

Substance Abuse in Kabul, Afghanistan: Clinical Patterns, Comorbidities, and Healthcare Challenges

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Article Info

Article type:
Research Article

Article history:
Received:
31/05/2025
Received in revised form:
10/06/2025
Accepted:
11/09/2025
Available online:
22/09/2025

Keywords:
Substance Abuse,
Afghanistan, Adults,
Clinical Patterns,
Comorbidities

ABSTRACT

Background: Substance abuse represents a major public health problem in Afghanistan, with its high prevalence among adults aged 18 to 40 years. Besides social complications, there are physical and psychological complications. Consequently, it places a high burden on the healthcare system. Patterns, comorbidities, and healthcare challenges posed by substance use must be understood in order to intervene effectively.

Methods: A cross-sectional survey was conducted among 1,500 adults (aged 18–40 years) using convenience and snowball sampling in community and public settings across Kabul. Data were collected using a structured questionnaire adapted from previously published instruments and administered in local languages (Dari and Pashto). The questionnaire captured demographic characteristics, substance use patterns, clinical symptoms, and healthcare access. Descriptive statistics and cross-tabulations were performed using SPSS.

Results: 68% of men reported substance use, primarily opioids (35%) and methamphetamines (25%). Malnutrition accounted for 45% of physical complications, infections for 12%, and anxiety for 25% and depression for 48% of mental health issues. 42% of women reported using cannabis and opioids, with fewer health issues. Misconceptions regarding the dangers of drugs were widespread, and only 30% had access to healthcare services.

Conclusion: Substance misuse among Afghan adults constitutes a serious health problem in the 18–40-year-old age group, for whom access to healthcare itself is very challenging. Urgent interventions through community-based programs, awareness programs, and policy initiatives are required to reduce harms and improve public health outcomes.

Cite this article: Omid, M. & Iqbal, Z. (2025). Substance Abuse in Kabul, Afghanistan: Clinical Patterns, Comorbidities, and Healthcare Challenges, *Kateb Journal of Medical Sciences and Biotechnology*, 4 (1), 11-22.



1. Introduction

Substance abuse is defined as the frequent or excessive use of psychoactive substances that have a detrimental effect on a person's physical, mental, and social well-being, such as opioids, methamphetamines, cannabis, and other illegal drugs [2,3]. Substance abuse is considered a major global public health concern because of its substantial impact on early mortality, disability, and social disruption. Substance abuse can cause a variety of problems in people, including infectious diseases like HIV and hepatitis as well as chronic conditions like liver disease, cardiovascular problems, and neuropsychiatric disorders. According to the World Health Organization, approximately 35 million people worldwide suffer from drug use disorders [20,5].

In Afghanistan, substance abuse has grown to be a serious social and public health problem that mostly affects adults between the ages of 18 and 40. Substance use is caused by a number of factors, including easy access to drugs, poverty, unemployment, lack of education, psycho-social stress, and persistent sociopolitical instability that impacts urban and peri-urban communities [1,17]. Substance abuse not only puts people's health at risk but also has a detrimental impact on families, communities, and the nation's economy. Examples of this impact include the breakup of families, a decline in work productivity, criminal activity, and the strain on already limited health resources [11].

It is possible to prevent, intervene early, and lessen substance-related harm by being aware of the risks, health consequences, and available treatment options. However, a number of obstacles prevent people from promptly seeking help, including drug-related misconceptions, social stigma, reliance on conventional healing methods, and limited access to healthcare [8,12]. There is a dearth of evidence-based drug abuse programs aimed at young and middle-aged adults in Afghanistan, as well as a dearth of public health education.

Substance abuse is becoming more common in Afghanistan, but there is a dearth of community-level data on usage patterns, clinical manifestations, comorbidities, and healthcare challenges, especially in urban areas like Kabul. As a foundation for creating culturally relevant awareness-raising campaigns, preventative measures, and policy interventions, this information is crucial. In order to help health authorities, non-governmental organizations, and policymakers lessen the growing burden of substance abuse in Afghanistan, the current study will evaluate substance use patterns, clinical consequences, comorbid conditions, awareness, and access to healthcare among adults in Kabul between the ages of 18 and 40.

