

Alcohol use disorders among adults at primary care, South-West Ethiopia

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ABSTRACT

INTRODUCTION

The May 2010 UN Resolution 64/265 and its subsequent General Assembly's (GA) High-Level Meeting were the two historic events of current Millennium heralding UN's recognition of non communicable Diseases (NCDs) as threats to mankind (1). The GA meeting also underscored that NCDs are among the most important obstacles of development in LMIC.

Moreover, the Assembly identified alcohol consumption as the key determinant of NCDs (2)). Therefore, there is a pressing need to know the status of AUDs and factors associated with them at PHC clinics to enhance intervention programs at different levels. This is important particularly in low-income countries like Ethiopia where knowledge regarding AUDs is scarce from PHC setting whereas production and import of any alcoholic beverages are alarmingly has been increasing at an imaginable pace for around at least the past three decades in this country.

The existing literature from different parts of the world indicates how AUDs, other substance use disorders, and common mental health disorders have become obstacles for the achievement of Millennium Development Goals by LAMIC [3-5]. AUDs are the fourth most disabling health problems in these countries accounting for about 5% of all YLDs [6, 7] whereas death from alcohol consumption is 4% globally [8]. Estimates show that 2 billion world's population consumes alcohol, 76.3 million developing AUDs subsequently [9].

Road traffic injuries (RTIs) are among the challenges faced by humanity particularly in LAMICs. The projected RTIs related to AUDs will rank fifth among contributors of GBD by the year 2030. Among the global population, the brunt born by LAMICs from road traffic injuries is huge accounting for 90% of fatal road accidents [10-14]. Furthermore, there is a relation between

AUDS and violence, child sexual abuse, violence against intimate sexual partners, and suicide. (15-18).

Concerning the Global Burden of Diseases (GBD), the WHO comparative risk assessment study indicated that only unsafe sex and childhood underweight exceeded the risks caused by AUDs [19]. Another study using the same WHO data reported that the overall burden of injuries attributable to alcohol consumption was 17.3% of all injury deaths, 16.7% of all potential years of lost life (PYLL), and 13.6% of all DALYs caused by injuries, 2.0% of all PYLL, and 1.4% of all DALYs in 2004 [20].

Why then people drink despite these huge negative consequences? There is convergent solid evidence from many independent sources complementing each other presenting compelling explanation. Multiple complex biopsychosocial developmental pathways are held accountable for risk factors playing a role in starting to drink and drinking behavior progression to the development of AUDs. This evidence also indicates that AUDs have their roots in much earlier developmental years than previously believed (16, 17). The implication of these findings is giving insight into the time framework of starting alcohol consumption, as to when to start preventive and related programs having in mind the onset time of AUDs. This also equips clinicians, health program designers, and policymakers by providing pertinent knowledge with a conceptual framework when which tasks need to be a priority in terms of addressing AUDs. Evidence also indicates transitions from use to the next dimensions of abuse and dependence (18-24).

Concerning public health policy program execution, PHC setups serve as the first entry point for the majority of the population where health services are provided. Prevalence estimates for AUDs from countries where services are available for AUDs to

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indicate that they could be as high as 29% in PHC [25]. Other reports indicate that one-in-five among PHC attendees could be excessive drinkers [26]. Reports of concern from such countries about general practitioners' (GPs) attitudes and limitations in the identification of AUDs have existed for long. Researchers from the UK indicated that GPS might be missing as many as 98% of the excessive drinkers at PHC [27, 28]. Such limitations in intervention endeavors are an excellent lesson for LAMICs in avoiding mistakes identified by other countries.

Overall understanding of the complexity and multiple natures of involved potential causative factors for alcohol consumption earlier in life, knowledge of the progression of alcohol use into next dimensions of excessive drinking affecting productivity, disrupting interpersonal and family dynamics is important in focusing on designing effective prevention and intervention programs at PHC level.

In Ethiopia, there are no well-developed prevention and intervention programs for individuals with AUDs at PHC. Few existing services are restricted to some public hospitals mainly in the capital city although the provided service organization for people with AUDs is exceedingly suboptimal.

All the substance-related studies in the country were general population-and special population groups-based studies (29-31). The country also does not have nationally representative data on AUDs according to the Authors' knowledge.

