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Alcohol Use among Men in Ghana: Socioeconomic Predictors and Psychological Effects

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Abstract

Background: The use and abuse of alcohol has been increased worldwide among people of all social classes particularly among the youth. It is of public health importance that deserves attention due to the adverse effects it has on individuals, family, and community in terms of culture, ethical-legal, political, economic, and technology.

Aim: To identify alcohol use prevalence among men in Ghana, socioeconomic predictors, and the psychological effect of usage.

Methods: The design used for this study was descriptive cross-sectional relying on the Multiple Indicator Cluster Survey (MICS) of Ghana for 2017/18.

Results: Men's alcohol use prevalence was 48.7%. Predictor factors were: Age above 24 years: 25 - 34, AOR = 2.4 (2.03 - 2.84), ≥ 35 , AOR = 3.09 (2.63 - 3.64). Region (Western as reference): Volta region, AOR = 2.8 (1.86 - 4.21), Northern region, AOR = 0.21 (0.14 - 0.30). Ethnicity (Akan as reference): Guan's, AOR = 2.36 (0.28 - 0.65). Mole Dagbani, AOR = 0.35 (0.27 - 0.45). Grusi, AOR = 0.32 (0.22 - 0.47). Mande, AOR = 0.12 (0.03 - 0.45), other Ghanaian tribes, AOR = 0.25 (0.19 - 0.34), no health insurance, AOR = 1.17 (1.02 - 1.35), wealth index quintile (Poorest as reference): second, AOR = 0.58 (0.47 - 0.73), middle, AOR = 0.55 (0.44 - 0.70), Fourth, AOR = 0.56 (0.44 - 0.70) and richest, AOR = 0.54 (0.42 - 0.68). A good percentage (71.5%) of men without alcohol use indicated improved life satisfaction from the previous year as compared to 59.8% for those with alcohol use(X^2 (5318) = $P \le 0.001$). percentage of happiness among those without alcohol use was high (42.9%) as compared to that (36.8%) of those with alcohol use.

Conclusion: Prevalence of alcohol use was high, several socioeconomic factors predicted use. Identified psychological effects were life dissatisfaction and depression.

Keywords: Alcohol, predictors, psychological, socioeconomic, Ghana

1. Introduction

The use and abuse of alcohol have been increased worldwide among people of all social classes, particularly among the youth. It is of public health importance that deserves attention due to the adverse effects it has on the individual, family, and community in terms of culture, ethical-legal, political, economic, and technology [1,2].

According to the World Health Organization (WHO) global status report on alcohol use, the prevalence of alcohol use in Sub-Saharan Africa is 60.0% and that of Ghana is 30.5% [3]. From one 30 days prevalence of alcohol study, alcohol use prevalence among men was 59.0% and that of women was 47.0% and about 7.0% of men compared to 4.0% percent of women had alcohol use disorder [4].

In Scottish prison, the prevalence of alcohol problem was 73% among male prisoners' [5].

Proportionally men in Ghana are likely to drink alcohol than females and even tend to frequently drink alcohol than women. Variation of drinking habits among men in Ghana is associated with the level of education, economic status, and residential area [6]. Anyinzaam-Adolipore and Alhassan study in a district in Ghana reported that men were likely 2.3 times to engage in harmful drinking or 2.7 times to engage in independent drinking when compared to women [7].

Alcohol abuse is a potential reducer of life expectancy, due to the potential consequence abusers are exposed to such as road traffic accidents, sleep disorders, eating habit disorder, perception disorder, stress, the violence of interpersonal nature, a medical complication such as cirrhosis, hypertension, psychological illness, and unprotected sexual activity leading to sexually transmittable diseases such as HIV

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and hepatitis B [6,8]. According to a CDC report, men's alcohol use is more associated with problems such as sexual violence, suicide, cancer, road accidents. And about 75.0% of world deaths related to alcohol abuse are among men [4]. Alcoholism is associated with Psychiatric disorders such as depression, bipolar, and anxiety disorders [9]. In another study, respondents with hazardous drinking habits were more likely to experience low life satisfaction and mental health issues and increased emotional and social loneliness when compared to those low-risk alcohol use [10].

Since many studies including a recent Ghana study identified significantly higher odds of alcohol use among males as compared to females [4,6,7]. This prompted this current tofocus on alcohol use prevalence among men in Ghana. And also, identify socioeconomic predictors and the psychological effect of usage.

