Original Research

Magnitude of Substance Use & Associated Factors Among Adult Psychiatric Patients in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia

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Abstract

Background: Substance use is one of the most serious and expanding public health issues in Ethiopia. People who suffer from psychiatric disorders are more likely than the general population to have substance use problems. Substance use has a negative effect on psychological health, leading to higher levels of addiction-related problems and poorer outcomes. The aim of the study was to assess the magnitude of substance use & associated factors among adult psychiatric patients in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia.

Method: A facility-based cross-sectional study was conducted from April to June 2023 in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia. A systematic random sampling technique was used to select 408 study participants. The data collection tool is adopted from previous studies and a structured interviewer-administered questionnaire and from standard tools. The collected data was entered into EpiData and then exported into SPSS version 23 statistical software for Windows for analysis. Then, binary logistic regression analysis was carried out to identify the association between dependent and independent variables at a CI of 95% and a significance level of P-value < 0.05. All variables with a P value < 0.25.

Results: A total of 408 psychiatric patients participated in the study, with a 100% response rate. The prevalence of substance use among the participants was 61% (249 individuals). Several factors were found to be significantly associated with substance use. These included being male (Adjusted Odds Ratio [AOR] = 4.649; 95% CI: 2.352, 9.188), having a diagnosis of schizophrenia (AOR = 3.057; 95% CI: 1.372, 6.812), having a family history of substance use (AOR = 1.994; 95% CI: 1.075, 3.697), having friends who use substances (AOR = 5.995; 95% CI: 3.318, 10.834), and experiencing a relapse of mental illness (AOR = 3.694; 95% CI: 1.552, 8.795). These findings indicate that both individual and social factors play a significant role in substance use among psychiatric patients.

Conclusion: According to this study, the prevalence of substance use is high among facility-based surveys of psychiatric patients, suggesting the necessity of routine screening of substances for patients with psychiatric disorders.

Keywords: Substance Use, Magnitude, Psychiatric Patient, Eastern Ethiopia

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1. Introduction

Substance use is a broad term that encompasses all forms and frequencies of using harmful substances. It is the consumption of drugs or alcohol, including cigarettes, illegal narcotics, prescription medications, inhalants, and solvents [1]. According to the medical dictionary definition, substance use is defined as the inappropriate consumption of medicines, drugs, or other materials, including prescription drugs, over-the-counter drugs, alcohol, and tobacco [2]. Substance use may trigger changes in brain structure and function that make a person more likely to develop a psychiatric disorder [3,4]. A cluster of cognitive, behavioral, and physiological symptoms showing that a person uses a substance despite serious substance-related issues is the defining characteristic of a substance use disorder [5].

The National Survey on Substance Use and Health from the United States National Institute on Substance Abuse indicates that some substances are more likely to be abused than others. The following are listed as the top 10 most abused substances consecutively: Alcohol, nicotine, marijuana, cocaine, heroin and prescription opiates, lysergic acid diethylamide (LSD), tranquilizers, inhalants, MDMA, and methamphetamine [6]. As in many developing nations, substance use is one of the most serious and expanding public health issues in Ethiopia. The most popular substances are alcohol, khat, and tobacco [7-9]. Khat, hashish, alcohol, tobacco, benzodiazepines, and pethidine are substances that are commonly used in Ethiopia [10].

Substance use has a negative effect on psychological health, leading to higher levels of addiction-related problems and poorer outcomes. Several recent studies have addressed how mental health issues can increase the risk of substance abuse; this can lead to people with mental illnesses turning to alcohol or drugs to cope with the pain of their mental health issues [11]. Using drugs or alcohol, whether for other purposes or as self-medication, can exacerbate mental health problems such as schizophrenia, borderline personality disorder, bipolar disorder, anxiety, depression, or post-traumatic stress disorder and can increase the likelihood of substance use [12].

People who suffer from psychiatric disorders are more likely than the general population to have substance use problems. It makes recovering from psychiatric disorder more challenging, triggers repeated suicidal thoughts, and necessitates readmission to the hospital [13]. Mortality, morbidity, comorbidity, economic cost, and social isolation are a few potential short- and long-term effects of substance use [14, 15].