Additionally, the country lacks a functional evidence-based public health policy on the production and use of alcoholic beverages [32]. Alcohol producing industry and import of hard spirits have been increased in recent years. Uncontrolled media advertisement of these products puts the vulnerable groups at risk. Anyone as early as 7-8 years of age or more has easy access to alcoholic beverages through different channels. This inculcates expectations for future drinking or right away starting of use. Control and regulation over the illicit drugs appear exceedingly suboptimal as well. Control over multitudes of traditionally produced brews at every corner of the country seems unmanageable likewise.

The quality of traditional alcohol brews always has raised a serious question regarding their impact on health. PHC clinics are poorly organized and their capacity is limited because of the stunted economy and shortage of skilled mental health workforce.

Despite this fact, it is essential to know the prevalence of AUDs and the patterns of alcohol consumption among adults attending the PHC system and at least something needs to be done hoping that things will turn good shortly based on the finding. This helps scaling up of preventive and intervention programs for AUDs being a stimulus for better reorganization and evidence-based resource allocation for capacity building at PHC set-ups.

Therefore, this study aims to assess the prevalence rate of AUDs in PHC and explore factors associated with them to help start intervention using intervention packages such as mhGAP-Guide (33).

METHODS

Study Setting

We conducted this study at three PHC clinics giving services to Jima town residents and people coming from the suburbs. The town is multiethnic; the predominant residents are the Oromo Ethnic group. The two main practiced religions are Christianity and Islam, Moslems outnumbering others. Amharic and Afan Oromo are the two main spoken languages.

Instruments

We used the WHO Alcohol Use Disorders Identification Test (AUDIT) for identifying persons with hazardous and harmful patterns of alcohol consumption. It provides a framework for intervention. It is a helpful screening instrument for alcohol use problems among patients seeking primary care for other medical problems. The instrument considers scores of > 7 as abnormal drinking patterns. The instrument's sensitivity is 51%-97% with a specificity of 78%-96% in different setups globally. Each AUDIT item has four response scales that range from 0 to 4 alcohol; 0= never, 1= less than per month, 2=monthly, 3= weekly, and scoring of 4=almost daily. Only Items 9 and 10, have three responses, 0, 2, and 4 [34].

To ensure the quality of this study, translation into both languages followed a five-step process. Two proficient in both languages senior staff members from the Department of English conducted a forward translation separately; the other two seniors blinded for forwarding translation carried out the back translation. By arranging a meeting comprising of Consultant Psychiatrist, the first Author, and the 4 translators we addressed discrepancies between translations. The meeting also considered medical technical terminologies. Then we did a pilot study on 5% of the source population who were not included in the study sample. The purpose was to ascertain whether AUDIT items are understandable by local lay people and to know its feasibility for use.

We also adapted alcohol content levels determined in the country previously [46] for locally brewed alcoholic beverages. A consultant expatriate psychiatrist who is a specialist in Addition to Psychiatry helped us in this respect. The purpose was to determine a standard drink for local alcoholic beverages that corresponds to their industrial brewed counterparts that are 14 grams of pure alcohol accepted by AUDIT. Averages of ethanol content for traditional brews were 6.4% for Tella, 11.5%, for Tej and 37.2% for Areke (Table I). An average was preferred because the alcohol content of even the same type of traditional brew meant either for commercial purposes or for home use and varies in content greatly across brewers.

Study Design and participants

We conducted a facility-based cross-sectional study at Jimma town's three PHC clinics on 422 adults aged 18+ years using face-to-face interviews. We calculated our sample size using a single population proportion formula assuming that the proportion of AUDs would be 0.5 to obtain maximum

representative sample size and 5% margin of error with 95% confidence interval and added a 10% non-response rate. We used a simple random sampling technique to select study participants from patients coming to each clinic.

We selected six nurses for data collection with one full-time nurse supervisor. They took 2-day training. We excluded those who were too ill to communicate, too cognitively impaired to consent, and unwilling to participate in the study.

Data management

Fulltime supervisor visited data collectors daily. He checked the entire interview formats for completeness, consistency, and accuracy. Data collectors Corrected missed information or other problems accordingly at the spot before respondents left respective PHC clinics. One of the Authors made frequent random visits to the sites to ensure whether the data collection process was taking place as intended. Then we entered the obtained data into a computer. We analyzed the data using SPSS-16 software. We used bivariate analysis to assess the statistical association of covariates with AUDs. Then, we used logistic regression analysis as a final model to control for confounders. We measured the strength of association using a 95% confidence interval.

Ethical Consideration

The ethical review committee of the College of Health Sciences of Jimma University approved the study. Then we got permission from Oromiya zonal and Jimma town Health bureaus.

