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Original Article

Knowledge, Risk Factors and Preventive Practices against Tuberculosis among Pottery Workers in Southwestern Nigeria

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ABSTRACT

Mortality and morbidity figures associated with tuberculosis are generally scary. Raw materials involved in the pottery making process contain crystalline silica which has been documented as risk factors to the development of tuberculosis. Unfortunately Nigeria pottery workers have no formal occupational health services. This study determined the knowledge of risk factors and preventive practices against pulmonary tuberculosis among pottery workers in Oye, Nigeria. A descriptive cross sectional study was carried out among 198 pottery workers selected using multistage sampling method. Research instrument consisted of a semi structured interviewer administered pretested questionnaire. Data was analyzed using the SPSS software version 23.0. Results shows that a one hundred and ninety four (98%) of the respondents have ever heard of pulmonary tuberculosis, 178(89.9%) of them don't know whether clay soil contained chemicals that could predispose them to tuberculosis. Only 64.1%, 56.6% and 59.1% had good mean general knowledge, good mean knowledge of prevention and good mean perception scores to tuberculosis respectively. Sixty three (31.8%) said that pottery workers are among those at risk of developing Tuberculosis (TB). Only 51 (25.8%) said they used protective equipment. Predictors of good general knowledge and good perception of TB include age above 24 years, being female, having post primary school education, having spent more than 5 years in pottery business and using protective devices ($p < 0.005$). There is need for recognition and prioritization of all silica-exposed workers for screening and treatment services in anti-TB programmes of the Government.

Keywords: Pottery workers, Silica, Hazards, Tuberculosis, Knowledge

INTRODUCTION

Mortality and morbidity figures associated with TB are generally scary, whereas ending the epidemic of Tuberculosis by 2030 is one of the highly strategic health targets of the Sustainable Development Goals. In 2018, an estimated 10 million people fell ill with

tuberculosis (TB) worldwide, out of which about 1.5 million people died in the same year.¹ Nigeria ranked 5th among the 22 highest disease burden countries in the world and 2nd only to South Africa on the African continent.² No fewer than 460,000 cases of TB are reported annually in Nigeria.¹ Despite Nigeria being one of the countries in the world to use the new standard approach of “Directly

Observed Treatment Short Course” to treat tuberculosis, the true prevalence of bacteriologically-confirmed pulmonary tuberculosis can only be directly measured in nationwide population-based surveys which are not readily available. Air polluted by dust in workplaces is associated with a wide variety of occupational respiratory diseases and pulmonary problem. Ceramic and pottery workers are in danger of exposure to dust particles, including crystalline silica. These are generated in many phases of ceramic and pottery materials production and puts handlers at potentially risk of developing occupational pulmonary respiratory diseases.³ Chronic inhalation exposure to ceramic and pottery dust has been associated with elevated risk of pneumoconiosis, chronic bronchitis, and tuberculosis among both male and female workers.^{3,4}

The procedures of mixing, sieving and shaping of pots involve raising dusty particles, which in the absence of precautions, produces a tremendous amount of dust in the air of the work rooms.

Exposure to almost any kind of dust even for a short time is apt to irritate the respiratory tract and produce coughing. It is the desire of the international community that a concerted global effort is made to promote Occupational Safety and Health strategies to prevent tuberculosis (TB), especially in high-risk occupations. These include but not limited to, silica dust exposed workers in mining, construction, pottery and other industries. In Nigeria, pottery sites are mainly owned by individuals and governments who are probably not keen on observing the standard safety practice for their employees. Like in many other informal sectors, most pottery industries are usually small to medium scale industries with little or no occupational health services on ground.^{5,6} A study on knowledge of risk factors for TB would assist those at risk towards taking proactive measures towards disease prevention. This study therefore aimed to determine the knowledge and risk factors for pulmonary tuberculosis among pottery workers in Oye in Southwestern Nigeria.

