with emotional neglect ($r = .204$, $p < .05$), physical neglect ($r = .299$, $p < .05$) and overall childhood trauma ($r = .199$, $p < .05$). Overall, the pattern of findings suggests that greater childhood trauma was associated with poorer mental health, while greater drug use was associated with poorer mental health and greater exposure to various dimensions of childhood trauma.

Table 3 One-Way Analysis of Variance of Mental Health and Its Dimensions Across Educational Qualification

Variable	Educational qualification	M	SD	F(3, 96)	η^2
Emotional well-being	Illiterate	7.09	1.87	2.44	.071
	Primary education	7.41	2.75		
	Secondary education	8.39	2.68		
	Higher education	8.22	2.42		
Social well-being	Illiterate	11.18	2.04	6.91***	.178
	Primary education	12.41	1.89		
	Secondary education	14.42	2.46		
	Higher education	14.06	2.83		
Psychological well-being	Illiterate	13.09	3.59	5.27**	.141
	Primary education	13.91	4.25		
	Secondary education	16.70	4.83		
	Higher education	17.56	3.87		
Overall Mental health	Illiterate	31.36	6.65	5.52**	.147
	Primary education	33.73	7.98		
	Secondary education	39.52	9.12		
	Higher education	40.56	8.48		

Note.. ** $p < .01$. *** $p < .001$.

One-way analysis of variance (ANOVA) was carried out to investigate differences in mental health and its dimensions across educational levels. The findings showed that there was no significant difference in emotional well-being between educational qualifications $F(3, 96) = 2.44$, $p = .069$, $\eta^2 = .071$).

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A significant difference was found in social well-being across educational qualification, $F(3, 96) = 6.91$, $p < .001$, $\eta^2 = .178$, indicating a large effect size. Participants with secondary education had the highest mean social well-being ($M = 14.42$, $SD = 2.46$), followed by those with higher education ($M = 14.06$, $SD = 2.83$), primary education ($M = 12.41$, $SD = 1.89$), and illiterate participants ($M = 11.18$, $SD = 2.04$).

Psychological well-being also differed substantially by educational qualification, $F(3, 96) = 5.27$, $p = .002$, $\eta^2 = .141$, with a large effect size. The highest mean was observed among participants with higher educations ($M = 17.56$, $SD = 3.87$) followed by secondary education ($M = 16.70$, $SD = 4.83$), primary education ($M = 13.91$, $SD = 4.25$) and illiterate participants ($M = 13.09$, $SD = 3.59$).

Overall mental health also varied considerably across educational qualification, $F(3, 96) = 5.52$, $p = .002$, $\eta^2 = .147$, indicating a large effect size. Participants with higher education had the highest mean mental health score ($M = 40.56$, $SD = 8.48$), followed by secondary education ($M = 39.52$, $SD = 9.12$), primary education ($M = 33.73$, $SD = 7.98$), and illiterate participants ($M = 31.36$, $SD = 6.65$).

Table 4 One-Way Analysis of Variance of Substance Use Across Educational Qualification

Variable	Educational qualification	<i>M</i>	<i>SD</i>	<i>F</i> (3, 96)	η^2
Substance use	Illiterate	8.73	1.27	13.71***	.300
	Primary education	8.18	1.56		
	Secondary education	6.42	1.80		
	Higher education	6.06	1.48		

Note. *M* = mean; *SD* = standard deviation; η^2 = eta squared. *** $p < .001$.

Similarly, one-way analysis of variance (ANOVA) was performed to find the differences in substance use by educational qualification. The results demonstrated a statistically significant difference in substance use across the four education groups, $F(3, 96) = 13.71$, $p < .001$, $\eta^2 = .300$, a large effect size. The mean scores show that the highest substance usage was among the illiterates ($M = 8.73$, $SD = 1.27$) followed by elementary education ($M = 8.18$, $SD = 1.56$), secondary education ($M = 6.42$, $SD = 1.80$) and higher education ($M = 6.06$, $SD = 1.48$).

