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Research Article

PREVALENCE OF ALCOHOL USE DISORDERS AND ASSOCIATED FACTORS AMONG PEOPLE WITH SCHIZOPHRENIA AT AMANUEL MENTAL SPECIALIZED HOSPITAL, ADDIS ABABA, ETHIOPIA 2013.

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Abstract:

Background: Alcohol use disorders (AUDs) are the most common co-occurring disorders in people with schizophrenia. Several studies have shown that rates of alcohol use disorders were over three times higher among peoples with schizophrenia than the general population. It complicates the course, treatment and worsen prognosis of schizophrenia. In Ethiopia treatment services for AUDs are inadequate. Most people with schizophrenia have access to alcohol; especially to home brewed alcoholic beverages while the identification rate is relatively low. We hope that the result of this study will help to forecast in improving the quality of care provided for people with schizophrenia and it will serve as a baseline data in similar field of studies in this country.

Objectives:-The aim of this study was to assess the prevalence of AUD and associated factors among people with schizophrenia at outpatient department of Amanuel Mental Specialized Hospital, Addis Ababa.

Methods:- An institution based cross-sectional study was conducted at Amanuel Mental Specialized Hospital among people with Schizophrenia. Systematic random sampling technique was used to get a total of 423 participants of schizophrenic patients from the outpatient department of the hospital. Pre-tested semi structured questionnaire was used for interviewing the study participants. Five trained data collectors and one supervisor were involved in the data collection process. The collected data were coded, entered in to EPI-INFO software and analyzed by using SPSS version 20. The strength of association between variables assessed using crude and adjusted odds ratio by running logistic regression and the cut off point for declaring statistical significance was P- value <0.05 or 95% confidence interval which does not contain the null value.

Result: A total of 406 schizophrenic patients were incorporated in this study with (96%) of response rate and 28.3% of them had Alcohol use disorders. Respondents were predominantly male [n=289 (71.2%)]. The mean age of participants was 33.96 years \pm 9.90 SDs, and range from 18 to 66 years. AUD were significantly associated with male gender, single, divorce/widowed, increasing age, lower income, living alone, having medical illness, and with those who use substances.

Conclusion and Recommendations: Prevalence of Alcohol use disorder was high among peoples with schizophrenia and this finding suggests that screening for risky alcohol use should be integrated into routine hospital outpatient care and further need to establish preventive measures against alcohol use disorders.

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INTRODUCTION:

Alcohol use disorders are maladaptive patterns of alcohol consumption manifested by symptoms leading to clinically significant impairment or distress [1]. These are conditions that range from hazardous and harmful alcohol use to alcohol dependence [2, 3]. Hazardous drinking is defined as a quantity or pattern of alcohol consumption that places patients at risk for adverse health events, while harmful drinking is alcohol consumption that results in adverse events [3, 4, 5,].

Harmful use of alcohol results in the death of 2.5 million people annually, nearly 4% of all deaths; and causes illness and injury to millions more [5]. Harmful use of alcohol is ranked as the fifth leading risk factor for premature death and disability in the world [6]. A 2008 WHO study found that some 40.5 million people worldwide suffered a moderate or severe disability due to alcohol dependence [7].

Alcohol use disorders represent 0.6% and 2.6% of the total burden of disease in low and middle- income countries, respectively, and 3.4% in high-income countries. These disorders represent one of the most important risks to health and are the leading risk factor in developing countries [8] alcohol use disorders are placed among the top ten causes of disability due to health-related conditions in all countries, as well as in LMICs (Low and Middle Income Countries) alcohol use disorders account for nearly 4% of the attributable-disease burden [9]. Alcohol consumption contributes 5% of global risks for burden of disease as measured in Disability Adjusted Life Years (DALYs) and shows a unique geographic and sex pattern with its burden highest for men [10].

Schizophrenia and Alcohol use disorders also figures in the leading ten causes of YLD (Years of Life with Disability) [9].

