



## Background

Globally, harmful alcohol consumption contributes to 3.3 million deaths and 5.1% of disability-adjusted life years (DALYs) [1]. Harmful alcohol use is associated with more than 200 diseases and injury conditions. Some of the diseases associated with harmful alcohol use include alcohol dependence, liver cirrhosis, cancers and injuries [1]. A study done on the contribution of the six preventable risk



higher odds of engaging in HED (unadjusted OR 6.9, 95% CI 4.4–10.8).

Table 3 shows the covariates associated with HED identified using logistic regression, as described in the methods section. When assessing the effects of sociodemographic status on HED, we found that all of our hypothesized variables: age, sex, number of years of education, residence, and current smoking were found to have statistically significant relationships with HED. Adults aged 40–49 years old were nearly twice as likely to be engaged in HED as compared to their younger counterparts in the 18–29-year age group (OR 1.9, 95% CI 1.0–3.5). Men had nearly ten times higher odds of engaging HED as compared to women. Finally, there was evidence of interaction between sex and current

smokers on odds of HED, and non-smokers had around eight time'

Table 2 Breakdown of heavy alcohol use by sociodemographic characteristics in Kenya

Characteristics	Consumed alcohol in the past 30 days (n, %) N = 665	Consumed alcohol in the past 12 months (n, %) N = 877	Average number of drinks per sitting (mean, 95% CI) N = 662	Average number of "binge" days (mean, 95% CI) N = 646	Presence of "heavy episodic drinking" (n, %) N = 384
<b>Age</b>					
18–29	156 (35.4)	240 (40.7)	9 (7,11)	3 (2,4)	83 (35.2)
30–39	215 (28.4)	283 (26.1)	11 (9,13)	5 (4,7)	125 (28.6)
40–49	138 (19.6)	166 (18.0)	9 (7,11)	5 (3,8)	90 (21.0)
50–59	88 (10.3)	103 (9.4)	8 (6,10)	4 (2,6)	46 (8.7)
60–69	68 (6.3)	85 (5.8)	13 (5,20)	4 (2,7)	40 (6.4)
<b>Sex</b>					
Men	536 (85.4)	667 (79.3)	10 (9,11)	5 (4,6)	325 (88.5)
Women	129 (14.6)	210 (20.7)	8 (5,11)	2 (1,2)	59 (11.5)
<b>Education level</b>					
No Education	73 (8.5)	92 (8.3)	11 (5,17)	3 (2,4)	44 (8.3)
Primary	300 (43.3)	390 (42.6)	9 (7,12)	4 (3,5)	166 (38.2)
Secondary	172 (28.5)	221 (28.3)	10 (8,12)	5 (4,7)	106 (32.9)
Tertiary	120 (19.7)	174 (20.8)	9 (7,11)	3 (2,5)	68 (20.6)
<b>Marital status</b>					
Currently married/ Cohabiting	433 (63.8)	554 (61.1)	9 (8,11)	5 (4,6)	242 (60.4)
Never married	118 (21.2)	175 (25.0)	11 (10,13)	3 (2,5)	75 (25.0)
Formerly married/widowed	114 (15.0)	148 (14.0)	10 (7,13)	4 (3,5)	67 (14.6)
<b>Occupation</b>					
Government employee	76 (13.2)	94 (12.2)	9 (7, 11)	5 (3,7)	47 (14.5)
Non-government employee	106 (19.0)	144 (18.6)	10 (8, 12)	4 (2,5)	67 (19.3)
Self-employed	311 (43.0)	388 (39.9)	8 (7, 9)	4 (3,6)	160 (37.7)
Non-paid/volunteer	2 (0.3)	5 (0.5)	7 (7, 8)	0 (0,1)	2 (0.5)
Student	21 (5.5)	34 (7.0)	8 (5, 11)	2 (1,3)	10 (5.9)
Homemaker	54 (6.0)	88 (9.5)	10 (5, 14)	2 (1,3)	31 (5.8)
Retired	17 (1.9)	18 (1.5)	20 (8, 32)	8 (1,15)	15 (2.8)
Unemployed able to work	75 (10.6)	97 (10.0)	16 (11, 20)	6 (3, 9)	50 (13.0)
Unemployed unable to work	3 (0.4)	9 (0.8)	9 (4, 14)	0 (0, 1)	2 (0.5)
<b>Wealth quintile</b>					
1 Poorest	127 (17.4)	157 (16.5)	13 (8, 18)	3 (2,5)	66 (15.3)
2 Second	137 (18.126-64D[-(lle) (0.9-7332.9(11)-JTJ.9984-res				

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Table 3 Covariates associated with “heavy episodic drinking” in Kenya

	Unadjusted Odds Ratio (95% CI)	P-value	Adjusted Odds Ratio <sup>a</sup> (95% CI)	P-value
Age (per 10 years)	1.15 (1.03,1.29)	0.01	1.15 (0.98,1.34)	0.08
Age categories		0.10		
18–29	1.0			
30–39	1.7 (1.1,2.7)	0.02		
40–49	1.9 (1.0,3.5)	0.05		
50–59	1.2 (0.8,1.8)	0.46		
60–69	1.7 (1.0,3.0)	0.07		
Sex				
Men	9.9 (5.3,18.8)	<.0001		
Women	1.0			
Sex <sup>a</sup> currently smoking				0.006
Smoker subgroup: man vs. woman			2.0 (0.7,5.3)	0.19
Non-smoker: man vs. woman			7.9 (4.1,15.5)	< 0.0001
Marital status		0.31		0.26
Currently married/ Cohabiting	1.0		1.0	
Never married	1.2 (0.8,1.8)	0.44	0.9 (0.6,1.4)	0.66
Formerly married/widowed	1.4 (0.8,2.5)	0.19	1.8 (0.9,3.5)	0.10
Education level		0.12		0.50
No education	1.0	–	1.0	–
Primary	1.6 (0.9,2.9)	0.11	1.2 (0.6,2.3)	0.57
Secondary	2.0 (1.04,3.9)	0.04	1.5 (0.8,2.8)	0.21
Tertiary	2.5 (1.1,5.6)	0.02	1.6 (0.7,3.8)	0.28
Wealth quintile		0.02		0.02
Poorest	1.00		1.0	
Second	1.0 (0.5,1.9)	0.92	0.8 (0.4,1.6)	0.45
Middle	1.0 (0.5,2.0)	0.90	0.7 (0.4,1.5)	0.38
Fourth	1.2 (0.6,2.4)	0.62	0.8 (0.4,1.8)	0.64
Richest	1.9 (0.9,4.1)	0.07	1.7 (0.8,3.8)	0.18
Residence				
Rural	0.6 (0.4,1.0)	0.04	1.0 (0.7,1.5)	0.86
Urban	1.00			
Currently smoking				
Yes	6.9 (4.4, 10.8)	<.0001		
No	1.00			

of social desirability of drinking behavior. Second, not being able to consider other factors associated with HED for example segregation of data by region, liquor outlet density, enforcement of law, attitudes, among others [10]. The major strength of this study was the national representation of the STEPs survey, including the wide geographic and population scope.

## Conclusions

Our findings highlight a significant prevalence of HED in Kenya. Alcohol use, particularly Heavy Episodic Drinking is prevalent in Kenya and is likely influenced by known socio-demographic factors that are amenable to evidence-based interventions. The laws and policies in place to control alcohol consumption should be

appropriately implemented and enforced, while enhancing efforts to create awareness on the risks associated with harmful use of alcohol, particularly HED. There is need for strategic interventions among key populations in the society, which particularly include men, young