2. Methodology

Study Design

A cross-sectional survey was conducted to evaluate substance use patterns, clinical manifestations, comorbidities, awareness levels, and healthcare challenges among adults in Kabul city.

Study Population

- **Participants:** 1,500 adults (1,000 men and 500 women)
- **Age range:** 18–40 years

- **Sampling method:** A combination of convenience and snowball sampling was used. Convenience sampling was carried out in schools, universities, community centers, and public gathering areas across Kabul. Snowball sampling was also used because it is challenging to identify individuals with current or past substance use through public recruitment. Initial participants who disclosed substance use (referred to as “seeds”) were asked to discreetly refer peers with similar experiences. This referral approach enabled access to hidden substance-using populations that would otherwise be difficult to reach. Although convenience and snowball sampling methods are associated with a risk of selection bias and may limit generalizability, these approaches were considered appropriate for accessing hard-to-reach populations. To enhance the diversity and representativeness of the sample, participants were recruited from multiple settings across Kabul, including educational institutions, community centers, and public spaces. Efforts were made to include individuals from different age groups, educational backgrounds, and occupational categories. Additionally, the use of multiple initial participants (“seeds”) in the snowball sampling process helped to reach varied social networks and reduce clustering within a single subgroup.
- **Recruitment sites:** Schools, universities, public spaces, community centers, and urban gathering areas

Data Collection Tool

A structured, pretested questionnaire was used, covering:

- **Demographics:** Age, gender, education, occupation, family background
- **Substance Use Patterns:** Type of substances (opioids, methamphetamines, cannabis, others), frequency, duration
- **Clinical Patterns:** Physical and psychological symptoms
- **Comorbidities:** Infectious diseases, chronic conditions, mental health disorders
- **Awareness:** Knowledge of health risks, complications, and treatment options
- **Healthcare Challenges:** Access to care, barriers, and use of traditional remedies
- **Administration:** Face-to-face by trained surveyors with clear explanation of study objectives.

Inclusion and Exclusion Criteria

- **Inclusion:** Adults aged 18–40 years, permanent residents of Kabul, willing to provide informed consent
- **Exclusion:** Individuals outside the age range, cognitive impairments, or unwilling to participate

Ethical Considerations

- Informed consent obtained from all participants
- Verbal approval from local community and education authorities
- Confidentiality maintained throughout the study
- Adhered to ethical guidelines for human research

Data Analysis

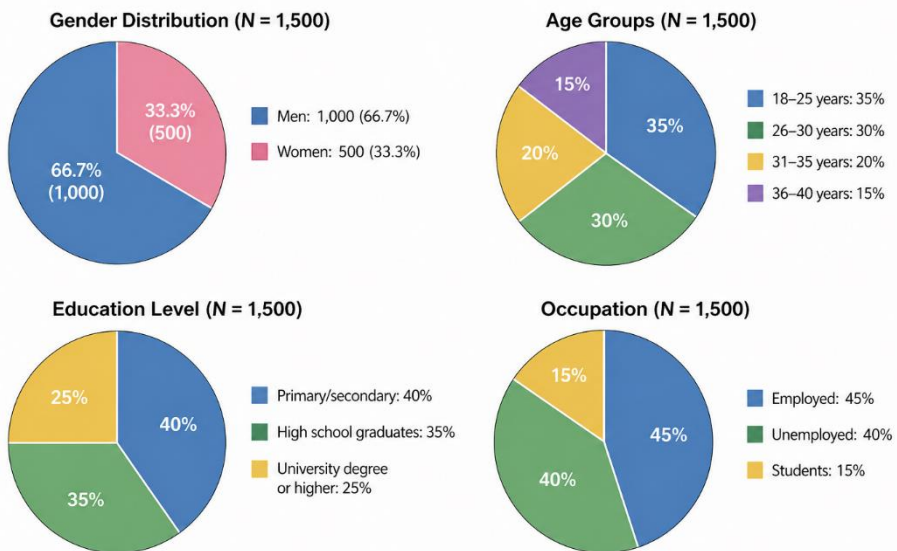
- Software: **SPSS version 25** (IBM Corp., Armonk, NY, USA)
- Analysis: Descriptive statistics (frequencies, percentages)
- Presentation: Tables, bar charts, and pie charts for visualization of trends in substance use, clinical patterns, comorbidities, awareness, and healthcare challenges

