Austin Journal of Drug Abuse and Addiction

Open Access

Austin Publishing Group

Research Article

Prevalence of Psychological Disorders among Substance Abusers in Saudi Arabia: A Systematic Review

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Received: July 31, 2024
Accepted: August 23, 2024
Published: August 30, 2024

Abstract

Objectives: To compile the findings of the literature that shed light on the psychological aspects of substance abuse among PWUD in Saudi Arabia.

Methods: A thorough search of pertinent databases was done in order to find studies that satisfied the requirements for inclusion. A thorough search of PubMed, Web of Science, SCOPUS, and Science Direct was conducted to find pertinent literature.

Results: Six studies, including a total of 1905 participants, and 761 (39.9%) of them were females, were included in our data. The prevalence of depression ranged from 4.8% to 92.5% among poly-drug users and the prevalence of anxiety ranged from 3.3% among poly-drug users to 65.7% among khat abusers. Stress, suicidal thoughts, stress, and psychosis were also among the reported psychiatric disorders associated with substance abuse. Males were more likely to suffer from substance misuse and psychiatric neurosis is linked to anxiety and traumatic childhood experiences. However, females were more likely to use khat with greater anxiety symptoms. Suicidal thoughts can be triggered in polysubstance abusers by associated long-term substance usage.

Conclusion: Substance abuse is a critical issue among the Saudi population. The comorbid incidence of psychiatric symptoms such as depression, anxiety, stress, psychosis, and suicidal thoughts was significant among PWUD. Future scientific research of this kind will yield valuable information for creating community education and campaigns, giving parents more knowledge and resources to deal with substance use in the home.

Keywords: Substance abuse; Drug abuse; Psychological disorders; Systematic review

Abbreviations: PWUD: Persons Who Use Drugs.

Introduction

Drug abuse, also known as substance abuse, is a medical illness that results from long-term drug use and is characterized by a range of behavioral, physiological, and cognitive symptoms that a PWUD experiences [1]. The PWUD's continued drug usage in spite of serious negative effects is a defining feature of this illness. The PWUD, their family members, and society at large incur significant financial, psychological, and bodily expenses as a result of substance misuse [2]. A recent United Nations Drug Report (UNODC) indicated that 271 million people, or 5.5% of the world's population between the ages of 15 and 64, had used drugs in the year prior [3]. Furthermore, 35 million individuals obtained treatment services and received a diagnosis for substance abuse [3].

As an Islamic nation, Saudi Arabia's societal norms and values are deeply ingrained in religion. Although alcohol and narcotic substances are prohibited both religiously and legally, some Saudis do use alcohol and drugs [4]. Seven to eight percent of Saudis report using drugs [5, 6]; the age range of all PWUDs is twelve to twenty-two years old [5]. Amphetamines, heroin, alcohol, and cannabis are the most commonly abused substances among Saudis, and most PWUDs are multi-drug addicts [7]. During the past ten years, the use of cannabis and amphetamines has risen, while the use of heroin and volatile substances has declined [4,8]. A percentage of Saudi women also take drugs, and this percentage might be rising [9]. Due to the severe gender segregation and restrictive social structure in Saudi Arabia,

Citation: Ali A, Zangooty, Al-Arjan S. Prevalence of Psychological Disorders among Substance Abusers in Saudi Arabia: A Systematic Review. Austin J Drug Abuse and Addic. 2024; 5(1): 1012.

women do not have as easy access to drugs as males do. Consequently, women are more likely to use rudimentary and flammable materials like gasoline, glue, and shisha [9].

According to the National Commission for Drug Control, substance abuse is on the rise in Saudi Arabia in 2018 and is linked to a number of medical conditions, mental health issues, and negative effects on education, employment, society, and the law. The most often misused substances among Saudi patients were cannabis, alcohol, heroin, and amphetamine; peer pressure and psychosocial stressors were the main risk factors [10].

The main objective of this systematic review was to compile the findings of the literature that shed light on the psychological aspects of substance abuse among PWUD in Saudi Arabia by synthesizing current literature, identifying knowledge gaps, and offering insights for future research and clinical practice.