MATERIALS AND METHODS

Oye community in Southwestern Nigeria is a traditional city noted for pottery and clay production. The prevalence of TB in Oye is not known. This is a descriptive cross sectional study carried out to assess knowledge and risk factors for TB among pottery workers. All pottery workers who used clay for various purposes at the study site constituted the target population. An eligible respondent is a pottery worker who is registered with the central association and who has been in pottery business for at least 5 years. Sample size was calculated using the modified Leslie Fishers formula and a prevalence of pottery workers who have heard about TB disease.⁷ A sample size of 200 was arrived at after correcting for attrition and non response. A multi- stage sampling procedure was used for the selection of respondents. These include selection of six out of the nine pottery clusters within Oye by simple random sampling (simple balloting) in stage 1; and selection of two out of three sub-clusters in an average cluster by simple random sampling (balloting) in Stage 2. The 3rd stage involved a systematic sampling of one in three names on pottery workers list in a sub-cluster and this continued until the desired sample size was reached. A semi-structured, interviewer-administered, pre-tested questionnaire was used in data collection. Sections of the questionnaire included socio-demographic data of pottery workers, factors related to knowledge of pottery workers on the risk of pulmonary tuberculosis, risk assessment to TB and preventive practices against TB infection. A vernacular version of the question was prepared for the illiterate respondents, and these were back translated to English from the local Yoruba language. Data was entered into the computer system and analysed using the SPSS software version 23.0. Charts and frequency tables were generated. Mean scores were generated about risk factors (high or low) and knowledge (good or poor). P-value was considered significant at values less or equals to 0.05 for all inferential statistics done at bi-variate and multivariate analysis levels.

RESULTS

Two hundred (200) pottery workers were recruited for this study; complete responses were obtained from 198, giving a response rate of 99%. Table 1 shows the socio-demographic characteristics of the pottery workers. Mean age was 55.7 ± 5.8 years, 154 (77.3%) were females, 77 (38.9%) attained primary level education, while 90 (45.5%) had been in pottery work for about 7 to 8 years. Table 2 shows the knowledge of pottery workers on pulmonary tuberculosis; 194 (98%) of the respondents has ever heard of pulmonary tuberculosis and 110 (55.8%) of them heard of it through the health facility, 191 (96.5%) of them knew that tuberculosis was dangerous. High proportions 186 (93.9%) of them knew that tuberculosis could kill. Majority 178 (89.9%) of them did not know whether the clay soil they handles contained chemicals that could predispose them to tuberculosis. Few 45 (22.7%) of the respondents reported they had ever had tuberculosis. Majority 143 (72.2%) of them reported that tuberculosis could be cured. Most 186 (93.9%) believed that tuberculosis could be transmitted by inhaling infected air. Table 3 shows the knowledge about pulmonary tuberculosis prevention and DOTs program. It showed that 21 (10.6%) of the respondents have ever heard of DOTs program while 19 (9.6%) reported effectiveness for treatment of TB by DOTs program. Majority 149 (75.3%) of the respondents said that TB is preventable - by taking drugs 135 (90.6%) and through immunization 131 (87.9%). Only 64.1%, 56.6% and 59.1% had good mean general knowledge, good mean knowledge of prevention and good mean perception scores respectively according to Figure 1. Table 4 shows the perception and preventive measures on pulmonary tuberculosis. It shows that 63 (31.8%) said that pottery workers were among those at risk for developing TB, while 42 (21.2%) said that some workers in pottery industry may have TB. Majority 196 (99.0%) said that one can contact TB if working with untreated TB patients, 197 (99.5%) believed that going for TB test early when coughing for more than a month is advisable, 142 (71.7%) believed that taking TB drugs for treatment of TB is the

best treatment advisable. Only 51 (25.8%) said they used protective equipment like face mask, goggles etc, with 19 (37.3%) using it regularly. Reasons for not using protective devices include poor environmental sanitation (95.5%), wet preparation (76.3%) while few 1% claimed it is due to the availability of the first aid box.