Schizophrenia is a severe and disabling psychiatric disorder characterized by persistent delusions, hallucinations, disorganized speech, disorganized behavior, and negative symptoms such as the absence of emotional expression or a lack of motivation or initiative [1, 11].

Substance use disorder (SUD) is the most frequent and clinically significant co morbidity in peoples with schizophrenia, and alcohol is the most common substance of abuse, other than nicotine [12].

Co morbid AUDs are known to have significant adverse effects on the course of schizophrenia and are associated with worsening of psychiatric symptoms and risk of re hospitalization [13]. People with schizophrenia and AUD are particularly prone to unstable housing situations and homelessness, receive a high rate of hospital-based services—relapse, as well as familial, psychosocial, legal, and other crises force them into emergency care, bad outcomes and poor quality of life increased recurrence of psychiatric symptoms, medical problems, and institutionalization in hospitals and jails [12].

Heavy drinking and alcohol dependence also reduce productive work activities among individuals affected by these disorders [14] and total mean annual mental health treatment expenditures for those with substance use disorder were about 75% higher than for those with schizophrenia alone.

In most LMICs NGO's (Non-Governmental Organizations) and religious (social) organizations (mostly unregulated) provide help that is not evidence based and is sometimes even inhumane[15]. WHO declared that higher taxes on alcoholic beverages uniformly bring down the consumption levels, leading to substantial reduction in alcohol related problems [16].

One fourth to half of LMICs do not have a national policy on treatment of AUD [15]. In Ethiopia according to Global Burden of disease (GBD) estimate of 2004, availability of treatment services for both inpatient and outpatient is less than 10% and no long term residential rehabilitation for AUDs [17].

Previous studies show that Schizophrenia was the most common discharge diagnosis [18], whereas alcohol abuse was one of the contributing factors for the rate of readmissions into the Amanuel Mental Specialized Hospital [19].

Despite that AUDs are chronic and disabling severe mental illness and it is a public health problem its prevalence and associated factors are less known in Ethiopia among specific populations suffering from schizophrenia. AUDs interfere with treatment, prognosis and functioning; and availability of services is inadequate in this country this cross sectional study designed to investigate its prevalence and associated factors among peoples with schizophrenia.

METHODS AND MATERIALS:**Study design and period:**

Hospital based cross-sectional study was conducted from May1 to May31, 2013.

Study settings:

The study was conducted at Amanuel Mental Specialized Hospital. The Hospital is located in Addis Ababa, Addis Ketema Sub City, and it had been established during the Ethio-Italian war in 1930s and is the only mental Hospital in Ethiopia. The hospital has a total of 268 beds of which 239 are for inpatients and 29 emergency beds. The hospital has 13 OPDs (Out Patient Department) of Psychotic, Mood, Non psychotic and Neurologic case teams. The psychotic case team has five OPDs at which about 204 people with schizophrenia seen daily on working day. Now days the Hospital also serves as training center for psychiatric nursing and M Sc. program in Integrated Clinical and Community Mental Health in coordination with University of Gondar.

Source population:

All people with clinical diagnosis of schizophrenia in Ethiopia

Study population:

Schizophrenic patients who attended the outpatient department of Amanuel Mental Specialized Hospital during the study period

Inclusion criteria:

Patients who have been clinically diagnosed as schizophrenia and within the age group 18 years and above, in the outpatient units of Amanuel mental specialized hospital.

Exclusion criteria:

Patients who are acutely disturbed and patients who can't communicate

Sample size determination:

The minimum number of sample required for this study was determined by using the formula to estimate single population proportion considering the assumption that 50% of peoples with schizophrenia have AUD and with 95% confidence level that falls within 5% margin of error:

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

Where,

n= minimum sample size required for the study

Z= the reliability coefficient corresponding to 95% confidence level (Z=1.96)

P= the prevalence of AUD among persons with schizophrenia and is unknown in our country; hence, P = 50 % (0.5) is assumed.

d= Absolute precision or tolerable margin of error (d) =5%=0.05

Then adding 10% (384 x 0.1 = 38.4 ≈ 39) of non-respondent the total sample size for this study was 384+39=423.

