PREVALENCE OF ALCOHOL USE DISORDER AND ASSOCIATED FACTOR AMONG PATIENT ATTENDING ART CLINIC AT WOLKITE UNIVERSITY SPECIALIZED TEACHING HOSPITAL, GURAGE ZONE, SNNPR, ETHIOPIA 2022.

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Abstract

Background: *Alcohol Use Disorder is A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period: Alcohol is often taken in larger amounts or over a longer period of time than intended. Alcohol use Disorder increases hospitalization and have negative effect on the life expectancy of patients infected with Human immune virus/Acquired immune deficiency syndrome [1].*

Objective: *The main objective of this study is to assess the prevalence of alcohol use disorder and associated factors among patients attending antiretro viral therapy clinic at Wolkite university specialized teaching hospital, south west Ethiopia.*

Methodology: *An institution based cross sectional study was conducted from March - May 2022. consecutive sampling method was used to select study unit from the study population. The sample size was calculated by using the formula for single population proportion for cross sectional survey. Data was collected by face-to-face Interviewing with administered questionnaires technique by using semi structured and pre-tested questionnaire .The data is coded and entered into the Statistical Package for Social science (SPSS) version 21 for analysis to enable the responses to be grouped into various categories. Bivariate and multivariate binary logistic registration model was used to asses factor independently associated with Alcohol use disorder among people live with human immunue virus/ acquired immune deficiency syndrome. The analysed data was described using tables, graphs and figures accordingly.*

Result; *A total of 367 participants participated in the study with a response rate of 81.8 % Of the total respondents, 187(51.0%) were male. The overall prevalence of alcohol use disorder was 26.0%.thus, male Gender are more risky for AUD with AOR=3.80(CI 95%2.33-6.22)and who are divorced are more at risk of AUD than marreid with [AOR=2.8 CI 95% (1.037-7.521)]]. smoker were 3.2 times more at risk of AUD with[AOR = 3.243 CI 95% (1.23,4.754)].those Who have poor social support was 2.4 times more risky with [AOR =2.423 CI 95%(1.145-4.353).*

Conclusion*:*

The prevalence of Alcohol use disorder was high. Male gender, being divorced, cigarette smoker, poor social support were independently associated with alcohol use disorder.

Key word*; ANTIRETROVIRAL THERAPY, ALCOHOL USE DISORDER,H IV/AIDS.*

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Abbreviation or Acronym

AIDS	Acquired Immune Deficiency Syndrome
AUD	Alcoholic Dis order
ART	Anti-Retroviral Therapy
ARV	Anti-Retro Viral
COPD	chronic Obstructive pulmonary disease
CI	Confidence Interval
HIV	Human Immune Deficiency Virus
PLHIV	People Living with Human Immune-Deficiency Virus
PLWHA	People Live with Human Immune Deficiency virus
RVI	Retroviral Infection
SPSS	Statistical Package for Social Sciences
STDs	Sexually Transmitted Diseases
WKUSTH	Wolkite University Specialized and Teaching Hospital

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Alcohol Use disorder is A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period: Alcohol is often taken in larger amounts or over a longer period of time than intended [1]. Alcohol is a psychoactive and addictive substance with dependence producing properties.it has been used among humans for millennia. Its overuse is associated with health, social, economic and environmental problems [7].

Alcohol can be defined as psychoactive drug ability of making physiological as well as psychological addiction. Its harmful use is associated with great social, health, economic consequence .and also contribute 3.8% burden of disease globally. The worldwide burden death due to alcohol outweighs the synergized burden of death from AIDS, HIV, TB and violence [20].

Human immunodeficiency virus infection and acquired immunodeficiency syndrome (HIV/AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV), a retrovirus. A viral infection that attacks the immune system especially CD4 in T cell is affected and killed by HIV[14].

PLWHA (people live with HIV/AIDS) live many years by medical care of antiretroviral therapy. AIDS(acquired immune deficiency syndrome) is developed due to HIV and no cure but treat the symptom. HIV is primarily a sexually transmitted disease (STD), transmitted by heterosexual and homosexual practices: anal, vaginal, and oral sex [14].

Alcohol use disorder increase hospital admission and negative impact on the life expectancy of clients infected with HIV because alcohol can aggravate immunosuppression, interfere cognitive function and predispose individual to bacterial infection like TB in addition to these reduce client ART adherence which can lead to treatment failure and drug resistance .PLWHA are at high risk of alcohol use due to people with terminal illness such as HIV may use alcohol coping mechanism for a way of dealing with psychological distress results due to the severity of the HIV illness and ART drug side effect[4].

Alcohol is a drug which is able to causes acute and chronic change and serious temporary and psychological symptom such as anxiety, depression and psychosis problem most people start

during in early to midst teens.in the world 50% all homicide and 25%sucide have associated with alcohol use. Decrement of 10 yrs life expectancy related to alcohol use. women 10% and men 20% are meet diagnostic criteria of alcohol abuse during life time [19].

HIV is a virus affecting more than 60 million people since epidemic had started in 2013 an estimated 35 million people living with HIV in worldwide in sub-Saharan Africa is 12% of the global population. yet account for 71% of the global burden of HIV infection [20].

