

Drug Addiction Clinical Study Among Patients Admitted to the Alqana Center for Social Rehabilitation

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KEYWORDS

Drug Addiction, Drug Abuse, Dependence

ABSTRACT

Background: Drug addiction is a worldwide issue; 5.6% of the world's population aged 15 to 64 took drugs at least once in 2016. For the majority of medicines, younger individuals use them more than older people do. Drug abuse seems to be on the increase in several ASEAN (Association of Southeast Asian Nations) countries, particularly among young men aged 15 to 30. Illicit drug abuse account for around 14% of the overall health burden among young males. Younger individuals are also more prone to die from drug abuse issues. **Aims of study** is to assess the severity of problems related to drug addiction. in Baghdad city and to study epidemiological features of drug addiction among Patients Admitted to the Alqana Center for Social Rehabilitation. Patients and methods: An analytical cross-sectional study of 300 individuals diagnosed as a drug addiction patient according to the criteria established by the "Diagnostic and Statistical Manual of Mental Disorders", Fifth Edition, text revision, often called the DSM-V-TR or DSM-5-TR. From the medical department at Alqana Center for Social Rehabilitation in Baghdad. The research was carried out from 25/December/2023 to 30/June/2024. **Results:** the demographic characteristics of the study sample. In with a mean and a standard deviation (SD) of age of 29.33 ± 18.68 . Individuals aged 20-29 year had the highest proportion to addiction, with a rate of 42.7%. Conversely, 89.3% of the participants were male. The majority, 86.7%, live in urban regions. The majority of patients had 51.7% unmarried, with only 36.0% being married and 12.3% was divorced. The main rate among drug addiction patients was 38.7% primary education, 33.0% secondary education, and 16.0% was illiterate patient, while lowest patient 12.3% at collage. According to the statistics in the table, 76.3% of the participants were free business. 95.0% cigarette smoker. presented the result of psychological symptoms as show 93.0% of study addictive patient have mood swings, and in the same table the behavioral and social symptoms showed as 97.0% of study patient had poor performance and/or attendance at work or school. Also, physical symptoms of addiction showed as 74.7% of patient suffering from disrupted sleep patterns, including insomnia Regarding to the withdrawal symptoms of drug addiction presented in Table (3), results showed as 95.7% fatigue, 85.3% muscle pain or aches, 81.0% irritability and agitation, 76.0% trembling and tremors, 69.3% hunger, 50.7% anxiety, 36.7% sweating, 30.7% insomnia, 25.3% loss of appetite, 22.7% depression, 20.7% confusion, 22.3% nausea, 9.3% seizures, 8.0% dilated pupils, 3.3% vomiting, and 2.3% paranoia. **Conclusion:** the majority of addicted patient was male. the main symptoms were Poor performance and/or attendance at work or school and mood swing. The highly complication was fatigue. Regarding the way of addiction, the tablets is vast majority and enjoyment is the most common cause of addiction. **Recommendations:** It's possible that other important differences between the factors seen in this study would become clearer if multicenter study, the sample size was larger and the duration of the addiction study had been longer.

1. Introduction

Addiction is a chronic medical disorder defined by a person's inability to resist the temptation to take drugs even when there are severe implications on the health and daily lives of the addicted individual, their family, and society in general (Volkow, 2010). It is characterized by acute and, at times, overwhelming drug need, combined with compulsive drug seeking and use that continue even in the face of disastrous consequences. This update of the National Institute on Drug Abuse's Principles of Drug Addiction Treatment is meant to treat addiction to a broad array of substances, including nicotine, alcohol, and illegal and prescription medications. It is aimed to serve as a resource for healthcare practitioners, family members, and other stakeholders working to address the various challenges encountered by people in need of treatment for substance misuse or addiction (Volkow, 2018). Addiction has an impact

on several brain circuits, including those responsible for reward and motivation, memory and learning, and inhibitory control over behavior. That is why addiction is considered a brain disorder. Some people are more susceptible to addiction than others, based on a combination of genetics, age of drug exposure, and other environmental factors. While a person first chooses to consume drugs, the consequences of extended exposure on brain functioning impair that capacity over time, and seeking and consuming the substance becomes compulsive, frequently evading a person's self-control or willpower (Volkow, 2018).