Sampling techniques:

The average number of schizophrenic patients who visit the outpatient department per month calculated and found to be 4076. Systematic random sampling method was used to select sample patients. Using sampling frame (patients register) of the schizophrenia who attend the outpatient department of the hospital, about 815 (N'=815) patients seen at each OPD monthly. The sample size was decided to be 423(n=423). Dividing the sample size n=423 to the five OPDs (423/5 ≈ 85) n'= 85. The sampling fraction k was obtained by dividing: the sampling frame (N') to the number of sample at each OPD. N'/n', 815/85= 9.6 ≈ 9 Hence the sample interval was 9. Individuals were chosen at regular interval (every 9th). Thus (every 9th) patients in the sampling frame was included for the study and the selected patients was directed by the facilitator to the office where the data collectors were working.

Study variables:

Dependent variable:

❖ Alcohol Use Disorders

Independent variables

Socio demographic factors

Age

Sex

Ethnicity

Religion

Marital status

Educational status

Occupational status

Income

Homelessness

Social Factors

Peer pressure

Family history of alcohol use

Clinical factors

Medical illness

Duration of illness

Other Substance use

Khat, Nicotine, Cannabis, etc

Operational Definitions:

Alcohol Use Disorders: this is measured using the Alcohol Use Disorders Identification Test (AUDIT), a ten-item screening questionnaire developed by the World Health Organization (WHO) [37]. Study of the utility of the AUDIT in people with schizophrenia, reported that a cut off of ≥ 8 produced the highest level of correct classification (89%) estimated by the CIDI for current alcohol use disorder, with sensitivity of 87% and specificity of 90% [38]. The WHO prescribed AUDIT cut-off score of 8 or more is associated with harmful or hazardous drinking. A score of 13 or more in women, and 15 or more in men, is likely to indicate alcohol dependence.

Participants who drank alcohol but scored below the cut-off score of 8 was coded as casual drinkers.

Medical illness: additional medical illness with schizophrenia.

Substance use: those who use of any drug (khat, cigarette cannabis etc.) usually by self-administration in a manner that deviates from approved social or medical patterns during the past 12 months.

Data Collection:

To obtain a full baseline assessment of each participant social, demographic, and clinical information was interviewed. Data was collected by five psychiatry nurses using semi structured, pre-coded and pre-tested questionnaire that includes tool that was used to evaluate the prevalence of AUDs. The AUDIT is a 10-item screening instrument developed by a WHO Collaborative study conducted in six countries: Australia, Kenya, Bulgaria, Norway, Mexico and the USA. It is designed to screen for a range of drinking problems and in particular for hazardous and harmful consumption [20]. This 10-item questionnaire is brief, easily administered, and is highly reliable and valid in schizophrenia [21]. The AUDIT has been used in a variety of international community and primary health care settings, including several African countries [22, 23, 24].

Data was collected by trained five psychiatry nurses and one supervisor for a period of one month during the data collection period. Two days training was given to familiarize on AUDs, the data collection methods, how to administer the collected data using questionnaire, and on how to handle sensitive and emotional issues. The importance of keeping information confidentiality from study participants was considered. The data collection tool used to

evaluate the AUDs; 10 item questions from AUDIT. Items are scored 0-4, giving a total range between 0 (no problems) and 40 (severe problems) and the items covers three domains; excessive alcohol intake, dependence and problems related to drinking.

Data quality control:

The questionnaire was designed and modified appropriately. It was translated to local language, Amharic, using the translation-back-translation method with two teams of translators to understood by all participants. Training was given for data collectors and supervisor. Pre-test was done two days before the start of actual data collection at study area and the results was not included in the main study. The data collectors were supervised daily and the filled questionnaire was checked daily by the supervisor and principal investigator. While problems faced solutions were given by discussing with the supervisors and the data collectors.

