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KNOWLEDGE OF ALCOHOL RELATED HARM AND PATTERN OF CONSUMPTION AMONG RURAL AND URBAN SECONDARY SCHOOL ADOLESCENTS IN IBADAN, NIGERIA

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ABSTRACT

The growing involvement of adolescents in alcohol consumption is a public health concern in Nigeria. This study assesses the knowledge differentials and alcohol consumption pattern between rural and urban adolescents in Ibadan, Nigeria. A descriptive cross-sectional survey was conducted using a four-stage random sampling technique to select 237 and 263 students from four rural and urban secondary schools respectively. A 14-point knowledge scale questionnaire on patterns of alcohol use was used for data collection. Knowledge scores of ≤ 7 and ≥ 8 were considered low and high respectively. Chi square and t-test were used for data analysis with the level of significance set at 5%. Overall, mean knowledge score of the respondents was 5.5 ± 3.2; the mean score of rural and urban respondents were 5.8 ± 3.4 and 5.2 ± 3.1, respectively. The findings also showed that more urban respondents (60.8%), than their rural counterparts (54.2%) had ever taken alcohol. Adolescents' knowledge of alcohol was generally low, and the prevalence of alcohol abuse cut across both residential settings. Health education interventions, including peer education and counselling, need to address the prevailing alcohol abuse concerns among these adolescents.

Keywords: Adolescents, Alcohol abuse, Alcohol-related knowledge, Alcohol consumption patterns, Alcohol exposure

INTRODUCTION

Alcohol and other drug use among our nation's youth remain a major public health problem and one of the most disturbing health-related problems among them (Adeyemo, 2007). Epidemiological data from school surveys in Nigeria show

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a rising prevalence of consumption of locally available substances (Abasiubong et al., 2014), alcohol (Rehm et al., 2010) with a decreasing age of onset of alcohol abuse (Eneh et al., 2004).

Alcohol related harm is correlated with the quantity of alcohol consumed, pattern of consumption (Rehm et al., 2010) and seldom on the quality of alcohol consumed (World Health Organization, 2014). Other factors such as age of initiation, especially before age fourteen (Fatoye et al., 2002) or below (Eneh et al., 2004) gives a prediction of alcohol dependence and abuse in older age (Beil-Gawelczyk et al., 2014).

These concerns have led to studies on the knowledge and pattern of alcohol consumption among young people worldwide. In sub-Saharan Africa, much of the evidence focuses on the links between alcohol consumption with drug use (Onohwosafe et al., 2008), substance use among secondary school students from different regions in Nigeria (Eneh et al., 2004; Fatoye et al., 2002; Peltzer, 2009) and sexual behavior and sexually transmitted diseases in adolescent population.

Other studies on substance abuse among youths found the habit to start in the school (Eneh et al., 2004), consequently, the best place for early detection and prevention of substance abuse is the adolescent population.

However, there is paucity of studies that explore the knowledge differentials and pattern of alcohol consumption among rural and urban secondary school adolescents in Nigeria (Kabiru, Beguy et al. 2010). Yet knowledge of alcohol related harm and pattern of consumption among rural and urban secondary school adolescents in Ibadan is important as this is a needed perquisite to proffer an intervention (World Health Organization, 2014).

To reduce these risks, it is critical to develop a better understanding of the risk factors for initiating alcohol use in adolescence. Preliminary steps in this process are to establish what is currently known regarding these risk factors and to identify what is needed to learn.

These gaps in knowledge constituted the focus of this study among in-school adolescents in Ibadan, Nigeria. Results obtained can be used to facilitate the design and development of behavioural change communicating materials that are sensitive to the peculiar needs of adolescents in rural and urban settings.

The study therefore assessed knowledge of alcohol related harm and pattern of consumption among rural and urban secondary schools students in Ibadan.

Adolescent's knowledge of alcohol related harm

There are few studies that examined determinants of adolescent alcohol consumption, particularly ones that examined adverse effects of childhood alcohol use in in sub-Saharan Africa (Kabiru et al., 2010), hence there is a compelling need for additional school surveys on knowledge of adolescents' alcohol related harm and consumption in Nigeria (Kabiru, Beguy et al. 2010). This will allow for comparison of determinants of adolescents' alcohol consumption from different localities bearing in mind possible prevailing social differences from various cities in Nigeria.