Methods

For the purposes of this systematic review, we complied with the guidelines provided in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA.11). A database search was conducted electronically to locate English-language research using PubMed, Web of Science, SCOPUS, and Science Direct. Relevant keywords were included in the search strategy for these situations; “Substance abuse,” “Drug abuse,” “Drug dependence,” “Psychological symptoms,” and “Psychiatric disorders.” To evaluate the quality of the included research, the writers independently examined the search results, selected relevant papers, gathered information, and applied the appropriate evaluation techniques.

Eligibility Criteria

The inclusion criteria for this review encompass studies that report the relationship between psychiatric disorders and substance abuse, specifically focusing on the prevalence of psychiatric symptoms or disorders among people who use drugs (PWUD). Eligible studies must have been conducted in Saudi Arabia and published in the English language. The types of studies considered include randomized controlled trials, cohort studies, case-control studies, and cross-sectional studies.

Conversely, the exclusion Criteria involve studies not published in English, review articles, case reports, letters to the editors, commentaries, and case series will be excluded. Additionally, studies with insufficient data or unclear methodology, as well as those with overlapping data or duplicate publications, will not be considered.

Data Extraction

To ensure accuracy, Rayyan (QCRI) was utilized to check the search results [12]. The relevance of the titles and abstracts that the search turned up was assessed using the inclusion and exclusion criteria. The study team gave careful consideration to the papers that met the inclusion conditions. Disagreements were resolved by consensus. Using a predetermined data extraction form, key study data, such as titles, authors, publication year, study location, gender distribution, age, substance use, the prevalence of psychiatric disorders (e.g. depression, anxiety, stress… etc.), and main outcomes were documented. To evaluate the possibility of bias, an impartial assessment instrument was created.

Data Synthesis Strategy

In order to provide a qualitative evaluation, summaries of the research findings and elements were prepared using data from relevant studies. Once the data collection for the systematic review was completed, the optimal approach to utilizing the included studies' data was determined.

Risk of Bias Assessment

The quality of the study was evaluated using the critical assessment criteria for studies reporting prevalence data, as outlined by the Joanna Briggs Institute (JBI) [13]. There were nine questions on this tool. A good response received a score of one, while a negative, unclear, or irrelevant response received a score of zero. The scores below 4, between 5 and 7, and above 8 will be classified as low quality, moderate quality, and high quality, accordingly. Researchers separately assessed the studies' quality, and disagreements were resolved through dialogue.

Results

Systematic Search Outcomes

After 385 duplicates were removed, a total of 766 study papers were found through a systematic search. After 381 studies had their titles and abstracts evaluated, 296 papers were discarded. Merely 2 articles were not located out of the 85 reports that were required to be retrieved. 83 articles passed the screening process for full-text evaluation; 69 were rejected due to incorrect study results, 6 due to incorrect population type, and 2 articles were editor's letters. Six research publications in this systematic review satisfied the requirements for eligibility. An overview of the procedure used to choose the research is illustrated in Figure 1.

Sociodemographic Features of the Comprised Studies

The research publications' sociodemographic information is displayed in Table 1. Six studies, including a total of 1905 participants, and 761 (39.9%) of them were females, were included in our data. All of the included studies were cross-sectional [14-