1.2 Statement of problem

Alcohol Use Disorder is causing the death of 3 million people this indicates that around 5.3% death in the World in each year. About 2.9 million deaths in the world in each year are caused by hazardous use of alcohol is 1.3 million death of traffic injuries are due to alcohol use. Harmful use of alcohol considers both increase risk of harmful physical mental and social effect on the user the majority of patient have difficult social background including illicit substance use and sex work that are a combined by stigma and discrimination [15].

Drinking of alcohol among PLWHA increase burden of disease cause huge health problem also hazardous drinker reported small involvement in performance physical social spiritual and environmental quality of domain there are various factor that predispose to hazardous alcohol use that are to get energy to relief from stress environmental influence [15].

Furthermore, It increases liver damage by HCV concurrent infection because of decline effectiveness of ART and aggravate immune suppression. level of alcohol use is risky behavior related to non-adherence to ART medication, Unprotected sex, multiple sexual partner and noncompliance of HIV AIDs care.in this case viral load is increase, CD4 cell decline and faster progression of disease.

A study done in Africa a systemic-review and meta-analysis if an individual with HIV consumes alcohol once/week his life span will be shortened by 2yrs and by 6.5years if alcohol is consumed daily the study shows Alcohol taking facilitate RVI disease progression even if the medication is taking properly because of adversely impact metabolizing and absorption of drug [5].

This in turn limits the level of care and decreases alertness to diagnose alcohol associated factors of such patients. Therefore, this paper is aimed at determining the level of alcohol use disorder among RVI patients in Ethiopia specifically Wolkite University referral hospital. Alcohol use disorders (AUDs) contribute to 3.8% of the overall global burden of disease [6].

The number of deaths attributed to alcohol worldwide is greater than the combined number of deaths from human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), violence and tuberculosis [2].

Early detection of AUD helps PLWHA by alerting the stakeholders in HIV prevention and control program to invest a greater effort to retain patient in addiction treatment and rehabilitation center, finally allocate screening and health education on consequence of AUD is warranted [4]. and also strengthen the effectiveness' of medication which is significant for poor therapeutic adherence. Knowledge of average prevalence AUD and detecting its associated factor would assist policy maker and program Implementer in deciding evidence driven prevention, promotion and treatment activity. my strength effect of medication which is significant for poor ART adherence [20].

This study address the current gap in the literature and share new information on prevalence of alcohol use and associated factor by utilizing data from institutional based, Cross sectional study sample of people living with HIV and who are on ART follow up.

1.3 Significance of the study

In PLWHA alcohol use have many sides effect because alcohol by itself causes a disease like COPD (Chronic Obstructive pulmonary disease), pneumonia, Heart failure by interfering oxygen and carbon dioxide exchange and narrowing of blood vessel, due to this specially in PLWHA, AUD worsen the overall condition of treatment outcome by exacerbating immunosuppression. Easily attack by foreign antigen the managements are complicated and poor outcome, non-adherence to ART decline their survival time. Our study put many important outcomes in understanding the prevalence of alcohol use and associated factor among PLWHA in WKUSTH. and also, we expect this study to give information to governmental and non-governmental institution to work in the effect of AUD and to decrease the number of AUD among PLWHA . Our study believe that the finding will be needs to strengthen and extends to reach of AUD related health information, facility action of evidence-based preventive and management intervention. Research by itself is update and inspire to another researcher.

CHAPTER TWO:-LITRATURE REVIEW

2.1 Overview

Alcohol Use Disorder A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period [16]. Alcohol Use Disorders (AUD) can be categorized as harmful use, hazardous use or dependence [8].HIV infection is major public health concern that claimed the life of 770,000 people in 2018 .globally,37.9 million people were living with HIV at the end of 2018 and 1,7 million people newly infected with HIV in 2018[20].

2.2 Prevalence of Alcohol Use Disorder

According to meta-analysis study done by using a total 25 studies with 25, 154 participants in 2019, prevalence of alcohol use disorder among PLWHA in the world was 9.8% [20].

The prevalence of AUD among PLWHA in Africa systemic review and meta-analysis study on 1362 article the prevalence and factor associated with AUD among PLWHA published the last 2011 study was 13.4% between 2011-2015, show that around 24.93% and after 2015 it is 22.8%. in addition to these one-year average prevalence of AUD 3.12%, 8.1%,10.87% alcohol dependent, harm full and hazardous taking respectively [7].

Furthermore, The average prevalence of alcohol use disorder in south Africa, Uganda , Nigeria and Kenya was 28.77%, 16.61 %, 22.8%, 18.8% respectively.

Another institution based cross-sectional study study to Addis Ababa Zewditu General hospital in 2017 by Simple random sampling technique from March-April substance related disorder treatment service in general hospital in Ethiopia the prevalence of AUD among people live with HIV is 18.2% (8).

An institution based cross sectional study done in Jimma comphernsive hospital with a total of 401 participant systematic sampling technique in 2004,the prevalence of AUD was 32.6%[17].

An sector based cross-sectional study design conducted in Bishoftu general hospital from May to June 2015, on AUD and its associated factor among PLWHA by total participants of 527. These studies show that prevalence of alcohol use disorder among PLWHA was 14.2%(7)

an institutional based cross-sectional study done in Mizan tepi university hospital from October to December 9,2017 in SNNPR. 332 participants are included majority are female these studies show prevalence of AUD among PLWHA was 18.4% and also prevalence of harmful alcohol user, social drinker, hazardous users are 1.8%,32.2%,11.4%,0.9% of alcohol dependent respectively (6).