Data processing and analysis:

Data was checked for completeness and consistency. Then it was coded and entered into EPI info and transported into SPSS version 20.0 for analysis. Frequencies, percentages, mean cross tabulation, odds ratio was calculated for different variables to describe the sample. Data were checked for normality distribution and outliers. For non-normal distribution non parametric tests were used. Logistic regression and chi-square tests was used for comparison of the subjects with and without AUDs. P-value less than 0.05 considered as statistically significant association.

Bivariate and multivariate logistic regression analysis was used to identify associated factors of AUD among persons with schizophrenia. The strength of the association was presented using odds ratio with 95% confidence interval (C.I).

Ethical consideration:

Ethical clearance was obtained from the Institutional Review Board (IRB) of college of medicine and health sciences, University of Gondar and from Amanuel Mental Specialized Hospital. The data collectors clearly explained the aims of the study for study participant. Information was collected after obtaining verbal consent from each participant. The right was given to the study participants to refuse or discontinue participation at any time they want and the chance to ask any thing about the study. For the purpose of anonymity participant's name was not used at the time of data collection and all other personnel information kept entirely anonymously and confidentiality was

assured throughout the study period. Data collectors signed for that they could obtain verbal consent from the respondents. The investigator has commitment that finding's will be used later to prevent and or treat properly AUDs among people with schizophrenia.

RESULTS:

Basic socio-demographic characteristics of the respondents

A total of 423 schizophrenic patients were interviewed in this study with a response rate of n=406 (96%). Respondents were predominantly male [n=289

(71.2%)]. The mean age of participants was 33.96 years \pm 9.90 SDs, and range from 18 to 66 years. The majority were Christian Orthodox 205(50.5%), and Amhara by Ethnicity n=133(32.8%). The study revealed that 253 (62.3%) of the participants were single (never married), n=118(29.1%) of them were currently married, and the remaining were divorced and Widowed. As to the educational status 163(40.2%) were in primary school. The majority n =227 (55.91%) had monthly income \leq 500 birr or below median; n=56 (13.8%) of them live alone; and 341 (84%) of them were unemployed.

Table 1. Basic socio-demographic characteristic of the participants at Amanuel Mental Specialized Hospital, Addis Ababa May 2013

