ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

DRUG ADDICTION AND MENTAL HEALTH PROBLEMS AMONG YOUNG ADULTS

Dilawar Khan*[1], Tania Sikandar[2], Saima Bano[3], Mahnoor Ramzan[4] Sehrish Mazhar[5]

[1]Clinical Psychologist, Shaaf Rehabilitation Centre Addiction and Psychiatric Treatment, Lahore, Pakistan
Email: dilawarkhan3095@gmail.com
[2] Clinical Psychologist, Sadat TRT psychotherapy Clinic and Drug Rehabilitation Centre, Lahore, Pakistan
Email: taniakhan2092@gmail.com
[3]Senior Lecturer, Department of Professional Psychology, Bahria University Lahore Campus, Pakistan
Email: saimabano.academia@gmail.com
[4]MS Clinical Psychology Graduate, Lahore School of Behavioural Sciences, The University of Lahore, Lahore, Pakistan
Email: mahnoorramzan7514@gmail.com
[5]BS Applied Psychology Graduate, Department of Applied Psychology, The Islamia University of Bahawalpur, Bahawalpur, Pakistan
Email: sehrishmazhar786@gmail.com

***Correspondence:** *dilawarkhan3095@gmail.com*

Abstract
The objective of the study was to examine the relationship between drug addiction and mental health outcomes, specifically depression, anxiety, and stress, among young adults. A cross-sectional design with purposive sampling was employed, including 250 Pakistani university students aged 18 to 30 who had been using drugs for at least one year. The Drug Abuse Screening Test-10 (DAST-10) and the Depression Anxiety Stress Scale (DASS-21) were used to measure depression, anxiety and stress. Findings revealed that drug addiction was positively and significantly associated with depression, anxiety, and stress. Male participants scored higher than female participants on these mental health outcomes, suggesting greater psychological distress among men involved in drug use, although the differences were not statistically significant. This study contributes to the existing literature by providing evidence from a Pakistani context, highlighting the substantial mental health burden associated with drug addiction among university students. The findings underscore the urgent need for mental health awareness programs, early screening, accessible counseling services, and stigma-reduction initiatives within educational institutions, while government and organizational support is essential to develop preventive strategies, enhance mental health resources, and promote help-seeking behaviors to address these challenges effectively.

Keywords: *Drug Addiction, Depression, Anxiety, Stress, Young Adults.*

Introduction

Drug addiction is a serious public health issue associated with mental health problems, including depression, anxiety, and stress. Depression can be described as a low mood most of the

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

day nearly every day, with negative thoughts, worthlessness, hopelessness, reduced pleasure in daily activities, diminished interest in life, and even suicidal thoughts and attempts. Anxiety can be defined as a state of fear, tension, and uneasiness. It might result in sweating, restlessness, tension, rapid heartbeat, shallow breathing, or even freezing. Stress can be defined as a feeling of emotional or physical tension. It can come from any event or thought that makes one feel frustrated, angry, or nervous. Stress is the body's reaction to a challenge or demand (Chen et al., 2025; Dasare et al., 2025; Henriques et al., 2025).

A previous study compared depression, anxiety, stress, and quality of life in 100 opiate addicts from a quit addiction clinic in Rasht and 100 controls. Using the Depression, Anxiety and Stress Scale-21 (DASS-21) and Short Form-36 Health Survey (SF-36), addicts reported greater stress, anxiety, and depression (Fooladi et al., 2014). An analytical study examined 110 drug-dependent individuals in Rasht, assessing depression, anxiety, and stress using the DASS. Results indicated significant psychological distress among participants. Findings highlight the need for addiction treatment and cognitive-behavioral therapy clinics to address these comorbidities for improved outcomes (Khakbaz et al., 2014). An earlier case-control study examined the effects of substance abuse on depression, anxiety, and stress. Using the DASS-21 and demographic questionnaires, findings showed substance abusers had significantly higher psychological distress than non-users. Results emphasize early identification of psychological symptoms to design preventive and therapeutic interventions for reducing addiction-related problems (Farnia et al., 2021).

According to Engel (2003), the Biopsychosocial model is an integrative framework highlighting biological, psychological, and social factors that are associated with addictive behaviors and mental health problems, i.e., depression, anxiety, and stress. Biologically, alterations in neurotransmitters such as serotonin and dopamine often co-occur with tendencies toward addiction and mental health problems. According to a recent study conducted in Pakistan on young adults depicts that depression, anxiety and stress significantly associate with one anther among drug abusers (Shahid et al., 2025).