And also, in systematic review and meta analysis study done in Wollo comprehensive hospital with a total of 16774 participant systematic review sampling technique in 2014 the prevalence of AUD was 28.7% [11].

An institutional based cross-sectional study in Hawassa-city, by systemic sampling technique in 2019 a total of 195 participants on AUD and associated factor among PLWHA in this study the prevalence of AUD was 31.8% [12].

2.3. Associated factor

2.3.1. Socio demographic Factor

According to an institutional based cross-sectional study done in Hawassa-city by using systemic sampling technique in 2019 show that being males were positively associated with AUD. In which males are 2.43 times more likely to have alcohol abuse compare to female And also poor social support , poor medication adherence, khat chewing, cigarette were significantly associated with AUD[4].

According to systematic review and meta analaysis among 1362 article done in Africa, male gender and married martial status were positively associated with AUD in which male have 5.5% times greater prevalence compared to female which is 7.53% and being single have high prevalence compared to married which is 30.8% [20].

A systemic review and meta-analysis study in a total of 25 article conducted with 25154 participants in the world at 2019 by random sampling method The occurrence of alcohol use

disorder among HIV/AIDS patient in the world which in male 26.9% were female has only 13.37% [6].

Furthermore ,an institution based cross sectional study done in jimma university comprehensive hospital with a total of 401 participant a random sampling technique in 2004,male gender ,smoking cigarette & psychological distress were positively associated with AUD.

According to an institution based cross sectional in the university hospital of Rio Grande between December 2012 and July among 343 participants in brazil show that male have 40.8% occurrence where female have 16.0% (21). Being a male have and high risk of alcoholic dis order and people with HIV AIDS reported in seven included study increasing risk of having alcoholic disorder 5.5 times at high risk of alcoholic disorder as compared to female patient who are on ART follow up.

Additionally, According to an institutional based cross sectional study among 332 participants in Mizan Tepi University teaching hospital by systematic random sampling technique in 2017 show that the prevalence in male is 3 times greater than female 21.4% but in the general prevalence 18. 4% (17).

In systematic review and meta analysis study done in total of 16774 in wollo comprehensive hospital by using systematic review sampling technique in 2014 the narrative analysis shows that being male, smoking cigarette ,poor social support, mental distress, chewing khat were among associated factor of AUD[11].

2.3.2. Khat Chewing

In the study done in Bishoftu General Hospital; Khat chewing is positively associated with AUD. HIV infected patients who chew khat had 5 times more risk for AUD as compared to non-kha chewers [18].

An institutional based cross sectional study in SNNPR in Mizan Tepi in 332 participants in Mizan Tepi University teaching hospital by systematic random sampling technique in 2017 prevalence and factors associated with AUD among PLWHA is the participants who chew khat were 3 times more likely to had AUD as compared to non-khat chewer [17].

2.3.3. Cigarette Smoking

An institutional based cross-sectional study by systemic random sampling technique was conducted in bishoftu general hospital located in east Shewa zone Oromia regional state a total 525 participants from May -June in 2015.cigarrette smoking in HIV infected patient was positively associated with AUD in which those who smoke had 1.49 times greater risk than non-smokers this indicate that drinking alcohol and smoking cigarette are inter-related[18].

An institutional based cross-sectional study in SNNPR in Mizan Tepi in 332 participants by using systematic random sampling technique in 2017, prevalence and factors associated with AUD among PLWHA the study shows that those who smoking cigarette had 5 times greater risk than non-smoker to had AUD [17].

2.3.4. Socio Economic Factor

An institutional based cross-sectional study by using systemic random sampling technique was conducted in Bishoftu general hospital located in east Shewa zone Oromia regional state a total of 525 participants from May -June in 2015 shows that Social support is significantly associated with AUD. HIV infected patients with poor social support had 50% more risk for AUD as compared to those who had good social support. Family history of alcoholism was found to be significantly associated with AUD. HIV infected patients who had family history of alcoholism had 3.58 times more risk of AUD as compared to those who had no family history of alcoholism [18].

2.3.5 Clinical Factor

An institutional based cross-sectional study in Hawassa-city by systemic sampling technique in 2019 AUD and associated factor among PLWHAalcohol use increases hospitalization and have negative effects on the life expectancy of patients infected with the human immunodeficiency virus (HIV) [12].

An institutional based cross-sectional study by systemic random sampling technique was conducted bishoftu general hospital located in east Shewa zone Oromia regional state a total 525 participants from May -June in 2015.Missing ART drug was found to be associated with AUD patients who missed their ART drug had three times more risk of AUD as compared to those

who didn't miss their ART drug the relationship between missing ART and AUD are complex and bidirectional [18].

