

Assessment of Knowledge and Reasons towards Substance Abuse among Community in Kebele 08, Harar Town, Eastern Ethiopia

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Abstract

Background: Substance abuse is self-administration of drugs for non-medical reasons, in quantities and frequencies which may impair an individual's ability to function effectively and which may result in social, physical and emotional problems. Substance abuse is becoming a serious ongoing public health problem; it affects almost every community and family in some way. The common substances abused in most African countries including Ethiopia are alcohol, chat and tobacco

Objective: To assess Knowledge, attitude and practice toward substance abuse among the community of kebele 08 community, ShenkorWereda, Harar town, Eastern Ethiopia from December 10, 2020 – February 1, 2021.

Methodology: Community based cross-sectional study using a pre-tested structured self-administered questionnaire was conducted from December 10, 2020 to February 01, 2021. Simple random sampling technique was used to select 379 respondents from kebele 08, Shenkorworeda, Harar town, Eastern Ethiopia residents. The data collection was done using a self-administered structured questionnaire and the data was entered and analyzed by using statistical package for social science version 24. The result is presented in tables and figures.

Result: In this study 379 respondents were included. The 206 (54.4%) of the respondents were abused to drinking alcohol, while 61.5%, 32.7% and 13.7% of the respondents were abused to chewing 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 teeth problem 22(9.1%) respectively. In the current study age [AOR=19, 95% CI: 2.46-19.46] and educational status [AOR=43.19, 95% CI: 8.42-187.84] are associated with knowledge about substance abuse.

Conclusion and Recommendation: Despite high level of knowledge regarding substance abuse, the prevalence of substance abuse among community remains high.

Key words: alcohol; cigarette; khat, knowledge; substance abuse

Introduction

Substance is anything that when taken in to the living organism that modify one or more of its functions of the body. Substances when appropriately taken appropriately can be used for various functions [1]. When substances are inappropriately taken, the substance is abused and leads to various deleterious problems. Substance abuse is self-administration of drugs for non-medical reasons, in quantities and frequencies which may impair an individual's ability to function effectively and which may result in social, physical and emotional problems [2-4]. Substance abuse is becoming a serious ongoing public health problem; it affects almost every community and family in some way. Today, there are an estimated 275 million people worldwide, which

is roughly 5.6% of the global population aged 15-64 years used at least once during their life time [5, 6].

Social drugs use and associated problems are of current global concern. It has become an epidemic in some parts of the African region with adolescents being the main victims of health problems due to substance addiction. The common substances abused in most African countries including Ethiopia are alcohol, khat and tobacco which are reported to be abused widely among students in colleges and high schools [7-9].

Substance abuse is associated with adverse health effects such as hypertension, heart rhythm disorders, insomnia, liver toxicity, oral cancer, hypertension, spermatorrhoea and hemorrhoids, loss of appetite and

gastrointestinal effects [10, 11]. Medical problems associated with khat intoxication include psychiatric manifestations such as deterioration of psychophysical function and schizophrenia form psychoses. Some other khat chewers also experience anxiety, tension, restlessness, hypnagogic hallucinations, hypomania and aggressive behavior or psychosis. In addition, the combined use of alcohol and khat could increase sexual risky behavior contributing to the spread of human immunodeficiency virus (HIV) infection [12, 13].

The negative consequences of substance abuse affect not only individuals who abuse substances but also their families, friends, various businesses and government resources. Substance abuse and dependence have grave consequences for existing social systems, affecting crime rates, hospitalizations, child abuse and neglect, and rapidly consuming public funds [14]. Substance misuse is associated with psychological distress, suicide attempts functional impairment, physical ill- health and risk-taking behavior

Despite such deleterious effects of substance abuse, still no study has assessed prevalence, knowledge and reason of substance abuse among Shenkorworeda, kebele 08 community residents. Therefore, this study assessed the knowledge and reasons towards substance abuse among the communities of ShenkorWoreda, kebele08, Harar town residents.

Methodology

Study setting and period

The study was conducted in Kebele 08, Shenkor, Wereda, Harar town from December 10, 2020 to February 01, 2021 among ShenkorWoreda, kebele 08 residents in Harar town, Eastern Ethiopia. Harar is a city located in Eastern Ethiopia, 526kms from Addis Ababa. The total numbers of kebele of the city are 19, while the rural part of the State has 17 farmers associations. The State's size is estimated at 340km². Based on the 2012 census conducted by central statistics agency, the Harari national regional states' (HNRS) total population is 263,657 and 67,604 households. The percentage share of males and females is about 50% each. The urban residents of the State were 154,380 and its rural inhabitants were 109,276.