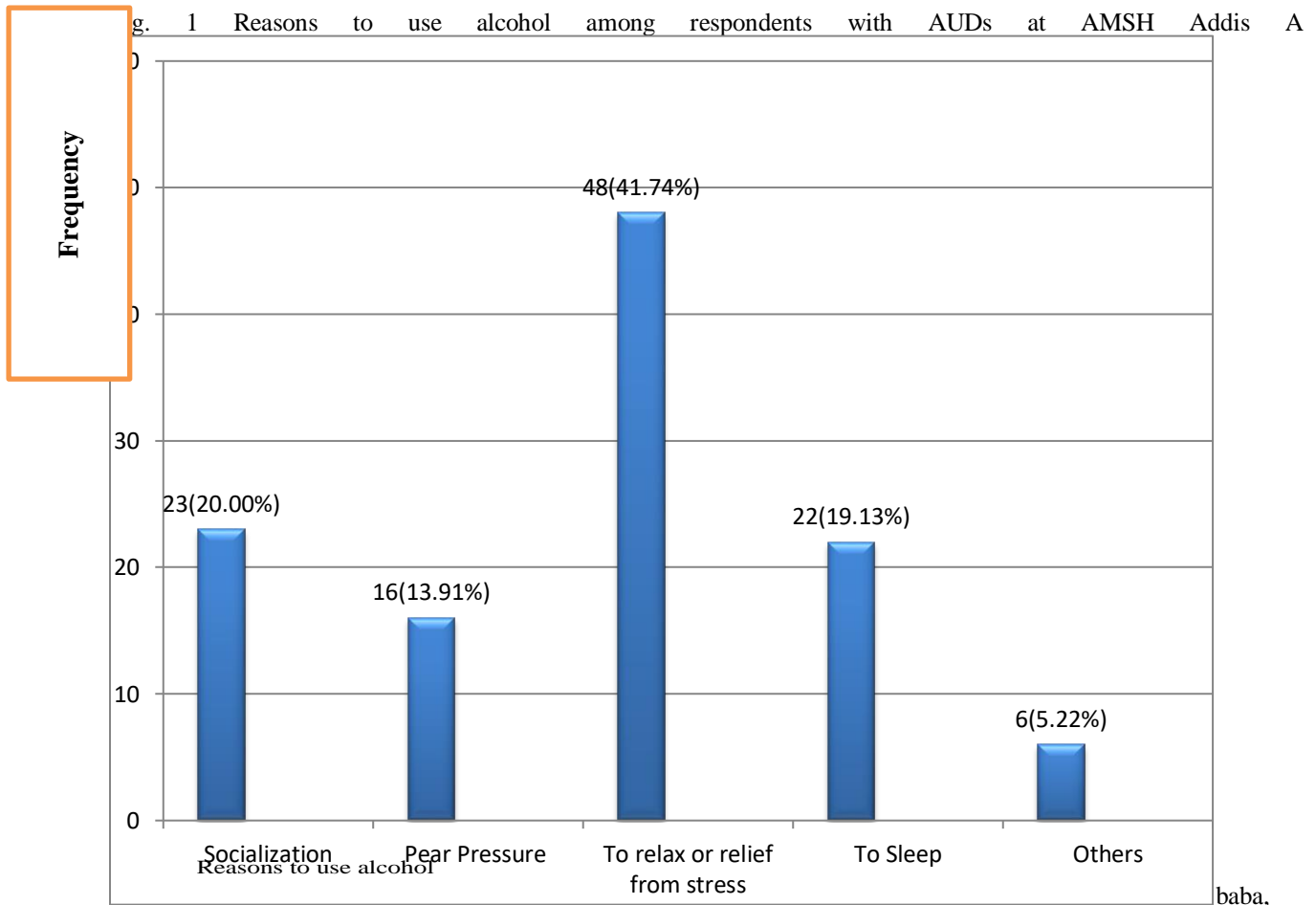
Variables	Categories	Frequency	Percentage %
Age in group	18-29	155	38.2
	30-44	185	45.6
	\geq 45	66	16.2
	Total	406	100
Sex	Male	289	71.2
	Female	117	28.8
	Total	406	100
Religion	Orthodox	205	50.5
	Muslim	131	32.3
	Protestant	53	13.0
	Others	17	4.2
	Total	406	100
Marital Status	Single	253	62.3
	Married	118	29.1
	Divorce	21	5.2
	Widowed	14	3.4
	Total	406	100
Ethnicity	Amhara	133	32.8
	Oromo	107	26.3
	Tigre	46	11.3
	Gurage	103	25.4
	Others	17	4.2
	Total	406	100
Educational status	Not formally educated	42	10.3
	1-8	163	40.2
	9-12	130	32.0
	College and above	71	17.5
	Total	406	100
Occupational status	employed	65	16
	Unemployed	341	84
	Total	406	100
Living Circumstances	With family	350	86.2
	Living alone	56	13.8
	Total	406	100
Income	\leq 300	154	37.9
	301-500	73	18
	501-888	83	20.4

≥ 889	96	23.7
Total	406	100

Basic Characteristics of Clinical Variables:

Over half of the schizophrenics (56.2%) had above five years duration of illness. Only 49(12.1%) of the patients had additional medical illness and of these hypertension was the most common [n=15(3.7%)]. A total of 166 (40.9%) of respondents had family history of alcohol use and 149(36.7%) of respondents use other substances. The most commonly used substance were tobacco [150(36.9%.], followed by khat

[145(35.7%)] and cannabis [21 (5.2%)]. The possible reasons of taking drink containing alcohol among those with AUDs as explained by the respondents were for socialization [23(20.00%)], as a result of peer group pressure [16(13.91%)], to relief from stress or to relax 48 (41.74%), to overcome the sleeping problems 22 (19.13%) and 6(5.22%) for other reasons as shown below.



May 2013.

Table 2 Basic characteristics of clinical factors at Amanuel Mental Specialized Hospital, Addis Ababa May 2013.