Table 5 shows bivariate and multivariate analysis between some socio-demographic characteristics and selected outcome variables of interest. A statistically significant association was found between general knowledge of TB and age, gender, education status, no of years of experience working in pottery industry and use of personal protective devices ($p < 0.05$). Similar association was found with

Table 1: Socio-demographic characteristics of respondents (N=198)

Variables	Frequency (n)	Percentage (%)
Age(years)		
18-27	15	7.6
28-37	25	12.6
38-47	14	7.1
48-57	71	35.9
≥ 58	73	36.9
Sex		
Male	44	22.2
Female	154	77.3
Family structure		
Monogamous	53	26.8
Polygamous	145	73.2
Marital status		
Single	20	10.1
Married	141	71.2
Separated/divorced/widowed/widower	37	18.7
Tribe		
Yoruba	188	94.9
Igbo	5	2.5
Hausa	5	2.5
Educational level		
No formal education	51	25.8
Primary	77	38.9
Secondary	58	29.3
Tertiary	12	6.0
Period of being in to pottery work		
1-2	9	4.5
3-4	10	5.1
5-6	40	20.2
7-8	90	45.5
>9	49	24.7
Income (Naira)		
5000	6	3.0
10000	13	6.6
15000	32	16.2
20000	94	47.5
25000	53	26.8

Table 2: Knowledge of pottery workers on pulmonary tuberculosis (N=198)

Variables	Frequency (n)	Percentage (%)
Ever heard about tuberculosis		
Yes	194	98.0
No	4	2.0
*Source of information		
Friends	75	38.1
Health facility	110	55.8
Co-workers	18	9.1
Television	122	61.9
Tuberculosis is dangerous		
Yes	191	96.5
No	3	1.5
Don't know	4	2.0
Tuberculosis can kill		
Yes	186	93.9
No	6	3.0
Don't know	6	3.0
How common is Tuberculosis among pottery workers		
Not common	162	81.8
Common	34	17.2
Very common	2	1.0
Clay contains chemical that can predispose you to TB		
Yes	16	8.1
No	4	2.0
Don't know	178	89.9
Protect yourself against dust inhalation		
Yes	76	38.4
No	122	61.6
*If yes, protective measures		
Handkerchief	n=76 16	21.1
Face mask	60	78.9
Anybody with TB now and before		
Yes	45	22.7
No	153	77.3
Tuberculosis can be cured		
Yes	143	72.2
No	5	2.5
Don't know	50	25.3
If yes, how		
Modern treatment	n=143 132	92.3
Traditional	10	7.0
Faith healing	1	0.7
How's Tuberculosis transmitted		
Through sexual intercourse	5	2.5
Through bad food and water	7	3.6
By inhaling infected air	186	93.9

Table 3: Knowledge about pulmonary tuberculosis prevention and DOTs program (N=198)

Variables	Frequency	Percentage
Ever heard about DOTs programme		
Yes	21	10.6
No	104	52.5
Don't know	73	36.9
There is effectiveness for treatment of TB by DOTs program		
Yes		
No	19	9.6
	179	90.4
If yes, how		
Sneezing	8	42.1
Singing	8	42.1
Talking	3	15.8
Do you know that TB is preventable		
Yes	149	75.3
No	1	0.5
Don't know	48	24.2
If yes, means of prevention		
Immunization	131	87.9
Taking drugs	135	90.6
Practice good hygiene	50	33.6
Use of protective devices	34	22.8
Herb	52	34.9
Traditional healer	21	14.1
Other preventive measures		
Cover mouth while coughing	169	85.4
Cover nose while sneezing	172	86.9
Avoid overcrowding	75	37.9
Going for screening	25	12.6
Eat well and nutritious food	20	10.1
BCG vaccines protect infants against tuberculosis		
Yes	171	86.4
No	11	5.6
Don't know	16	8.1
Do you use protective equipment like nose mask, goggles and others		
Yes	51	25.8
No	147	74.2
Reasons for not using protective devices (multiple responses with n=51)		
Not necessary	30	58.6
Inconvenient	14	27.3
Not always available	20	39.4
Often forgot	4	8.6