In addition, there is paucity of studies that explore the knowledge and pattern of alcohol consumption among rural and urban secondary school adolescents in Nigeria(Kabiru, Beguy et al. 2010). The outcome of this study will have implications for the formulation of

evidence-based policies that will constitute the framework for the implementation of alcohol control among in-school adolescents.

Pattern of adolescent alcohol consumption globally and in Nigeria

Alcohol abuse remains global alcohol problem, yet information on the accurate prevalence and pattern of use in Nigeria remain scant (Chikere et al., 2011). This is worsened by aggressive promotion of the product throughout society (Aina et al., 2008).

However, prevalence of alcohol consumption among secondary school students in rural – urban communities in South West, Nigeria by (Fatoye et al., 2002) was 13.4%, while in Abakaliki, South East, Nigeria, (Anyanwu et al., 2016) found in – school adolescent alcohol prevalence was 29.0%. On the contrary, alcohol consumption prevalence among undergraduate students in Owerri, South-East, Nigeria by (Chikere et al., 2011) was 78.4%.

The vast difference in the prevalence may be accounted for by the level of students researched were rural – urban secondary school students (13.4%), in Abakaliki, (29%) secondary school Owerri and among undergraduate students, prevalence was (78.4%). Also, other determinants include the locality, availability of alcohol, the sophisticated and unchecked manner of promotion in the marketing of the product may have contributed to the different prevalence in settings in (Aina et al., 2008; Dumbili, 2013).

Pattern of exposure of in – school adolescent alcohol in rural – urban settings

Decision to drink and patterns of drinking are largely culturally determined (Bonomo, 2005). Children are introduced to drinking alcoholic beverages early within the family by integrating drinking into commonplace activities (Adenugba et al., 2012). Other sources of exposure to alcohol use include friends' homes, schools, as well as commercial alcohol outlets (Aina et al., 2008) and events centers (Fatoye, 2003).

In Nigeria, the use of commercial centres for alcoholic consumption are higher among secondary school students, especially in urban settings where restrictive laws are relatively weak or non-existing (Eneh et al., 2004).

Ages at first consumption of alcohol

In Nigeria, (Fatoye et al., 2002), observed that majority of his respondents initiated alcohol consumption at a young age of fourteen years while (Eneh et al., 2004) observation was an extreme initiation of a mean age of alcohol of four (4) years. Drinking alcohol at a young age puts young people at risk of becoming alcohol dependent in later life (usually set at age 13 and younger) as well as alcohol related health problems (Ellickson et al., 2003).

METHOD

The study was a comparative, descriptive cross – sectional school - based survey conducted in four randomly selected senior and junior rural / urban public secondary schools. The sample consisted of 500 students of 11 to 19 years with overall mean age of 14.3 ± 2.1 years adolescents from Ido (rural) and Ibadan North (urban) LGAs. Using a multi – stage random sampling technique, a total of two hundred and thirty seven (237) and two hundred

and sixty - three students (263) selected using a four – stage sampling technique from a total number 9,064 and 8,432 from the rural / urban schools respectively. This is 2.9% of the total student population. The data collection lasted a period of two weeks and individual data collection lasted 35 to 45minutes to an hour.

Alcohol knowledge was measured using a Knowledge scores of ≤ 7 and ≥ 8 were considered low and high knowledge respectively and a 14-point knowledge scale questionnaire on pattern of alcohol use. Data was collected through using a pre- tested interviewer administer English questionnaire.

Pattern of alcohol consumption was elucidated by a measure of proximity to point of sales of alcohol, physical exposure of respondent to alcohol from his residence to the school premises using various indices. Other forms of Pattern of alcohol consumption elicited were prevalence of alcoholic beverage consumption and mean ages at consumption of various types of alcoholic beverages.

Permission and approval were obtained from the Commissioner for Education, Oyo State, and the Local Inspectorate of Education officers, in the local government areas. Subsequently permission and approval was sought from the Principals of the schools and informed written consent was obtained from the students after detailed disclosure of the study was thoroughly explained.

In order to ensure validity of the study instruments' for data collection, the instrument was pre-tested in two randomly selected secondary schools each in St. Gabriel commercial secondary school 1, both in the junior and senior secondary schools in North Local Government Area as an urban secondary school. It involved the administration of 10% of the questionnaire to a study population with participants' of similar socio – demographic characteristics.