3. Results

3.1 Demographic Characteristics

- **Gender distribution:** 1,000 men (66.7%), 500 women (33.3%)
- **Age groups:**
 - 18–25 years: 35%
 - 26–30 years: 30%
 - 31–35 years: 20%
 - 36–40 years: 15%
- **Education level:**
 - Primary/secondary: 40%
 - High school graduates: 35%
 - University degree or higher: 25%
- **Occupation:**
 - Employed: 45%
 - Unemployed: 40%
 - Students: 15%

Figure 1. Demographic Characteristics



3.2 Substance Use Patterns

- **Overall prevalence of substance use:** 68% men, 42% women reported current or past use
- **Commonly used substances:**
 - Opioids: 35% men, 20% women
 - Methamphetamines: 25% men, 10% women
 - Cannabis: 20% men, 8% women
 - Other substances: 10% men, 4% women

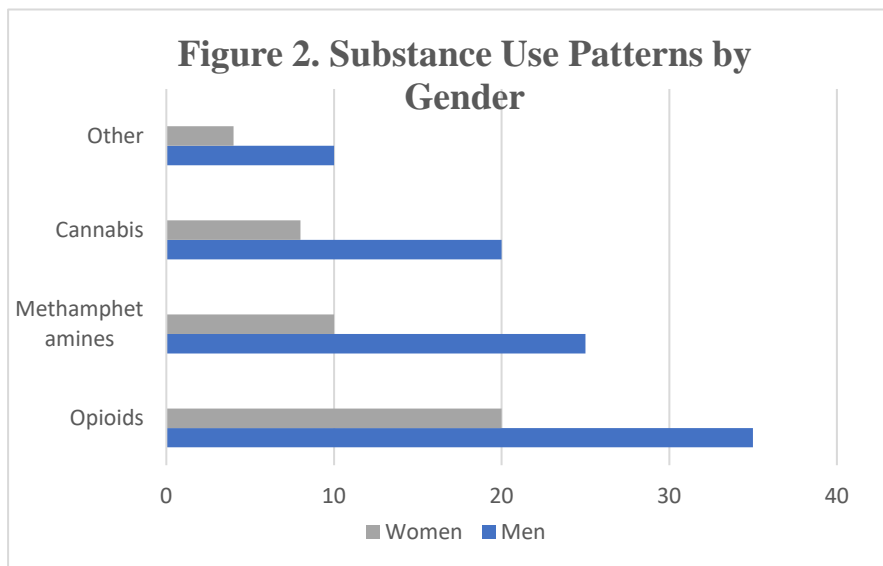


Figure 2. Prevalence of opioid, methamphetamine, cannabis, and other substance use by gender in adults aged 18–40 years, Kabul, Afghanistan

- **Frequency of use:**
 - Daily: 28%
 - Weekly: 40%
 - Monthly/occasional: 32%

3.3 Clinical Patterns

- **Physical symptoms reported:**
 - Weight loss/malnutrition: 45% men, 38% women
 - Sleep disturbances: 40% men, 35% women
 - Infections (HIV/hepatitis): 12% men, 8% women

