

## RESEARCH ARTICLES

# Increasing problem of alcohol abuse among the Zambian population in the psychiatric setting

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Alcohol abuse is related to the development of cancer, neuropsychiatric disorders, cardiovascular diseases and cirrhosis of the liver among others. Level of alcohol abuse varies in different subpopulations and is hypothesized to be high in psychiatry patients. The objective of the study was to determine proportions of patients with history of alcohol abuse and alcohol related disorders in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia. All diagnoses made in the Psychiatry ward between January 2012 and October 2015 were reviewed for frequency of alcohol related disorders. Additionally, randomly selected files in 2016 were examined for history of alcohol abuse. The Chi-squared test was used to compare proportions, while trends were established using simple linear regression. The cut off point for statistical significance was set at 5%. Totals of 6212 (3629 male and 2583 female) and 109 (79 male and 30 female) records were reviewed for alcohol related disorders and alcohol abuse, respectively. More males (75.9%) than females (23.3%) had a history of alcohol abuse ( $p < 0.001$ ). No significant linear trends were observed in the proportion of alcohol related disorders for both gender between 2012 and 2015 (males: slope = 3.980; 95% CI [-1.213, 9.173]; females: slope = 1.101; 95% CI [-1.479, 3.682]). Overall, rates of alcohol related disorders increased linearly from 9.3% in 2012 to 18.7% in 2015 (slope = 2.920; 95% CI [0.099, 5.741]). Proportions of alcohol abuse and alcohol related

disorders are high among patients in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia. Generally, the rate of alcohol related disorders is on an increase. Interventions are needed to reduce rates of alcohol abuse and subsequently alcohol related disorders. Rehabilitation centres are needed to provide affected patients with appropriate support.

## Introduction

The link between alcohol consumption and direct loss of health has been established in the research literature. A risk assessment by the World Health Organization (WHO) showed that the damaging impact of alcohol consumption on the worldwide burden of disease and injury is immense. It is the third highest global risk factor for disability-adjusted life years (DALYs, ranked after underweight during childhood and having unprotected sex [1]).

Alcohol misuse is an important and preventable major risk factor for chronic diseases that are related to lifestyle choices. It has been shown to be associated with more than 60 physical and mental illnesses; and social problems [2]. The excessive use of alcohol is related to the development of serious illnesses such as cancer, neuropsychiatric disorders, cardiovascular diseases and cirrhosis of the liver [3].

Alcohol consumption has been a part of the Zambian culture for a long time. Social drinking is commonly accepted and included in many important traditions and ceremonies [4]. Zambia is one of the African nations with the highest drinking levels. According to the WHO health report of 2014, the 12-month prevalence of alcohol use disorders among Zambians above 15 years of age, including alcohol dependence and harmful use of alcohol, is 7.9% of the male and 1.0% of the female population with an overall rate of 4.5% which is above the average of 3.3% for the WHO African Region [5]. This gender difference is shown in the effects of alcohol which causes significantly more harm to males than female, suggesting different drinking habits in relation to quantity and pattern of drinking [1]. The estimates above relate to the general population and may vary from one subpopulation to the other. It is

postulated that alcohol misuse is high in psychiatry patients. Since no information is available on alcohol misuse and its health effect in Zambia, a study was conducted to determine proportions of patients with history of alcohol abuse and alcohol related disorders in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia.

## **Methods**

This was a retrospective study conducted between February and March 2017 at the Department of Psychiatry of the University Teaching Hospital (UTH) in Lusaka, Zambia. All patient records were reviewed for the years 2012 to 2015 to address alcohol related disorders and only a sample for the year 2016 to address history of alcohol abuse. Patients aged under the age of 18 years were excluded from the study.

The Chi-squared test was used to compare proportions, while trends were established using simple linear regression. Regression estimates are reported together with their 95% confidence intervals (CI). The cut off point for statistical significance was set at 5%.

## **Results**

Totals of 6212 (3629 male and 2583 female) and 109 (79 male and 30 female) records

**Table 1** Distribution of patients by year, gender and alcohol related disorder

Year	Total number of patients		Female (%)	Total % alcohol related disorder diagnoses
	Male (%)			
2012	1233	55.6	44.4	9.3
2013	1424	57.8	42.2	15
2014	1739	57.8	42.2	16
2015	1816	61.3	38.7	18.7

were reviewed for alcohol related disorders and alcohol abuse, respectively. There were more male than female patients in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia. More males (75.9%) than females (23.3%) had a history of alcohol abuse ( $p < 0.001$ ). Table 1 shows the distribution of cases by year, gender and alcohol related disorders. The overall rate of alcohol related disorders increased linearly from 9.3% in 2012 to 18.7% in 2015 (slope = 2.920; 95% CI [0.099, 5.741]). However, there were no significant linear trends were observed in the proportion of alcohol related disorders for both gender between 2012 and 2015 (males: slope = 3.980; 95% CI [-1.213, 9.173]; females: slope = 1.101; 95% CI [-1.479, 3.682]). Table 2 shows rates of alcohol related disorders for males and females over time.