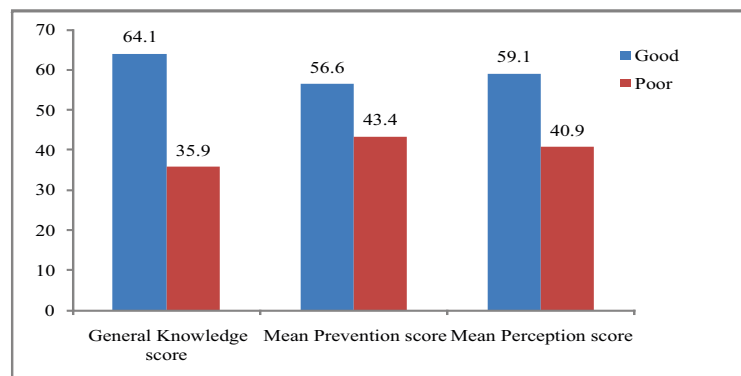


Figure 1: Mean score of TB knowledge and perception

Table 4: Perception and preventive measure on pulmonary tuberculosis (N=198)

Variables	Frequency (n)	Percentage (%)
Pottery workers are among the at risk group of developing TB	63	31.8
Yes	135	68.2
No		
Do you think that some workers in pottery industry may have TB		
Yes	42	21.2
No	24	12.1
Don't know	132	66.7
If you are living or working with untreated TB patients you can contact it		
Yes	196	99.0
No	2	1.0
Going for TB test early when coughing for more than a month is advisable		
Yes	197	99.5
No	1	0.5
Taking TB drugs for treatment TB is best treatment and advisable		
Yes	142	71.7
No	54	28.3
I will advise anyone coughing for more than a month to go for chest x-ray		
Yes	139	70.2
No	59	29.8
How regularly do you use protective device (n=51)	n=51	
Regularly	19	37.3
Not regularly	27	52.9
Don't use at all	5	9.8
Do you think you can never have TB		
Yes	177	89.4
No	21	10.6
Who are those who could have TB then if not you	n=21	
My friend	7	33.3
Other workers	14	66.7
Reasons why you said friend or other workers are at risk	n=21	
Not using face mask	10	47.6
Not using goggle	2	1.0
Not using nose cover	18	85.7
Will you like to be using preventive measures regularly		
Yes	183	92.4
No	15	7.6
*If yes, type of preventive measure	n=183	
Face mask	107	58.5
Goggle	42	22.9
Nose mask	158	86.3

* Multiple responses

Table 5: Association between knowledge and perception of pottery workers to TB and selected socio-demographic variables

	General mean knowledge scores		Statistics	Mean perception scores		Statistics
	Good	Poor		Good	Poor	
Age in years			X ² =4.876			X ² =14.939
<24	28(51.9)	26(48.1)	p=0.021**	20(37.0)	34(63.0)	p=0.001
<24*	99(68.8)	45(31.2)		97(67.4)	47(32.6)	
Gender			X ² =13.275			X ² =27.198
Male	18(40.9)	26(59.1)	p=0.001**	11(25.0)	33(75.0)	p=<0.001
Female*	109(70.8)	45(29.2)		106(68.8)	48(31.2)	
Education status			X ² =9.415			X ² =13.974
Up to primary	92(71.9)	36(28.1)	p=0.002**	88(68.8)	40(31.2)	p=<0.001
Secondary and above*	35(50.0)	35(50.0)		29(41.4)	41(58.6)	
No of years in pottery			X ² =4.916			X ² =7.847
<5 years	31(52.5)	28(47.5)	p=0.021**	26(44.1)	33(55.9)	p=0.004
>5 years*	96(69.1)	43(30.9)		91(65.5)	48(34.5)	
Use protective device (n=51)			X ² =10.831			X ² =18.853
Yes	23(45.1)	28(54.9)	p=0.001**	17(33.3)	34(66.7)	p=0.001
No*	104(70.7)	43(29.3)		100(68.0)	47(32.0)	