Dopamine is a neurotransmitter in the brain that regulates reward, mood, and motivation; its alteration affects mood significantly. Neuroimaging studies in the United States and China depicted that alteration of dopamine results in depression (Speranza et al., 2025). Studies have also depicted that alterations in serotonin are linked to drug addiction behavior and mental health problems, i.e., depression, stress, and anxiety (Amiry et al., 2023; Correia et al., 2021; Pourhamzeh et al., 2022; Fluyau et al., 2022). According to the psychological factor of the Biopsychosocial model, maladaptive coping strategies, such as using drugs to manage academic stress, are linked to both drug addiction and mental health problems. The psychological factor of the model is consistent with previous and contemporary studies on university-enrolled students (Newbury-Birch et al., 2021; Razali et al., 2025; Torales et al., 2025). Socially, factors like family environment, study pressure, peer influence, societal stressors, financial difficulties, and stigmatization are correlated with drug addiction and mental health problems. The social factor of the Biopsychosocial model is also supported by contemporary and previous studies among students across the globe (Katende, 2023; Nawaz et al., 2024; Schwenk et al., 2010; Soh et al., 2012).

There is substantial literature on drug addiction and its associations with mental health problems (i.e., depression, anxiety, and stress). However, studies directly evaluating these relationships among Pakistani university students are limited. Therefore, this study aims to fill this

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

gap by examining the relationships between drug addiction and mental health problems to provide meaningful implications.

Hypotheses

H1: Drug addiction is likely to be positively and significantly associated with mental health problems, i.e., depression, anxiety, and stress, among Pakistani university students.

H2: There are likely to be significant mean differences in mental health problems, specifically depression, anxiety, and stress, between male and female university students with drug addiction.

Methodology

Research Design and Sampling

The study utilized a cross-sectional correlational design and purposive sampling to recruit 250 university students between the ages of 18 and 35. Participants included both men and women who had been abusing drugs for at least one year.

Instruments

Drug Abuse Screening Test (DAST-10)

The Drug Abuse Screening Test (DAST) was originally developed by Harvey A. Skinner (1982) as a 20-item instrument. Later, a shorter version comprising 10 items (DAST-10) was developed. The response format is dichotomous, with Yes = 1 and No = 0, except for item 3, where "No" is scored as 1. The internal consistency of the DAST-10 has been reported to range between 0.81 and 0.84 (Johnson et al., 2025; Skinner, 1982; Skinner et al., 2024). In the present study, a cutoff score of 6 or higher was used as the screening and inclusion criterion for drug addiction.

Depression Anxiety Stress Scale (DASS-21)

The Depression Anxiety Stress Scale (DASS-21), a shorter 21-item version of the original DASS, was employed to assess mental health problems. It uses a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). The DASS-21 demonstrates strong internal consistency, with Cronbach's alpha values of 0.88 for depression, 0.82 for anxiety, and 0.90 for stress (Lovibond & Lovibond, 1995). This scale was used to measure depression, anxiety, and stress among individuals with drug addiction.

Ethical Standards and Procedure

The study followed the ethical guidelines outlined by APA 7. Institutional permission was obtained prior to initiating the research. Students from both public and private universities in Lahore were approached and provided with a consent form, a demographic questionnaire, and the study instruments. The consent form clearly informed participants that their involvement was voluntary, they would not experience any form of coercion, and they could discontinue participation at any point. Confidentiality was maintained by ensuring that no identifying information was disclosed. After providing informed consent, participants completed the demographic questionnaire, which included eligibility criteria (drug use for at least one year), gender, sociodemographic information, and educational level (e.g., bachelor's, master's). Eligible participants were then administered the DAST-10 along with the DASS-21. The questionnaires required approximately 20 minutes to complete, after which participants were thanked for their time and cooperation.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Results

Table 1

Characteristics of the Participants (N=250)

Characteristics	*f*	%	*M*	*SD*
Age			22.64	3.42
Gender				
Men	141	56.4		
Women	109	43.6		
Educational Level				
Bachelor	170	68		
Master	80	32		
Socioeconomic Status				
Lower Class	129	51.6		
Middle Class	97	38.8		
Upper Class	24	9.6		

Note. *f*=Frequency, *%*= Percentage, *M*= Mean, *SD*= Standard Deviation.

