



MENTAL HEALTH CORRELATES OF SUBSTANCE USE IN SECONDARY SCHOOL STUDENTS

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Abstract

This study investigates the relationship between substance use and mental health symptoms—specifically anxiety, depression, and emotional instability—among secondary school students. Conducted among 120 students in Punjab, the research used standardized psychological scales and structured questionnaires to assess substance use patterns and associated mental health outcomes. The findings revealed significantly higher levels of anxiety and depressive symptoms among students who reported using drugs compared to non-users. Emotional instability was also notably higher in the substance-using group. Statistical tests, including t-tests, chi-square, and Pearson correlation, confirmed strong associations between substance use frequency and poor mental health. The study highlights the pressing need for integrated mental health interventions in schools to address the dual burden of substance abuse and emotional distress in adolescents.

Keyword; emotional, substance, abuse, adolescents

INTRODUCTION:

Addiction is a long-term illness. Drug addiction is a chronic brain disease that impacts not just the addict but also others around them negatively; it is characterized by compulsive drug seeking and usage and frequent relapses.

3.3 million people die each year as a result of alcohol use, according to studies conducted by the World Health Organization (WHO). On a yearly basis, the typical person throughout the world who is at least 15 years old drinks 6.2 litres of pure alcohol. Over 15.3 million Americans struggle with substance abuse¹.

A General Introduction to the Substance Abuse Crisis in Punjab

Up until 1980, the only drugs abused in Punjab were cannabis, opium, alcohol, poppy husk, and tobacco. The next year, nevertheless, heroin's popularity skyrocketed; it is a more powerful kind of semi-synthetic synthetic opioids. By the 1990s, injectable heroin was popular, but so were other powerful prescription opioids including buprenorphine, morphine, pethidine, and pentazocine. It was common practice to inject diazepam and antihistamines simultaneously with these. Oral use of prescription or pharmaceutical opioids and other medical drugs, often known as "medical" in the local community, was common throughout the 2000s, coinciding with the usage of injectable pharmaceuticals. Some of the drugs that were included in this were cough syrups that include codeine and other oral opioids such dextropropoxyphene capsules. Lastly, stimulants like amphetamine-

like substances and cocaine have also shown a surge in use throughout the preceding decade. Thus, due to this, the drug situation in Punjab grew very convoluted and really worrisome. As a result, there was a rise in criminal activity, family strife, societal unrest, and low output. Therefore, what is needed right now is counselling and education on the dangers of narcotics among young people. Appropriate medical treatments, social support, a positive community response, and involvement in related societal issues may all help bring the addiction problem under control. Issues related to drug misuse in India

The increasing problem of drug addiction, particularly among the country's youth, is something that many nations have faced with difficulty. India is no exception.

The drug misuse crisis in India

The increasing problem of drug addiction, particularly among the country's youth, is something that many nations have faced with difficulty. India is no exception. The country's strategic location on the border of the Golden Triangle (Burma, Thailand, and Laos) and the Golden Crescent (Afghanistan, Pakistan, and Iran) has made it a major hub for the illegal drug trade, exacerbating the country's drug abuse problem (Narcotics Control Bureau, 2021). The Indian government has responded to the problem of drug abuse with a number of legislative and enforcement measures. In 1985, the Narcotics Drugs and Psychotropic Substances (NDPS) Act was approved as part of these efforts, and the Narcotics Control Bureau was established. But it has been challenging to effectively manage the issue because of its enormous size and complexity (Narcotics Control Bureau, 2021). Research shows that drug use is increasingly common among India's youth. This susceptibility is affected by a number of factors, including academic pressure, peer pressure, and the impact of urbanization and globalization (Reddy et al., 2019). Degenhardt et al. (2018) reports that prescription drug abuse, including the use of benzodiazepines and opioid pain relievers, has also emerged as a significant concern. Quite a few young individuals are engaging in the non-medical use of these drugs, which is the reason for this. Addiction to drugs has far-reaching consequences in India, including the proliferation of disease, an increase in criminal activity, and the halting of social and economic development. All of these outcomes are reliant on one another and related in some way. Additionally, the healthcare system has been under a lot of strain due to the large amounts of money spent treating drug use disorders and their associated issues (Garg et al., 2020). A comprehensive approach that includes programs for prevention, treatment, and rehabilitation is needed to address the problem of drug usage in India. According to the Narcotics Control Bureau in the year 2021, The National Action Plan for Drug Demand Reduction and the establishment of Integrated Rehabilitation Centres for Addicts (IRCA's) are just two of the many programs that the Indian government has launched; however, despite their implementation, the efficacy of these interventions is still being studied and evaluated.