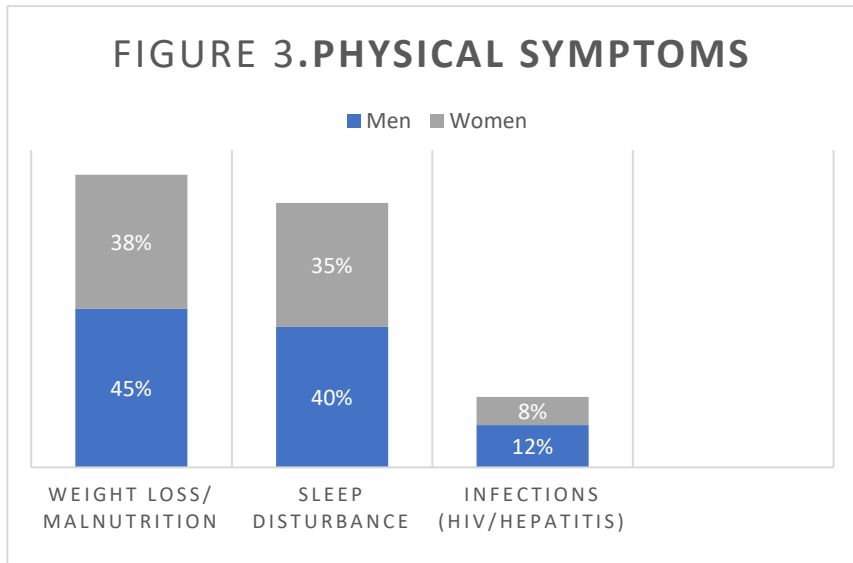


Figure 3. Physical symptoms related to substance use by gender among adults aged 18 - 40 years in Kabul

- **Psychological/behavioral symptoms:**
 - Anxiety or depression: 48% men, 42% women
 - Aggression or irritability: 35% men, 28% women
 - Cognitive difficulties (memory/concentration): 25% men, 18% women

3.4 Comorbidities

- **Physical comorbidities:**
 - Liver disease: 10% men, 5% women
 - Cardiovascular issues: 8% men, 4% women
 - Malnutrition: 18% men, 15% women
- **Mental health comorbidities:**
 - Depression: 22% men, 20% women
 - Anxiety disorders: 20% men, 18% women

Figure 4. Mental health comorbidities

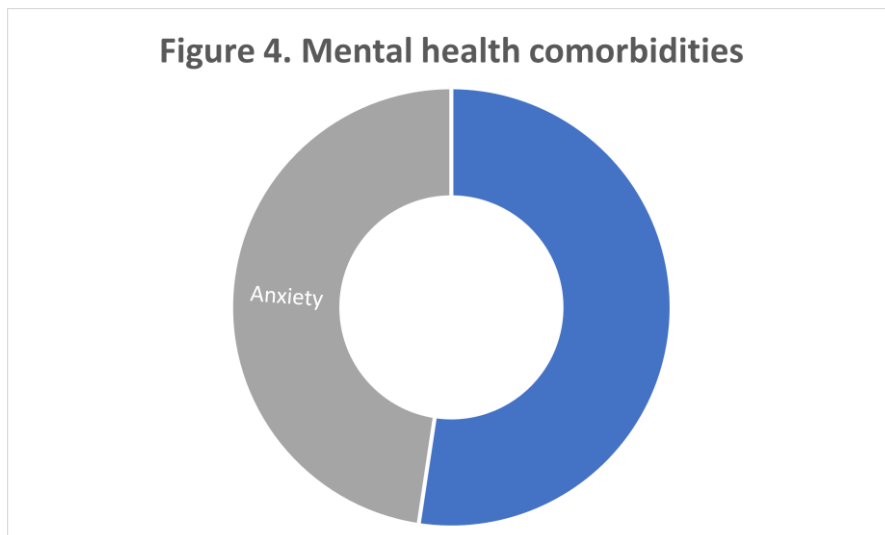


Figure 4. Prevalence of mental health comorbidities by gender among adults aged 18–40 years in Kabul, Afghanistan

- **Social consequences:**
 - Unemployment due to substance use: 15% men, 10% women
 - Family conflicts: 20% men, 12% women