Variables	Category	Frequency	Percentage
Duration of illness	<2 years	85	20.9
	2-5years	93	22.9
	≥6 year	228	56.2
	Total	406	100
Chronic medical illness	Yes	49	12.1
	No	357	87.9
	Total	406	100
	Hypertension	15	3.70
	Diabetes	8	2.0
	HIV/AIDS	6	1.5
	Others	20	4.9
Family history of alcohol use	Yes	166	40.9
	No	240	59.1
	Total	406	100
Non-alcohol substance use	Yes	149	36.7
	No	257	63.3
	Total	406	100

PREVALENCE OF ALCOHOL USE DISORDERS:

According to this study the prevalence of Alcohol Use Disorders among schizophrenic patients was found to be 28.3%. The prevalence was high among respondents who were male sex 98(33.9%), age 45

years and above 34 (51.5%), single (never married) 253 (62.3%) and divorce 20 (57.1%), those with lower income 56 (36.4%), live alone 35(62.5%), use substances 87 (58.4%), have family history of alcohol use 87(58.4) and those who have medical illness 33 (67.3%).

Table.3. Distribution of alcohol use and co-morbidity by sex of respondents at AMSH, Addis Ababa, May 2013.

No	category	AUDIT Score	Male		Female		Total	
			No	%	No	%	No	%
1	Abstainers	0	141	48.8	87	74.4	228	56.2
2	Low risk drinkers	1-7	50	17.3	13	11.1	63	15.5
3	Hazardous drinkers	8-14	30	10.4	7	6.0	37	9.1
4	Harmful Alcohol use	15-19	36	12.5	3	2.6	39	9.6
5	AUD (Hazardous, Harmful, Likely alcohol dependence)	20+	32	11.1	7	6.0	39	9.6
Total			289	100	117	100	406	100

Factors associated with Alcohol Use Disorders among peoples with schizophrenia:

Finding from bivariate logistic regression analysis on socio-demographic variables except ethnicity all others had p- value of less than 0.2. AUDs among schizophrenics were compared in term of their socio demographics, clinical characteristics such as: co morbid medical illness, duration of illness, family history of alcohol use, and other substance use based on the bivariate logistic regression analysis. Variables which showed bivariate relationship with AUDs based on a p- value less than 0.2 criteria were entered into the multiple logistic regressions for the purpose of minimizing confounding effect of the variables.

That means all variables significantly associated with AUDs in bivariate analysis at 0.2 p-value considered. Variables sex, age, marital status, religion, educational level, living circumstances, occupation, income, medical illness, family history of alcohol use, other substance use and duration of illness were included in the final models. In the final model only eight covariates were identified to have had associations with AUDs at 0.05 level of significance or corresponding 95% CI for the adjusted odds ratio (AOR).

The odds of AUDs among male people schizophrenics was 3.29[AOR=3.29, 95% CI (1.41, 7.46)] times higher than the odds of AUDs among female schizophrenics.

The odds of AUDs among respondents of age 45 years and above was 2.72 [AOR=2.72, 95% CI (1.01, 7.30)] times higher than the odds of respondents within age

group 18-29 years. Marital status were significantly associated with AUDs; the odds of AUDs among single (never married) schizophrenics was 3.66 [AOR= 3.66, 95% CI (1.46, 9.17), times higher than the odds of AUDs among currently married peoples with schizophrenics and the odds of AUDs among (Divorced / widowed) schizophrenics was about four times [AOR=4.2, 95% CI (1.17, 15.06)] higher than the odds of currently married schizophrenics.

The odds of AUDs among respondents in the 1st quartile monthly income was about six times [AOR= 6.38, 95% CI (2.39, 16.99)] higher than the odds of AUDs among respondents' within the 4th quartile monthly income.

The odds of AUDs among those living alone was 5 times [AOR=5.30, CI 95% CI (2.07, 13.55)] higher than the odds of AUDs among those living with their spouse, parents or relatives.

