

Substance Abuse among Community in Harar Town, Eastern Ethiopia; a Cross-Sectional Study

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ABSTRACT

Background: Substances are anything, that is, when taken inappropriately disturbs the normal function of the body. When substances are used appropriately, they are useful for various functions. Substance abuse is the inappropriate use of substances in a manner that leads to various deleterious problems. Self-administration of drugs for nonmedical reasons is a basic feature of substance abuse. Substance abuse is posing deleterious consequences to society. Currently, about 275 million people worldwide are exposed to substance abuse at least once during their lifetime.

Objective: To assess prevalence, knowledge and reasons about substance abuse among the community of Harar town, Eastern Ethiopia, from December 10, 2020 – February 1, 2021.

Methodology: Cross - sectional study was done from December 10, 2020 to February 01, 2021. Simple random sampling technique was used to collect responses from 379 respondents of Harar town. The data was collected using self-administered questionnaires and then entered and analyzed by using the statistical package for Social Science version 24.

Result: In this study, 379 respondents were included. 206 (54.4 %) of the respondents were abused to drink alcohol, while 61.5 %, 32.7 %, and 13.7 % of the respondents were abused to chew khat, smoking cigarettes and hashish respectively. The 201 (53 %), 55 (14.5 %), 48 (12.7 %), 30 (7.9 %), 32 (8.4 %) of participants responded that smoking causes heart attack, diabetic ulcer, impotency, bladder cancer and poor wound healing respectively. The health risks of khat chewing reported by the participants were constipation 58 (24.1 %), loss of appetite 34 (14.1 %), gastritis 33 (13.7 %) and tooth problem 22 (9.1 %) respectively. In multivariate logistic regression, respondents with an age of less than 45 years were 19 times more likely to have adequate knowledge about substance abuse [AOR = 19, 95 % CI: 2.46 - 19.46] compared to respondents whose age is above 45 years and respondents who are literate are 43 times more likely to have adequate knowledge about substance abuse [AOR = 43.19, 95 % CI: 8.42 - 187.84].

Keywords: Harar, Knowledge, Prevalence, Reason

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INTRODUCTION

Substances are anything, that is, when taken inappropriately disturbs the normal function of the body. When substances are used appropriately, they are useful for various functions.¹ Substance abusers is the inappropriate use of substances in a manner that leads to various deleterious problems. Self-administration of drugs for nonmedical reasons is a basic feature of substance abuse.²⁻⁴ Substance abuse is posing deleterious consequences to society. Currently, about 275 million people worldwide are exposed to substance abuse at least once during their life time.^{5,6}

Social drug use is a worldwide problem, particularly among African populations. Common substances abused in the region are alcohol, khat, and tobacco.⁷⁻⁹

Substance abuse causes various health problems such as hypertension, heart rhythm disorders, insomnia, liver toxicity, oral cancer, hypertension, spermatorrhoea and hemorrhoids, loss of appetite and gastrointestinal effects and psychiatric problems such as schizophrenia and psychosis.^{10,11} Abuse of social drugs like chat chewing is associated with medical problems like anxiety, tension, restlessness, hypnagogic hallucinations, hypomania, and aggressive behavior or psychosis among chewers. In addition, the combined use of alcohol and khat is associated with sexual risky behaviors contributing to the spread of Human Immunodeficiency Virus (HIV) infection.^{12,13}

The deleterious impacts of substance abuse are not limited to individuals who abuse substances but also affect families, friends, various businesses, and government resources. Substance abuse and dependence have complicated the existing society problems, increasing crime rates, hospitalizations, child abuse and neglect, and rapidly consuming public funds.¹⁴

Despite such deleterious effects of substance abuse, still no study has assessed the knowledge and reasons of substance abuse among residents of Harar town.

METHODOLOGY

Study Setting and Period

The study was conducted in Harar town, east Ethiopia. Harar town is found 526 kms east from Addis Ababa, the capital of Ethiopia. The study was conducted from December 10, 2020 – February 1, 2021.

Study Design

Cross-sectional study was conducted among Shenkore Wereda Kebele 08 residents to assess knowledge and reasons towards substance abuse.