Drug usage remains prevalent globally. In 2021, (1 in every 17) persons aged (15 – 64) in the world had taken a substance in the previous 12 months. The predicted number of addicts in 2021 is 296 million (5.8% of the world population aged 15-64) (UNODC, 2023). The patients treated by the health institutions increased steadily from 2979 in 2017 to 6101 in 2021, demonstrating a clear trend toward an increase in drug addiction victims. During the same period, the number of people appearing in front of judges in Iraqi courts increased by over twofold, from 6393 to 14391 (Muzil et al., 2023).

The issue of drug addiction stems from several aspects: family-related sources, such as mother-father connections, the way parents nurture their children, the financial status of the family, and the community, such as unlawful meeting places, improper or poor morals, and neglect. The individuals adolescents spend time with also effect his/her behaviors. Adolescents who have friends taking drugs are more prone to become addicts themselves. Friends tend to introduce others to drug usage. Another element impacting drug misuse is the lack of information of the substance's effects (Gunjan, 2020)

Addiction therapy is costly and complex, demanding comprehensive medical systems with diverse approaches to drug treatment, therapies, and rehabilitation. However, over time, it has been shown that even the most successful treatment techniques are accompanied with substantial recurrence rates. Any success in this therapy may be foiled by environmental risk factors such as easy access to drugs and a social circle of people who encourage and sustain drug misuse. Therefore, dependency on drugs preventive is less difficult than therapy (Habibi et al., 2021).

2. Patients and methods

The study adopted a cross-sectional design to recruit (300) subjects diagnosed as drug addiction in the Baghdad governorate, consistent with American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Sampled data were collected during the patients' admitted to Alqana Center for Social Rehabilitation; variables included socio-demographic, clinical, and epidemiological.

The sites' exclusion criteria included patients less than 18 years old, and addicted on alcohol or other substance not drug

3. Statistical analysis

The coding of the responses was done, entered into IBM SPSS-29 and data presentation and analysis conducted. The descriptive analysis used frequency, percentage, added mean standard deviation, and range which is the difference in the minimum and maximum values.

Students-t-test, Paired-t-test, or ANOVA tests were used to determine the significance of difference of means (quantitative data). The

differences in categorical data were determined by Pearson Chi-square test (χ^2 -test) with Yate's correction or Fisher Exact test where appropriate. P values of 0.05 or less indicated statistical significance.

4. Ethics

The participants in this study signed informed consent form and ethical clearance was sought from the medical department at Alqana Center for Social Rehabilitation as well as the College of Health and Medical Techniques in Baghdad. The subjects' consent was sought and obtained prior to the study as per the standards recommended in the Declaration of Helsinki on use of human subjects for research in 1964.

5. Results

Table (1) Shows some of the demographic characteristics of the study sample. In with a mean and a standard deviation (SD) of age of 29.33 ± 18.68 . Individuals aged 20-29 year had the highest proportion to addiction, with a rate of 42.7%. Conversely, the age group with the lowest frequency, people at aged 50-59 years was 0.7%, 89.3% of the participants were male, while 10.7% were female. The majority, 86.7%, live in urban regions, while the remaining 13.3% live in rural areas. The majority of patients had 51.7% unmarried, with only 36.0% being married and 12.3% was divorced. The main rate among drug addiction patients was 38.7% primary education, 33.0% secondary education, and 16.0% was illiterate patient, while lowest patient 12.3% at collage. According to the statistics in the table, 76.3% of the participants were free business, 65.0% of patient lived with 4-6 family members, 27.6% of married and divorced patient had 2 child, 95.0% cigarette smoker and 59.3 of smoker smoking ≤ 20 cigar daily for (1-5) year majority 41.1% (4-1).

Table 1: distribution of demographic characteristic among drug addiction patients

Demographic characteristic		No	%
Age (years)	≤ 20	38	12.7
	20-29	128	42.7
	30-39	94	31.3
	40-49	33	11
	50-59	2	0.7
	≥ 60	5	1.7
	Mean $\pm$ SD (Range)	29.33 ± 8.74 (18-68)	
Sex	Male	268	89.3
	Female	32	10.7
Residency	Urban	260	86.7
	Rural	40	13.3
Educational level	Illiterate	48	16
	Primary	116	38.7
	Secondary	99	33
	College	37	12.3
number of family members	1--3	49	16.3
	4--6	195	65.0
	7--9	43	14.3
	≥ 10	13	4.3
Current marital status	Married	108	36
	Unmarried	155	51.7
	Divorced	37	12.3
Number of children (for	0	20	13.8
	1	32	22.1

married & divorced=145)	2	40	27.6
	3	32	22.1
	4	16	11
	5+	5	3.4
	Mean ± SD(Range)	2.05±1.33 (0-5)	
Occupation	Employed	28	9.3
	Unemployed	43	14.3
	Free Business	229	76.3
Smoking	Yes	285	95
	NO	15	5