Study design

Community based cross-sectional study was conducted among ShenkorWoreda, kebele 08 community to assess knowledge and reason towards substance abuse.

Population

Source and study population

- The source population was all residents of ShenkorWeredakebele 08 of Harartwon..

Study population

- The study population was individuals aged greater than 15 years and living for at least six months in the town.

Sample size determination

Sample size was determined using single population proportion formula for cross-sectional study. To obtain maximum sample size at 95 % certainty and a maximum discrepancy of ± 5 % was used. The following formula was used to calculate the sample size:

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

Where;

n_i = the desired sample size

p = Prevalence of substance abuse among community (50%) (since no study was conducted in the study area as far as the investigator knowledge and searching effort)

$Z\alpha/2$ = critical value at 95% confidence level of certainty (1.96)

d = the margin of error between the sample and the population = 5%

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

Using the above formula, sample size (n_i) = 384, since our sample population (N) is less than 10000 (i.e) 8330. I used the following formula to calculate the exact sample size. (n_f)

$n_f = n_i \times N / n_i + N$, which results in sample size of 367. With additional 10% for contingency for non-response, the final sample size becomes 403.

Sampling procedures

First the study kebele was selected by lottery method from 19 kebeles found in the town. Then, the sample was selected by using simple random sampling.

Data collection methods and tools

Data collectors were principal investigator (researcher) about interviewing data study participants and questioner filling.

Data quality Control

In order to assure data quality, high emphasis was given to minimize errors using the following strategies: the questionnaire was pretested and subsequent correction and modification was done, and proper instruction was given before the survey was started. The collected data was reviewed and checked for completeness before data entry.

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 letter of permission obtained from school of pharmacy, Haramaya University College of Health and Medical Science. Confidentiality was assured and full written informed consent was obtained from all participants before actual data collection.

Operational definitions

Alcoholic drinks: any drink like "tela," "tej," "katicala/areke", beer, wine or other drinks that can cause intoxication

Attitude: Ways of thinking or feeling, which will drive a person to do or not to do things.

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

Knowledge: Information and skills acquired through experience or education. The participant will be categorized depending on their level of knowledge as per level of correct answer to 10 questions to assess knowledge as (Awole et al, 2015)

- Highly knowledgeable; if he/she answer (7-10) out of 10 questions
- Fairly knowledgeable; if he/she answer (4-6) out of 10 questions
- Not knowledgeable; if he/she answer (less than 3 or 3) out of 10 questions

Lifetime prevalence of alcohol drinking: the proportion of respondents who had ever used alcoholic drinks in their life time irrespective of the amount and type

Life time prevalence of khat chewing: the proportion of respondents who had ever chewed khat in their life time

Substances: Any non-medical drugs used by study subjects such as alcohol, khat, tobacco, cannabis, heroin, cocaine, and marijuana to alter their mood or behaviour

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

Result

Socio-demographic characteristics

Out of the total 403 community members invited to fill the questionnaire, the 379 respondents participated in the study with a response rate of 94.5%. The 211 (55.7%) and 168(44.3%) respondents were male and female respectively. Most of the study participants belong to an age group of 15-24 years (32.5%) and 25-34 years (25.6%).

The 10.8% of the participants were illiterate and 26.6% have completed primary education. With regard to occupation 110(29%) of the respondents are unemployed and 89(23.5) of the respondents were government employees. The 172 (45.4%) and 158 (41.7%) of the respondents were orthodox and Muslim respectively by their religion.

With respect marital status, the 167(44.1%) and 166(43.8%) were single and married. The monthly household income of the majority (59.9%) of the participants was below 1000 Ethiopian birr (Table 1).

| Variable | Frequency | Percentage (%) |
|------------|-----------|----------------|
| Sex | | |
| Male | 211 | 55.7 |
| Female | 168 | 44.3 |
| Age | | |
| 15-24 | 123 | 32.5 |
| 25-34 | 97 | 25.6 |
| 35-44 | 61 | 16.1 |
| 45-54 | 56 | 14.8 |
| >55 | 42 | 11.1 |

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

Table 1: Socio-demographic characteristics of the study participants kebele 08, Harar town, Eastern Ethiopia, February 2021.