3.5 Awareness of Health Risks

- **General awareness of substance abuse harms:** 60% men, 55% women
- **Knowledge of specific health risks (liver, infections, mental health):** 30% men, 28% women
- **Recognition of treatment options:** 25% men, 22% women

3.6 Healthcare Challenges

- **Reported barriers to accessing care:**
 - Limited treatment centers: 50% men, 45% women
 - Social stigma: 40% men, 38% women
 - Financial constraints: 35% men, 32% women
 - Reliance on traditional remedies: 25% men, 28% women
- **Healthcare utilization:** Only 30% of men and 25% of women had ever sought professional treatment for substance use

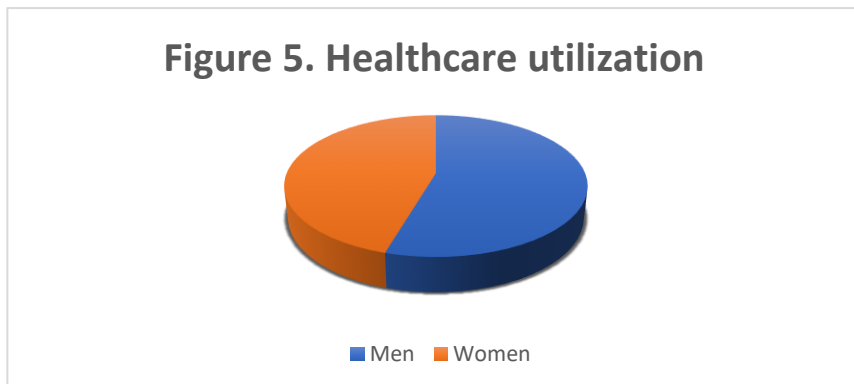


Figure 5. Healthcare utilization and treatment-seeking behavior for substance use among adults aged 18–40 years by gender in Kabul, Afghanistan

3.7 Association Between Substance Type and Clinical Outcomes

Cross-tabulation analysis was performed to explore the relationship between types of substances used and selected clinical outcomes. A higher proportion of malnutrition and infectious complications was observed among participants reporting opioid use compared to other substance categories. Methamphetamine users also demonstrated notable rates of weight loss and sleep disturbances, while cannabis users showed comparatively lower rates of severe physical complications. These findings suggest a differential pattern of health risks associated with specific substances; however, further analytical studies are required to establish causal relationships.

4. Discussion

The present study shows a high prevalence of substance use among adults aged 18–40 years in Kabul, with a notable gender difference. In total, 68% of men and 42% of women reported current or past substance use, suggesting that substance abuse is an important public health issue affecting the productive population of the city [8,9]. These findings indicate that substance use is not only an individual health problem but also a broader social issue affecting family relationships, productivity, and public safety.

The pattern of substance use showed opioids and methamphetamines to be the most commonly used drugs, especially among men. This is consistent with regional evidence, where Afghanistan's role as a major opium-producing country contributes to high opioid availability [11,16]. Other substances such as cannabis were less frequently used but remain significant due to their cumulative health consequences [15]. The frequency and type of substance use highlight the importance of understanding local supply networks, social influences, and cultural drivers of drug consumption.

Physical symptoms such as malnutrition, sleep disturbances, and infections, together with psychological manifestations including depression, anxiety, and cognitive impairment, reflect the multidimensional nature of substance abuse. These findings are supported by global evidence showing that substance use is frequently associated with both physical and mental comorbidities [4,5]. Although at lower

percentages, the presence of infections such as HIV and hepatitis suggest possible high-risk behaviors, including unsafe injection practices, requiring urgent harm reduction interventions.

Despite the well-documented harms of substance use, 60% of men and 55% of women demonstrated limited knowledge of specific health risks and treatment options. Only 25% of participants were aware of available treatment services, indicating significant gaps in public health education and healthcare access. Major barriers included reliance on traditional remedies, financial constraints, stigma, and gender-specific limitations [8,11].