Table 1 presents the demographic characteristics of the participants (N = 250). The participants had an average age of 22.64 years (*SD* = 3.42). Regarding gender, 56.4% of the participants were men (n = 141), while 43.6% were women (n = 109). In terms of educational level, most participants were bachelor's students (n = 170, 68%), followed by master's students (n = 80, 32%). With respect to socioeconomic status, 51.6% (n = 129) of the participants were from the lower class, 38.8% (n = 97) from the middle class, and 9.6% (n = 24) from the upper class.

Table 2

Relationship among Study Variables (N=250)

Variables	1	2	3	4
1.Drug Addiction	-	.31**	.40**	.53**
2.Depression		-	.31**	.32**
3.Anxiety			-	.38**
4.Stress				-

Note. ***p*<.01*

Table 2 presents significant relationship among study variables i.e. drug addiction, depression, anxiety and stress.

Table 3

Mean Differences Between Individuals with Drug Addiction and Gaming Addiction on Study Variables (N = 250)

	Male (n=141)		Female (n=109)				
Variables	*M*	*SD*	*M*	*SD*	*t (248)*	*p*	Cohen's *d*
Drug Addiction	8.73	4.28	8.49	4.25	.43	.66	0.05
Depression	8.51	1.85	8.31	2.12	.81	.41	0.10
Anxiety	9.74	3.94	9.47	3.63	.55	.58	0.07

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Stress	7.70	3.60	7.54	3	.37	.70	0.04

Note. ***$p<.001$, *M*= Mean, *SD*= Standard Deviation, DA= Drug Addiction

Table 3 presents the mean differences between men (n = 141) and women (n = 109) on drug addiction, depression, anxiety, and stress. The results indicate that men and women did not differ significantly on drug addiction scores, $t(248) = 0.43$, $p = .66$, $d = 0.05$. Similarly, no significant gender differences were observed for depression, $t(248) = 0.81$, $p = .41$, $d = 0.10$; anxiety, $t(248) = 0.55$, $p = .58$, $d = 0.07$; or stress, $t(248) = 0.37$, $p = .70$, $d = 0.04$. Although these differences were not statistically significant, men scored slightly higher than women on all study variables.

Discussion

Substantial research has demonstrated the association between drug addiction and mental health problems, such as depression, anxiety, and stress. However, studies directly examining these relationships among Pakistani university students remain limited. The present study aimed to address this gap and provide context-specific implications.

The findings indicate that drug addiction is positively and significantly associated with mental health problems, including depression, anxiety, and stress. These results are consistent with a previous cross-sectional study conducted among medical students in Karachi, Pakistan, which reported a 70% prevalence of depression, anxiety, and stress, with substance use significantly related to these conditions (Khan et al., 2006). Similarly, a cross-sectional study of 600 students with drug addiction in Pakistan (mean age 29.5 years) using DSM-5 criteria found a high prevalence of depression, anxiety, and stress (Siddiqui et al., 2024).

The independent samples t-test showed that men scored slightly higher than women on drug addiction, depression, anxiety, and stress; however, these differences were not statistically significant. This finding contrasts with research from the United Kingdom, where women scored higher than men on mental health problems (Griffith & France, 2019). In Pakistan, cultural factors such as greater freedom and access to drugs among men, and social norms that position women as submissive and restricted, may explain this difference (Sajid et al., 2022; Shahid et al., 2025). Other studies in Pakistan contradict this finding, showing that women scored slightly higher on depression, though not significantly (Shahid et al., 2024). Another indigenous study also contradicts the finding of this study which reported lower overall wellbeing among women is influenced by cultural and societal constraints in Pakistan (Bashir et al., 2024).

Regarding anxiety, the present results align with a study among Chinese college students, in which male students scored higher on depression than female students (Gao et al., 2020). Similarly, research in Poland indicated that female university students scored significantly higher than males on depression, anxiety, and stress, which aligns with the trends observed in this study (Debowska et al., 2022). The reason men scored slightly higher on depression, anxiety, and stress may be due to their higher scores on drug addiction, as drug addiction is associated with elevated levels of mental health problems such as depression, anxiety, and stress.