Mental health issues and substance misuse

There is evidence linking substance misuse to mental health problems, according to studies conducted by Harris and Edlund (2005) and Kessler and colleagues (1996). Adolescence is a frequent time for the onset of substance abuse and mental health issues, according to Rao, Daley, and Hammen (2000). There is an increased danger throughout adolescence. Research by Brook, Brook, Zhang, Cohen, and Whiteman (2002) found that drug and alcohol usage among teenagers at this time is associated with depression. Teenage marijuana and drug usage increases in tandem with the prevalence of certain anxiety disorders, including PTSD, according to a 2001 study by Rey, Sawyer,

Raphael, Patton, and Lynskey. Adolescent behavioural problems, such conduct disorder, are both a predictor of future substance abuse and a substantial risk factor for alcohol use (Armstrong & Costello, 2002; Moss & Lynch, 2001).

Some studies have failed to find a correlation between adolescent drug use and mental health problems, even though there is evidence to support the relationship. Case in point: Green and Ritter (2000) and Degenhardt and Hall Lynskey (2003), among others, found no evidence to support the idea that depression and marijuana use are comorbid. Research by Curran, White, and Hansell (2000) and Hussong, Curran, and Chassin (1998) found no association between increasing drug or alcohol usage and worse internalizing symptoms (such as anxiety and depression). When additional risk variables are taken into account, the weak link between drug consumption and mental health problems including anxiety and depression becomes minor, according to the research by Measelle and colleagues (2006).

Costello, Mustillo, Erkanli, Keeler, and Angold (2003) state that a large body of research shows that adolescent girls and boys experience mental health issues differently. According to studies done by Brooks, Harris, Thrall, and Woods (2002) and Wade, Cairney, and Pevalin (2002), males experience depression at a rate two to three times lower than girls do around the age of fourteen. In 1998, researchers Lewinsohn, Gotlib, Lewinsohn, Seeley, and Allen found that girls made up around two-thirds of the teenage population with anxiety disorders. Gender differences in externalizing behaviours including conduct disorder, criminality, and aggression emerge in late adolescence and early adulthood, according to Moffitt, Caspi, Rutter, and Silva (2001). In this case, the ratio of males to females is more than 2:1.

Concerns about gender, substance misuse, and mental health

Few research have looked at the potential moderating effect of gender on the association between adolescent mental health and drug use, and the results have been mixed. The fact that acierno et al. (2000) found a correlation between heavy smoking and depression and anxiety disorders in teenage females but not in teenage boys lends support to the notion that gender mediates the association between the two mental health issues. In a similar vein, Patton et al. (2002) discovered that young girls who regularly used marijuana were more likely to suffer from depression than teenage guys who did not. An rise in marijuana usage was linked to higher depression in both male and female teenagers, according to previous research. There was an elevated risk of alcohol and cigarette usage among depressed females as well (Poulin, Hand, Boudreau, & Santor, 2005).

Nonetheless, research has linked disruptive disorders to similar spikes in drug use among men and women (Shrier, Harris, Kurland, & Knight 2004). The correlation between adolescent boys' and girls' cigarette smoking and depression was shown to be the same by Galambos, Leadbeater, and Barker (2004). Other researchers that worked with teenagers came to the same result. Brook, Cohen, and Brook's (1998) 1998 longitudinal study indicated no gender effect on the correlation between teenage mental health and substance abuse. Their results are in line with our current findings. The results of a study done in Finland (Torikka, Kaltiala-Heino, Rimpela, Rimpela, & Rantanen, 2001) showed that the correlation between drug use and depression was not different in intensity based on gender. Even though females experience more depression than boys, this remained the case. Lastly, a study conducted by Weiss, Palmer, Chuo, Mouttapa, and Johnson (2008) linked increased smoking with feelings of aggression, anxiety, and depression in both boys and girls. This held true for people of both sexes. While there are few outliers, most studies examining gender, substance use,

and mental health have focused on preteens and teenagers from dominant cultural backgrounds. Results from studies on samples from majority cultures may not be applicable to other populations due to factors such as lower rates of alcohol and drug use among young people of African descent (Johnston et al., 2008b) and the lack of racial inequalities for mental health indicators (Williams & Earl, 2007).

