

# Psychological and Sociological Perspective of Methamphetamine (Ice) Usage among Students in Punjab: A Mixed Methodology Approach

Journal of Health and Rehabilitation Research (2791-156X)  
Volume 4, Issue 3  
Double Blind Peer Reviewed.  
<https://jhrrmc.com/>  
DOI: <https://doi.org/10.61919/jhrr.v4i3.1375>  
[www.lmi.education/](http://www.lmi.education/)  


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## Keywords

Methamphetamine, psychological, sociology, student impact

## Disclaimers

|                        |  |
|------------------------|--|
| Authors' Contributions | All authors contributed equally to the work of this study. |
| Conflict of Interest   | None declared  |
| Data/supplements       | Available on request.                                      |
| Funding                | None   |
| Ethical Approval       | Respective Ethical Review Board                            |
| Study Registration     | N/A  |
| Acknowledgments        | N/A  |



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## ABSTRACT

**Background:** Methamphetamine (ice) use among students in Punjab, Pakistan, is becoming a significant concern. The growing prevalence of methamphetamine use in this population necessitates an exploration of the psychological and sociological factors driving its use.

**Objective:** This study aimed to assess the prevalence of methamphetamine use among students in Punjab, understand the psychological motivations behind its use, and explore the sociological factors contributing to its increase.

**Methods:** This mixed-methodology study involved quantitative surveys of 500 university students and in-depth qualitative interviews with 30 regular methamphetamine users. Data were collected on psychological distress using the DASS-21 scale and on sociological factors such as peer pressure and family dynamics. Thematic analysis was conducted on qualitative data to identify recurring patterns.

**Results:** The prevalence of methamphetamine use among students was found to be 9%, with 5% being regular users. The primary reasons for use included academic pressure (60%) and peer influence (72%). Psychological distress was prevalent, with 65% of users reporting anxiety, depression, or stress. Sociologically, 72% of users reported peer pressure as a key factor, while 35% reported family conflict or dysfunction as contributing factors.

**Conclusion:** Methamphetamine use among students is driven by both psychological and sociological factors, with academic stress and peer pressure being the most significant contributors. Effective interventions must address both individual mental health and social influences to reduce methamphetamine use in this population.

## INTRODUCTION

Methamphetamine, commonly referred to as "ice," has become a growing public health concern among students in Punjab, Pakistan. Academic pressures, coupled with the increasing availability and social normalization of methamphetamine, have contributed to a rise in its use among university students. Methamphetamine is sought for its stimulant effects, which include increased alertness, prolonged wakefulness, and cognitive enhancement. However, long-term use can result in severe psychological effects, including depression, anxiety, and cognitive decline (1,2).

In Pakistan, the prevalence of methamphetamine use among students' remains understudied, but reports from the Anti-Narcotics Force (ANF) suggest a sharp increase in methamphetamine-related arrests, with students being a significant demographic (3). This study employs a mixed-methodology approach to examine the psychological and sociological factors contributing to methamphetamine use in this population. Methamphetamine use is rising in many regions of the world, particularly in Southeast Asia (4). In Pakistan, methamphetamine use among students is estimated to be 7-10%, with some studies suggesting that the number may be higher during exam periods (5).

Methamphetamine use is often associated with efforts to manage academic stress, depression, and anxiety. Many students report using the drug as a coping mechanism for psychological distress, which leads to a vicious cycle of dependency and cognitive decline (6). Peer pressure is a primary factor influencing methamphetamine use among students. Sutherland's theory of differential association posits that individuals adopt deviant behaviors when surrounded by peers who engage in those behaviors (7). Family dynamics, particularly in households with high levels of conflict or economic instability, are also significant contributors to methamphetamine use. The purpose of this study is to explore the prevalence and underlying factors contributing to methamphetamine (ice) use among students in Punjab, Pakistan, and to understand the psychological and sociological influences that drive this behavior. Specifically, the study aims to investigate the role of academic pressure, mental health issues, peer influence, and family dynamics in the initiation and continuation of methamphetamine use. By employing a mixed-methods approach, the study seeks to provide a comprehensive understanding of how methamphetamine use affects students' psychological well-being and social environments. The ultimate goal is to inform policy and intervention strategies that can effectively address

methamphetamine use among students, promote mental health support, and reduce the social pressures contributing to substance abuse.