2. MATERIALS AND METHODS

The design of the study was a descriptive cross-sectional survey employing data fromthe Multiple Indicator Cluster Survey (MICS) of Ghana for 2017/18. The period of the field survey was October 2017 to January 2018 by Ghana Statistical Service in collaboration with partners such as the Ministry of Health, Ministry of Education, Ministry of Sanitation and Water Resources, Ministry of Gender, Children and Social Protection, Ghana Health Service, and the Ghana Education Service. Technical support for the survey was from the United Nations Children's Fund (UNICEF), and government

funding and financial support from KOICA, UNDP, USAID, and the World Bank.

The sampling frame assumed was from the Ghana 2010 Population and Housing Census (PHC). This encompassed all men (5476) aged 15-49 years who were permanent occupants of selected households or visitors who stayed in selected households the night before the survey.

3. STATISTICAL ANALYSIS

SPSS version 20 (IBM Corp., 2011, and NY) was used for the statistical analysis. Results frequencies presented using percentages via tables and figures. The association between dependent and independent variables was done using chi-square and binary regression logistics model. Statistical significance was set at a p-value of < 0.05.

4. ETHICAL CONSIDERATION

The MICS team of UNICEF approved the protocol for the use of the Ghana Multiple Indicator Cluster Survey 2017/18 dataset for this study. Ethical approval was not necessary for this study because it involved a secondary analysis of a dataset with no revelation of the identity of the respondents or their households.

5. RESULTS

Demographic Characteristics

The survey recorded most (45.5%) of the participants to be within the age group of 15-24 years, very good proportion (87.0%) of them have been to school and only 11.2% of those with been to school had tertiary education. In terms of residence, about 56.2% of them were from rural (Table 1).

		Frequency	Percentage
	15-24 years	2424	45.5%
Age group	25-34 years	1285	24.1%
	35 years and above	1614	30.3%
7 attanded asked	Yes	4632	87.0%
Ever attended school		691	13.0%
74	Non-tertiary	4114	88.8%
Educational level	Tertiary	518	11.2%
Davidanaa	Urban	2396	43.8%
Residence	Rural	3080	56.2%
	Western	513	9.4%
	Central	436	8.0%
	Greater Accra	620	11.3%
	Volta	471	8.6%
Danian	Eastern	540	9.9%
Region	Ashanti	701	12.8%
	Brong-Ahafo	488	8.9%
	Northern	634	11.6%
	Upper East	479	8.7%
	Upper West	594	10.8%

	Akan	1958	35.8%
	GA/Dangme	387	7.1%
	Ewe	663	12.1%
	Guan	189	3.5%
Ethnicity	Gruma	230	4.2%
	Mole Dagbani	1349	24.6%
	Grusi	240	4.4%
	Mande	17	0.3%
	Other	441	8.1%

^{*}Other – the remaining Ghanaian tribe not mentioned directly in this study.

With regards to other socioeconomic factors, a very high percentage (94.6%) of them without any form of functional difficulty. Among them, health insurance coverage was 57.0% and dominant (26.6%) in terms of wealth index quintile was the poorest. About 79.8% of the

participants were happy on overall estimation, though 65.8% were dissatisfied with current life compared to the previous year and however 97.2% of them were optimistic about life satisfaction the coming year (Table 2).

 Table 2: Other Socioeconomic Characteristics of Respondents

		Frequency	Percentage
Functional difficulties (age 18-49	Has functional difficulty	231	5.4%
years)	Has no functional difficulty	4078	94.6%
	With insurance	2287	43.0%
Have health insurance	Without insurance	3036	57.0%
	Poorest	1416	26.6%
	Second	878	16.5%
Wealth index quintile	Middle	931	17.5%
	Fourth	1006	18.9%
	Richest	1092	20.5%
[:f4:-f4:	Improved	3501	65.8%
Life satisfaction compared to last	More or less than the same	1016	19.1%
year	Worsen	802	15.1%
[:fti-ftit-ti f	Better	5160	97.2%
Life satisfaction expectation for next	More or less than the same	124	2.3%
year	Worse	24	0.5%
	Very happy	2236	42.0%
	Somewhat happy	2010	37.8%
Estimation of overall happiness	Neither happy nor unhappy	726	13.6%
	Somewhat unhappy	222	4.2%
	Very unhappy	129	2.4%

Prevalence of Alcohol Use and Associated Factors

The prevalence of alcohol ever use among Ghanaian men of 5322 study participants was 48.7%, the highest prevalence was recorded in Volta region (76.9%) and the lowest in northern region (17.6%). Numerous factors were associated the use which included: Age of the

participant $X^2(2, 5322) = 489.544$, $P \le 0.001$, residential address $X^2(1, 5322) = 452.372$, $P \le 0.001$, ethnicity $X^2(8, 5322) = 382.960$, $P \le 0.001$, functional difficulty $X^2(1, 5322) = 10.392$, $P \le 0.001$, health insurance coverage $X^2(1, 5322) = 52.892$, $P \le 0.001$ and wealth index quintile $X^2(4, 5322) = 33.022$, $P \le 0.001$ (Table 3).