Consequently, this study recruited a sample of minority-identifying late teenagers to examine the relationship between mental health and substance addiction. In particular, we looked at whether or not gender mediates the association between mental health and drug use and whether or not there are gender differences in substance use and mental health. Although we anticipated disparities in mental health, we did not anticipate any variation in drug use between the sexes. Moreover, we postulated that the urban minority sample we used would exhibit a correlation between mental health and drug use, with the possibility that this correlation may manifest differently for males and girls.

Rivew of the literature

Twenty-five years ago, Rakgwata and Mphephu came up with the idea. South African high school pupils are increasingly struggling with substance abuse and mental health concerns. The study's overarching goal is to learn more about the state of mental health and drug addiction in Limpopo province, how common these problems are there, and what causes and effects they have. This study applies Denise Kandal's Gateway theory to the problem of drug abuse and addiction among high school students in order to trace its historical development. In addition, the research pinpoints at-risk people and develops targeted prevention strategies for them. Five tenth graders were chosen to take part in the study, which employed a qualitative case-study research technique. Among the substances that were most commonly used, the poll reported that 62.3% of respondents acknowledged to using alcohol and cannabis. Furthermore, screenings for mental health concerns, including anxiety, despair, and suicidal ideation, reveal that less than half of students are really experiencing these symptoms. It is worth noting that there is a substantial correlation between drug abuse and mental health. The findings highlight the significance of addressing substance abuse and mental health issues in high schools via the integration of prevention and intervention strategies. This study adds to what is already known about the prevalence of substance abuse and mental health issues among South African high school students. The findings underscored the need of having a comprehensive support system to address the issues and promote the learners' well-being.

Melkam(2023)Research involving 422 high school students found that drug abuse significantly affected participants' awareness levels, perceptions, and emotions. There was a 52.5% prevalence of drug use, and factors including being male, coming from a home where substance use was common, and feeling pressured by close friends were all significantly associated with an increased risk of engaging in substance use behaviours. This study used a self-report questionnaire in conjunction with bi-variable and multi-variable logistic regression analysis to identify factors associated with drug behaviour. Based on the results, it seems that if these factors are addressed, student drug consumption might be reduced.

Sharma (2016) A research conducted by the Department of Social Security Development of Women and children (2012) found that drug consumption might reach 40% in the state of Punjab. One shocking statistic that came out of the survey was the fact that 67% of rural households in the state have someone who is addicted to heroin. The percentage of young farmers is fifteen percent. Addicts

who consume poppy husk make up the majority, while 20% are dependent on synthetic substances. According to the research, Maqboolpura, a once-prosperous hamlet in the heart of Amritsar, is now known as a "Widow Village" because drug abuse has taken the lives of men in almost every home.

Bansal, Sidhu, and Singh (2015) found, there is now a big effort in Punjab to deal with drug dependence. Patients who sought treatment at the medical facility most typically utilized Bhukki, an opioid painkiller. Prior case study results indicated that a person typically ingested 2.453 kg of bhukki each month. This case was the first of its kind to record such a high dose of bhukki abuse, and it also showed how quickly one's bhukki consumption may go from very little to very much. The present situation was distinct due to these two reasons. Previous studies have similarly seen this expected transition from first opioid use to dependence. In addition to a thirty-year follow-up period and twenty years of follow-up study, the prediction for the change was a 2% annual mortality rate and a high mortality rate of around 50%. This is still a major issue for people who abuse drugs even when they know it has serious consequences for their health, relationships, careers, and the law.

Advani (2013) found that drug addiction is a major problem in the Indian state of Punjab. Several factors are being taken into consideration, including the quantity of addicts, the severity of their addiction, the type of substance used (such as injectable drugs, which were previously associated with urban areas), and the extent to which their addiction has progressed. There have been several fatalities and serious health consequences due to drug abuse in the state, such as the spread of AIDS.