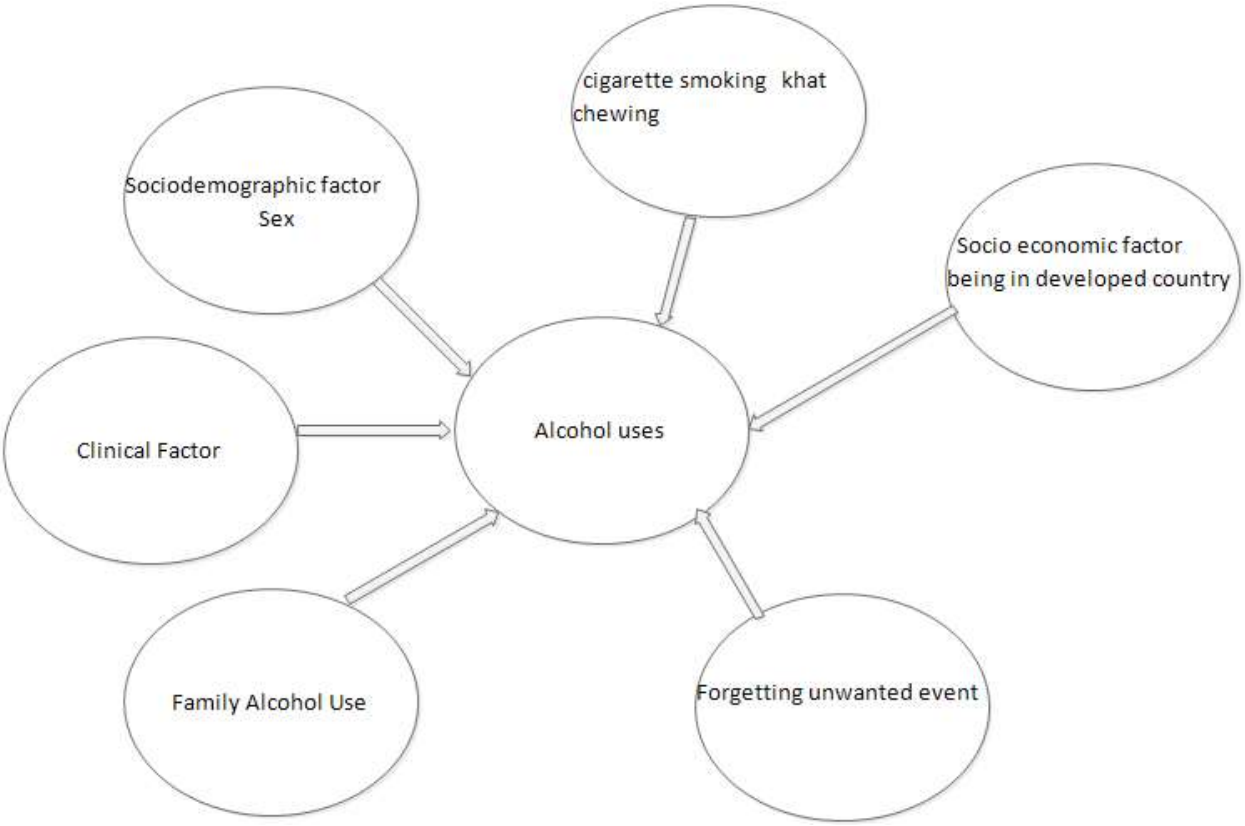


Figure 1 Conceptual frame work of Alcohol Use disorder and associated factor among PLWHA [4][3][2][17][20].

CHAPTER THREE; OBJECTIVES

3.1 General Objectives

- To assess Prevalence of Alcohol Use Disorder and Associated Factors among people living with HIV, who have ART follow up at Wolkite University Specialized and Teaching hospital, SNNPR, Southern West Ethiopia 2022 G.C.

3.2 Specific objective

- To determine the magnitude of alcohol use disorder among PLWHA who are attending ART clinic at Wolkite University Specialized Teaching Hospital, SNNPR, Southern Ethiopia 2022 G.C.
- To identify associated factors of alcohol use disorder among PLWHA who are attending ART clinic at Wolkite University Specialized Teaching, SNNPR, Southern West Ethiopia 2022 G.C.

CHAPTER FOUR

METHODOLOGY

4.1 Study design

An Institutional based cross-sectional study was conducted in WKUSTH from March-May 2022 G.C

4.2 Study area and period

The study was conducted in Wolkite University specialized and Teaching hospital from March-May 2022 E.C, which is located in the southern Nation Nationality People Region (SNNPR) Gurage Zone.

4.3 Population

4.3.1. Source Population

- All ART clients who attending ART clinic at Wolkite University Specialized Hospital was considered as source population.

4.3.1. Study Population

All sample patients who are registered and follow up treatment at ART clinic during the study period.

4.4 Eligibility Criteria

4.4.1 Inclusion criteria

- All patients who are registered and have follow up in the ART clinic
- Age of 18 and above who are willing to participate in the study during the time of data collection included.

4.4.2 Exclusive criteria

Patient with age less than 18, who were severely ill and aggressive client.