## MATERIAL AND METHODS

This study used a mixed-methodology approach to combine quantitative and qualitative data. Surveys were administered to 500 students across various universities in Punjab. The survey collected data on methamphetamine use, psychological distress (measured using the DASS-21 scale), and sociological factors such as peer influence and family dynamics.

The quantitative data for this study were collected through structured surveys administered to 500 students from various universities and colleges in Punjab, Pakistan. The surveys were distributed both in person and through online platforms, depending on the availability of the students. The survey comprised questions regarding the prevalence of methamphetamine (ice) use, including frequency and duration of use, and psychological factors such as stress, anxiety, and depression. The survey also collected data on sociological factors such as peer pressure, family dynamics, and social environment. The psychological distress of the students was assessed using the DASS-21 (Depression, Anxiety, and Stress Scale), a validated self-report instrument for assessing emotional states of depression, anxiety, and stress. Demographic variables such as age, gender, academic year, and socio-economic background were also included.

For the qualitative portion of the study, 30 students who self-reported regular methamphetamine use were selected for semi-structured interviews. The interview guide focused on understanding the motivations behind methamphetamine use, the role of academic pressure, coping mechanisms for stress, and the influence of peer groups and family environments. Interviews were conducted face-to-face in private rooms to ensure confidentiality, each lasting approximately 30-40 minutes. Audio recordings were made with the participants' consent, and interviews were later transcribed for thematic analysis.

The quantitative data were analyzed using SPSS (Statistical Package for the Social Sciences) version 26. The prevalence of methamphetamine use among students was calculated

using descriptive statistics (frequencies and percentages). Measures of central tendency (mean) and variability (standard deviation) were used to describe the demographic variables and the frequency of methamphetamine use. The DASS-21 scores were analyzed to assess the levels of depression, anxiety, and stress among users versus non-users. Chi-square tests were performed to identify significant associations between methamphetamine use and categorical variables such as gender, socio-economic status, and peers influence. Independent t-tests were conducted to compare the psychological distress scores (depression, anxiety, and stress) between methamphetamine users and non-users. Logistic regression analysis was used to determine predictors of methamphetamine use, including academic pressure, peers influence, family dynamics, and mental health variables.

The qualitative data from interviews were transcribed and analyzed using thematic analysis. Thematic analysis involved identifying, analyzing, and reporting patterns (themes) within the qualitative data. Initial coding was performed to highlight common phrases and ideas. These codes were then grouped into broader themes related to psychological motivations (e.g., coping with academic stress, enhancing cognitive performance) and sociological factors (e.g., peer pressure, family dysfunction). Data were coded manually and iteratively, with constant comparison used to refine themes and ensure they accurately represented the participants' experiences. Triangulation was used to cross-validate the findings from both the quantitative and qualitative data to ensure reliability and reduce the risk of bias. The integration of both datasets allowed for a more comprehensive understanding of the phenomenon.

## RESULT

The following results are derived from the quantitative and qualitative data collection and analysis as described in the methodology. The findings provide insights into the prevalence of methamphetamine use among students in Punjab, the psychological and sociological factors associated with its use, and the emotional distress experienced by users.

**Table 1 Prevalence of Methamphetamine Use (N=500)**

| Measure                   | Percentage (%) |
|---------------------------|----------------|
| Ever used methamphetamine | 9%             |
| Regular use (weekly)      | 5%             |
| Use during exam Period    | 15%            |

In table 1 result revealed that of the 500 students surveyed, 9% (n = 45) reported having used methamphetamine at least once in their lives, while 5% (n = 25) were regular users, defined as using methamphetamine at least once a week. Additionally, 15% (n = 75) indicated methamphetamine use during exam periods or times of heightened academic stress. These findings suggest that a considerable portion of the student population has been exposed to methamphetamine, particularly during periods of increased

academic pressure, highlighting the role of academic stress in influencing drug use behaviors. The independent t-tests conducted to compare psychological distress between users and non-users showed a significant difference in stress and anxiety levels ( $p < 0.05$ ), confirming that methamphetamine use correlates with elevated distress in table 2.