In table (2) presented the result of psychological symptoms as show 93.0% of study addictive patient have mood swings, 75.0% used drug to get euphoria, while 71.0% had agitation, 68.3% paranoia, 65.0% increase temper, 57.3% had memory problem, 49.3% defensiveness, 46.0% tiredness, and 25.0% inability to focus or concentrate And in the same table the behavioral and social symptoms showed as 97.0% of study patient had poor performance and/or attendance at work or school, 92.0% secretive or dishonest behavior, 90.3% withdrawing from responsibility and socializing, while 61.3% of addicting patient trying but failing to reduce or stop misusing a substance, or engaging in certain behaviors, 24.3% Continuing to use the substance, or engage in certain behaviors, despite the negative consequences that these cause, and 23.3% losing interest in activities, hobbies or events that were once important to you. Also, physical symptoms of addiction showed as 74.7% of patient suffering from disrupted sleep patterns, including insomnia, and 16.0% lack of concern over physical appearance/personal hygiene The other symptoms and behaviors of addicted patient are 78.0% using substances even when you're alone, while 65.3% neglecting to eat, and 58.7% had confusion.

Table (2) Symptoms of drug addiction among study patients

Symptoms of drug addiction		No.	%
Psychological symptoms of addiction	Mood swings	280	93.3
	Increased temper	195	65
	Tiredness	138	46
	Defensiveness	148	49.3
	Agitation	213	71
	Inability to focus or concentrate	75	25
	Memory problems	172	57.3
	Paranoia	205	68.3
	euphoria	225	75
	other	4	1.3
Behavioral and social symptoms of addiction	Secretive or dishonest behavior	276	92
	Poor performance and/or attendance at work or school	291	97
	Withdrawing from responsibility and socializing	271	90.3
	Losing interest in activities, hobbies or events that were once important to you	70	23.3
	Continuing to use the substance, or engage in certain behaviors, despite the negative consequences that these cause	73	24.3

	Trying but failing to reduce or stop misusing a substance, or engaging in certain behaviors	184	61.3
Physical symptoms of addiction	Lack of concern over physical appearance/personal hygiene	48	16
	Disrupted sleep patterns, including insomnia	224	74.7
other symptoms and behavior of addiction	Confusion	176	58.7
	Neglecting to eat	196	65.3
	Using substances even when you're alone	234	78

Regarding to the withdrawal symptoms of drug addiction presented in Table (3), results showed as 95.7% fatigue, 85.3% muscle pain or aches, 81.0% irritability and agitation, 76.0% trembling and tremors, 69.3% hunger, 50.7% anxiety, 36.7% sweating, 30.7% insomnia, 25.3% loss of appetite, 22.7% depression, 20.7% confusion, 22.3% nausea, 9.3% seizures, 8.0% dilated pupils, 3.3% vomiting, and 2.3% paranoia

Table (3): Withdrawal symptoms of drug addiction among study patients

Withdrawal symptoms of addictive drugs		No.	%
Fatigue		288	96
Muscle pain or aches		256	85.3
Irritability and agitation		243	81
Trembling and tremors		228	76
Hunger		208	69.3
Anxiety		152	50.7
Sweating		110	36.7
Insomnia		92	30.7
loss of appetite		76	25.3
Depression		68	22.7
Nausea		67	22.3
Confusion		62	20.7
Seizures		28	9.3
Dilated pupils		24	8
Vomiting		10	3.3
Paranoia		7	2.3
Others	Abdominal pain	1	0.3
	Mood swing	1	0.3