When it comes to treating substance use, there is no magic solution. It is a drawn-out procedure with a variety of services that needs repeated treatments. It might be difficult to give patients with psychological disorders high-quality medical treatment [13, 15]. Different studies conducted in Ethiopia state the legal system in Ethiopia was weak on substance control [10, 16]. There are not enough clear laws regarding substances like khat in our country, Ethiopia [10]. Enforcing strong rules and regulations on substance use and providing thorough education and support at all times is the best way to prevent substance use [10, 16].

This study was designed to describe the significance from several perspectives. Firstly, in Ethiopia, particularly in the study area, early identification will help substance-user psychiatric patients. Having data regarding the burden of substance use among psychiatric patients will help both Dilchora Referral Hospital and Hiwot Fana Comprehensive Teaching Hospital and also the Dire Dawa and Harari Regional Health Bureaus effectively plan to prevent damages caused by these problems. The findings from this study will be used as a reference for future researchers who want to undertake similar studies in the country.

2. Methods and Materials

2.1. Study Area, Period and Design

The study was conducted in Dilchora Referral Hospital in Dire Dawa City Administration and Hiwot Fana Comprehensive Specialized Hospital in Harar Town, Harari Region, Eastern Ethiopia. Dire Dawa is among the Ethiopian Federal administrative towns located in the eastern part of the country at a distance of 515 kilometers from Addis Ababa and has a total population of 493,000 in 2019 with an estimated area of 1,213 square kilometers. According to the 2012 Health and Health-Related Indicators published by FMOH, Dire Dawa has two public hospitals, 15 health centers, and 36 health posts.

"The Harari Region is situated about 512 kilometers east of Addis Ababa. According to the 2017 Central Statistical Agency (CSA) report, the region has an estimated population of 246,000 and covers an area of approximately 334 square kilometers. As reported in the 2012 Health and Health-Related Indicators of the Ministry of Health, Harar hosts two public hospitals, two federal hospitals (Defense Force and Police), two private hospitals, eight health centers, and 28 health posts. The study was conducted between April and June 2023 using an institution-based cross-sectional design.

2.2. Population

2.2.1. Source Population

The source population was all adult patients with psychiatric disorders attending at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital.

2.2.2. Study Population

The study population was all adult patients with psychiatric disorders attending Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital during the study period.

2.3. Eligibility Criteria

2.3.1. Inclusion Criteria

- All adult psychiatric patients were included.

2.3.2. Exclusion Criteria

- Patients who were severely ill and not capable to give required information.
- Patients who visit the hospital more than one times during the study period.

2.4. Sample Size Determination

The sample size for the first objective was calculated using the single population proportion formula with the assumption of 95% CI and 40.6% from a study on the prevalence of khat use among patients with anxiety disorder in the Amhara Region of Northwest Ethiopia [17]. After adding a 10% non-response rate, the sample size was 408. Sample size for objective two was determined using the double population formula by using Epi data version 3.1 by considering the following assumptions: confidence interval (CI) 95%, ratio 1:1, and non-response rate 10%. The factors were taken from a previous study conducted in Western Ethiopia, Jimma, and Ambo [17, 18]. By comparing the calculated sample size of the first and second objectives, the largest sample size, which is 408, was taken. Therefore, the final sample size of the study was 408 patients.

2.5. Sampling Procedures

A systematic random sampling technique was used to recruit the study participants. The sample size was proportionally allocated to each hospital by using K=n/N. The total number of cases within two months in 2023 before the data collection period was 1872 in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital.

2.6. Variables of the Study

2.6.1. Dependent Variables

- Substance use (Yes/ No)

2.6.2. Independent Variables

- Socio-demographic factors: age, sex, educational level, marital status, and income
- Social factors affecting individuals' behavior: substance-user friends and substance user family members.
- Clinical-related factors: type of psychiatric disorder, total duration of illness, relapse of illness, severity of illness, suicidal attempt, level of improvement, and hospitalization.
- Psychological Factors: trauma, physical abuse.