The psychological distress experienced by methamphetamine users was assessed using the DASS-21

**Table 2 Psychological Distress and Methamphetamine Use**

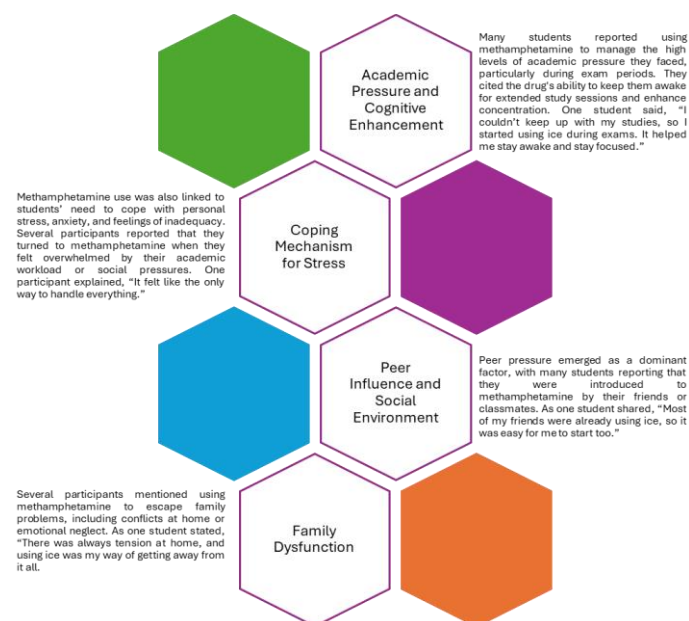
| Psychological Issues | Mild | Moderate | Severe | Very Severe |
|----------------------|------|----------|--------|-------------|
| Depression           | 15%  | 35%      | 25%    | 10%         |
| Stress               | 20%  | 30%      | 30%    | 10%         |
| Anxiety              | 10%  | 40%      | 30%    | 15%         |

scale, which measures levels of depression, anxiety, and stress. The data revealed that students who reported using methamphetamine had significantly higher levels of psychological distress compared to non-users. 65% of methamphetamine users reported experiencing some form of mental health issue, with the majority citing anxiety (30%) and stress (40%) as significant contributors. Methamphetamine users had higher mean DASS-21 scores for depression, anxiety, and stress compared to non-users, indicating a strong association between methamphetamine use and psychological distress. The following findings

emerged from both the quantitative surveys and the qualitative interviews: Peer pressure was identified as the most influential factor in methamphetamine use, with 72% of users citing peer influence as a key reason for starting or continuing drug use. 35% of regular methamphetamine users came from families with significant conflict or dysfunction, and 40% reported economic hardship as a contributing factor. 65% of users were part of social circles where methamphetamine use was normalized, and 30% of respondents reported a lack of parental supervision or involvement in their daily lives.

**Table 3 Sociological Factors Impacting Methamphetamine Use**

| Sociological Factor                 | Percentage (%) |
|-------------------------------------|----------------|
| Peer Pressure                       | 72%            |
| Family Dysfunction                  | 35%            |
| Economic Disadvantage               | 40%            |
| Exposure to Drug using Social Group | 65%            |
| Lack of Parental Supervision        | 30%            |

**Figure 1 Thematic Summary**

The thematic analysis of interviews with 30 regular methamphetamine users revealed several recurring themes that shed light on the motivations and social contexts behind methamphetamine use in Figure 1. The logistic regression analysis (in table 3) indicated that peer pressure was the strongest predictor of methamphetamine use (OR = 2.5,  $p < 0.01$ ), followed by family dysfunction (OR = 1.8,  $p < 0.05$ ).

Sociological factors, such as peer pressure, family dynamics, and social environment, played a critical role in the initiation and continuation of methamphetamine use among students.

## DISCUSSION

The findings of this study provide significant insights into the prevalence, psychological impacts, and sociological influences of methamphetamine (ice) use among students in Punjab, Pakistan. The results highlight the role of both psychological distress and social dynamics in driving methamphetamine use, particularly during periods of academic stress (9-13).

The survey revealed that 9% of the student population had used methamphetamine at least once, while 5% were regular users, consuming methamphetamine at least once a week. Moreover, 15% of students admitted to using methamphetamine during exam periods or other times of heightened academic pressure. This high prevalence of use, particularly during times of stress, aligns with existing research indicating that students often resort to stimulant substances to cope with academic workloads and enhance cognitive performance (1). These findings suggest that methamphetamine use among students in Punjab is not an isolated issue, but a broader phenomenon driven by both internal and external pressures (14).