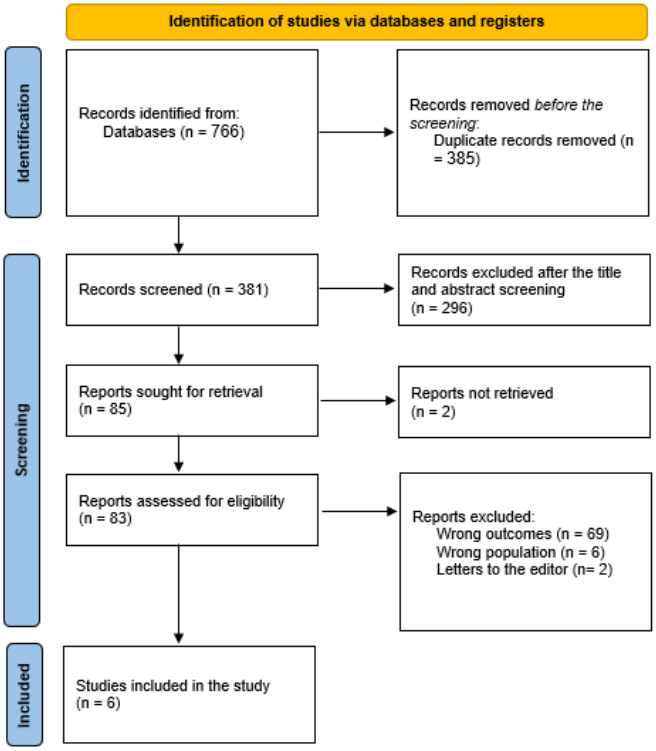

Figure 1: Study decision is summed up in a PRISMA diagram.

Table 1: The sociodemographic attributes of the participating populations.

Study	Study design	City	Participants	Mean age/ range	Females (%)
Bahhawi et al., 2018 [14]	Cross-sectional	Jazan	642	22.14 (1.7)	314 (48.9%)
Alibrahim et al., 2012 [15]	Cross-sectional	Jeddah	69	19.3 (7.2)	10 (10%)
Youssef et al., 2016 [16]	Cross-sectional	Al-Baha	122	32.9 (5.9)	0
Alharbi et al., 2023 [17]	Cross-sectional	Makkah	720	18-30	424 (58.9%)
Hussein et al., 2015 [18]	Cross-sectional	Medina	187	27.9	13 (7%)
Alzahrani et al., 2015 [19]	Cross-sectional	Jeddah	165	18-50	0

Table 2: Clinical features and results of the included research.

Study ID	Substance used	Depression (%)	Anxiety (%)	Others (%)	Main outcomes	JBI
Bahhawi et al., 2018 [14]	Khat	344 (53.6%)	422 (65.7%)	Stress (50.8%)	Anxiety was linked to the usage of Khat, and female students had greater rates of tension, anxiety, and depression symptoms.	High
Alibrahim et al., 2012 [15]	Opiates, cannabis, and amphetamines.	NM	NM	33 (47.7%)	When using or quitting illicit substances, the majority of teenage drug users who are reliant on them exhibit psychotic symptoms. The severity of the diseases linked to the usage of poly-drugs was correlated with an increase in psychotic symptoms.	Moderate
Youssef et al., 2016 [16]	Amphetamine, Cannabis, alcohol, volatile substances, and minor tranquilizers	23 (18.9%)	4 (3.3%)	Suicidal 79 (64.7%)	Suicidal thoughts can be triggered in polysubstance abusers by associated long-term substance usage, and concomitant mental problems, particularly when there is a disordered mood component. Substance misuse frequently results in depression and an increased risk of suicide.	Moderate
Alharbi et al., 2023 [17]	Poly-drug	148 (20.6%)	153 (21.3%)	Stress 54 (7.5%)	Males are more likely to suffer from substance misuse, and psychiatric neurosis is linked to anxiety and traumatic childhood experiences. Substance abuse also positively connects with sociodemographic information.	Moderate
Hussein et al., 2015 [18]	Stimulants, cannabis, alcohol, solvents, benzodiazepines, and morphia	9 (4.8%)	NM	Psychosis disorder 79 (42%)	Drug abuse is prevalent among first-episode psychosis sufferers. Stimulants like alcohol and cannabis were the most often used substances. The most prevalent demographics for substance usage are Saudi nationals, men, those with higher education levels, and single people.	Moderate
Alzahrani et al., 2015 [19]	Amphetamine, heroin, volatiles, alcohol, and cannabis	153 (92.5%)	NM	NM	In Saudi Arabia, the prevalence of depression among substance abusers is significant. The length of substance addiction is substantially correlated with both prevalence and comorbidity.	Moderate

*NM=Not-mentioned

19]. One study was conducted in Jazan [14], two in Jeddah [15, 19], one in Al-Baha [16], one in Makkah [17], and one in Madinah [18]. The earliest study was conducted in 2012 [15] and the latest in 2023 [17].