2.7. Operational Definitions

Psychiatric disorder: The occurrence of at least one of the following: Generalized anxiety disorder, bipolar disorder, depression, schizophrenia, and PTSD in patients who attend the Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital.

Substance use: The occurrence of at least one of the following: Alcohol, khat or nicotine use current in data collection time.

Trauma: The occurring of either verbal abuse or sexual assault in patients who attend in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital.

Alcohol use disorders: A total AUDIT score of 8 was used to indicate AUD. The AUDIT scores were 8 to 15, 16 to 19, and 20. These categories indicated the degree of drinking, which corresponded to risky drinking, harmful drinking, and possibly developing alcohol dependency, respectively [18].

Nicotine dependence: Fagerstrom test scores of ≥1 indicated the existence of nicotine dependence. A score of 1 to 2 indicated low dependence, 3 to 4 low to moderate dependence, 5 to 7 moderate dependence, and 8+ indicated high dependence on nicotine [18].

Khat Addiction: By using the Severity of Dependence Scale, khat addiction was assessed among patients with psychiatric problems. A cutoff point of 6 was used to assess khat dependency [17].

Level of Improvement: The Clinical Global Impressions Scale (CGI) was used to assess improvement and severity among psychiatric patients attending Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital [18].

2.8. Data Collection Procedures

Data were collected by using a structured interviewer-administered questionnaire. The questionnaire was extracted from standard tools and adopted by reviewing different literatures. To assure uniformity, the questionnaires were prepared in English, translated into the Amharic, Afan Oromo, and Af-Somali local languages, and then back-translated to English. Lastly, the questionnaires in Amharic, Afan Oromo, and Af-Somali were used to collect data. About 6 trained psychiatric nurses participated in data collection.

2.9. Data Quality Control

In order to ensure the quality of the data, data collectors were psychiatric nurses, and training was given to all data collectors on the objective of the study, data collection methods, tools, and the consent form. Data collectors checked all questionnaires for completeness, consistency, and clearness. Local translation of the questionnaire was used to get quality data, and the questionnaire was presented to the participants in their mother tongue.

2.10. Data Analysis

After being coded and entered into EpiData version 3.1, it was exported to SPSS version 23 for data processing and analysis. Descriptive statistics were used to calculate the demographic characteristics and factors associated with substance use among the respondents and interpreted in the form of text, figures, and tables. The model of fitness was checked using the Hosmer-Lemeshow goodness-of-fitness test. In order to separately adjust for possible confounders for both outcome variables, all factors that showed a connection with substance use in the bivariate logistic regression. Crude odds ratios with their 95% confidence interval were estimated in the bivariate logistic regression analysis to assess the association between each independent variable and the outcome variable. In the bivariate logistic regression, with a p-value less than 0.25, they were put together into a multivariable logistic regression. Finally, it was determined that the correlation was statistically significant when P-values were less than 0.05. An adjusted odds ratio with a 95% confidence level was used to describe how strongly the factors were associated.

3. Results

3.1. Socio-demographic Characteristics

From a total of 408 traced psychiatric patients in Dilchora Referral Hospital in Dire Dawa town and Hiwot Fana Comprehensive Specialized Hospital in Harar town, 408 individuals participated in the study, making the response rate 100%. The majority, 241 (59.1%), of the

participants were males. The mean age of participants was 29.4 (SD ± 7.43) years, ranging from 18 to 54 years. Of the total participants, 138 (33.8%) had attended secondary education, and 86 (21.1%) of them were jobless. At the time of the study, 191 (46.8%) of the study participants were never married, and 217 (53.2%) reported a mean family income of greater than 1201 birr per month (Table 1).

Table 1: Social-demographic characteristics of study participants at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia: 2023 (n=408).