Table3: Chi-Square Association Between Respondents' Socioeconomic Factor and Alcohol Use

		Alcol	Alcohol use			
		Yes	No	X^2	df	P-value
	15-24 years	781	1642	489.544	2	.001
Age group	25-34 years	772	513		1 1	
	35 years and above	1040	574			
T 1 1 1 1	Yes	2249	2382	.358	1	.550
Ever attended school	No	344	347		1	
Residence	Urban	1152	1184	.586	1	.444
Residence	Rural	1441	1545		1	
D	Western	276	234	452.372	9	.001
Region	Central	222	211		1	

	Greater Accra	353	248			
	Volta	350	105			
	Eastern	286	214			
	Ashanti	330	354			
	Brong-Ahafo	226	246			
	Northern	109	511			
	Upper East	184	285			
	Upper West	257	321			
	Akan	1059	854	382.960	8	.001
	GA/Dangme	224	148			
	Ewe	460	180			
	Guan	84	99			
Ethnicity	Gruma	98	129			
-	Mole Dagbani	455	862			
	Grusi	85	144			
	Mande	4	13			
	Other	122	300			
Functional difficulties (age	Has functional difficulty	152	79	10.392	1	.001
18-49 years)	Has no functional difficulty	2241	1836			
II h	With insurance	983	1304	52.891	1	.001
Have health insurance	Without insurance	1610	1425			
	Poorest	649	766	33.022	4	.001
	Second	388	490			
Wealth index quintile	Middle	455	476			
_	Fourth	493	513			
	Richest	608	484			

Predictors of Alcohol Use

Variables with significance at chi-square analysis were further modeled with binary logistics regression to identify predictors of alcohol among men in Ghana. Age was a predictor of use, men with age within 25-34 years were more likely 2.4 times to use alcohol as compared those in the age group of 15-24 years (AOR = 2.4, 95%, C.I. = 2.03-2.84), equally those within the age group of 35 years and above are more likely about three times to

use alcohol as compared those in the age group of 15-24 years (AOR = 3.09, 95%, C.I. = 2.63-3.64). In terms of regional use of alcohol, those in the Volta region more likely 2.8 times to use alcohol as compared to those in the Western region (AOR = 2.8, 95%, C.I. = 1.86-4.21), meanwhile those in the Northern region were less likely 0.2 times to use alcohol as compared to those in Western region (AOR = 0.21, 95%, C.I. = 0.14-0.30) (Table 4).

Table 4: Binary logistics regression of predictors of alcohol use among men

	В	Wald	Sig.	AOR	$X^2(8) = 12.125$	H-L GOF test (8) = 12.125, P= .146 5% C.I.for EXP(B)	
					Lower	Upper	
15-24 years		Ref	.001				
25-34 years	.877	105.235	.001	2.404	2.033	2.843	
35 years and above	1.129	187.118	.001	3.093	2.631	3.636	
Western		Ref	.001				
Central	131	.705	.401	.877	.645	1.191	
Greater Accra	.155	1.048	.306	1.168	.868	1.573	
Volta	1.029	24.349	.001	2.799	1.860	4.212	
Eastern	.197	1.564	.211	1.218	.894	1.660	
Ashanti	178	1.622	.203	.837	.637	1.101	
Brong-Ahafo	060	.150	.698	.942	.695	1.275	
Northern	-1.571	67.883	.001	.208	.143	.302	
Upper East	091	.242	.623	.913	.635	1.313	
Upper West	.091	.257	.612	1.095	.771	1.556	
Akan		Ref	.001				
GA/Dangme	025	.029	.864	.975	.732	1.300	
Ewe	.129	.810	.368	1.137	.860	1.504	