The observed gender differences in healthcare access and treatment awareness may be explained by sociocultural factors in Kabul, where women often face additional structural barriers compared to men. In Afghanistan and similar settings, women's mobility may be restricted by cultural norms requiring male permission or accompaniment to access healthcare services. This dependency can delay or prevent timely help-seeking for substance use disorders. Furthermore, stigma surrounding substance use is often more severe for women, leading to concealment of symptoms and reluctance to engage with formal treatment due to fear of social exclusion or family dishonor. These factors may contribute to underreporting of substance use among women and reduced awareness of available healthcare services. Similar gender disparities have been reported in other low-resource and conservative settings, emphasizing the need for gender-sensitive and confidential healthcare services [17,20].

Such barriers significantly reduce early help-seeking behavior, which is essential for preventing long-term physical and mental health consequences. Comparisons with high-income countries show substantial differences in substance use literacy and treatment engagement. In those settings, structured school-based programs, community awareness campaigns, and accessible treatment services promote early intervention and reduce harm [18,19].

The absence of such comprehensive programs in Kabul worsens the burden of substance abuse, particularly in the context of ongoing sociopolitical instability and economic challenges. This study highlights the need for targeted educational initiatives, community outreach programs, and policy-level interventions. In addition to mass media campaigns and culturally sensitive health promotion, integration of substance use education into schools and universities may help improve awareness and reduce risky behaviors.

Improving health outcomes requires stigma-reduction strategies, expansion of treatment services, and integration of substance use care into primary healthcare systems [20,19]. Furthermore, these findings emphasize the importance of multisectoral collaboration involving government authorities, religious leaders, NGOs, and community stakeholders. Without coordinated action, substance abuse is likely to continue increasing, further exacerbating the health and socioeconomic burden in Kabul.

5. Conclusion:

This study found a high prevalence of substance use among adults aged 18–40 years in Kabul, with opioids and methamphetamines being the most commonly used substances. While general awareness of the harmful effects of substance use was

relatively high, knowledge of specific health risks, long-term consequences, and treatment options was limited. Women demonstrated lower healthcare access and awareness, reflecting important gender-based disparities influenced by sociocultural barriers.

Substance use was associated with significant social and health consequences, affecting families, communities, and healthcare services. Major barriers to care included social stigma, financial constraints, reliance on conventional remedies, and limited access to formal treatment services. The low healthcare access rate (approximately 30%) highlights a critical treatment gap.

These findings support the need for targeted interventions, including community-based harm reduction programs (such as mobile outreach services, opioid substitution therapy, and needle exchange programs), alongside integration of substance use services into primary healthcare. Culturally appropriate awareness campaigns and gender-sensitive services ensuring confidentiality are essential to improve access and reduce stigma.

Overall, a coordinated multisectoral response is required to reduce substance use burden and improve health outcomes in Kabul.

6. Recommendations

The following steps are suggested to address substance use among adults in Kabul in light of the study's findings:

1. **Public Education Campaigns:** Educate adults about the dangers, health effects, and available treatments for substance use by implementing culturally sensitive awareness programs in schools, colleges, community centers, and media outlets.

2. **Community Outreach:** To engage communities, lessen stigma, and promote early help-seeking, host workshops, seminars, and discussion groups in nearby neighborhoods.

3. **Better Access to Treatment:** Increase the number of accessible and reasonably priced treatment services, such as counseling, rehabilitation, and support groups, with a focus on men and women who encounter social or financial obstacles.

4. **Health Screening and Early Intervention:** To identify at-risk individuals early, conduct routine screenings for substance use and related health conditions in urban clinics, workplaces, and educational institutions.

5. **Cooperation with Local Leaders and NGOs:** Collaborate with religious leaders, local leaders, and NGOs to provide interventions that are widely accepted, sustainable, and suitable for the area.

6. **Policy Development and Support:** At the national and local levels, encourage legislators to create and implement plans to limit the availability of substances, control drug sales, and advance preventive health initiatives.

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