Variables	Category	Frequency (n)	Percentage (%)
Sex	Male	241	59.1
	Female	167	40.9
Educational status	No write and read	36	8.8
	Primary	127	31.1
	Secondary	137	33.6
	College/Above	108	26.5
	Merchant	27	6.6
Occupational status	Government employee	66	16.2
	Non-governmental employee	39	9.6
	Day laborer	28	6.9
	Pastoralist/Farmer	35	8.6
	Driver	33	8.1
	Jobless	86	21.1
	Student	67	16.4
	Other	27	6.6
Marital status	Never Married	190	46.6
	Married	137	33.6
	Divorced	61	15
	Widowed	20	4.9
Income	≤1201 birr	191	46.8
	≥1201 birr	217	53.2

3.2. Clinical Related Factors of the Study Participants

Among the study participants, 81 (19.9%) of them had a total duration of illness between 6 months and 1 year, while 118 (28.9%) of them had a longer total duration of illness ≥3 years. Of the total study participants, 168 (41.2%) of them had experienced relapse of illness. In terms of psychiatric disorders, the most common primary psychiatric diagnosis was schizophrenia, 127 (31.1%), followed by general anxiety disorder, 103 (25.2%), bipolar disorder, 69 (16.9%), depression, 58 (14.2%), and PTSD, 51 (12.5%). At the time of the study, 101 (24.8) were mildly ill. About 68 (16.7%) of the patients had very much improved from their illness, and 306 (75%) of participants have no history of admission. Around 57 (14%) had accounted for suicidal attempts, and of the total study participants, 249 (61%) had used different types of substances (Table 2).

Table 2: Clinical related factors of study participants at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia; 2023 (n=408)

Variables	Category	Frequency (n)	Percentage
Total duration of illness	< 1year	81	19.9
	1 -2 year	103	25.2
	2 -3year	106	26
	> 3 years	118	28.9
Relapse condition	No	240	58.8
	Yes	168	41.2
Types of psychiatric problem	General Anxiety Disorder	103	26.2
	Depression	58	14.2
	PTSD	51	12.5
	Schizophrenia	127	31.1
	Bipolar	69	16.9
Suicidal attempt	No	351	86
	Yes	57	14
Level of improvement	Not assessed	203	49.8
	Very much improved	68	16.7
	Much improved	63	15.4
	Minimally improved	33	8.1
	No change	25	6.1
	Other	15	9.9
Level of severity	Not assessed	5	1.2
	Not ill at all, Normal	55	13.5
	Borderline ill	89	21.8
	Mildly ill	102	25
	Moderately ill	83	20.3
	Markedly ill	59	14.5
	Severely ill	15	3.7
Hospitalization	Yes	306	75
	No	102	25
Current History of substance use	Yes	249	61
	No	159	39

3.3. Social Factors of the Study Participants

Regarding having a friend who uses substances, around two-thirds (236, 57.8%) of participants replied that their friends were substance users. In terms of having a substance-user family member, 159 (39%) of participants' family members were also substance users (Table 3).

Table 1: Social factors of the study participants at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia; 2023 (n=408)

Variables	Category	Frequency (n)	Percentage (%)
Substance users' friends	Yes	236	57.8
	No	172	42.2
Family history of substance use	Yes	159	39
	No	249	61

3.4. Psychological Factors

Regarding the exposure to any kind of trauma, about 51 (12.5%) of the respondents stated that they had experienced a lot of traumas. Besides, 76 (18.6%) of the respondents were physically abused (Table 4).

Table 4: Psychological factors of the study participants at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia (n=408).

Variables	Category	Frequency (n)	Percentage (%)
Trauma	Yes	51	12.5
	No	357	87.5
Physical abuse	Yes	76	18.6
	No	332	81.4