Gupta and Kaur (2013) Young individuals in Punjab are falling into the drug abuse trap at a young age, with high rates of recurrence, according to study. at order to discourage drug usage among the youth of today, it is critical to establish anti-drug awareness programs at all K-12 and higher education institutions. Unfortunately, many college-educated youth are falling into the harmful drug habit, which has a devastating effect on their academic careers and academic performance. Assistance with drug abuse education, prevention, and treatment must come from all quarters, including households, community groups, educational institutions, lawmakers, and medical experts. Successful reintegration into society after a drug addiction treatment program depends on the availability of vocational rehabilitation programs, such as computer lessons or training in tailoring, and the provision of financial aid for these programs.

Kalra and Bansal (2012) found that substance abusers pour a lot of resources into their habit. Government authorities from the office of the Civil Surgeon/Deputy Commissioner are suggested to periodically oversee all DDCs. Despite its passage, the NDPS Act of 1985 failed to curb drug abuse. We have developed and, more importantly, implemented a number of strong policies. Furthermore, in rural areas, there was a concerted effort to dispel the myths surrounding drug use and possession via the dissemination of information, education, and communication.

Mahi, Sharma, and Sidhu, B.S. (2011) found that 39.3% of rural residents abused drugs, with 32.1% abusing one substance, 4.9% abusing two, 1.3% abusing three, and 1% abusing four or more substances. A single-substance dependence affected 17.9% of the population, while a dual-substance dependence affected 3.7%. It was determined that 0.4% of the population was dependent on three medicines, while 0.6% were dependent on four substances. The typical age range for the onset of drug abuse was fifteen to twenty-four years old.

Schwinn(2010) This study looks at the impact of alcohol, tobacco, and illicit drug use on the mental health of late-teen urban adolescents, specifically focusing on gender. Our research focuses on three

main areas: first, whether men and women use substances at different rates; second, whether mental health indices differ between the sexes and predict substance use; and third, whether gender mediates the relationship between mental health and drug use. Our 400-person non-clinical sample was almost all data collected online. The results of the cross-sectional investigation did not indicate any differences in drug consumption between the sexes. Results demonstrated that men and women reported different levels of anxiety and depression, with women reporting more severe symptoms. Boys and girls assessed the amount of enmity at about the same level. No difference in the correlation between gender and substance abuse was found; nevertheless, there was an increase in depressive, anxious, and violent symptoms among those who smoked, drank, and used drugs. The research found that between worse mental health status and increased drug use among urban late-adolescent youth, there is some evidence. The notion that gender moderates the relationship between mental health and drug use was not supported by sufficient data.

Singh (2000) surveyed 300 women across 15 districts in Punjab, she found something shocking about the trajectory our youth are on. In rural areas, 23% of substance abusers are long-term users, and more than 50% of adult males have an addiction of some kind. There was a vast array of medicines accessible, including opium, bhukki, morphine, alcohol, charas, jarda, and cough concoctions. Medications cost an average of 734 rupees a month for each household. Eleven percent or more might blow through three thousand rupees in a month.

Objective of the study

1. To investigate the relationship between substance use and mental health symptoms—specifically anxiety, depression, and emotional instability among secondary school students.
2. To study Beck Anxiety Inventory (BAI) to measure anxiety levels, the Children's Depression Inventory (CDI) to evaluate depressive symptoms, and a standardized Emotional Regulation Scale (ERS) to assess emotional instability.

Methodology

This study employed a descriptive cross-sectional survey design to examine the relationship between substance use and mental health symptoms—specifically anxiety, depression, and emotional instability—among secondary school students. A total of 120 students, aged between 14 and 18 years, were selected from government and private schools in the village of Bathinda, Punjab. A stratified random sampling technique was used to ensure adequate representation across gender and school type.

Data were collected using a structured, self-administered questionnaire that included both demographic details and psychological screening tools. To assess mental health status, the study utilized the Beck Anxiety Inventory (BAI) to measure anxiety levels, the Children's Depression Inventory (CDI) to evaluate depressive symptoms, and a standardized Emotional Regulation Scale (ERS) to assess emotional instability. Substance use behaviors were recorded through a researcher-developed questionnaire focusing on type of substance, frequency of use, and duration.

Data collection was conducted during in-school sessions under the supervision of trained facilitators to ensure confidentiality and honest responses. Prior informed consent was obtained from both the students and school authorities. The collected data were analyzed using SPSS (version 26). Descriptive statistics such as frequency and percentage were used to summarize the data. Inferential statistics included independent samples t-tests (to compare mean anxiety and depression scores

between users and non-users), chi-square tests (to determine association between emotional instability and drug use), and Pearson correlation coefficients (to assess the relationship between frequency of drug use and mental health symptoms). A 95% confidence interval was applied, with p-values less than 0.05 considered statistically significant.