Practice of substance abuse

The majority, 206(54.4%) of the respondents were abused to drinking of alcohol. The 233(61.5%) and 135(35.6%) of the respondents were abused

to chewing chat and cigarettes smoking respectively. Significant proportion, (13.7%) of the study participants were abused to smoking of marijuana /hashish (Table 2).

| 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: Prevalence of substance abuse among the study participants kebele 08, Harar town, East Ethiopia, February 2021.

Reason of substance abuse

Different reasons were mentioned by the participants about abuse of the substances. 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 are abused to alcohol to get personal pleasure 101(49%) and due to peer influence (24.3%) (Table 3).

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

Table 3: Reason for substance abuse for the study participant's kebele 08, Harar town, Eastern Ethiopia, February 2021.

Knowledge toward substance abuse

The 324 (85.8%) of the respondents were adequately knowledgeable and 54(14.2%) were inadequately knowledgeable and not knowledgeable respectively about effects of substance abuse (Figure 1).

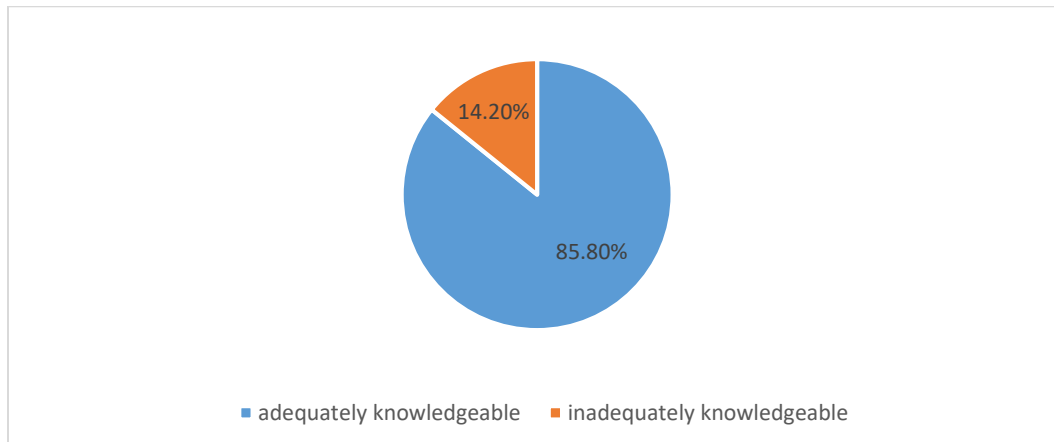


Figure 1: Study participant’s knowledge about substance abuse kebele 08, Harar town, Eastern Ethiopia, February, 2021.

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 teeth Problem 22(9.1%), respectively (Table 4).

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 (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+ | 30 | 12.4 |
| Gastritis + teeth problem | | |
| All | 31 | 12.9 |
| No problem | 18 | 7.5 |

Table 4: Health risks of khat chewing mentioned by study participants kebele 08, Harar town, eastern Ethiopia, February 2021.