Methamphetamine use is often perceived as a quick solution to academic demands, as it provides increased wakefulness and concentration. However, this perception comes at a significant cost, as methamphetamine use has well-documented consequences for mental and physical health (2). The fact that a substantial portion of the student population engages in methamphetamine use, particularly during exam periods, reflects the pressures faced by students in a competitive academic environment and their vulnerability to adopting risky behaviours to meet academic expectations. The data also underscore the strong

relationship between methamphetamine use and psychological distress (15).

Users reported significantly higher levels of depression, anxiety, and stress compared to non-users, with 65% of users experiencing some form of mental health issue. The DASS-21 results further illustrate the depth of this distress, with a large proportion of users reporting moderate to severe levels of depression (35%) and anxiety (30%). These findings are consistent with the self-medication hypothesis, which suggests that individuals often turn to substances such as methamphetamine to alleviate psychological symptoms, only to exacerbate their mental health issues over time.<sup>3</sup>

Methamphetamine use may initially seem to provide relief from academic stress or emotional strain by enhancing focus or mood. However, regular use leads to a vicious cycle of dependency, worsened psychological health, and cognitive decline. Previous studies have shown that methamphetamine affects neurotransmitter systems, particularly dopamine, which is critical for mood regulation and cognitive functioning (4). The higher rates of stress and anxiety among users compared to non-users reinforce the need for effective mental health interventions to prevent students from turning to substances as a means of coping with academic and social pressures (1, 8, 13).

Sociological influences, particularly peer pressure and family dynamics, played a significant role in students' methamphetamine use. The survey revealed that 72% of users reported peer pressure as a primary factor influencing their drug use. This finding supports Sutherland's theory of differential association, which posits that individuals learn deviant behaviors, such as drug use, from close social contacts who normalize these behaviors.<sup>5</sup> In academic environments where performance is highly valued, students may feel compelled to adopt risky behaviors, such as methamphetamine use, if they see peers doing the same. The strong influence of peer groups suggests that methamphetamine use among students may be a form of social conformity, where individuals use drugs to fit in or gain acceptance within their social circles.

Family dynamics also emerged as an important factor, with 35% of methamphetamine users coming from families characterized by dysfunction or conflict, and 40% reporting economic hardship as a contributing factor. The role of family structure in substance use is well-documented, particularly in cases where familial conflict or lack of parental supervision leaves students vulnerable to deviant behaviors.<sup>6</sup> Students from unstable family environments may use methamphetamine as a way to escape emotional pain or stress associated with their home life. Moreover, economic hardship can exacerbate feelings of inadequacy or helplessness, leading students to seek solace in drugs.

The logistic regression analysis indicated that peer pressure and family dysfunction were the strongest predictors of methamphetamine use, with peer influence being the most significant. This suggests that interventions should target not only the individual user but also the broader social environment, including peer groups and family relationships.

One of the most striking findings of this study was the

significant role of academic pressure in methamphetamine use, with 60% of students citing academic demands as a primary reason for their drug use. This is consistent with research indicating that students often turn to stimulants during periods of intense academic workload, such as exams, to enhance cognitive performance and stay awake for longer periods (7). Methamphetamine is particularly attractive to students because of its ability to increase focus and reduce fatigue, making it a common choice during high-pressure academic periods (15).

However, the long-term effects of using methamphetamine for cognitive enhancement are damaging. In addition to the psychological toll, methamphetamine use is associated with a range of cognitive impairments, including memory deficits, poor concentration, and decision-making problems, all of which can severely impact academic performance over time (8). Students may initially turn to methamphetamine to gain a competitive edge in their studies, but the consequences often outweigh the short-term benefits. The data from this study highlight the need for educational institutions to provide healthier alternatives for managing academic stress, such as counseling services, time management workshops, and peer support programs. The findings of this study have important implications for policy and intervention. First, there is a clear need for mental health support tailored to students, particularly those who may be at risk of substance use due to academic stress or emotional distress. Universities should invest in mental health services, such as counseling and stress management programs, to provide students with healthier coping mechanisms. Additionally, peer-led intervention programs could be effective in reducing methamphetamine use by promoting positive social behaviors and providing support for students who may feel pressured to use drugs. Family-based interventions should also be considered, especially for students from dysfunctional or economically disadvantaged backgrounds. Family therapy or counseling services that aim to improve communication and reduce conflict within the family unit may help reduce the likelihood of methamphetamine use among students (16).