The odd of AUDs among respondents with co morbid medical illness was 3.65 times higher than the odds of AUDs among those who have no medical illness. The odds of AUDs among schizophrenic who had family history of alcohol use was 4.93 times higher than the odds of AUDs schizophrenics who don't have family history of alcohol use.

Schizophrenics who use substances were about 9 times more likely to develop AUDs than schizophrenics who never use substances. Variables having an association during bivariate analysis were lost during multiple logistic regression analysis shown on table 4 below.

Table-4 Socio-demographic factors associated with AUDs among people with schizophrenia using multiple logistic regression analysis, Addis Ababa, May 2013.

Variables	Category	Crude OR (95% CI)		AOR(95% CI)		P-Value
		Yes (%)	No (%)			
Age group	18-29	25 (16.1)	130 (83.9)	1	1	
	30-44	56 (30.3)	129 (69.7)	2.26(1.33, 3.84)	2.60(1.24, 5.44)	0.011
	≥45	34 (51.5)	32(48.5)	5.53(2.90, 10.53)	2.72(1.01, 7.30)	0.047
Sex	Male	98 (33.9)	191(66.1)	3.02(1.71, 5.33)	3.29 (1.41, 7.46)	0.006
	Female	17 (14.5)	100(85.5)	1	1	
Religion	Orthodox	86 (42)	119 (58)	1.45 (.42, 4.95)	2.52(.50, 12.71)	
	Muslim	17 (12.7)	117(87.3)	.29(.08, .07)	.65(.12, 3.49)	
	Protestant	8 (14.5)	47(85.5)	.34(.08, 1.40)	.68(.10, 4.54)	
	Others	4 (33.3)	8 (66.7)	1	1	
Marital Status	Married	10 (8.5)	108 (91.5)	1	1	
	Single	85 (33.6)	168 (66.4)	5.46(2.72, 10.99)	3.66(1.46,9.17)	0.006
	Divorce&	20 (57.1)	15 (42.9)	14.4(5.67, 36.56)	4.2(1.17, 15.06)	0.027
	Widowed					

Occupational status	Employed	10(15.4)	55 (84.5)	.41(0.20, 0.83)	.45(.15, 1.29)	
	Unemployed	105 (30.8)	235 (69.2)	1	1	
Living Circumstances	With parent or family	80 (22.9)	270 (77.1)	1	1	
	Living alone	35(62.5)	21(37.5)	5.63(3.1, 10.21)	5.30(2.07, 13.55)	<.001
Income	≤ 300	56 (36.4)	98 (63.6)	3.34(1.74, 6.44)	6.38(2.39, 16.99)	<.001
	301-500	26 (35.6)	47(64.4)	3.24(1.54, 6.81)	4.45 (1.44, 13.8)	.01
	501-888	19 (22.9)	64 (77.1)	1.74(.81, 3.73)	2.34 (.79, 6.95)	

Table-5 Clinical factors associated with AUDs among people with schizophrenia using multiple logistic regression analysis, Addis Ababa, May 2013.

Variables	Category	Crude OR (95% CI)		AOR (95% CI)		P-Value
		Yes	No			
Family history of alcohol use	≥ 889	14 (14.6)	82 (85.4)	1	1	
	Yes	83 (50)	83 (50)	6.5(4.02, 10.51)	4.93 (2.49, 9.78)*	< .001
	No	32(13.3)	208 (86.7)	1	1	
Medical illness	Yes	33 (67.3)	16 (32.7)	6.92(3.61, 13.20)	3.86(1.57, 9.50)	<.003
	No	83(23)	275(77)	1	1	
Duration of illness	< 2 years	12 (14.1)	73 (85.9)	.29 (.15, .56)	.82(.30, 2.22)	
	2-5	20 (21.5)	73 (78.5)	.48(.27, .84)	.74(.28, 1.93)	
	>5 years	83 (36.4)	145 (63.6)	1	1	
Ever Non alcohol substance use	Yes	87 (58.4)	62 (41.6)	11.48(6.89,19.11)	9.33(4.72, 18.45)	<.001
	No	28(10.9)	229(89.1)	1	1	