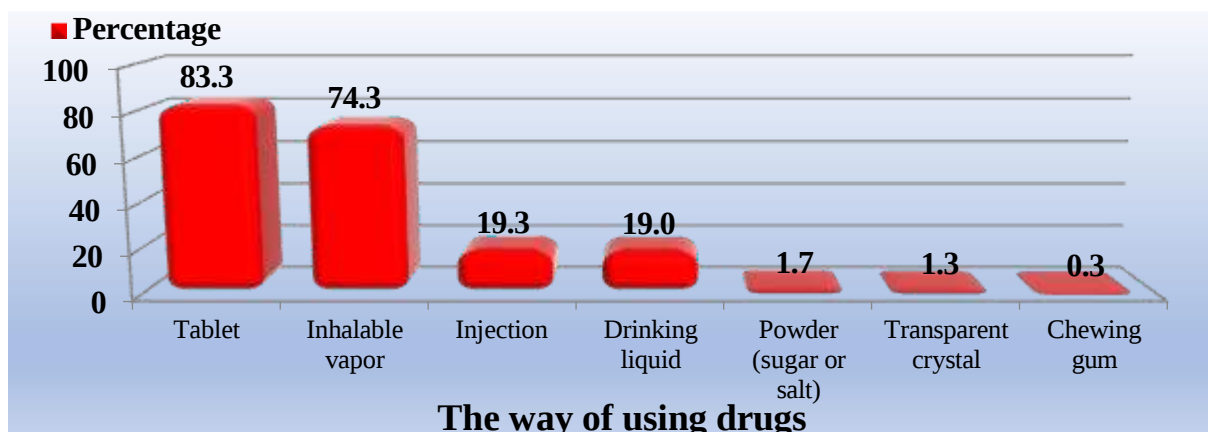


Figure (1) the way of using addictive drug by study patients.

Figure (1): presented the different form of drug that taken by addicted patient and the most common form is tablets at 83.3% percent, and following by 74.3% inhalable vapor, were injection is compromised 19.3% of drugs form ,19.0% drinking liquid ,1.7% powder (sugar OR salt), and minimum drug form is chewing gum 0.3% percent.

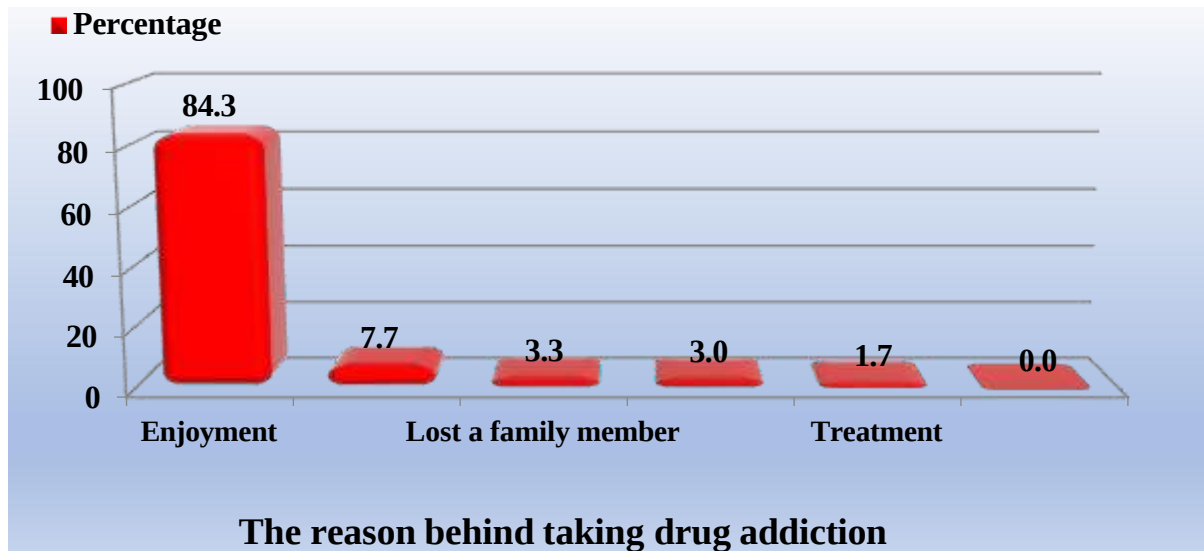


Figure 2: The reason behind taking drug addiction

Figure (2): Show the reason behind taking drug addiction in this study is vary between 84.3% enjoyment, 7.3% work load, 3.0% employment, 1.7% treatment, 1.0% father dead, 0.7% son dead and home disputes at the same percentage, and the last reason 0.3% study load, sister and mother dead, brother dead, and divorce

6. Discussion

Most individuals were in the third decade of life with mean age of drug addicted patient and standard division was (29.3 ± 8.7) .