4.5 Sampling

4.5.1 Sample Size

The sample size was calculated by using the formula for single population proportion for cross sectional survey and taking the proportion as 31% with confidence level of 95% and degree of precision of 5%. An additional 10 % was added to the sample size as a contingency for non-responses. Using single population proportion formula, the sample size will be

$$n = \frac{z^2 p(1-p)}{d2}$$

Where: n=sample size from an infinite population

Z= standard deviations corresponding to the **95%** confidence interval =**1.96**

P= prevalence (31.8%) population proportion (get from a research done Hawassa-university teaching hospital in 2019).

d= degree of accuracy required or desired precision (maximum allowable error of the estimate) =**0.05**

$$n = \frac{z^2 p(1-p)}{d2}$$

$$\mathbf{n = 1.96^2 * 0.318(1-0.318)/0.05^{2} = \underline{333}}$$

when we add non response rate of **10% (333+10%)** , the final sample size became=**<u>367</u>**

4.5.2 Sampling technique

Consecutive sampling technique was conducted.

4.6 Variables

4.6.1 Dependent variables

- Alcohol use disorder

4.6.2 Independent variables

- Age
- Sex
- Socioeconomic factor
- Medical factor
- Marital status
- Occupation
- Year serostatus
- HIV related stigma

4.7 Data Collection Technique and procedures

4.7.1 Data collection instrument

We collect data from respondents. Logistic regression use the association between AUD and independent variable, sociodemographic factor the questionnaire was adopted from program of Alcohol use disorder identification test p value 0.318 and CI 95%.

AUDIT was used to measure alcohol consumption, drinking behaviour and alcohol related problem.it is a 10-item screening tool which was developed by WHO to identify AUD for the last 12 months. The score of greater than eight or more consider as AUD and it was tested in our pre-test reliable in our study (Cronbach's alpha=0.94).

Perceived stigma scale was used to asses self-felt stigma by HIV patient it is types of scale with three possible(no=1 yes a little =2, yes a lot =3) and ART medication adherence.

4.7.2Data collection method and period

The Data collection method of this study was done by face-to-face interviewing with administered questioners for PLWHA who attend ART Wolkite University specialized and teaching Hospital and the data was collected from March – May (2022).

4.7.3 Methods of data analysis

The collected data is checked for completeness; exploratory data analysis is carried out to check the levels of missing values. The data was coded and entered in to a computer and it was analysed using the software SPSS version 21 was annual and Bivariate and multivariate binary logistic registration model was used to asses factor independently associated with AUD among PLWHA.

4.7.4. Quality control methods

Pre-test was done in a Wolkite, Edigetber health centre different from the study area to check the feasibility of the study and quality of questionnaires. After the data collection, the questionnaires was checked for completeness and correctness each day by group leader and the questionnaire was translate from English to Amharic.

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4.7.5 Operational Definition

- **Alcohol use disorder**: A person who scored greater or equal to 8in AUDIT .
- **Alcohol;** ethanol especially when considered as the intoxicating agent in fermented and distilled liquors such as bear
- **Risky sexual Behavior**; behavior that increases one's risk of sexual transmitted infection
- **Hazardous drinking;** the total AUDIT score of drinker among 8 to 15.

4.9 Ethical Considerations

Before the start of the data collection process ethical clearance was secured from Research and Ethics Committee (REC) of college Medicine and Health Sciences, Wolkite University and study site. Data was collected after participants are informed about the objectives and use of the study. Participation was by voluntary and the patient was told to withdraw from the study without explanation. the participant was told about the aim of the research and gave personal information like to not write their name, and they have the right to not accept the questioner. Information

obtained at each course of study was kept confidentially. Non-participant didn't have negative effect on service provided in any level. All the interviewees consented to undertake the questionnaires. For thus, we link them to psychiatry for further care.

4.10 Dissemination of Results

Depending on the findings from the data, conclusion and recommendations was done. Then, copies of the research paper will be submitted to Wolkite University College of medicine and health science, department nursing. If possible, it will be published on journals as well.

CHAPTER FIVE ; RESULT

5.1 Socio demographic characteristics

Our research includes 367 participants, from these 51.0% were male and 49.0% were female and Age group of 18-30 were the dominant age group of containing 63.5% of the participants and age greater than 69 age group contain the smallest number of the participants. Most of participant are private employee which are (23.7%) compared to other occupation type and the farmer occupation group contain the smallest number of participant (6.5%). From the total participant (45.2%) were single (38.4%) were married and equal participant of widowed & divorced which is (8.2). one hundred ninety-nine (32.4%) are illiterate & the smallest number of participants have education level of degree and above which is 14 (3.8%). One Hundred ninety-eight (54.0%) participant have middle group of income (1000-4000 ETB).

Here is the result below listed in table

Table 1 socio demographic character of people live s HIV/AIDS at WKUSTH,2022.

Variable	Category	Frequency	Percent%
Age	18 -30	233	63.5
	30-49	93	25.3
	50-68	36	9.8
	69&above	5	1.4
Sex	Male	187	51
	Female	180	49
Occupation	Governmental employee	64	17.4
	Private employee	87	23.7
	Merchant	72	19.6
	Farmer	24	6.5
	Student	47	12.8
	Daily labourer	56	15.3
	Others	17	4.6
Marital status	Marreid	166	45.2
	Single	0141	38.4
	Divorced	30	8.2
	Widowed	30	8.2
Educational level	Illiterate	119	32.4
	Able to read and write	64	17.4
	Primary school	93	25.3
	Secondary school	51	13,9
	Diploma	26	7.1
	Degree and above	14	3.8
Income	<1000	14	3.8
	1000-4000	198	54.0
	4000-10000	125	34.1
	>10000	30	8.2

5.2 Behavioral Characteristics of the Participants

From a total of 367 study participants, 44.4% have friends smoke cigarette, 34.5% feel guilty of chewing khat , 24.5% uses one drug in the same time 34.1 5 of them feel flashback of chew khat (Table 2).