The Cronbach's Alpha Model technique yielded a coefficient reliability of 0.645 reliability hence, the instrument is reliable.

Data obtained from this study were properly managed, analyzed and stored using the following process:

Questionnaires were hand-coded by the researcher and entered into a computer, facilitated by the use of the SPSS software version 15 for analysis. The analysis of the data was done using descriptive and inferential statistical methods and Pearson's chi square was used for test of significance.

RESULTS

Socio-demographical characteristics of the sample

Overall, majority (76.0%) of the respondents lived with parents (77.6% in the rural and 74.5% in the urban). Out of this, 11.6% lived with mothers alone (12.2% living in rural and 11.6% living in the urban). Overall few (5.2%) respondents lived with fathers alone with rural-urban disparity being 4.2% and 6.1% respectively. Overall more than half (58.4%) were Christians and 81.4% were from monogamous families.

Knowledge of related harm of alcohol usage

The overall mean knowledge score of the respondents was 5.8 ± 3.2 on a 14-point knowledge scale. The mean knowledge scores of respondents relating to alcohol are summarized in figure 4.6. The mean knowledge score of rural-based

Table 1. Respondents' knowledge of alcohol-related diseases

Diseases related to alcohol use	Rural			Urban			Overall (%)
	No	%	N	No	%	N	
Disease of the liver							
Yes*	76	32.2	236	85	32.7	260	135 (27.2)
No	59	24.9		61	23.5		132 (26.6)
Don't know	101	42.8		114	43.8		229 (46.2)
Hypertension							
Yes*	56	23.6	237	59	22.7	260	84 (16.8)
No	83	35.0		73	28.1		163 (32.7)
Don't know	98	41.4		128	49.2		250 (50.1)
Measles							
Yes	40	16.9	237	28	10.8	260	105 (21.0)
No*	88	37.1		80	30.8		149 (29.8)
Don't know	109	46.0		152	58.5		243 (48.7)
Cancer of the throat							
Yes*	68	28.7	237	65	25.0	260	98 (19.6)
No	66	27.8		61	23.5		144 (28.8)
Don't know	103	43.5		134	51.5		255 (51.0)
Poliomyelitis							
Yes	26	11.0	237	30	11.5		84 (16.8)
No*	93	39.2		78	30.0	260	153 (30.6)
Don't know	118	49.8		152	58.5		259 (51.8)
Diabetes :							
Yes*	35	14.8		58	22.4		83 (16.6)
No	86	36.3	237	60	23.2	259	157 (31.4)
Don't know	116	48.9		141	54.4		257 (51.4)
Sickle cell disease							
Yes	50	21.1		48	18.5		139 (27.8)
No*	85	35.9	237	71	27.3	260	142 (28.4)
Don't know	102	43.0		141	54.2		216 (43.2)
Stomach ulcer							
Yes*	80	33.8	237	89	34.2	260	133 (26.7)
No	65	27.4		57	21.9		148 (29.7)
Don't know	92	38.8		114	43.8		216 (43.2)
Malaria							
Yes	42	17.7	237	53	20.4	260	199 (39.9)
No*	92	38.8		83	31.9		127 (25.5)
Don't know	103	43.5		124	47.7		172 (34.5)
Alcohol drinking can make one to start forgetting what one has learnt.							
*Yes**	146	61.6		157	60.2		291 (58.3)
No	34	14.3	237	35	13.4	260	81 (16.2)
Don't know	57	24.1		69	26.4		127 (25.5)
One can get used to alcohol drinking such that without drinking one will no longer be able to feel comfortable or do things normally.							
*Yes**	137	57.8		145	55.6		163 (32.7)
No	43	18.1	237	47	18.0	261	177 (35.5)
Don't know	57	24.1		69	26.4		159 (31.9)
Alcohol use makes people to think faster							
Yes	29	12.2		26	10.0		61 (12.2)
*No**	128	54.0	237	134	51.3	261	270 (54.0)
Don't know	80	33.8		101	38.7		168 (33.7)
Alcohol use makes one to remember things faster							
Yes	29	12.2		32	12.3		154 (30.9)
*No**	130	54.9	237	142	54.4	261	176 (35.3)
Don't know	78	32.9		87	33.3		169 (33.9)
Alcohol can make one misjudge distance							
*Yes**	101	42.6		125	47.9		101 (42.6)
No	44	18.6	237	46	17.6	261	44 (18.6)
Don't know	92	38.8		90	34.5		92 (38.8)