Guan	860	15.676	.001	.423	.276	.648
Gruma	155	.545	.460	.857	.568	1.291
Mole Dagbani	-1.063	65.720	.001	.346	.267	.447
Grusi	-1.130	36.785	.001	.323	.224	.466
Mande	-2.092	9.902	.002	.123	.034	.454
Other	-1.369	91.307	.001	.254	.192	.337
Functional difficulties (No/yes)	165	1.071	.301	.848	.620	1.159
Health insurance (No/Yes)	.160	4.893	.027	1.174	1.018	1.353
Poorest		Ref	.001			
Second	540	21.930	.001	.583	.465	.731
Middle	597	25.069	.001	.551	.436	.695
Fourth	589	24.394	.001	.555	.439	.701
Richest	619	25.623	.001	.539	.424	.684
Constant	.577	6.918	.009	1.781		

^{*}Alcohol use was dummy coded, 0 for no use, and 1 for use.

In terms of ethnicity, Guan's were less likely 0.4 times to use alcohol as compared to Akan's (AOR = 2.36, 95%, C.I. = 0.28 - 0.65). Those from Mole Dagbani also were less likely about 0.4 times to use alcohol as compared to those from the Akan tribe (AOR = 0.35, 95%, C.I. = 0.27 - 0.45). Those from Grusi tribe were less likely 0.3 times likely to use alcohol as compared to those from the Akan tribe (AOR = 0.32, 95%, C.I. = 0.22 - 0.47). Furthermore. alcohol use was likely about 0.1 times among men of the Mande tribe as compared to the men of the Akan tribe (AOR = 0.12, 95%, C.I. = 0.03– 0.45). Finally, those from other Ghanaian tribes (tribes not listed under this current study) were almost 0.3 times likely to use alcohol as compared to those from the Akan tribe (AOR = 0.25, 95%, C.I. = 0.19 - 0.34) (Table 4).

With economic factors those without health insurance were likely 1.2 time to use alcohol (AOR = 1.17, 95%, C.I. = 1.02 - 1.35) and with wealth index quintile with poorest as reference, men from the rest of the wealth index quintile were protected from alcohol use, second (AOR = 0.58, 95%, C.I. = 0.47 - 0.73), middle (AOR = 0.55, 95%, C.I. = 0.44 - 0.70), Fourth (AOR = 0.56, 95%, C.I. = 0.44 - 0.70) and richest (AOR = 0.54, 95%, C.I. = 0.42 - 0.68) (Table 4).

Psychological Effects of Alcohol Use Among Ghanaian Men

Chi-square analysis revealed a significant relationship between alcohol use and life satisfaction among Ghanaian men. In terms of proportion,a good percentage (71.5%) of men without alcohol use indicated improved life satisfaction as compared to the previous year as compared to 59.8% for those with alcohol use(X^2 (2, 5318) = 131.982, P ≤ 0.001). And optimism with regards to life satisfaction for the coming year, 97.7% of those without alcohol hoped-for improve life satisfaction as to 96.7% for those with alcohol use (X^2 (2, 5307) = 6.288, P = 0.043) (Table 5).

 Table 5: Chi-square analysis of alcohol use and Life satisfaction (experience and expectation)

		Lif			
		Improved	More or less than the same	Worsen	Total
Yes		1550	507	535	2592
Alaahal yaa	res	59.8%	19.6%	20.6%	100.0%
Alcohol use	NI.	1950	509	267	2726
	No	71.5%	18.7%	9.8%	100.0%
T-4-1		3500	1016	802	5318
Total	Fotal 65.8%		19.1%	15.1%	100.0%
		$X^{2}(2,5)$	$(3318) = 131.982, P \le 0.001$		
		Life	satisfaction expectation for next	year	
		Improved	More or less than the same	Worsen	Total
	Vac	2496	70	16	2582
A 1 1 1	Yes	96.7%	2.7%	0.6%	100.0%
Alcohol use	Nia	2663	54	8	2725
	No 97.7% 2.0%	2.0%	0.3%	100.0%	
Total		5159	124	24	5307
		97.2%	2.3%	0.5%	100.0%
	•	$X^{2}(2,$	5307) = 6.288, P = 0.043		•

On overall estimated life happiness of the respondents, the percentage of happiness among those without alcohol use was high (42.9%) as

compared to that (36.8%) of those alcohol use (Figure 1).