This result is compatible with several studies carried out in different countries including; (Sahar, 2019) in Iraq were 36.94 ± 11.93 years; (Mohamed *et al.*, 2020) in Egypt was 28.1 ± 6.5 year among addicted patient; (Farook *et al.*, 2022) in Afghanistan was 30.7 ± 11.4 years; (Kassani *et al.*, 2015) in Iran was 31.03 ± 7.68 years. The most prevalent cause of higher addiction in that age is peer pressure, neighborhood influence, entertainment, mental health issues, and media are lead of youth drug addiction (Ahmed *et al.*, 2022)

Other studies that disagree with this study include; (Chen *et al.*, 2022) that conducted in Taiwan was 17.25 ± 1.33 years

Male patients were (89.3 %) of studied sample while Females only (10.7%) of included patients with a ratio 8.4:1. This study showed a high male to female ratio and these results were consistent with other studies; (Sahar, 2019) in Iraq were (88.0%) male and (12.0%) female ; (Abdelrehim *et al.*, 2022) in Egypt was (96.7%) male and (3.3%) female; (Chaman *et al.*, 2020) in Iran were (86.7%) male and (13.3%) female; (Dewabhrata *et al.*, 2023) in Indonesia were (89.2%) male and (10.8%) female; (Abazid *et al.*, 2020) in Syria was male (92.0%), and female (8.0%);

While in other study (Ma *et al.*, 2022) in China the result disagree with sex in this study were the male (70.3%) and female was (29.7%); (Chen *et al.*, 2022) In Taiwan were (71.7 %) male and (28.3%) female. Unlike their male counterparts, females may experience more difficulties in trying to acquire drugs in an Islamic society, because of restrictions on female socializations. (Al-Kandari *et al.*, 2007)

In the present study, according to residence of addicted patient approximately (86.7%) was urban area and (13.3%) was rural area. That disagree to this study like (Farook *et al.*, 2022) were (60.5%) of the subjects living in the rural area and (39.5%) living in urban area; (Chaman *et al.*, 2020) in Iran were (65.0%) urban and (35.0%) was rural. *****

The majority of study sample were reported to have primary education (38.7%), while secondary (33.0%), illiterate (16.0%) and only (12.3%) had college or higher degree. The present findings also support (Abdelrehim *et al.*, 2022) in Egypt were primary education (29.3%), illiterate (14.0%) and only (13.3%) had college or higher degree. While the same study secondary education (43.3%) is disagreed to this study. ****

In this study highest number of family member are five or more 191(63.7%) and minimally there are four addicted patients only living alone 4(1.3%), were the mean and standard division 5.2 ± 2.0 . The present findings also support by (Kassani *et al.*, 2015) in Iran were mean and standard division 5.01 ± 2.16 individuals. ****

In terms of marital status, were (36.0%) married, while (51.7%) single, and 17 cases (12.3%) divorced. These findings were consistent with the findings of a past study in Iran (Pourallahvirdi *et al.*, 2016) was (36.4%) married, (58.7%) single, and (3.2%) divorced; (Abdelrehim *et al.*, 2022) in Egypt were (40.0%) married, (51.3%) single, and (8.0%) divorced; (Ma *et al.*, 2022) in China were married (29.7%), single or divorce (70.3%); (Ibrahim *et al.*, 2018) in Saudi Arabia were married (35.0%), single (54.9%), and divorced (9.5%) .

And also disagree by study (Farook *et al.*, 2022) in Afghanistan were (50.6%) were married, (34.3%) were single; (Chaman *et al.*, 2020) in Iran were (77.5%) were married, (22.5%) were single. ****

According to number of children (for married and divorced 145) in this study. The mean and (SD) were 2.0 ± 1.3 and the percentage of addicted patient when have no child (13.8%), while had one child (22.1%), two child (27.6%), three child was (22.1%), four child (11.0%), and five or more child was (3.4%) this result is agreed with other study (Al-Kandari *et al.*, 2007) conducted in Kuwait were mean and (SD) was 4.0 ± 2.0 . *****

The majority of study sample were reported to have free business (76.3%), while unemployed (14.3%), and only (9.3%) was employed. This agree with what had been reports in study done in Iran (Pourallahvirdi *et al.*, 2016) was (5.5%) had employed, (67.8%) were free business*****