Table 2 behavioural characteristics distribution of PLWHA at WKUSTH, 2022.

Variable	Category	Frequency	Percent (%)
Friend smoke cigarette	Yes	163	44.4
	No	201	54.8
Stigma	No stigma	121	33.0
	Little stigma	143	39.0
	A lot stigma	103	28.1
Guilty of chewing khat	Yes	130	35.4
	No	224	61.0
Greater than one drug in the same time	Yes	90	24.5
	No	277	75.5
Withdrawal symptom	Yes	104	28.3
	No	263	71.6
Adherence	good adherence	203	55.3
	Poor adherence	164	44.7
Flash back of Chew khat	Yes	125	34.1
	No	242	65.9
Engage illegal activity to obtain khat	Yes	64	17.4
	No	303	82.6

5.3 Prevalence of alcohol use disorder

In our study the prevalence of alcohol use disorder is 26.0 % people from the total participant of 367. from these 119 are male and 50 of them are female.

5.4 Factor associated with Alcohol use disorder among PLWHA

From bivariate logistic regression analysis male gender, poor social support, cigarette use and being divorced, had fulfilled the criteria of p ≤0.2 significance level were taken into consideration for multivariable logistic regression analysis. These variable was taken and analysed together by using multivariate logistic regression model male gender , cigarette smoker, being divorced, poor social support were found statistically significant predictor of alcohol use (P <0.05).

In case of sex, The odds of using alcohol was 3.8 times more likely among male as compared to female with [AOR=3.806 , 95% CI: ((2.329, 6.221)].. The odds of using alcohol was **2.8** times more likely among divorced as compared to married participant with [AOR **=2.8 ,95% CI (1.037-7.521)]** (Table 4)

Table: 3 Bivariate and multivariate logistic regression factor independently associated with AUD among PLWHA attending service at WKUSTH in south nation nationality Ethiopia 2014 (N=367)

Variable	Categories	Alcohol use		Crude OR (CI 95%)	Adjusted OR (CI 95%)
		Yes	No		
Sex	Female	29	151	1	1
	Male	67	120	4.426(2.850, 6.875)	**3.806(2.329, 4.221)***
Cigarette smoke	Yes	95	72	4.588(1.452,7.789	**3.243(1.23,4.754)***
	No	44	153	1	**1**
social support	Good	55	111	1	**1**
	poor	110	91	3.004(1.323, 3.033)	**2.423(1.145, 4.353)***
Educational level	Illiterate	63	55	5.000(1.121, 20.297	1.588(0.728, 4.690)
	Able to write and read	38	26	4.200 (1.114,15.83)	1.043(0.755, 12.273)
	Primary school	27	66	5.359(1.362,21.10)	2.976(0.940, 4.823)
	Secondary	24	28	1.500(0.388, 5.803)	1.000(0.235, 4.253)
	Diploma	15	11	3.143(0.784, 12.595)	2.768(0.639,11.990)
	Degree	3	11	1	1
Marital status	Married	68	98	1	1
	Single	64	77	1.198(.761, 1.885)	1.12(0.327, 1.996)
	Divorced	21	9	3.363(1.452,7.789)	**2.8(1.037-7.521)***
	Widowed	17	13	1.885(.859, 4.134)	1.6(0.629, 7.461)

Note: significance at P value <0.005

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CHAPTER SIX; DISCUSSION

The current study showed that the prevalence of alcohol use among people attend ART at WKUSTH was 26.0% ,this is in line with a meta analaysis and systematic review study done in Wollo comprehensive Hospital which is 28.7%.Lower than study done on Brazil 49.5% anda cross sectional study done in Hawassa (31.8%), and which is higher than study done in Bishoftu (14.2%) & Mizan Tepi (18.4%).[4][17][18][20].

6.1 Factor associated with alcohol use disorder

Among PLWHA who have attend at ART of WKUSTH ,Male gender, poor social support, smoking cigarette, divorced marital status were significantly associated with HIV/AIDS.

Those In this study, male were more than 3.8 times more likely to alcohol use as compared to those who are female [AOR=;3.806 95% CI: [(2.329, 6.221)] this is in line with study done in Hawassa city institutional based cross sectional study which is male are 2.43 times more AUD than female. This reveal being male have its own risk on developing alcohol use disorder [4][20][17][18]. The probable reason for the difference might be due to the differences in screening tools, study design, study period, the difference in socio-economic characteristics
And also who are divorced are more at risk of AUD than marreid with [AOR=2.8 CI 95% (1.037-7.521)]]. In contrast another study done in Africa meta-analysis study in which single have high prevalence of AUD compared to married which is 30.8% [2][20].