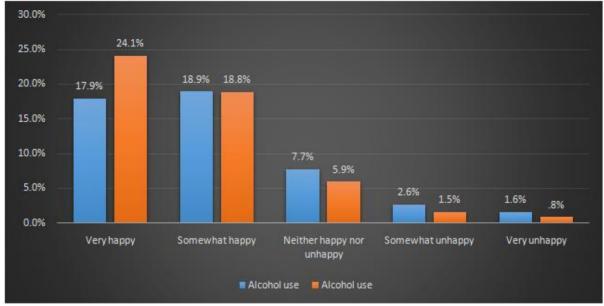


Figure 1. Alcohol use and overall life estimated happiness

 X^{2} (4, 5322) = 84.723, $P \le 0.001$

6. DISCUSSION

One aim of this study is to find the prevalence of alcohol use among men in Ghana. The prevalence of alcohol ever use among the 5322 study participants was 48.7%, prevalence was high in the Volta region and low in the Northern region. This study's national prevalence among men was low as compared to that was revealed by the Centre for Disease Control (CDC) (59.0%) and that of a similar Scottish study (73.0%) [4,5]. Compared to the general population prevalence, this study prevalence is higher than that of Ghanaian and that of Sub-Saharan Africa. According to the World Health Organization (WHO) global status report on alcohol use, the prevalence of alcohol use in Sub-Saharan Africa is 60.0% and that of Ghana is 30.5% [3].

Proportionally men in Ghana are likely to drink alcohol than females and even tend to frequently drink alcohol than women. Variation of drinking habits among men in Ghana is associated with the level of education, economic status, and residential area [6]. In this current study,numerous factors were factors such as age, residential address, ethnicity, functional difficulty, health insurance coverage, and wealth index quintile were associated with men's alcohol use.

This current study also aimed to identify predictive factors associated with alcohol use in Ghana. Age was a predictor of Ghanaian men's alcohol use, men with age within 25-34 years were more than two times likely to use alcohol as compared to those in the younger age group. Equally those of 35 years and above were more likely about three times to use alcohol as compared to those in the age group of 15 - 24years. This confirms an earlier study among men prisoners in Scottish land, where the mean audit alcohol score was higher among those in higher age groups [5]. And the good thing about this finding is that all things being the issue of more men developing heavy alcohol behaviors will be reduced since a study has it that, early age alcohol use is a related increase risk of heavy alcohol abuse later life [11].

In terms of regional use of alcohol, those in the Volta region more likely 2.8 times to use alcohol as compared to those in the Western region, and meanwhile those in the Northern region were less likely 0.2 times to use alcohol as compared to those in the Western region. This was related to the regional prevalence as the Volta region recorded the highest and the Northern region the lowest. When it comes to ethnicity, Guan's were less likely 0.4 times to use alcohol as compared to Akan's. Those from Mole Dagbani were also less likely for about 0.4 times to use alcohol as compared to those from

the Akan tribe. Again those from Grusi tribe were less likely 0.3 times likely to use alcohol as compared to those from the Akan tribe. Furthermore, alcohol use was likely about 0.1 times among men of the Mande tribe as compared to the men of the Akan tribe. Finally, those from other Ghanaian tribes (tribes not listed under this current study) were almost 0.3 times likely to use alcohol as compared to those from the Akan tribe. In another earlier study ethnicity was a predictor variable for alcohol use [12,13].

With economic factors, those without health insurance were about 20% more likely to use alcohol and with wealth index quintile, those in the poorest quintile predicted alcohol use as compared to those in the remaining wealth index quintiles. An earlier meta-analysis study indicated an association between alcohol use and economic status, even though different from this study, use was high among those with higher economic status [14].

Finally, on the psychological effects of alcohol use, there was a significant relationship between alcohol use and life satisfaction among Ghanaian men. Proportionally men without alcohol use indicated high improved life satisfaction as compared to the previous year as compared with those with alcohol use. And optimism with regards to life satisfaction for the coming year, proportionally high among those without alcohol use. On overall estimated life happiness of the respondents, the percentage of happiness among those without alcohol use was high as compared to that of those alcohol use. These current study findings confirmed those of earlier findings that alcoholism is associated with Psychiatric disorders such as depression, bipolar, and anxiety disorders [9,15]. In another study, respondents with hazardous drinking habits were more likely to experience low life satisfaction and mental health issues and increased emotional and social loneliness when compared to those low-risk alcohol use [10].

This study was with its limitations, not all variables like religion, which if were studied will help throw more light on the research question.

7. CONCLUSION

Prevalence of alcohol use was high, several socioeconomic factors such as age, region,

ethnicity, health insurance status, and economic status predicted use. Identified psychological effects were life dissatisfaction and depression.

8. DATA AVAILABILITY

All dataset related to the findings of this study is available online at www.dhsprogram.com.

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