* Correct responses

respondents was 5.8 ± 3.1. The mean knowledge scores of males and females respondents were 5.4 ± 3.1 and 5.5 ± 3.3 respectively. Respondents in the senior classes had a higher mean knowledge score of 5.9 ± 3.1 compared with those in the junior classes with a score of 5.1 ± 3.3 with a significant difference. Overall proportions of respondents with good and poor alcohol-related knowledge were 35.2% and 64.8% respectively.

Table 2 presents respondents' level of knowledge of alcohol by rural-urban disparity. The result revealed that higher proportion (68.8%) of respondents in the urban setting had poor knowledge of alcohol compared with 60.3% in the rural setting.

The various settings where alcoholic beverages were taken and the pattern of use of alcoholic beverages in the settings are shown in the Table 5. The table reveals that overall equal proportions of respondents took alcohol once a month, in friends' house (54.4%) and at special ceremonies (54.4%). Slightly above fifty-one percent (51.4%) indicated they took alcoholic beverages once a month in beer palours. See Table 2 for the rural-urban disparity in pattern of alcohol consumption by settings among the respondents.

Respondents' responses on pattern of purchasing alcohol for consumption. Overall, the proportion of respondents who had ever spent their pocket money or part of it to buy alcohol for drinks was 28.8% (rural, 18.2%; urban, 39.4%). Slightly above sixty-three percent (63.2%) reported that they still spent their money to purchase alcohol to drink (rural, 50. %; urban, 69.2%). Respondents who had ever bought alcohol for friends constituted 13.0% overall (rural, 15.2%; urban, 11.5%). Respondents who still indulged in the purchase of alcohol for friends were 58.1% overall (rural, 46.7%; urban, 68.8%).

DISCUSSION

Knowledge of Alcohol related harm

The knowledge of alcohol related harm is measured by its implication on the etiology on disease causation and alcohol use-related experiences among respondents. The respondents' knowledge of alcohol use was generally poor. Majority of them for instance, did not know that alcohol consumption could be implicated in etiology of hypertension, cancer of the throat and diabetes. Oshodi et al. (2010) similarly reported three-quarters of their respondents were unaware of the negative implication of alcohol abuse. Chikere et al., (2011) study participants' demonstrated awareness of alcohol consumption-related risks but awareness cannot

Table 2. Knowledge of alcohol by respondents' residential setting

Respondents setting	Knowledge level		
	Poor	Good	Total
Rural	143 (60.3%)	94 (39.7%)	237 (100.0%)
Urban	181 (68.8%)	82 (31.2%)	263 (99.0%)
Total	324 (64.8%)	176 (35.2%)	500 (100.0%)

Chi Square (X^2) = 3.934; *p* value = 0.047

Table 3. Respondents' pattern of alcohol consumption by settings

Settings	Rural			Urban			Overall (%)
	No	%	n	No	%	N	
Home							
Everyday	3	10.0		10	15.9		13 (14.0)
Once a week	15	50.0	30	21	33.3	63	36 (38.7)
Once a month	12	40.0		32	50.8		44 (47.3)
Friend's house							
Everyday	2	7.4		3	10.0		5 (8.8)
Once a week	8	29.6	27	13	43.3	30	21 (36.8)
vOnce a month	17	63.0		14	46.7		31 (54.4)
Special ceremonies/festivals							
Everyday	3	9.4		3	7.1		6 (8.1)
Once a week	11	34.4		13	31.0		24 (32.4)
Once a month	18	56.3	34	26	61.9	42	31 (54.4)
Beer parlour							
Everyday	4	33.3		1	4.3		5 (14.3)
Once a week	3	25.0	12	9	39.1	23	12 (34.3)
vOnce a month	5	41.7		13	56.5		19 (51.4)
Pepper soup eatery							
Everyday	5	26.3		4	21.1		9 (23.7)
Once a week	6	31.6	19	8	42.1	19	14 (36.8)
Once a month	8	42.1		7	36.8		16 (39.5)
From hawkers on my way to school							
Everyday	2	25.0		2	20.0		4 (22.2)
Once a week	3	37.5	8	5	50.0	10	8 (44.4)
Once a month	3	37.5		3	30.0		6 (33.3)
From hawkers who sell outside school premises							
Everyday	1	4		1	11.1		1 (7.1)
Once a week	3	60.0	5	3	33.3	9	6 (42.9)
Once a month	2	40.0		5	55.6		7 (50.0)
Within school premises secretly							
Everyday	1	14.3	7	1	9.1	11	2 (11.1)
Once a week	3	42.9		6	54.5		9 (50.0)
Once a month	3	42.9		4	36.4		7 (38.9)