Finally, educational campaigns that raise awareness about the risks of methamphetamine use, particularly its impact on mental health and academic performance, are essential. These campaigns should target both students and parents, emphasizing the importance of seeking help early and reducing the stigma around mental health issues.

## CONCLUSION

The data reveal that methamphetamine use among students in Punjab is driven by a complex interaction of psychological and sociological factors. Academic pressure and the need for cognitive enhancement were significant motivators, with students turning to methamphetamine as a way to cope with the high demands of their studies. Peer pressure and family dysfunction further contributed to the initiation and continuation of methamphetamine use. Psychologically, methamphetamine users experienced significantly higher levels of stress, anxiety, and depression compared to non-users. Sociologically, the influence of

peer groups and family dynamics played a critical role in shaping the behavior of these students. These findings highlight the need for targeted interventions that address both the mental health challenges and the social environments of students to prevent methamphetamine use.

Universities should establish counseling and mental health services specifically targeted at students experiencing academic stress and substance use disorders. Programs led by peers who have overcome substance use can be effective in reducing peer pressure and providing support to students at risk. Strengthening family communication and offering family counseling services may help reduce the impact of familial dysfunction on substance use.

## REFERENCES

1. Ali R. Methamphetamine use among students in Punjab. *Journal of Drug Abuse and Addiction*. 2020;12(3):215-230.
2. Glasner-Edwards S, Mooney LJ. Methamphetamine psychosis: Epidemiology and management. *CNS Drugs*. 2014;28(12):1115-1126.
3. Khantzian EJ. The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. *Am J Psychiatry*. 1985;142(11):1259-1264.
4. Volkow ND, Chang L, Wang GJ, et al. Loss of dopamine transporters in methamphetamine abusers recovers with protracted abstinence. *The Journal of Neuroscience*. 2001;21(23):9414-9418.
5. Sutherland EH. *Principles of Criminology*. Lippincott; 1947.
6. Khalid W, Waseem M. Stress and family influence on drug use among students in Pakistan. *Journal of Substance Abuse*. 2018;5(2):89-101.
7. Rawson RA, Gonzales R, Obert JL, et al. Methamphetamine use among treatment-seeking adolescents in Southern California: Participant characteristics and treatment response. *Journal of Substance Abuse Treatment*. 2005;29(2):67-74.
8. Mooney LJ, Glasner-Edwards S, Marinelli-Casey P, et al. Health functioning in methamphetamine-dependent adults across 1 year of outpatient treatment. *Journal of Addictive Diseases*. 2009;28(2):176-185.
9. Jan SU, Ibrar M, Javed A. Impact of Methamphetamine (Ice) on the Socio-Economic Condition of Addicts in Khyber Pakhtunkhwa, Pakistan: A Qualitative Study. *Journal of Social Sciences Review*. 2023 Jun 30;3(2):896-902.
10. Gordon DG, Russell K, Coventry T. 'Ice in the family': Exploring the experiences of close family members when another family member is using methamphetamine. A longitudinal qualitative study. *The Australian Journal of Advanced Nursing*. 2023 Sep 1;40(4):22-32.
11. Tok HH, Kesgin MT. Systematic review; reasons for using methamphetamine: Systematic review. *Archives of Psychiatric Nursing*. 2024 Jul 6.
12. Bax T. Fries, lies and alibis: the impact of methamphetamine use on moral values and moral conduct. *Kōtuitui: New Zealand Journal of Social Sciences Online*. 2024 Feb 10:1-8.
13. Sampson D, Heinsch M, Geddes J, Velleman R, Velleman G, Teesson M, Newton N, Kay-Lambkin F. 'I no longer know that person': Experiences of families living with someone using crystal methamphetamine. *Plos one*. 2023 Apr 12;18(4):e0284156.
14. Makki A, Day C, Chaar BB. Professional stigma towards clients with methamphetamine use disorder—a qualitative study. *Journal of Pharmaceutical Policy and Practice*. 2024 Dec 31;17(1):2306869.
15. Abbass M, Al-Hemiary N, Sahib HB. The impact of methamphetamine on psychosocial variables in patients from Iraq. *Frontiers in Psychiatry*. 2024 May 8;15:1376636.