Table 5 One-Way Analysis of Variance of Mental Health Across Socioeconomic Status

Variable	Socioeconomic status	<i>M</i>	<i>SD</i>	<i>F</i> (2, 97)	η^2
Emotional well-being	Upper middle	7.04	1.94	12.29***	.202
	Lower middle	8.87	2.77		
	Upper lower	9.82	2.46		
Social well-being	Upper middle	12.40	2.32	10.37***	.176
	Lower middle	14.00	2.61		
	Upper lower	15.14	2.44		
Psychological well-being	Upper middle	13.87	3.99	12.31***	.202
	Lower middle	17.35	4.51		
	Upper lower	18.55	3.66		
Total mental health	Upper middle	33.32	7.28	14.51***	.230
	Lower middle	40.23	9.00		
	Upper lower	39.33	8.70		

Note.. *** $p < .001$.

Further, one-way analysis of variance (ANOVA) test was employed to identify differences in mental health and its dimensions among socioeconomic status. The results showed that there was statistically significant difference in emotional well-being among three socioeconomic status group, $F(2, 97) = 12.29, p < .001, \eta^2 = .202$, suggesting large effect size. The mean emotional well-being score was highest observed in the upper-lower socioeconomic group ($M = 9.82, SD = 2.46$) followed by the lower-middle ($M = 8.87, SD = 2.77$) and upper-middle group ($M = 7.04, SD = 1.94$).

Also, there was a statistically significant difference in social well-being, $F(2, 97) = 10.37, p < .001, \eta^2 = .176$, indicating a large effect size. The mean social well-being was highest in the upper-lower socioeconomic group ($M = 15.14, SD = 2.44$), followed by the lower-middle group ($M = 14.00, SD = 2.61$) and the upper-middle group ($M = 12.40, SD = 2.32$).

Moreover, there was also a significant difference in psychological well-being across socioeconomic status, $F(2, 97) = 12.31, p < .001, \eta^2 = .202$, indicating a large effect size. The mean psychological well-being was highest among the upper-lower socioeconomic group ($M = 18.55, SD = 3.66$), followed by the lower-middle ($M = 17.35, SD = 4.51$) and the upper-middle ($M = 13.87, SD = 3.99$) group.

Finally, there was a statistically significant difference in overall mental health across socioeconomic status, $F(2, 97) = 14.51, p < .001, \eta^2 = .230$, indicating a large effect size. The overall mean mental health score was highest among the lower medium socioeconomic group participants ($M = 40.23, SD = 9.00$) followed by the upper lower group ($M = 39.33, SD = 8.70$) and the upper middle group ($M = 33.32, SD = 7.28$).

Table 6 One-Way Analysis of Variance of Substance Use Across Socioeconomic Status

Variable	Socioeconomic status	<i>M</i>	<i>SD</i>	<i>F</i> (2, 97)	η^2
Substance use	Upper middle	8.15	1.59	34.72***	.417
	Lower middle	6.32	1.38		
	Upper lower	5.23	1.19		

Note. *** $p < .001$.

One-way analysis of variance (ANOVA) was conducted to examine differences in substance use across socioeconomic status. The analysis revealed a statistically significant difference in substance use across the three socioeconomic status groups, $F(2, 97) = 34.72, p < .001, \eta^2 = .417$, with a large effect size. The mean substance use score was highest in the upper-middle socioeconomic group ($M = 8.15, SD = 1.59$) followed by the lower-middle ($M = 6.32, SD = 1.38$) and the upper-lower ($M = 5.23, SD = 1.19$) socioeconomic groups.

DISCUSSION

In the present study, childhood trauma was significantly negatively correlated to mental health reveals that exposure to emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, and overall past trauma was related to lower emotional, social and psychological well-being. The finding is in line with Amendola et al. (2022) who observed that childhood maltreatment was related to depressive symptom, anxiety and intensity of drug addiction. Similarly, Erga et al. (2024) found a high association between childhood abuse and worse mental health. Borgert et al. (2023) found that the more unpleasant events that occurred throughout childhood the more symptoms of depression, anxiety and posttraumatic stress were found.