3.5. Prevalence of Substance Use in Patients with Psychiatric Problem

Those who were using any of the available types of substance or any combination of them in the study were 249 (61%) of the sample. The overall prevalence of alcohol use disorder (defined as an AUDIT score $\geq$ 8) was 22.5% (n=92). Risky drinking, harmful drinking, and alcohol dependence were found in 7.6% (n=31), 3.9% (n=16), and 11% (n=45) of the participants, respectively. The prevalence of nicotine dependence (defined as Fagerstrom test scores of $\geq$ 1) was 20.9% (n=85). Among patients with nicotine dependence, 2.9% (n=12), 6.1% (n=25), 10.3% (n=42), and 1.5% (n=6) of them had low dependence, low-to-moderate dependence, moderate dependence, and high nicotine dependence, respectively. Out of the total participants, 49.8% (n=203) of them reported that they use khat. The prevalence of khat dependence (defined as a severity of dependency scale score $\geq$ 6) was 29.9% (Figure 1).
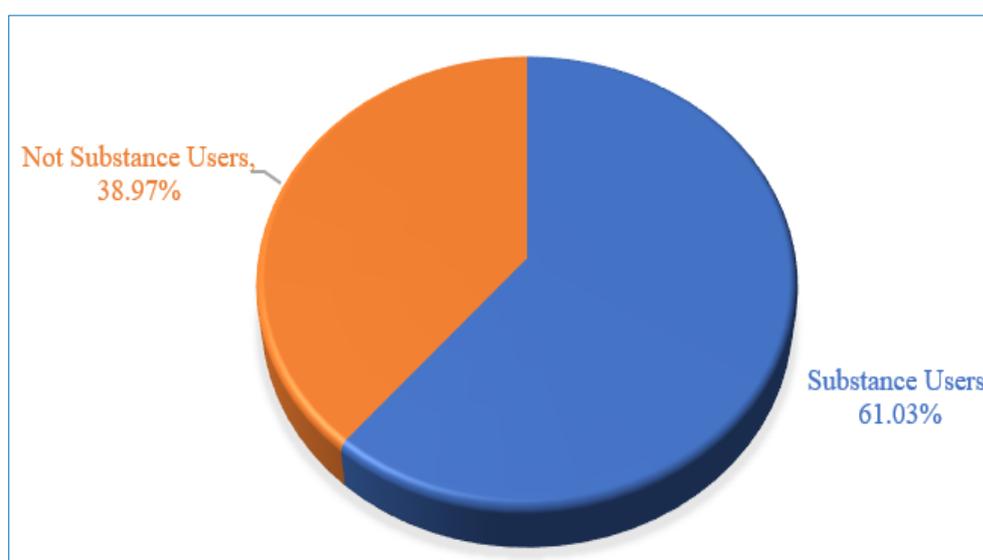

Figure 1: Percentage of Substance use practice among adult psychiatric patients in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia, 2023.

3.6. Factor Associated with Substance Use

In In the bivariate logistic regression analysis, variables with a p-value of less than 0.25 were considered eligible for inclusion in the multivariable logistic regression model. These variables included age, sex, type of psychiatric disorder, duration of illness, having a family member or friend who uses substances, history of suicide attempts, illness relapse, history of physical abuse, and level of improvement.

In the multivariable logistic regression analysis, the following factors were found to be significantly associated with substance use: being male, having a diagnosis of schizophrenia, having friends or family members who use substances, and experiencing a relapse of illness. Male participants were nearly five times more likely to use substances compared to females (AOR = 4.649, 95% CI: 2.352, 9.188). Patients diagnosed with schizophrenia had approximately three times higher odds of substance use compared to those with other psychiatric disorders (AOR = 3.057, 95% CI: 1.372, 6.812). Respondents with a family history of substance use were twice as likely to use substances compared to those without such a history (AOR = 1.994, 95% CI: 1.075, 3.697). Similarly, patients whose friends had used substances were six times more likely to engage in substance use than those whose friends did not (AOR = 5.995, 95% CI: 3.318, 10.834). Finally, patients who had experienced a relapse of their illness were three times more likely to use substances than those without a relapse history (AOR = 3.694, 95% CI: 1.552, 8.795) (Table 5).

Table 5: Bivariate and Multivariate analysis of factors associated with substance use at Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital, Eastern Ethiopia: 2023 (n=408)