Analysis and result

Table 1: Demographic Profile of the Respondents (N = 120)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	65	54.2%
	Female	55	45.8%
Age Group	14–15 years	38	31.7%
	16–17 years	60	50.0%
	18 years	22	18.3%
Class (Grade)	9th	42	35.0%
	10th	40	33.3%
	11th	24	20.0%
	12th	14	11.7%
Type of School	Government	68	56.7%
	Private	52	43.3%
Location village	Sangat	60	50.0%
	Nathana	60	50.0%

Table 2: Prevalence of Substance Use and Mental Health Symptoms (n = 120)

Category	Substance Users (n = 58)	Non-Users (n = 62)	Total (n = 120)
High Anxiety	35 (60.3%)	19 (30.6%)	54 (45.0%)
Depressive Symptoms	32 (55.2%)	14 (22.6%)	46 (38.3%)
Emotional Instability	29 (50.0%)	12 (19.4%)	41 (34.1%)
No Mental Health Symptoms	12 (20.7%)	34 (54.8%)	46 (38.3%)

The data from Table 2 showed that a majority of students who used substances experienced mental health difficulties, with 60.3% reporting high anxiety, 55.2% showing depressive symptoms, and 50% suffering emotional instability. In contrast, the non-user group had markedly lower prevalence rates, indicating a strong difference between the two groups.

Table 3: Independent Samples t-Test – Mean Score Comparison

Mental Health Scale	Mean (Users)	Mean (Non-Users)	t-value	p-value	Significance
Anxiety Score	23.7	14.2	5.94	< 0.001	Highly Significant
Depression Score	21.5	13.6	5.11	< 0.001	Highly Significant

Scales used: Beck Anxiety Inventory (BAI) & Children's Depression Inventory (CDI), Scores range from 0–63.

Table 3 confirmed these findings through statistically significant t-tests. The mean anxiety score of users (M = 23.7) was significantly higher than non-users (M = 14.2), and similarly for depression scores. This suggests that drug use is strongly associated with elevated psychological distress.

Table 4: Chi-Square Test of Association – Emotional Instability & Substance Use

Emotional Instability	Users (n = 58)	Non-Users (n = 62)	Total
Present	29 (50.0%)	12 (19.4%)	41
Absent	29 (50.0%)	50 (80.6%)	79
Chi-square value			$\chi^2 = 13.97$
p-value			< 0.001

Interpretation: A statistically significant association exists between emotional instability and substance use.

Table 4 provided a chi-square test of association between emotional instability and substance use. With a chi-square value of 13.97 ($p < 0.001$), a significant relationship was established—users were more than twice as likely to report emotional instability compared to non-users.

Table 5: Pearson Correlation Between Frequency of Drug Use & Mental Health Scores (n = 58 Users)

Mental Health Variable	Correlation Coefficient (r)	p-value	Strength of Association
Anxiety Score	0.48	< 0.01	Moderate Positive
Depression Score	0.44	< 0.01	Moderate Positive

Interpretation: Higher drug use frequency is moderately correlated with both anxiety and depression.

Table 5 explored the correlation between frequency of drug use and mental health symptoms, showing moderate but significant positive relationships between frequency of use and both anxiety ($r = 0.48$) and depression ($r = 0.44$). This implies that the more frequently students use substances, the more intense their psychological symptoms become.

Conclusion

The findings of this study provide compelling evidence of a significant association between adolescent substance use and poor mental health outcomes. Students who reported using drugs showed notably higher levels of anxiety, depression, and emotional instability than their non-using peers. Moreover, the frequency of drug use was moderately correlated with the severity of these symptoms, indicating a possible compounding effect over time. These results underscore the psychological vulnerability of adolescent drug users and the importance of integrating mental health screening and support services within school environments.

The study calls for urgent collaboration between educators, psychologists, and healthcare providers to implement prevention strategies that go beyond drug awareness and address the emotional well-being of students. School counselors should be trained to detect early warning signs of psychological distress, and peer-led programs can help create a supportive environment to discourage drug use and encourage emotional resilience.

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