Binary logistic regression (with good mean general knowledge)

	Mean good general knowledge			Mean good perception scores		
	95%CI		OR/ P value	95%CI		OR P value
	Lower	Upper		Lower	Upper	
Age in years						
<24	0.2582	0.9280	0.49	0.1483	0.5476	0.29
<24*			0.015			0.001
Gender						
Male	0.1428	0.5722	0.29	0.0704	0.3237	0.15
Female*			0.001			0.001
Education status						
Up to primary*	0.3933	4.6875	2.56	1.6987	5.6951	3.11
Secondary and above			0.001			0.001
No of years in pottery						
<5 years	0.2655	0.9264	0.50	0.2232	0.7738	0.42
>5 years*			0.014			0.002
Use protective device (n=51)						
Yes*	0.1762	0.6546	0.34	0.1193	0.4627	0.24
No			0.001			0.001

**Statistical significance *Reference category

mean perception scores of respondents ($p < 0.005$). Predictors of good general knowledge and good perception of studied pottery workers to TB include age above 24 years, being a female, having post primary school education, having spent more than 5 years in pottery business and using protective devices, though all these observations were found to be statistically significant ($p < 0.005$).

DISCUSSION

Pot making is one of the traditional handwork for which the people of the study area and many other communities are known for. It serves as a source of livelihood for many despite their predisposition to TB by the handling of clay and silica materials in their operations. The socio-demographic characteristics of pottery workers in our study supports that from another Nigerian study,⁸ in which majority were females, with lower level of education. Another cross-sectional survey in Thailand also reported female dominance among pottery workers.⁹ The female characteristics of patience and paying attention to fine details may be responsible for the affinity for pottery work among them.

Majority of the respondents having ever heard about tuberculosis holds a good prospect for TB prevention and control. This figure is higher when compared to another similar study among potters and ceramic workers.¹⁰ Good knowledge is an indicator that respondents would search for in-depth information on mode of acquiring the disease, as well as, what can be done to treat the illness. Some studies revealed that people who have good knowledge adhere more to good TB preventive practices and seek medical treatment early.^{11,12} More than half of our respondents had knowledge of tuberculosis from the health facility, which is in agreement with another local study where more than half of their respondents also had knowledge of tuberculosis and associated hazards from the hospital while seeking health care.⁸

Majority of our respondents did not know if clay soil contained chemicals that may predispose them to

tuberculosis. This figure is far higher when compared to findings from another study.¹⁰ The pattern is however better when compared to another Nigerian study,⁸ where it was found that about half of the respondents were not aware of hazards associated with working with clay. Good general knowledge of TB and its prevention was found among two thirds of our respondents, similar to findings from another study.¹³

Only one quarter of our respondents said they used protective equipment like face mask, goggles and others. This usage pattern is low or poor and not encouraging when compared to other studies,^{8,13} and far lower when compared to another Nigerian study where majority of their respondents reported a high magnitude of utilization of personal protective equipment.¹⁴ However, another study in Dhaka conducted among pottery workers reported non-use of protective devices among two-thirds of the respondents.¹¹ Majority of the respondents indicated willingness to be using preventive measures regularly. This supports another Nigerian study by another study.¹¹ Poor awareness and low use of protective devices may also be attributed to the low level of education observed among the pottery workers in this study, and similar findings from other studies.^{9,14}

CONCLUSION

Pottery workers have a high risk of contracting TB due to the processes involved in their occupation. The low level of education observed among the pottery workers in this study may have accounted for the poor awareness and low use of protective devices. We recommend the need to educate pottery workers, recognize and prioritize all silica-exposed workers for screening and treatment services and their prioritization in anti -TB programmes of Government.