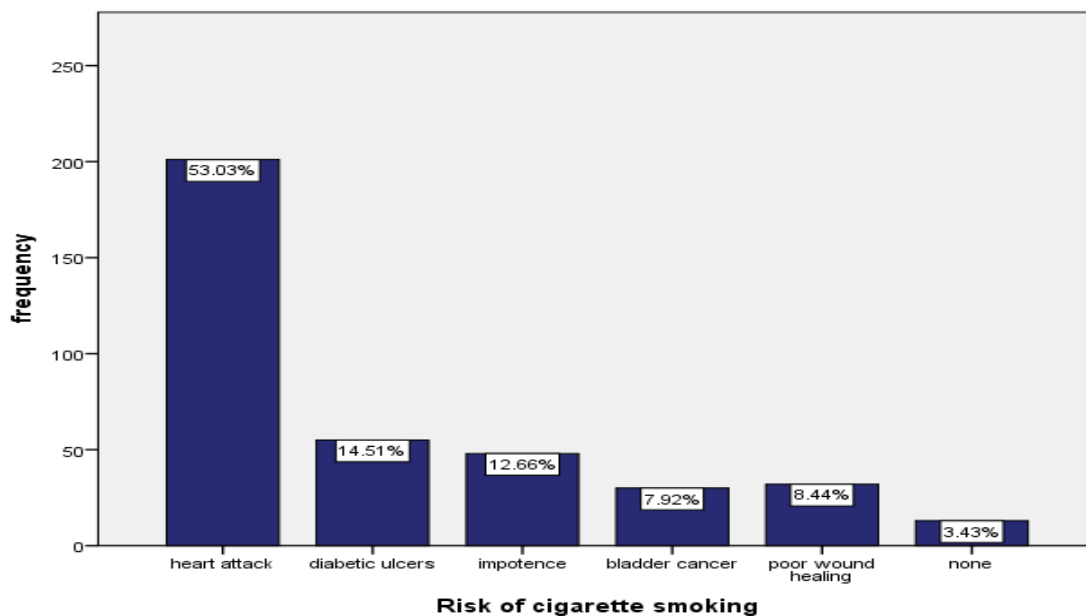


Figure 2: Health risks of cigarette smoking mentioned by study participants kebele 08, Harar town, Eastern Ethiopia, February 2021.

Determinants of treatment outcomes

In the bivariate logistic regression association of sex, educational status and age towards knowledge about substance abuse was assessed. Accordingly sex, educational status and age were found to be significantly associated with knowledge about substance abuse with [p value< 0.05].

In multivariate logistic regression, respondents with 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).

| 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) | 0.002* |
| >45 | 55 | 43 | 1 | 1 | |
| Educational Status | | | | | |
| Illiterate | 6 | 35 | 0.101(0.020-0.507) | 43.19(8.42-187.84) | 0.003* |
| Literate | 319 | 19 | 1 | 1 | |

Table 5: Predictors of knowledge about substance abuse study participant's kebele 08, Harar town, Eastern Ethiopia, February 2021.

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

Discussions

In this study three hundred seventy-nine (379) respondents were included, of which 211 (55.7%) and 168(44.3%) respondents were male and female respectively.

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

In the current 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 is in opposite to report of study done among students of a college in Gondar, Ethiopia which revealed that the majority of the respondents stated that their reason for Khat chewing was for concentration (62.3%) followed by for entertainment and relaxation (36.9%) [17]. This result is significantly higher than study done in Meru Kenya among secondary students reported that 58(28.9%), 16 (8%), 5 (2.5%) and 5 (2.5%) reported that they chew Khat for reasons getting concentration, entertainment, get good health and relief from stress respectively [18].

The 54.4% of the study participants were abused to alcohol consumption. This result is significantly higher than study report of study done in Jimma town, Ethiopia (11.5%) and in Iran (33%) [19, 20]. This variation could be due difference in sample size, geographical and cultural difference among the participants. Current study finding is lower than study report of study done in Mekelle town, Ethiopia in which 64.9% of the respondents were addicted to alcohol consumption [13].

The prevalence of cigarette smoking in this study is 35.6%. This result is significantly higher than study done in Mekelle University, Ethiopia and study conducted among Shahrud University students in 29.55 and 20% respectively of the respondents were addicted to cigarette smoking [13, 20]. This variation may be due difference in the, cultural and educational status of the study participants.

In the present study the 85.8% and 14.2% of participants were adequately and inadequately knowledgeable about substance abuse and its harmful

effect on health. The current study result is almost in line with result of another study done in India, in which 84% were have knowledge regarding harmfulness of substance abuse [21]. Our study finding is higher than to result of a study carried out in International Islamic University of Malaysia, in which the 63.5% of the respondents have good knowledge about the consequences of substance abuse [14]. The possible explanation for this variation could be the socio demographic and cultural variation.

Age and educational status of the respondents was found to be associated with knowledge about substance abuse. In the current study respondents with 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],

In this study majority of the respondents reported that constipation 59(24.2%) and loss of appetite 39(16%) were health risks of khat chewing. This is in line with 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 the 37.8% and 20.9% respondents report harmful effects of Chewing Khat on teeth and other body systems [18].

Conclusion and Recommendation: Despite high level of knowledge regarding substance abuse, the prevalence of substance abuse among community remain high. Thus concerned bodies like health bureaus and non-governmental organizations should take measure to decrease prevalence of substance abuse among the community.

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Declarations

Consent to publish: Not applicable

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Conflict of Interest: The authors declare no conflict of interest.

Author's contribution

Author SelamBogale involved in the conception and design of the study, participated in the literature searches, analyzed data and wrote the manuscript. Both the authors approved the final manuscript. Author TeshomeSosengoinvolved in the conception and design of the study, participated in the literature searches, supervised data collection and analyzed data.

Availability of data: All the data are available with the corresponding author, SelamBogale.

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