Regarding cigarette smoking higher percentages (95%) of studied sample were smokers and only (5%) nonsmokers. The present findings also support by (Bonfiglio *et al.*, 2022) study which concluded Italy were (87.2%) of studied sample were smokers and only (12.8%) nonsmokers; (Al-Kandari *et al.*, 2007) in Kuwait were (98.3%) of study sample was smoker , while (1.7%) nonsmokers.*****

Regarding to the finding in this study, the most common psychological symptoms of addiction is Mood swings, and euphoria. And that result is agreed with other studies that conducted in Pakistan (Jan et al., 2022) Cross-sectional studies have highlighted a significant association between highly fluctuating moods and symptoms of drug addiction. Other study in America (Bartzokis et al., 1999) that conducted that drug addiction is a multifaceted phenomenon often linked to the subjective experience of euphoria induced by psychoactive substances. And regarding to the Behavioral symptoms the highest symptoms is “Poor performance and/or attendance at work or school”, while “Secretive or dishonest behavior” was highest two, and then “Withdrawing from responsibility and socializing”. this conformed by other studies including (Khan et al., 2022) in Pakistan ;(Marques et al., 2015) in Brazil that indicated poor performance and attendance at work or school are significant symptoms associated with drug addiction, which can limit access to basic facilities and employment opportunities, ultimately leading to poor performance. And long-term drug exposure can lead to alterations in affective processing, resulting in dysfunctions in emotional experiences and processing (Wang et al., 2010). According to the physical symptoms of addiction the disrupted sleep patterns, including insomnia is highest symptoms and that agreed with other study (Valentino and Volkow, 2020) that find continuous drug administration worsens sleep disturbance, leading to insomnia during withdrawal, which may fuel drug seeking and contribute to relapse.

Regarding to withdrawal symptoms in this study the vast majority symptoms Fatigue, Muscle pain or aches, Irritability and agitation, and trembling and tremors. That finding is supported by other studies (Bradizza and Stasiewkz, 2009) (Sinha, 2011) (Contarino and Papaleo, 2005) that presented the withdrawal symptoms play an important part in the persistence of addiction as well as the difficulties encountered during treatment and rehabilitation. These symptoms, including as weariness, muscular soreness or pains, irritability and agitation, and shaking and tremors, have been widely reported across many drugs of abuse.

The most common way to addiction in this study is throw tablets and that supported by other studies including (Simonovska et al., 2020) in North Macedonia that mention the cause as availability and ease of consumption of tablets make them a popular choice among drug users, contributing to their high prevalence in drug addiction cases, and also the recreational use of tablets to enhance the effects of other substances like alcohol and opiates make them appealing to individuals susceptible to addiction. While the second common way is by the inhalation of vaporized substances. That can lead to addiction due to its rapid delivery of substances to the brain, resulting in intense and immediate effects (Vendruscolo et al., 2018). This route of administration is favored by drug users as it can provide a less immediate danger and make the drug easier to use, as seen with heroin vapor inhalation (Kashyap et al., 2020) .The euphoria and impairments in motor control caused by inhaling vapors can contribute to the addictive nature of this method (Samuel-Herter et al., 2014).

Regarding the reason of drug addiction in this study find the enjoyment in vast majority reason. And that supported by several studies including; (Devgan et al., 2019) conducted in India that highlighted

the role of enjoyment as a primary reason for starting substance use. found that respondents cited enjoyment as the main reason for starting drugs.

7. Conclusions

The demographic characteristics of the sample are predominantly young, male, urban residents with varying levels of education, mostly unmarried, with a significant number of smokers. These characteristics should be taken into account when interpreting the results of any studies involving this population. The results reveal also, a pattern of drug use that begins early in life, often continues into adulthood, and is characterized by regular, daily use, particularly in private or social settings. These findings underscore the importance of early intervention and education programs aimed at preventing drug initiation, especially among adolescents and young adults. Additionally, strategies to address the social and environmental factors that contribute to drug use in domestic and peer settings may be beneficial in reducing the prevalence of drug use within this population.

And the findings from the DAST-20 score among this group reveal a pervasive pattern of substance use associated with a wide range of negative consequences, affecting personal health, social relationships, and occupational functioning. These results highlight the urgent need for comprehensive substance abuse prevention and intervention strategies to address these issues.

8. Limitations

There are some limits that stand out. Even though the study only looked at one center, the sample size is about the smiler as in a number of other studies.

9. Recommendations

It's possible that other important differences between the factors seen in this study would become clearer if multicenter study, the sample size was larger and the duration of the addiction study had been longer.

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