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Conflict of interest

None to declare

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Original Article

Prevalence and Predictors of Harmful Alcohol use in a Sub-urban Community in North-Central Nigeria

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ABSTRACT

Alcohol is a commonly used beverage with adverse health and socio-economic consequences when consumed in excessive amounts. This study determined the prevalence and predictors of hazardous alcohol use in a sub-urban community in Plateau state, Nigeria. Consenting adults aged 18 years and above were selected using multi stage sampling technique. They completed a semi-structured interviewer administered questionnaire adapted from Short Michigan Alcoholism Screening Test-Geriatric Version (SMAST-G) and the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT) tools. Majority 154 (55) of the 280 respondents were males and about half were farmers. About 150 (53.6) of respondents had ever consumed alcohol as at the time of data collection and 112 (77.4) of them were currently using alcohol. Harmful use was prevalent in 93 (83) of current users. Being male, belonging to age group 38-45 years, and being a civil servant or a business person positively predicted harmful use of alcohol while consuming burukutu, was a negative predictor of harmful use. Control efforts need to target these groups to reduce the negative health and socio-economic consequences of alcohol use in the community

Keywords: Harmful alcohol use, Predictors, Prevalence

INTRODUCTION

Alcohol is a psychoactive substance with dependence properties that has been used globally in many cultures for centuries.¹ It is accepted as a key feature of leisure time in many societies including Nigeria, where it is regarded as an important part of traditional ceremonies like marriages and other social gatherings.^{1,2} However, its harmful use causes significant socio-economic and disease burden in societies. Harmful use of alcohol is alcohol drinking that causes detrimental health and social consequences for the drinker, the people around the

drinker and society at large.³ It also includes the patterns of drinking that are associated with increased risk of adverse health outcomes. Globally, alcohol accounts for about 5.3% of total annual deaths, 5.1 % of total disability adjusted life years and is the 7th leading risk factor for premature death and disease.^{1,2} Although moderate alcohol consumption has been previously considered to be harmless or even protective from heart disease and diabetes mellitus, recent findings from the 2016 global burden of disease suggest that even low levels of alcohol consumption could be harmful.^{3,4}

In Nigeria the pattern of alcohol use has changed over the

years from the customary occasional use of locally brewed alcohols like palm wine, 'akpeteshi', 'ogogoro' and 'gokolo' by adult males to a regular sometimes daily use of predominantly industrially produced types like beer, wine and whiskey by all including young adults and women.² Data released by the World Health Organisation in 2011 ranked Nigeria as the leading country in alcohol consumption with a per capita consumption of about 13.4 Litres per annum.⁵ In addition, some of the local brews like ogogoro and gokolo have very high and variable alcoholic concentration because of lack of standardisation which makes them potentially more harmful to health.^{6,7} There is therefore concern that consumption of these brews in high volumes or on a regular basis could lead to organ damage and even death. The Plateau state Government banned the production and consumption of the common local brew with very high alcoholic concentration produced in the state, as well as the sell and consumption of alcohol in public places in certain hours of the day about ten years ago in an effort to reduce the damage caused by excessive alcohol consumption but it is unclear if harmful use of alcohol still goes on in communities in the state. The purpose of this study therefore is to determine the prevalence and predictors of harmful alcohol use in Fobur, a sub-urban community in Jos East Local Government Area of Plateau state.

MATERIALS AND METHODS

This study was conducted in Fobur community in Jos east LGA of Plateau state. Fobur is located about 6 km east of Jos municipal area, the capital of the State. It is located between latitude 8° 24' N and longitude 9° 51' and 9° 01' East. The altitude ranges from 1,300 meters to a peak of 1,709 meters above sea level. The temperature of the area ranges from 16 - 35°C yearly, with the highest temperature experienced in the month of March. The mean annual rainfall ranges from 131cm to 146cm.⁸

Fobur community is one of the Semi – urban area with an estimated population of 17,060.⁸ It has an access road, a Primary Health care centre (PHC), a government owned primary and secondary schools, electricity and

telecommunication network. It is predominantly an agrarian community with Afizere as the predominant tribe.⁹

Study Design

This study was a community based survey using members of selected households. It was a cross sectional study that involved all adults aged 18 years and older.