Population

Source and study population

- All residents of kebele.

Study population

- Individuals aged greater than 15 years and lived for at least six months in the kebele.

Sample size determination

Sample size was calculated using the formula:

$$N_i = \frac{(Z_{\alpha/2})^2 P(1-P)}{d^2}$$

Where;

N_i = sample size

P = Prevalence of substance abuse among the community (50 %)

$Z_{\alpha/2}$ = critical value at 95 % C.I (1.96)

D = margin of error (5 %)

$$n = \left(\frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.05)^2} \right) = 384$$

Since of the population size of the kebele is 8330, which is less than 10000, the final sample size to be analyzed in the study was determined using the following equation:

$N_f = n_i \times N / n_i + N$, which results in a sample size of 367. With the addition of 10 % of contingency for nonresponse, the final sample size becomes 403.

Sampling Procedures

The samples were selected by using a simple random sampling method.

Data Collection Methods

Data was collected using self-administered questionnaires. Data collectors were trained by the principal investigators (researchers) about interviewing data, study participants, and questioner filling.

Data Processing and Analysis

The collected data was coded, entered, and analyzed with SPSS version 20 program and the result is presented by Tables and Figures.

Ethical Considerations

The study was carried out after a letter of permission was obtained from School of Pharmacy, Haramaya University College of Health and Medical Science. Respondent’s data confidentiality was assured and full written informed consent was obtained from all participants before actual data collection started.

Operational definitions

Illicit (illegal) drugs: Drugs which are forbidden by law and include cocaine, heroin, hashish, cannabis, ganja, and marijuana.

Knowledge: Information and skills acquired through experience or education. The participants will be categorized depending on their level of knowledge as per the level of correct answers to 10 questions to assess knowledge.

Highly knowledgeable; if he / she answers out of 10 questions.

Fairly knowledgeable; if he / she answered out of 10 questions.

Not knowledgeable; if he / she answers (less than 3 or 3) out of 10 questions

Substance abuse: A condition in which the person uses a drug repeatedly, in ways that hurt their health.

RESULT

Socio-demographic Characteristics

379 subjects were willing to be included in the study. The 55.7 % and 44.3 % respondents were male and female, respectively. Most of the respondents belong to an age range of 15 - 24 (32.5 %) and 25 - 34 (25.6 %). 10.8 % of the participants were illiterate and 26.6 % have completed primary education (Table 1).

Variable	Frequency	Percentage (%)
Sex		
Male	211	55.7
Female	168	44.3
Age(in years)		
15-24	123	32.5
25-34	97	25.6
35-44	61	16.1
45-54	56	14.8
>55	42	11
Educational status		

Illiterate	41	10.8
Read and write	82	21.6
Primary school		
Secondary school	101	26
Collage/University	83	21.9
Occupation		
Government	72	19
Private sector	89	23.5
Self employed	67	17.7
Daily labor	81	21.4
I have no work	32	8.4
Religion		
Orthodox	110	29
Muslim	172	45.4
Protestant	158	41.7
Catholic	40	10.6
Other*	5	1.3
Marital status		
Single	4	1.1
Married	167	44.1
Divorced	166	43.8
Widowed	28	7.4
Monthly income		
< 1000 Et Br*	18	4.7
1000-5000 Et Br*	227	59.9
5000-10000 Et Br*	117	30.9
>10000 Et Br*	23	6.1
	12	3.2
Other*: No religion ; Br*: Ethiopian Birr		

Table 1. Socio-demographic Characteristics of the Study Participants’ February, 2021.

Practice of substance abuse

The majority, 206 (54.4 %) of the respondents were abused with alcohol. 233 (61.5 %) and 135 (35.6 %) of the respondents were abused with chew chat and cigarette smoking, respectively. Significant proportion (13.7 %) of the study participants were abused by smoking of marijuana / hashish (Table 2).¹⁵

Variable	Frequency	Percentage (%)
Abuse of alcoholic		
Yes	206	54.4
No	173	45.6
Abuse of khat chewing		
Yes	233	61.5
No	146	38.5

Abuse of cigarette smoking		
Yes	135	35.6
No	244	64.4
Abuse of marijuana /hashish		
Yes	52	13.7
No	327	86.3

Table 2. Practice Of Substance Abuse Among The Study Participants, February 2021.