Additionally, cigarette smoking were positively associated with AUD in which being smoker is3.2 times more at risk of AUD with[AOR = 3.243 CI 95% (1.23,4.754**)].** This is Higher than study done in bishoftu general hospital in which those who smoke had 1.49 times greater risk than non-smokers this indicate that drinking alcohol and smoking cigarette are inter-related[18].and lower than study done in in Mizan Tepi in 332 participants by using systematic random sampling technique in 2017, prevalence and factors associated with AUD among PLWHA the study shows that those who smoking cigarette had 5 times greater risk than non-smoker to had AUD [17].

And also, in our study, poor social support was positively associated wit AUD In which those who have poor social support was 2.4 times more risky with [AOR =2.423 CI 95%(1.145-4.353*)*. . HIV infected patients with poor social support had 50% more risk for AUD as compared to those who had good social support. Family history of alcoholism was found to be significantly associated with AUD. HIV infected patients who had family history of alcoholism

had 3.58 times more risk of AUD as compared to those who had no family history of alcoholism [18].

.

6.2 limitation of the study

This study has some important limitations that should be kept in mind when interpreting the results. First, the cross-sectional nature of the study design does not confirm definitive cause and effect relationship. Furthermore, the study may prone to reporting bias since the data was collected based on self-reported information. Finally; reports for some of the questions were past history or encounters which are prone to recall bias.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

7.1 conclusion

The prevalence of AUD was high. Male gender, being divorced, cigarette smoker, poor social support were independently associated with AUD.

7.2 Recommendation

- It is recommended that detailed awareness creation about the influence of alcohol use on HIV and ART adherence by health professionals have invaluable benefit.
- It is better to give health education on harmful effect of alcohol use. WKUSTH has to work on this issue specially, among people living with HIV.
- It is recommended that health institutions have to strengthen counseling system in ART clinic and Psychiatry service and has to create interlink with supportive organization to tackle the problem.
- It is recommended that, researchers in Wolkite University and other organizations to work on alcohol use and associated problems.

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ANNEX

QUESTIONNAIRE

- **Information sheet and informed conset**

Greetings; Hello**!** we are last year nursing student in Wolkite university ,college of medicine and health science .now we are conducting research on title **"PREVALENCE AND ASOSSIATED FACTORS OF ALCOHOL USE DISORDER AMONG PATIENT ATTENDING ART CLINIC AT WKUSTH" .**the purpose of this study is to assess the prevalence and associated factor of alcohol use disorder among patient attending ART clinic" .your participation is crucial to the outcome of the study , so we are kindly request you to participate in this study .all the information that you are going to give us will remain confidential and if you are not volunteer to participate you have the right to refuse from participation. It is not necessary to write your name. Your participation or refusal to answer question will not have effect on your life.

Are you volunteer to participate in this study?

1Yes, continue _____

2 No, I'm not. _____

- **This questionnaire consists 4 part**

Part I Sociodemographic Charactersic

Part II Alcohol use disorder tools

Part III Perceived stigma scale

Part IV medication adherence tools

Part V cigarettes and khat use disorder tools

Part I sociodemographic information

S. No		
100	Age	_____ years old
101	Sex	• Male • Female
102	Address	
103	Educational status	• Illiterate • Read and write only • Up to primary (1-8) • Secondary (9-12) • Diploma • Degree and above
104	Marital status	• Single

		• Married • Divorced • Widowed
105	Occupation	• Government employed • self employed • Merchant/trading • Farmer • Student • Daily labor • Other, specifiy _____
106	Your individual estimated monthly income	_____ETB

Part II alcohol use disorder tools

Questions	0	1	2	3	4	score
How often you drink alcohol containing?	never	Monthly or less	2-4 times a month	2-3 times a week	4+ times a week	
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	

How often during the last year have you found that you were not able to stop drinking once you had started?	never	Less than monthly	Monthly	Weekly	Daily	
How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you needed a drink first thing in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	

Part III Perceived Sigma scale

Variable	No	Yes, a little	Yes, a lot
Have you ever treated unfairly in your social life?			
Have you been treated unfairly in making friendship, in your neighbour, in your job area?			
Have you been shunned by people who know that you have HIV/ADIS			
Have you stopped yourself from applying work?			
Have you treated unfairly in finding a job?			

Part IV Medication Adeherence(Search MORISKY scale)

No	Question	Yes	No
1	Do you ever forget to take your medication?		
2	Do you stop taking medication when you feel better?		
3	Does medicationmake you feel tired and sluggish?		
4	Does your thought on medication are clear?		
5	Do you take your medication only when you feel ill?		

Part V Cigarettes and chat use disorder

No		Yes	No
1	Do you Have a friend that smokes cigarette?		
2	Have you neglected your family because of your smoking?		
3	Have you ever experienced any medical problem because of your smoking cigarette?		
4	Have you ever experienced withdrawal symptoms (felt sick when you stopped smoking?		
5	Do you abuse more than one drug in the same time?		
6	Do you feeling bad or guilty about your khat chewing?		
7	Does your spouse /parent ever complain about your khat chewing?		
8	Have you had "blackout" or "flashback' as a result of khat?		
9	Have you engaged in illegal activity in order to obtain khat?		

THANK YOU!

Declaration

We declare that this is our original work and has not been preseneted in this and other university. All source of material used for this research proposal have been acknowledged.

Name of investigator; **signature** **Date**

1 Fedila Worku _____ _____

2 Marifa Abdelhalim _____ _____

3 Tsega belay _____ _____

Place; Wolkite University , College of Medicine And Health sceince.