All eligible household members residing in Fobur Community for at least a year who gave verbal or written consent were included in the study whereas migrant households, temporary residents and members who declined consent were excluded from the study.

A multi stage sampling technique was used for selection of respondents. From the list of all the four (4) political wards in Fobur community (Fobur A, Fobur B, Fobur C and Fobur B west) Fobur A ward was selected by simple random sampling technique using balloting method. From the list of all the three (3) settlements in FoburA ward, one settlement – Sabon Fobur was selected using simple random sampling technique by balloting. Household listing and enumeration was done in the selected settlement giving a total of 238 households. All eligible respondents in all the households in the two settlements were enrolled starting from the household in the settlement centre.

Advocacy visit was paid to community leader to solicit his support for the study and ethical approval was obtained from the ethics committee of Jos University Teaching Hospital. Eight resident doctors from the Department of Community Medicine Jos University Teaching Hospital (JUTH) were trained as research assistants to aid with the data collection.

A semi-structured interviewer administered questionnaire adapted from Short Michigan Alcoholism Screening Test – Geriatric Version (SMAST-G) and World Health Organization's Alcohol Use Disorders Identification Test (AUDIT) tool was used to obtain information about alcohol use from the participants. A scoring system was used to indicate harmful alcohol use, as well as possible alcohol dependence.^{10,11} A total score of 8 and above was considered harmful use.

Data Analysis

Data was cleaned and exported to the software. Analysis was done using statistical package for social sciences (SPSS) version 21. A p-value of < 0.05 was considered statistically significant.

RESULTS

Two hundred and eighty respondents participated in the study. Majority were males 154(55) and married 171(61.1), and almost all were Christians. Their median age was 31 years (IQR 25-75). Table 1.

Table 1: Demographic Characteristics of the Respondents

Characteristics	Frequency n=280	Percentage
Age group (years)		
18-35	216	77.2
36-45	41	14.6
46 and above	23	8.2
Total	280	100.0
Sex		
Female	126	45.0
Male	154	55.0
Total	280	100.0
Marital status		
Single	94	33.6
Married	171	61.0
Separated/divorced	10	3.6
widowed	5	1.8
Total	280	100.0
Religion		
Christianity	258	92.1
Islam	19	6.8
Traditional	3	1.1
Total	280	100.0
Occupation		
Business	33	11.8
Civil servant	28	10.0
Driver	43	15.4
Farming	138	49.3
Unemployed	34	12.1
Others	4	1.4
Total	280	100.0

Mean Age: 35.98 ±14.97 years; Median Age: 31.0 years (IQR = 25 –42) years ** Police, clergymen

About fifty-three percent 150 (53.6) of respondents had ever consumed a drink containing alcohol as at the time of data collection, 112(74.7) of whom were currently using alcohol. About a third of users had commenced using it before 18 years of age. Goskolo was the least commonly used alcoholic beverage among the respondents. Harmful use was prevalent in 93 (83) of current users ((33.2) of

Table 2: Patterns of alcohol use among the respondents

Characteristics	Frequency	Percentage
Lifetime alcohol use		
Ever used	150	53.6
Never used	130	46.4
Total	280	100.0
Current use of alcohol		
yes	112	74.7
No	38	25.3
Total	150	100.0
Age of onset of alcohol use		
< 18 years	47	31.3
=18 years	103	68.7
Total	150	100.0
Level of current alcohol use		
Harmful	93	83.0
Not harmful	19	17.0
Total	112	100.0
Type of alcoholic drink consumed*		
Burukutu	57	51.0
Goskolo	8	7.1
Beer	61	54.5
wine	10	8.9

Mean age of onset of alcohol use: 21.0 ±7.9 years

* Multiple responses allowed.

total respondents) Table 2.