Substance use was significantly negatively associated with emotional, social and psychological wellbeing and overall mental health. This finding is consistent with Zhou et al. (2024) who found that illegal drug usage was related with poorer mental-health outcomes among drug users. Similarly, Sarkar et al. (2025) found considerable depression and anxiety in opioid dependency patients. Khan et al. (2026) also reported that higher polysubstance use patterns were correlated with increased chance of major depressive episodes, substantial psychological discomfort, and mental illness.

These positive relationships between substance use and emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect and overall trauma support the link between that childhood adversity is associated with the problem of substance abuse. Consistent with that, Li et al. (2023) found that adverse childhood experience had a significant direct effect on polydrug abuse by adult drug abusers. Similarly, Pham et al. (2023) stated that there existed a positive relationship between the increased exposure to adverse childhood experiences and the methamphetamine use by the young people. Further, Huang et al. (2021) found that increased childhood trauma such as emotional and physical abuse were associated with the early onset of drug abuse by methamphetamine-dependent patients.

Based on the observed relationship examining the links between substance use, childhood trauma, and mental health status, the present study also demonstrated significant differences in the social well-being, psychological well-being, and overall mental well-being across education levels, but no significant differences in emotional well-being were observed. It should be noted that higher mental well-being scores were found to be associated with higher educational level of the participants. According to Gyawali et al. (2016) low education attainment was related to high levels of psychological distress in patients with substance use disorders. Likewise, Yang et al. (2021) showed more anxiety symptoms in drug users with primary education or below, with primary education continues to be a significant predictor of anxiety symptoms.

Further to these differences in mental health, substantial differences in substance use were observed across educational qualification in the present study, with higher substance-use scores among participants with lower educational attainment. This result is consistent with Teixidó-Compañó et al. (2018) who found more substance usage among individual with lower education levels, and Erickson et al. (2016) who reported higher odds of substance-use and dependent disorder among lower education attainment. In conclusion, the present findings demonstrate that substance usage differed significantly by educational qualification. Overall, the findings show that mental health and substance use differed by educational qualification.

Additional to the educational findings, the present study also indicated significant differences in emotional, social, and psychological well-being and overall mental health across socioeconomic status groups with large effect sizes. Overall, mental health scores differed across socioeconomic groups, indicating a substantial, but not linear relationship was identified between socioeconomic status and mental health. Similar findings were observed by Li et al. (2025), with significant differences in subthreshold depression according to education and monthly income. while Sarkar et al., (2025) reported significant negative relationships between per-capita income and depression and anxiety. Miller et al. (2014) further found that employment significantly predicted subjective well-being.

The Findings for substance use also revealed substantial disparities across socioeconomic status groups. This finding is in line with Xu et al. (2022), who reported the association between higher socioeconomic position and higher alcohol use. Similarly, Patrick et al. (2012) observed a link between higher family socioeconomic status and greater alcohol and marijuana usage among young adults.

CONCLUSION

The present study highlights the significant relationships between childhood trauma, substance use, and mental health. Greater exposure to childhood trauma was associated with worse emotional, social and psychological well-being while drug use was associated with poorer overall mental health. Mental health and substance use also differed substantially across education and socioeconomic group. Overall, the findings suggest the importance of addressing childhood trauma and mental health challenges in substance use prevention and treatment.

Limitations

There are certain limitations of the study that should be addressed in the interpretation of the findings. The cross-sectional design limits any conclusion regarding temporal associations between childhood trauma, substance use and mental health. The retrospective childhood experiences assessment may be influenced by the recall bias. Response bias may have been produced through the use of self-reported measures. Moreover, the study examined selected psychological, social and socio-economic aspects, whereas other possible significant factors were beyond its scope.

Implications

The findings provide a basis for developing more individualized substance-use interventions, particularly by accounting for differences in trauma exposure, mental-health status, educational attainment and socioeconomic background. They may also help foster future research into particular ways by which childhood experiences and educational and socioeconomic circumstances determine substance use and mental health outcomes.

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Conflict of Interest

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