ጥያቄዎች	0	1	2	3	4	ውጤት
በየስንት ጊዜ አልኮል ይጠጣሉ ?	በፍጹም	በየወሩ	በወር ውስጥ ከ 2-4 ጊዜ	2-3 ጊዜ በሳምንት	4+ ጊዜ ሳምንት	
በመደበኛው ቀን ምን ያህል የአልኮል መጠጥ ይጠጣሉ?	1 ወይም2	3 ወይም 4	5 ወይም 6	7 እስከ 9	10 ወይምከዚያበላይ	
ስድስት እና ከዚያ በላይ አልኮልን በአንድ ጊዜ	በፍጹም	ከወር ያነሰ	በየወሩ	በየሳምንቱ	በየ	

የሚጠጡበት አጋጣሚ ምንያህል ነው?						
ባለፈው አመት ከእርስዎ ሚጠበቅብዎትን ነገሮች በአልኮል ምክንያት ማድረግ ያልቻሉበት ጊዜ ምን ያህል ነው?	በፍጹም	ከወር ያነሰ	በየወሩ	በየሳምንቱ	በየቀኑ	
ባለፈዉ አመት መጠጥ መጠጣት ጀምረህ ማቆም ያልቻልክበት ጊዜ ምን ያህል ነው?	በፍጹም	ከወር ያነሰ	በየወሩ	በየሳምንቱ	በየቀኑ	
ባለፈው አመት ከጠጡ በኋላ የመፀፀት ወይም የጥፋተኝነት ስሜት ምን ያህል ጊዜ ይሰማዎት ነበር?	በፍጹም	ከወር ያነሰ	በየወሩ	በየሳምንቱ	በየቀኑ	
ባለፈው አመት ማታ መጠጥ በመጠጣትዎ ምክንያት የሆነውን ማስታወስ ያልቻሉበት አጋጣሚ ምን ያህል ነው?	በፍጹም	ከወር ያነሰ	ወየወሩ	በየሳምንቱ	በየቀኑ	
አልኮል በመጠጣትዎ ምክንያት እራሰን ወይም ሌላን ሰው ላይ ጉዳት	አይ		አው ነገርግን ባለፈዉ		አዎን፣ ባለፈው አመት	

አስከትሏል ?			አመት አይደለም			
ቤተሰብ፣ጓደኛ ወይም የጤና ቧለሙያዎች መጠጣትዎ አሳስቧቹው እና እንዲያቆሙ ሀሳብ አቅርበውሎት ያውቃሉ?	አይ		አዎ ነገርግን ባለፈው አመት አይደለም		አዎ፣	

	አይ	አው፣ በመጠኑ	አው፣ በብዛት
ማህበራዊ ህይወትዎ ላይ ኢ-ፍትሀዊ በሆነ መልኩ ተስተናግደዋል ?			
በጓደኝነት ፣በጉርብትና ወይም በስራ ቦታዎ ላይ ኢ-ፍትሀዊ በሆነ መልኩ ተስተናግደዋል ?			
ኤችአይቪ እንዳለብዎት ባወቁ ሰዎች መገለል ወይም ማራቅ ደርሶብዎት ያውቃል ?			
እራስዎን ስራ ከመስራት ይገድባሉ?			
ስራ በመፈለግ			

ወይም በመቀጠር ሂደት ላይ ኢ - ፍትሀዊ በሆነ መልኩ ተስተናግደዋል ?			

1		አዎን	አይ
1	ሲጋራ የሚያጨሱ ጓደኞች አሉዎት?		
2	በማጨስዎ ምክንያት ቤተሰቦችዎ ላይ ቸልተኛ ሆነዋል?		
3	ሲጋራ በማጨስዎ ምክንያት ለጤና ችግር ተዳርገው ያውቃሉ?		
4	ሲጋራ ማጨስ ሲያቆሙ እንደመታመም ያለ ስሜት ተሰምቶት ያውቃል?		
5	በተመሳሳይ ሰዐት ከአንድ በላይ ዕፅ ይጠቀማሉ?		
6	ጫት በመቃምዎ የመፀፀት ስሜት ይሰማዎታል?		
7	የትዳር አጋርዎ ወይም ወላጆችዎ በእርሶ ጫት መቃም ዙሪያ ቅሬታቸው አቅርበው ያውቃሉ?		
8	በጫት ምክንያት የመተከዝ፣የመፍዘዝ ሁኔታ ይገጥሞታል?		
9	ጫት ለማግኘት/ለመግዛት ብለው ህገወጥ ድርጊት አድርገው ያውቃሉ?		

	ጥያቄዎች	አዎን	አይ
1	መድሐኒትዎን መውሰድ ረስተው ያውቃሉ?		
2	ጥሩ ስሜት ሲሰማዎ መድሐኒት መውሰድ ያቆማሉ?		
3	መድሐኒት የድካምና ስንፍና ስሜት እንዲሰማዎ ያደርገግዎታል?		
4	ስለመድሀኒቱ ትክክለኛው ግንዛቤ አለዎት?		
5	መድሐኒቱ የሚወስዱት የህመም ስሜት ሲሰማዎ ብቻ ነው?		

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