## Discussion

There were more male than female patients in the current study. More males than females

had a history of alcohol abuse. The rate of alcohol related disorders increased linearly from 9.3% in 2012 to 18.7% in 2015 with no gender difference.

There were more males than female patients in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia. Similar findings have been reported elsewhere [6-8]. These findings suggest that males be more exposed to stressors than females leading to alcohol and other drug abuses among others. This hypothesis is supported by yet another finding from the current study that more males than females

**Table 2** Alcohol related disorder diagnoses between males and females by year

Year	Number	Male	Female
		% alcohol related disorder diagnoses	% alcohol related disorder diagnoses
2012	685	15.9	1.1
2013	824	25	1.2
2014	1006	25.5	3
2015	1114	29	2.4

had a history of alcohol abuse. These findings support the importance of introducing rehabilitation centres in Zambia. As of right now, the only possibility to have an in-ward detoxification is at Chainama, a psychiatric hospital located outside of Lusaka. This hospital though is not a professional rehabilitation centre but takes on all

complicated psychiatric cases. This does not make it a perfect place to go through the different stages of alcohol withdrawal. Zambia seems to face an increasing alcohol-attributable burden at a time when the knowledge about effective strategies to control the harms made by alcohol exists.

Apart from alcohol abuse being related to the development of illnesses such as cancer, neuropsychiatric disorders, cardiovascular diseases and cirrhosis of the liver, it is also related to HIV since it elevates the sexual risk taking behaviours concerning the number of partners, condom use and intimate partner violence. Several studies have shown that alcohol can impair judgment and lead to improper use of condoms while also enhancing promiscuous and aggressive behaviour [9,10]. A recent study also listed the role of alcohol as one of the three major risk factors for HIV infection among Zambian men [11]. More alcohol-related interventions might help reduce a further expansion of the epidemic which already affects around 13% of the Zambian population [12-14]. The relationship between alcohol and HIV goes even further. HIV-infected people who are problem drinkers are less than half as likely to follow antiretroviral treatment guidelines as a recent meta-analysis shows [15]. From this perspective, it

is suggested that HIV prevention programs should also acknowledge the importance of fighting alcohol abuse.

Alcohol use is also a risk factor for the incidence and re-infection of TB and is linked to its worsening [16,17]. Given the evidence of the causal linkage between alcohol and the infection with TB, establishing rehabilitation centres which help people out of their addiction could lower the prevalence of TB infections. Drinking alcohol elevates the seizure threshold. On cessation of drinking this threshold declines which can lead to seizures, usually 6-48 hours after the last drink [18]. A recent meta-analysis which covered 48 years of studies regarding this topic supported the assumption that alcohol abuse can also be a trigger for epileptic seizures [19].

It has been reported by numerous studies that alcohol use is related to assaults [20]. The positive link between alcohol abuse and intimate partner violence (IPV) has also been proven by several meta-analyses [20,21]. The proportion of men who abuse their intimate partner increases with the frequency they drink alcohol [22]. The opportunity to receive treatment for alcohol related disorders could reduce the problem of domestic violence.

The Psychiatry ward of UTH is flooded with people being treated for alcohol related disorders. The problem is taking up much of the time and resources of the employed psychiatrists, psychologists and mental health nurses. If professional rehabilitation centres would be available for the low-income population it might not only help the sick needing care but it would also reduce the burden on the psychiatry wards which would lead to them having more capacities for other mental health issues. Alcohol use disorders are risk factors for the incidence and re-infection of TB and are as well causally linked to worsening of the disease course. [3,16].

The study may not have been powered enough to estimate the alcohol abuse rate. However, we have no reason to believe that our findings were greatly biased, partly due to missing information as generally is the case in retrospective studies. In conclusion, proportions of alcohol abuse and alcohol related disorders are high among patients in the Psychiatry ward of the University Teaching Hospital (UTH) in Lusaka, Zambia. Generally, the rate of alcohol related disorders is on an increase. Interventions are needed to reduce rates of alcohol abuse and subsequently alcohol related disorders.

Rehabilitation centres are needed to provide affected patients with appropriate support.

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