DISCUSSION:

This study showed that there was a high prevalence of AUDs. According to this study the prevalence of AUDs among people with schizophrenia was found to be 28.3%. The rates of alcohol abuse and/or dependence are higher in patients with schizophrenia and ranges (12%- 55%) [25]. There have been no studies of AUDs in Ethiopia using a methodology similar to ours with which to directly compare our results. However the result of this study was consistent with the previous study conducted at the same study area among randomly selected n=43 schizophrenic patients of whom 25.58% of them had abused alcohol [19], and with that of the North America finding; which indicated that every fourth (25%) of persons suffering from schizophrenia misuse alcohol [26].

It was lower compared to the study conducted in USA life time prevalence of 33.7% [27], and Scotland year prevalence of 40% [27]. There were also studies with lower prevalence that were done in USA (22%) [28], London (22%) [28], Australia the six months prevalence of 18.1% [29], and that of India Goa a one year prevalence of 8.2% [30].

These differences in prevalence of AUDs could be due to cultural settings, population being studied, the study design, study periods, psychiatric service delivery, availability of alcohol and the assessment tools used.

In Ethiopia this high prevalence discrepancy may be due to that home brewed alcohol like Tej, Tella, and arakie were easily available with the cost that patients with schizophrenia could afford. These locally brewed alcohol used in community during holy days and different ceremonies and patients with schizophrenia even could get it free and the community may don't have awareness that alcohol exacerbate the symptoms of illness and it is legal to use.

The study found that male gender was significantly associated with AUD with (AOR=2.86) consistent with existing literature [31, 19]. It is likely that both psychosocial and biological etiologies converge to lead to the greater risk of alcohol use disorders in men [12].

This study also showed that age 30-44 and 45 years and above were significantly associated with AUD with (AOR=2.6) and (AOR=2.72) respectively implies

that being in age category 45 years and above 2.72 times more likely to develop AUDs compared with age group 18-29. This result even similar with the study in Addis Ababa, in general population prevalence of problem drinking increase with increasing age [31].

The possible reasons that as age increase AUD increase may be they develop tolerance to alcohol over time, increase social and psychological problems, medical illness, lack of support and being alone which are associated with old age and culture may not support youths excessive alcohol use.

Divorce/Widowed and Single (never married) were significantly associated with AUDs with (AOR=3.66) and (AOR=4.20) respectively and this finding consistent with other literature [30].

Because of that majority of respondents were unemployed and they don't have regular source of income they were not able to specify their accurate monthly income; though respondents with low income were associated with alcohol use disorders with (AOR=6.38), even though literature associate with those with economically active [31]. This may be because of home brewed alcoholic beverages were available with affordable cost for this population and 74.8% of those with AUD most of the time use the home brewed alcohol such as Tej, Tella and arakie as they explained.

Living alone was significantly associated with AUD (AOR=5.30) compared with those living with their spouse, parents or relatives. Those who have family history of alcohol use were associated with AUD (AOR=4.93). Medical illness increases the risk of developing AUD by 3.65 compared with those without medical illness. This study also showed that substance use was significantly associated with AUDs. Those who use substances were about 9 times more likely to develop AUDs than those who never use substances and this finding consistent with literature findings [32]. There were no statistically significant association between AUD and Variables like religion, ethnicity, occupation, and duration of illness during multiple logistic regression analysis.

CONCLUSION AND RECOMMENDATION:

Conclusion: The prevalence of co-morbid Alcohol use disorders was high. Alcohol use disorders were significantly associated with male sex, single (never married), Divorced/widowed, those with lower income, living alone, increase age, having medical illness, and substance use.

Recommendations:

❖ To Amanuel Mental Specialized Hospital

Screening for risk alcohol use and diagnostic procedures should be integrated into routine hospital outpatient care in order to detect and properly treat patients with dual diagnosis.

❖ To Ministry of health

Needs to establish preventive measures against alcohol use disorders

❖ To Researchers

Longitudinal and community based study should be recommended to identify the causal relationship of associated factors.

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