Reasons of Substance Abuse

Various reasons were forwarded by the study participants about the causes of substance abuse. The most common reasons mentioned for the abuse of chat chewing were to increase work or academic performance 73 (31.3 %), followed by to stay awake 50 (21.5 %). The majority of the respondents replied that they abuse alcohol to get personal pleasure 101 (49 %) and due to peer influence (24.3 %) (Table 3).

Variable	Reason for abuse	Frequency	Freq*	(%)*
Khat Chewing	To increase work or academic performance	To increase work or academic performance	73	31.3
	Due to family chewing habit	Due to family chewing habit	20	8.6
	To stay awake	To stay awake	50	21.5
	Peer pressure	Peer pressure	26	11.2
	To get personal pleasure	To get personal pleasure	32	13.7
	To increase work or academic performance	To increase work or academic performance	12	5.2
	+family chewing habit + to stay awake			
	To stay awake +peer pressure to get		15	6.4
	Personal pleasure		5	1.3
Alcohol drinking	To get personal pleasure	To get personal pleasure	101	49
	Peer influence	Peer influence	50	24.3
	Due to academic work dissatisfaction	Due to academic work dissatisfaction	16	7.8
	To be sociable	To be sociable	25	12.1
	To increase pleasure during sexual practice	To increase pleasure during sexual practice	2	1
	To get personal pleasure + peer influence + academic work	To get personal pleasure + peer influence + academic work	12	5.8
	dissatisfaction + to be sociable	dissatisfaction + to be sociable		

Freq*: Frequency
%: Percentage

Table 3. Reasons for Substance Abuse for the Study Participants, February 2021.

Knowledge on Substance Abuse

324 (85.8 %) of the respondents were adequately knowledgeable and 54 (14.2 %) inadequately knowledgeable effects of substance abuse (Figure 1).

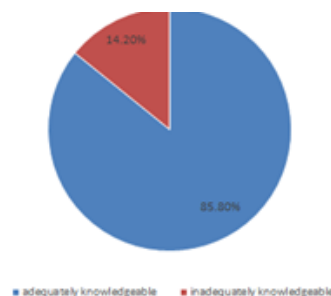


Figure 1. Study participant's knowledge about substance abuse, February, 2021.

Knowledge towards Health Problems Caused Substance Abuse

The health risks of khat chewing reported by the participants were constipation 58 (24.1 %), loss of appetite 34 (16 %), gastritis 33 (13.7 %) and tooth problem 22 (9.1 %) respectively (Table 4).

The 201 (53 %), 55 (14.5 %), 48 (12.7 %),30 (7.9 %), and 32 (8.4 %) of participants responded that smoking causes heart attack, diabetic ulcer, impotency, bladder cancer and poor wound healing respectively (Figure 2).

Variable	Frequency	Percentage (%)
Health risks caused by khat chewing		
Constipation	58	24.2
Loss of appetite	34	14.1
Gastritis	33	13.7
Teeth problem	22	9.1
Decrease in sexual desire	15	6.2
Constipation + loss of appetite + Gastritis + teeth problem	30	12.4
All	31	12.9
No problem	18	7.5

Table 4. Health Risks of khat Chewing Mentioned by Study Participants, February 2021.

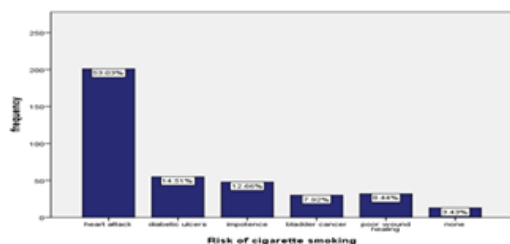


Figure 2: Health risks of cigarette smoking mentioned by study participants, February 2021.