We got written consent from every study participant. For those who cannot read, data collectors read the consent content until the participant understood it, and questions were answered as they arose. We discussed the confidentiality of the given information with study participants. We agreed with participants on Anonymous release of overall information after finishing the study. There was a provision for leaving the interview at any stage of the interview if they feel things are not going as they expected. We also pledged them facilitating help from mental health professionals if they had AUDs before leaving the clinics at the JUTSH psychiatric clinic or inconvenient for them time through us. However, we connected those with serious problems in the psychiatric clinic for expert assessment and treatment.

RESULTS

Sociodemographic characteristics of the study participants are displayed in Table II. The response rate of participants was 100% (n=422), with a female to male ratio of 1.5:1. The mean age of the study participants was 33.2+11.6 years. Oromo ethnic group constituted about three-fourths of the study participants. From the total sample, 50.2% were Orthodox Church follower Christians and more than one-third (38.6%) were Muslims.

Among participants, one-third [32.7%] were unemployed, 35% claimed to earn \$ 23.5 or less whereas 65% reported earning more per month. More than one-third claimed to have

completed some grades in primary school whereas nearly one-third completed one or more grades in secondary schools, because of high dropout rates. Those who were illiterates constituted close to one-third (28.9%) of the total respondents. More than half (59%) of the participants were married followed by about one-fourth singles.

Concerning drinking behavior, about 59 % (N=249) of the total sample were lifetime abstainers and non-misuse.

Therefore, the prevalence rate of AUDs was 41% (N=173). More than one-fourth (27.5%) used alcohol in hazardous situations, 8.3% used in harmful circumstances and 5.2% were alcohol dependent (Figure I). Of the total alcohol abusers, 41% (N=71) admitted having already had a drink just before coming to PHC clinics.

Our results showed that 51.6% of Orthodox Church Christians, 8.3% of the Moslems, and 6.7% of those in the 'others' category (Protestants, Catholics) having AUDs (Figure II). More than half of the worshipers (55.8 %) from the whole sample were not attending worship places regularly and had AUDs (Table III).

Factors that remained independently associated with AUDs in the logistic regression model were being male (7.6; 2.9,19.5), very infrequent attending of worship places (6.1; 1.4,26.1), social anxiety (7.0; 1.1,46.5), Alcohol availability (1.2; 1.04,1.6), Income (4.4; 1.5,12.5) and other Psychoactive substances' use alongside alcohol (5; 1.9,17.6) respectively (Table IV).

DISCUSSION

Our result shows a high prevalence rate among studied PHC attendees. This provides new information on the prevalence of hazardous and harmful alcohol consumption among patients attending PHC clinics at least in Jimma town and Jimma Zonal Administration health facilities where there is virtually no mental health service. Our findings that 6.3% of Muslims and 6.6% of Protestant Christians were among drinkers beyond safe limits are unexpected for the authors. This is because Islam prohibits drinking and Christians following different Protestant Christian Denominations in Ethiopia preach drinking as sinful. As a result, Based on this finding propose that our prevalence rate might be even very conservative because of under-reporting. The reason for underreporting could be the fear of stigma and discrimination from the respective groups they belong to. We propose that this might be an indication of the infiltration of the problem even into known in Ethiopia as very traditional and conservative living in the Jimma District population.

Because of the absence of services for AUDs at PHC in Ethiopia, we understand that the comparability of our prevalence rate with similar studies from other countries has limitations. Yet making a comparison is important for understanding the existing gap. Such knowledge could be a springboard for scaling up the ever-neglected services for AUDs and other mental health problems in Ethiopia.

Our prevalence rate of AUDs (41.0%) is nearly two times and more than 2.6 times higher than that reported (22.3%) by Academy of Family Physicians National Research Network, the USA, and a study from France (16%) respectively [35, 36]. Well-

developed prevention and intervention programs for AUDs in those countries could explain their low prevalence rates.

Our prevalence rate is 4 times higher than that reported from primary care (10.7%) from the Northern city of Luebeck, Germany (37). That study used SMAS for screening. Effective prevention and intervention programs for AUDs and the use of SMAS for screening could be an explanation for differences in prevalence rates. Our prevalence rate is also higher as compared to Irish studies on 196 individuals as well (38). Besides, the Dublin sample size was small and comprised a sample of current alcohol users from former heroin users currently on methadone contributing to the probable difference.