Variable	Category	Substance Use		COR (95%CI)	AOR (95%CI)	P-value
		Yes	No			
Age	18-24 years	56	70	0.452 (0.144, 1.426)	1.823 (0.862, 3.858)	0.116
	25-34 years	123	67	1.012 (0.326, 3.141)	2.510 (0.834, 7.555)	0.102
	35-44 year	61	17	1.993 (0.590, 6.740)	0.496 (0.056, 4.390)	0.529
	≥ 45 years	9	5	1	1	
Sex	Male	192	49	7.562 (4.831, 11.836)	4.649 (2.352, 9.188)	< 0.001
	Female	57	110	1	1	
Type of	General anxiety	41	62	1	1	
Psychiatric	Depression	31	27	1.736 (0.907, 3.324)	1.341 (0.574, 3.129)	0.498
Disorder	PTSD	20	31	0.976 (0.491, 1.939)	0.950 (0.366, 2.465)	0.916
	Schizophrenia	104	23	6.838 (3.754, 12.488)	3,057 (1.372, 6.812)*	0.006
	Bipolar	53	16	5.009 (2.527, 9.930)	1.472 (0.567, 3.823)	0.427
Duration of	< 1 year	40	41	1	1	
illness	1 -2 year	63	40	1.614 (0.896, 2.909)	1.738 (0.778, 3.882)	0.177
	2 -3year	63	43	1.502 (0.838, 2.691)	0.665 (0.291, 1.521)	0.333
	>3 year	83	35	2.431 (1.350, 4.376)	0.398 (0.147, 1.077)	0.070
Family	Yes	117	42	2.469 (1.604, 3.802)	1.994 (1.075, 3.697) *	0.028
History of	No	132	117	1	1	
substance use						

Substance user Friends	Yes	198	38	12.362 (7.672, 19.919)	5.995 (3.318, 10.834)*	< 0.001
	No	51	121	1	1	
Suicidal Attempt	No	223	128	1	1	
	Yes	26	31	0.481 (0.274, 0.847)	0.607 (0.267, 1.380)	0.233
Relapse	No	170	139		1	
	Yes	79	20	3.230 (1.883, 5.539)	3.694 (1.552, 8.795)*	0.003
Physical Abuse	Yes	36	40	0.503 (0.304, 0.832)	0.673 (0.309, 1.462)	0.317
	No	213	119	1	1	
Level of Improvement	Not assessed	118	85	1	1	
	Very much improved	34	34	0.720 (0.415, 1.250)	0.312 (0.118, 0.821)	0.18
	Much improved	40	23	1.253 (0.699, 2.246)	0.590 (0.221, 1.573)	0.291
	Minimally improved	25	8	2.251 (0.968, 5.233)	0.687 (0.194, 2.436)	0.561
	No change	18	7	1.852 (0.741, 4.632)	0.927 (0.214, 4.011)	0.919
	Minimally worse	12	0	1.163 (0.689, 0.521)		0.999
	Much worse	2	1	1.441 (0.12, 16.147)	0.253 (0.011, 6.014)	0.395

4. Discussion

This study was conducted to assess the magnitude of substance use among adult psychiatric patients and its associated factors in Dilchora Referral Hospital and Hiwot Fana Comprehensive Specialized Hospital. Sex, types of psychiatric disorders, substance-user family members, relapse of illness, and substance-user friends were found to be associated with substance use.

The prevalence of substance use in this study area was 61% (249), which is in line with previous studies conducted in Jimma city (64.4%) [19]. This study's findings were higher than the findings of various studies conducted in psychiatric units in Ethiopia (studies conducted in southwest Ethiopia (18.5%) [20], Jimma (21.7%) [18], Addis Ababa city (24.5%) [21], and southwest Ethiopia (22.3%) [22] and also in Danish people (37%) [23]. This discrepancy could be because of the difference in study settings, in which the previous studies were conducted on only a specific type of substance, while the present study was carried out on different types of substances. Additionally, it could be due to the difference in geographical areas and cultures of the study subjects in the study done in Jimma, Addis Ababa, and southwest Ethiopia. In Eastern Ethiopia this high prevalence difference may be due to the availability of khat and nicotine, which were easily accessible at a cost patients could afford, and comorbidity in psychiatric patients is more common.

In contrast, it is lower than studies conducted in the Middle East (72%) [24], Addis Ababa (75%) [25], and Bench Shako (85%) [26]. This difference might be due to the difference in study settings, in which the previous studies were conducted on only specific types of substances, while the present study was carried out on different types of substances, or due to the difference

between the types of psychiatric disorders patients were diagnosed with in this study and the study done in Jimma that assesses only bipolar disorder and anxiety and depression in the Middle East. Additionally, it could be due to the difference in study design, study period, and the assessment of tools used.