Determinants of Treatment Outcomes

In the bivariate logistic regression, the association of sex, educational status, and age towards knowledge about substance abuse was assessed. Accordingly, sex, educational status, and age were significantly associated with knowledge about substance abuse [p < 0.05]. In multivariate logistic regression, respondents with an age of less than 45 years were 19 times more likely to have adequate knowledge about substance abuse [AOR = 19, 95 % CI: 2.46 - 19.46] compared to respondents whose age is above 45 years and respondents who are literate are 43 times more likely to have adequate knowledge about substance abuse [AOR = 43.19, 95 % CI: 8.42 - 187.84] (Table 5).¹⁶

Variable			Odd ratio (95% CI)		P-value
	Adequate knowledge	Inadequate knowledge	COR	AOR	
Sex					
Male	181	30	2.76 (1.4 - 6.57)	0.381(0.147-1.654)	0.03*
Female	144	24	1	1	
Age					
15-45	270	11	0.063(0.017-0.253)	19(2.46-19.46)	0.02*
> 45	55	43	1	1	
Educational Status					
Illiterate	6	35	0.101(0.020-0.507)	43.19(8.42-187.84)	0.03*
Literate	319	19	1	1	

Table 5. Predictors of Knowledge about Substance Abuse Study Participant’s February 2021.

COR-Crude Odds Ratio, AOR-Adjusted Odds Ratio, * statistically significant, CI-Confidence Interval

DISCUSSION

In the current study, 61.5 % of the respondents were abused for chewing khat. This result is higher than a report of Sebata town, Ethiopia (52.3 %),¹⁵ Jazan region of Saudi Arabia (21.46 %),¹⁶ and Gondar, Ethiopia (42 %).¹⁷ The discrepancy in the results may be due to differences in sample sizes and culture among the respondents.

In the present study, the major reasons given by the study participants for chewing khat were to

increase academic (work) performance (31.3 %) and to stay awake (21.55 %). This in opposite to the report of a study done in Gondar, Ethiopia, which revealed that the majority of the respondents replied that they chew khat for entertainment (62.3 %) and relaxation (36.9 %).^{16,17} This finding is significantly higher than the result of a study done in Meru, Kenya, among secondary students in which 58 (28.9 %), 16 (8 %), 5 (2.5 %) and 5 (2.5 %) respondents reported that they chew Khat for reasons getting concentration, entertainment, get good health and relief from stress respectively.¹⁸

54.4 % of the study participants were abused to alcohol consumption. The finding is significantly higher than the study reports of a study done in Jimma town, Ethiopia (11.5 %) and in Iran (33 %).^{19,20} This difference could be due the difference in sample size, geographical location, and culture of the study respondents. The present study finding is lower than the study report of a study done in Mekelle town, Ethiopia, in which 64.9 % of the study participants were addicted to alcohol consumption.¹³

The prevalence of cigarette smoking in this study is 35.6 %. This result is significantly higher than the study done in Mekelle University, Ethiopia, and the study conducted among Shahroud University students in which 29.5 % and 20 % of the respondents were addicted to cigarette smoking.^{13,20} This variation may be due to a difference in the cultural and educational status of the study participants.

In this study, 85.8 % and 14.2 % of participants were adequately and inadequately knowledgeable about substance abuse and its harmful effects on health. This result is almost in line with the result of another study done in India, in which 84 % of the respondents had knowledge regarding the harmfulness of substance abuse. The current finding is higher than the result of a study carried out in International Islamic University of Malaysia, in which 63.5 % of the respondents had good knowledge about the consequences of substance abuse.¹⁴ This variation in the results could be due to the socio-demographic and cultural variation.

In this study, the majority of the respondents reported that constipation 59 (24.2 %) and loss of appetite 39 (16 %) were health risks of khat chewing. This result is in concordance with the study done in Sebata, Ethiopia, and Kaffa Zone, Ethiopia.¹⁵ The current result is in opposite to a study report of a study done in Meru, Kenya, in which 37.8 % and 20.9 % respondents reported harmful effects of Chewing Khat on teeth and other body systems.¹⁸

CONCLUSION

Despite the high levels of knowledge regarding substance abuse, the prevalence of substance abuse among the community remains high. Thus, concerned bodies like health bureaus and non-governmental organizations should take measures to decrease the prevalence of substance abuse among the community.

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