Being male, belonging to age group 38-45years, and being a civil servant or a business person positively predicted

Table 3: predictors of harmful alcohol use among the respondents

Factors	Odds ratio	95% confidence interval	p-value
Age			
18-35	3.39	0.092-5.196	0.235
36-45	8.60	1.010-9.469	<0.05
46 and above	1	-	-
Sex			
Female	0.61	0.009-0.397	0.003
Male	1	-	-
Marital status			
Single	0.06	0.001-1.207	0.120
Married	0.92	0.468-2.386	0.841
Separated/divorced	0.54	0.030-1.968	0.564
Widowed	1	-	-
Type of alcoholic drink consumed			
Burukutu	0.02	0.001-0.274	0.006
Goskolo	2.66	0.116-4.088	0.282
Beer	0.29	0.044-1.921	0.200
Wine	1	-	-
Occupation			
Business	7.49	1.191-9.972	<0.001
Civil servant	15.36	1.172-16.515	<0.001
Driving	0.14	0.092-0.336	<0.001
Farming	0.37	0.025-1.803	0.362
Others**	4.74	1.130-5.022	0.095
Unemployed	1	-	-
Age of onset of alcohol use			
=18 years	0.64	0.251-1.632	0.350
>18 years	1	-	-

** Police, clergymen

harmful use of alcohol while consuming burukutu, was a negative predictor of harmful use of alcohol. Table 3.

DISCUSSION

The prevalence of harmful alcohol use was very high among our respondents suggesting that the measures employed by government so far have not been effective in reducing harmful alcohol use. It is higher than the 32% reported by Hassan et al in an urban community in Jos North, Plateau state North-Central Nigeria, the 69.1% found by Lasebikan and Ola in semi-rural communities in Oyo state South-West Nigeria, and the 34.3% found by Adeoye *et al.*, in a systematic review.^{12,13,14} It is also much higher than the 7.7% reported among older South Africans by Peltzer and Phaswana-Mafuya.¹⁵ Although the much higher prevalence found in this study could be due to differences in tools used to assess harmful use, it could also be because harmful alcohol use is excessive in this community. Prevalence of current alcohol use was also higher than in the other studies suggesting that Fobur community may have a higher alcohol use problem compared to the other communities. There is therefore an urgent need for effective measures to address the harmful use of alcohol in this community.

Although the prevalence of alcohol use in general was not very high compared to findings in other studies,^{12, 13, 14} most of those who were currently using alcohol were using it in a harmful way. This may be because those currently using alcohol are addicted to it and could not be persuaded to stop by existing control measures alone. More effective measures like education and personal interventions may therefore be required to discourage these individuals from continued harmful use. Studies have shown that population level approaches like reducing the

economic and physical availability of alcohol are the most practical and cost effective ways of reducing harmful alcohol use.^{16,17}

Being male, belonging to the age group 38-45 years and certain occupations were found to positively predict harmful use of alcohol. This has differences and similarities to findings reported in other studies. For instance, Hassan *et al.*, found male sex, age of initiation of drinking and the number of drinks considered normal in a sitting to predict harmful alcohol use, while among older south-Africans being male, white (Caucasian), a tobacco user and not obese were predictors of harmful use.

It is noteworthy that being male has been found to be associated with harmful alcohol use in many studies in Nigeria and other parts of the world.^{12,13,14,15} The reasons advanced for this include higher alcohol exposure opportunities among men due to psychological, family, and social factors, gender roles, expectations, and culture in society^{18,19}. Control measures need to pay particular attention to men and the factors that predispose them to harmful alcohol use.

Two occupations (civil servants and in business) were found to positively predict harmful alcohol use. This could be due to the higher disposable income these occupations provide which enable those engaged in them to afford excessive quantities of alcohol.

CONCLUSION

Male sex, age group 38-45 years and certain occupations were found to positively predict the highly prevalent practice of harmful alcohol use in Fobur community. Control efforts need to target these groups to reduce the negative health and socio-economic consequences in the community.

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Conflict of interest

The authors declare that they have no conflicting interests.

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