There are also studies conducted in low and middle-income countries (LAMICs) at PHC clinics on AUDs. A PHC study conducted on a sample of 228 individuals in Kolkata, India, reported a prevalence rate of 65.8% [39] that is 1.7 times higher than ours is. However, they reported less (8%) harmful or hazardous patterns of drinking as compared to ours. Conversely, their reported dependence rate was 2.6 times (14%) higher than that we found. The differences in both study results could be explained by almost half less sample size in their study compared with that of ours and the availability of services in Kolkata.

South African (SA) prevalence rate study on a sample of 4,900 participants from forty-two PHC clinics in three districts found a prevalence rate of 23.2% (40). This is about two times less compared to our findings. The proportion of males with hazardous and harmful drinking in SA study (31.8%) was less compared with that of our finding (43.70%) whereas female drinkers beyond safe limits were more in SA study (13.7% vs 8.0% respectively) whereas dependence is more in SA sample (12.7% vs 5.2% respectively). Proportional to the sample size ours appears more.

The two studies have several other significant differences: The sample size of the SA study is much higher as compared to ours. SA study sample consisted of individuals with Tuberculosis whereas ours is not.

We found a high prevalence rate compared with other African countries' studies' results as well. It is about two times higher than Ugandan (17.4%) is (41) and 2.6 higher compared to another SA study results (17.6%) (42); those studies used CAGE and ASSIST respectively. The Explanations for the differences in results could be the relatively developed mental health services in studied areas and differences in the used instruments.

We also assessed factors that might have an association with AUDs in our sample. We found that males were 5 times more affected as compared to their female counterparts. This is in agreement with studies reporting that being male is a risk factor for developing AUDs worldwide (43-47). The probable reason for this appears to be discouraging in almost every culture women drinking, the dependence of women economically on males in low-income countries, and females' sensitivity for alcohol.

We found 'never going to worship places' to be associated with AUDs. This is also by findings of other studies (48-51). Religion appears to have a positive modifying effect.

Reports from different parts of the world show that social anxiety disorder has a strong association with AUDs that could be explained by self-medication to endure social obligations or social events. Therefore, our result regarding social anxiety is consistent with the results of these studies (53-54). An association of income with AUDs found by us is also in line with reports from many countries (43, 55-58).

We found a strong association with alcohol availability concerning AUDs, which is not unexpected. This is in line with the results of studies from other parts of the world (58, 59).

Our finding that the use of other substances of abuse alongside alcohol is associated with AUDs is in agreement with studies from elsewhere [43, 53, 60-62].

LIMITATIONS AND STRENGTHS

This is the first study to presenting data from a primary health care setting in this country among other low-income countries.

Regarding limitations, data presented here need cautious interpretation. Firstly, Individuals with AUDs rarely seek help from the health care system unless physical complications from AUDs urge them to do so. This might have an additive effect on our conservative prevalence rate. The predominance of Orthodox Church follower Christian among PHC attendees might have masked drinking behavior among Moslems and Protestant Christians in our sample. The reason could be attributable to differences in help-seeking behavior among religious groups. This needs further verification.

The cross-sectional nature of the study limits the direction of causality when assessing associated factors. Secondly, regarding the generalizability of our findings, the generalizability of our results could perhaps be limited to similar setups internationally within Ethiopia and in countries where there are no mental health services and for AUDs with similar heterogeneity of social and religious composition.

CONCLUSION

The prevalence rate of AUDs at PHC clinics in Jimma town is very high. The results of the current study provide new information from PHC delivery set-up. Scaling up mental health services is a cornerstone to address AUDs and other mental health disorders at the PHC level. The identification of the use of alcohol consumption patterns and the prevalence rate should guide the designing of intervention and prevention programs. We propose the following measure to address this alarming health problem and its expansion. Firstly, health facilities in the country need to include routine screening for detecting AUDs among PHC clinic attendees. Secondly, the country needs to develop a sustainable approach for the treatment of alcohol use disorders and developing mental health services in general. Thirdly, AUDs need to be integrated with the general health care system in mental health units. Trained non-specialist health professionals are the only mainstay for the delivery of services of this kind. Therefore, on the job, continuous training for capacity building is crucial, as the number of psychiatrists for a population of around to a hundred ten million country's

population is only less than sixty, and more than 80 % of the psychiatrist live in the capital city. Fourthly, a nationally representative data on AUDs and other psychoactive substances needs to be available to help priority setting and resource allocation. There must be a smart approach to work with Traditional and Religious healers until awareness creation population among the population and its consolidation is well-enough.

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