Clinical Outcomes (Table 2)

The prevalence of depression ranged from 4.8% [18] to 92.5% among poly-drug users [19]. The prevalence of anxiety ranged from 3.3% among poly-drug users [16] to 65.7% among khat abusers [19]. Stress (50.8%) [14], suicidal thoughts (64.7%) [16], stress (7.5%) [17], and psychosis (42%) [18] were also among the reported psychiatric disorders associated with substance abuse. Males were more likely to suffer from substance misuse and psychiatric neurosis is linked to anxiety and traumatic childhood experiences [17,19]. However, females were more likely to use khat with greater anxiety symptoms [14]. Suicidal thoughts can be triggered in polysubstance abusers by associated long-term substance usage, and concomitant mental problems, particularly when there is a disordered mood component [16].

Discussion

This review found that the prevalence of depression ranged from 4.8% [18] to 92.5% among poly-drug users [19] and the prevalence of anxiety ranged from 3.3% among poly-drug users [16] to 65.7% among khat abusers [19]. Foulds *et al.* reported that within the first three to six weeks of treatment, the mean level of depression significantly improved in patients with an alcohol use problem and depressive symptoms; after three months, the mean level of depression plateaued. The degree of improvement was similar in participants with high baseline levels of depression across investigations [20]. Lai *et al.* confirmed the substantial correlation between SUDs, mood, and anxiety disorders. The problem is now acknowledged globally as a factor influencing the characteristics, progression, patterns, severity, and results of various disorders [21]. Some current research on the risk of teenage drug use and social, familial, and personal preventive factors has been covered in this review. We suggest that more attention should be paid to individual factors since they were the subject of discussion for the bulk of the findings. Given the growing tendency of drug abuse, it will be imperative to focus research in this area. Studies that are more regionally focused, especially those that address demographic issues, might yield more applicable findings, making them more beneficial for organizing and assessing regional control and prevention programs. Adolescents have specific developmental milestones that must be acknowledged, and a variety of theory-based psychotherapies can be employed as examples of interventions. Substance misuse and alcoholism are directly related to the psychological components of society. Substance abuse and psychosocial determinants of an individual can occasionally be attributed to society. Substance misuse therefore has an impact on the psychological environment [22,23].

We found that stress (50.8%) [14], suicidal thoughts (64.7%) [16], stress (7.5%) [17], and psychosis (42%) [18] were also among the reported psychiatric disorders associated with substance abuse. Males are more likely to suffer from substance misuse, and psychiatric neurosis is linked to anxiety and traumatic childhood experiences [19]. However, females were more likely to use khat with greater anxiety symptoms [14]. According to a meta-analysis by Edwards & Atkins, there is a 122% rise in the prevalence of mental symptoms, especially psychiatric distress, when khat consumption is present [24].

Saudi Arabian culture revolves around the family and religion, although these have not been thoroughly examined in the context of SUD. For instance, the average Saudi family is far larger than that of their Western counterparts, and many Saudi men have more than one wife. It is unknown how this impact the parent-child bond. Similarly, a child's development of substance use is likely influenced by a number of factors, including the parent's employment and educational background, drug use by parents and siblings, parental enabling behaviors, and the religious atmosphere of the family.

Limitations

Although this work draws upon the results of a comprehensive assessment of studies conducted in various circumstances, it has several possible drawbacks. We may have missed some other important components because we restricted our article extraction to the four search engines above and only included English articles. This research is more tightly focused because the review focused on Saudi drug abuse studies rather than the broader context of substance misuse, which includes alcohol and tobacco.

Conclusion

This review demonstrated that substance abuse is a critical issue among the Saudi population. The comorbid incidence of psychiatric symptoms such as depression, anxiety, stress, psychosis, and suicidal thoughts was significant among PWUD. Future scientific research of this kind will yield valuable information for creating community education and/or awareness campaigns, giving parents more knowledge and resources to deal with substance use in the home. Secondly, these data can serve as a foundation for creating and evaluating interventions meant to stop drug use, lessen harm, and enhance and customize treatment plans.

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