Being male was significantly associated with substance use compared to being female (AOR = 4.649, 95% CI: 2.352, 9.188). This finding is consistent with previous studies conducted in Addis Ababa (AOR = 5.8, 95% CI: 2.55, 13.19) [27], Gondar (AOR = 3.15, 95% CI: 1.68, 7.89), and Jimma (AOR = 2.19, 95% CI: 1.25, 3.83) [22]. A possible explanation for this association is that male patients may experience less severe negative symptoms than females, making them more prone to engaging in substance use.

Relapse of psychiatric illness was also positively associated with substance use (AOR = 3.694, 95% CI: 1.552, 8.795), a finding supported by previous research conducted in Jimma [20]. Relapse may reflect a more severe form of illness characterized by a higher symptom burden, prompting patients to turn to substances as a coping mechanism. This, in turn, can hinder recovery and potentially lead to a cycle of continued substance use and worsening illness.

Having a family member who uses substances was another significant predictor of substance use (AOR = 1.994, 95% CI: 1.075, 3.697). This result aligns with findings from studies in Addis Ababa (AOR = 2.18, 95% CI: 1.29, 3.68) [21] and Bahir Dar (AOR = 1.55, 95% CI: 0.98, 2.43) [17]. The association may be explained by both genetic and environmental factors, suggesting shared etiological mechanisms underlying psychiatric disorders and substance use within families.

Furthermore, patients diagnosed with schizophrenia were more likely to use substances compared to those with other psychiatric disorders (AOR = 3.057, 95% CI: 1.372, 6.812), which is consistent with findings from a similar study in Jimma (AOR = 5.26, 95% CI: 2.07, 13.37) [20]. Individuals with schizophrenia may use various substances in an attempt to self-medicate or alleviate distressing symptoms associated with the disorder.

Lastly, having friends who use different substances was strongly associated with substance use (AOR = 5.995, 95% CI: 3.318, 10.834), a result that corresponds with findings from Jimma (AOR = 4.88, 95% CI: 2.12, 11.25) [20]. Peer influence and social pressure are likely contributing factors, as individuals may be encouraged or influenced by their social circles to engage in substance use behaviors.

5. Conclusion

The current study explained that the prevalence of substance use by psychiatric patients was comparatively high, and this entails there is poor progress and a high risk of relapse of illness. Male sex, schizophrenia disorder, substance-user friends, having a substance-user family, and having a relapse were significantly associated with substance use.

Abbreviations

ADHD - Attention-deficit hyperactivity disorder; AOR - Adjusted Odds Ratios; AUDIT - Alcohol Use Disorder Identification Test; AUDS - Alcohol Use Disorders; CD - Conduct Disorder; COR - Crude Odds Ratios; DSM - Diagnostic and Statistical Manual; FTND - Fagerstrom Test of Nicotine Dependency; PTSD - Post-Traumatic Stress Disorder; SAMHSA - United States Department of Substance Abuse and Mental Health Services; SMI - Severe Mental Illness; SPSS - Statistical Package for Social Sciences; SUD - Substance use disorder; WHO - World Health Organization.

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Author Contributions

All authors were involved in various aspects of the project, including conceptualization, fund acquisition, validation, design, data curation, resource management, project administration, methodology, data analysis, report writing, and manuscript review and approval. Additionally, all authors contributed to drafting the manuscript, revising it, and preparing the final version for submission.

Conflict of Interests

The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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Ethics Approval

Ethical clearance was obtained from Dire Dawa University's Institutional Review Board (IRB) for the Dire Dawa city administration health bureau, and a Hiwot Fana Comprehensive Specialized Hospital cooperation letter was obtained from the Dire Dawa city administration health bureau for Dilchora Referral Hospital to carry out this study. During data collection, all the study participants were clearly informed about the aims and importance of the study. The data was gathered only with the participants' verbal and written agreement.

Availability of Data and Materials

Data will be available upon request from the corresponding author.

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