Limitations and Recommendations

The study has several limitations. First, the sample size (n = 250) may not fully represent the population of individuals with drug addiction. Second, the study utilized English-language questionnaires, which may not have been fully understood by all Pakistani university students. Future research should consider translating scales into Urdu for better comprehension. Additionally, purposive sampling was used, which may limit representativeness. Future studies

could consider snowball sampling to recruit a wider range of participants. The cross-sectional design also limits the ability to assess changes over time; longitudinal studies are recommended to explore temporal relationships. The study assessed addiction in general terms; future research should consider specifying types of drugs in demographic data. Finally, data were collected only from Lahore, limiting generalizability. Future studies could adopt online data collection methods to include participants from more regions of Pakistan.

Implications

The findings highlight the urgent need for mental health awareness programs in universities to improve understanding of addictive behaviors and promote help-seeking from mental health professionals. Media outlets can contribute positively by featuring discussions with mental health experts on addiction and its psychological consequences. Community-level awareness is also critical to reduce stigma toward individuals with drug addiction and promote supportive environments. Families should be provided with psychoeducation to better assist affected members. Governmental action is essential, including the establishment of rehabilitation centers, enhancement of facilities, control over drug supply, and stricter enforcement against drug suppliers. Universities should provide accessible counseling services, workshops, and seminars to support students' mental health and raise awareness about the consequences of drug addiction.

References

Amiry, G. Y., Haidary, M., Azhdari-Zarmehri, H., Beheshti, F., & Ahmadi-Soleimani, S. M. (2023). Omega-3 fatty acids prevent nicotine withdrawal-induced exacerbation of anxiety and depression by affecting oxidative stress balance, inflammatory response, BDNF and serotonin metabolism in rats. *European Journal of Pharmacology*, *947*, 175634.

Bashir, S., Shahid, M. S., & Salman, F. (2024). The mediating role of social connectedness in linking Ludo Star game addiction and mental health problems in young adults. *Gomal University Journal of Research*, *40*(3), 359-369.

Chen, S., Huang, W., Zhang, M., Song, Y., Zhao, C., Sun, H., ... & Chang, C. (2025). Dynamic changes and future trend predictions of the global burden of anxiety disorders: analysis of 204 countries and regions from 1990 to 2021 and the impact of the COVID-19 pandemic. *EClinicalMedicine*, *79*.

Correia, A. S., Cardoso, A., & Vale, N. (2021). Highlighting immune system and stress in major depressive disorder, Parkinson's, and Alzheimer's diseases, with a connection with serotonin. *International Journal of Molecular Sciences*, *22*(16), 8525.

Dasare, S. U., Bagade, V. G., Bhondwe, M. R., Vedpathak, V. L., & Wadiyar, S. S. (2025). Prevalence of Depression, Anxiety and Stress among Higher Secondary School Students by Using DASS-21 Scale. *Life Sci*, *11*(3), 7395-7399.

Debowska, A., Horeczy, B., Boduszek, D., & Dolinski, D. (2022). A repeated cross-sectional survey assessing university students' stress, depression, anxiety, and suicidality in the early stages of the COVID-19 pandemic in Poland. *Psychological medicine*, *52*(15), 3744-3747.

Engel, G. L. (2003). The clinical application of the biopsychosocial model. *The biopsychosocial approach: Past, present, and future*, 1-20.

Farnia, V., Afshari, D., Abdoli, N., Radmehr, F., Moradinazar, M., Alikhani, M., ... & Farhadian, N. (2021). The effect of substance abuse on depression, anxiety, and stress (DASS-21) in epileptic patients. *Clinical Epidemiology and Global Health*, *9*, 128-131.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Fluyau, D., Mitra, P., Jain, A., Kailasam, V. K., & Pierre, C. G. (2022). Selective serotonin reuptake inhibitors in the treatment of depression, anxiety, and post-traumatic stress disorder in substance use disorders: a Bayesian meta-analysis. *European Journal of Clinical Pharmacology*, *78*(6), 931-942.

Fooladi, N., Jirdehi, R., & Mohtasham-Amiri, Z. (2014). Comparison of depression, anxiety, stress and quality of life in drug abusers with normal subjects. *Procedia-Social and Behavioral Sciences*, *159*, 712-717.

Gao, W., Ping, S., & Liu, X. (2020). Gender differences in depression, anxiety, and stress among college students: a longitudinal study from China. *Journal of affective disorders*, *263*, 292-300.

Griffith, C., & La France, B. (2019). Difference between men and women in drug use disorders. *Archives of Clinical and Medical Case Reports*, *3*(1), 27-32.

Henriques, J., Afreixo, V., Unterrainer, H., & Senra, H. (2025). Psychological mediators of the association between obesity and symptoms of depression, anxiety, and stress. *Neuropsychobiology*, *84*(1), 26-37.

Johnson, E., Barstack, S., Xu, Y., Wise, H., Erford, B. T., Chang, C., & Delmonico, D. (2025). Psychometric Synthesis of the Drug Abuse Screening Test (DAST) Versions. *Measurement and Evaluation in Counseling and Development*, *58*(1), 83-96.

Katende, I. D. (2023). *Social pressure, anxiety and drug dependency among students of Makerere University* (Doctoral dissertation, Makerere University).

Khakbaz, H., Karami, H., Shafi'e-Abadi, A., Malmir, M., & Farhadi, M. H. (2014). The relationship between depression, anxiety, stress and aggression in patients with drug dependence. *Archives of Rehabilitation*, *14*, 15-20.

Khan, M. S., Mahmood, S., Badshah, A., Ali, S. U., & Jamal, Y. (2006). Prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. *Journal-Pakistan Medical Association*, *56*(12), 583.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*(3), 335-343.

Nawaz, R., & Akhter, N. (2024). Exploring the Abuses and Solutions of Students' Drug Addiction at the University Level. *Journal of Excellence in Social Sciences*, *3*(1), 148-170.

Newbury-Birch, D., Walshaw, D., & Kamali, F. (2001). Drink and drugs: from medical students to doctors. *Drug and alcohol dependence*, *64*(3), 265-270.

Pourhamzeh, M., Moravej, F. G., Arabi, M., Shahriari, E., Mehrabi, S., Ward, R., ... & Joghataei, M. T. (2022). The roles of serotonin in neuropsychiatric disorders. *Cellular and molecular neurobiology*, *42*(6), 1671-1692.

Razali, S., Jaris, N., Menaldi, A., & Sham, F. (2025). Depression, Suicidal Ideation and Behaviours, and Substance Use among Female University Students. *Environment-Behaviour Proceedings Journal*, *10*(32), 221-227.

Sajid, M. A., Tatlah, I. A., & Butt, I. H. (2020). Causes of drug abuse among university students in pakistan: Variation by gender and drug type. *Pakistan Social Sciences Review*, *4*(1), 459-468.

Schwenk, T. L., Davis, L., & Wimsatt, L. A. (2010). Depression, stigma, and suicidal ideation in medical students. *Jama*, *304*(11), 1181-1190.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Shahid, M. S., Abid, S., Anmol, H., Ain, S. F. U., & Saleem, Z. E. H. (2025). Addictive Behaviours and Mental Health Outcomes: A Quantitative Comparative Study. *Regional Lens*, *4*(3), 144-154.

Shahid, M. S., Bashir, S., & Fatima, S. (2024). Social media addiction and aggression in Pakistani young adults: Social connectedness as a moderator. *Journal of Professional & Applied Psychology*, *5*(3), 424-433.

Shahid, M. S., Yousaf, R., & Munir, H. (2024). Social media addiction, depression and aggression in young adults. *Journal of Professional & Applied Psychology*, *5*(2), 276-285.

Siddiqui, S., Khalid, F., Khalid, M. F., Towheed, A., Ahmed, S., Paracha, H., ... & Owais, A. (2024). Exploring the Prevalence and Determinants of Substance Use among Drug Addicts in Pakistan.

Skinner, H. A. (1982). Guide for using the drug abuse screening test (DAST). *Toronto: Centre for Addiction and Mental Health*.

Soh, N., Ma, C., Lampe, L., Hunt, G., Malhi, G., & Walter, G. (2012). Depression, financial problems and other reasons for suspending medical studies, and requested support services: findings from a qualitative study. *Australasian Psychiatry*, *20*(6), 518-523.

Speranza, L., Miniaci, M. C., & Volpicelli, F. (2025). The Role of Dopamine in Neurological, Psychiatric, and Metabolic Disorders and Cancer: A Complex Web of Interactions. *Biomedicines*, *13*(2), 492.

Torales, J., Torres, A., Sánchez, M., O'Higgins, M., Amarilla, D., Molodynski, A., ... & en Neurociencias, R. D. E. I. (2025). A National Epidemiologic Mixed-methods Study on Depression, Anxiety, Substance Use, Treatment Needs and Barriers and Facilitators to Treatment Among Medical Students. *Indian Journal of Psychological Medicine*, 02537176251316798.