be taken to be knowledge on alcohol related harm. Besides, the difference could be linked to the fact that Chikere et al., (2011) respondents were students in tertiary institutions who were supposed to be better informed than the younger adolescents about the adverse consequences of alcohol abuse.

Many of the respondents erroneously believed that alcohol use makes people to think faster. This is a misconception associated with alcohol use. Yet other respondents were of the perception that road traffic accidents in Nigeria are caused by carelessness only and not by excessive use of alcohol. This is obviously a reflection of the respondents' poor knowledge of the effects of alcohol on human activities including driving. It has been noted that alcohol impairs the function of the mind and body (Hingson et al., 2006). The extent of the impairment depends, however, upon the quantity, quality of alcohol in the blood (World Health Organization, 2014).

The other factors which can influence the effect of action on the human body in-

clude drinker's body weight (French et al., 2010) gender and amount (Oshodi et al., 2010) and pattern of drinking (Eneh et al., 2004; Naimi et al., 2015).

Others, erroneously believed that alcohol consumption can lead to the occurrence of malaria.

Pattern of Alcohol consumption

Alcohol addiction is often characterized by increased tolerance, causing the abuser to drink greater amounts to achieve the same desired effect. When an alcoholic stops drinking, he or she will typically experience the symptoms of withdrawal. The unbearable withdrawal symptoms force the alcoholic to drink again in spite of the associated harmful physical, psychological and social consequences (Brown et al., 2004).

Compulsive drug seeking and use despite harmful consequences characterize alcohol-related intoxication by long-lasting chemical changes in the brain which interfere with the person's ability to think clear, exercise good judgment and control behaviour. A major consequence of this was the respondents' inability to remember some of the things that happened the previous day or night. Bonomo, (2005) had a similar result which showed that a fifth of young people aged 16–24 drank to intoxication most times and that many (42%) alcohol drinkers reported memory loss after drinking (Brown et al., 2004). In-school adolescents need to be aware that alcohol could have a more immediate and severe effect on young people because their muscle mass is smaller than that of adults. Adolescents also need to be informed that individual differences have roles to play regarding the adverse effects of alcohol.

Findings from this study show that respondents who misuse alcohol always become less interested in people or things after ingesting alcohol. This psychosocial effect is characteristic of several psychoactive substances including alcohol (Oshodi et al., 2010).

Few respondents in this study reported having much energy to do things after consuming alcohol. It has been reported that some men anticipate feeling more powerful, sexually active and aggressive after drinking alcohol (George et al., 2006). The reported adverse effects of alcohol use documented in this study include the following: loss of balance, vomiting, making of inappropriate statements which they have to apologize for after the effects of alcohol have worn away.

This is obviously a reflection of the respondents' poor knowledge of the effects of alcohol on human activities including driving. It has been noted that alcohol impairs the function of the mind and body (Hingson et al., 2006). The extent of the impairment depends, however, upon the quantity, quality of alcohol in the blood (World Health Organization, 2014). The other factors which can influence the effect of action on the human body include drinker's body weight (French et al., 2010) gender and amount (Oshodi et al., 2010) and pattern of drinking (Eneh et al., 2004; Naimi et al., 2015).

Limitations of the Study

This study only involved students from 8 public co-educational schools (4 junior secondary schools, two from urban and two from rural LGAs; and 4 senior secondary schools, two from urban and two from rural LGAs). Although the sample is ethnically and socioeconomically diverse, generalization of result beyond the target population should be avoided.

As is typical in school-based surveys, dropouts and regular absentees were likely to be drinkers who spend more time watching music videos than being in regular school classes. This category of respondents may have been missed out during the study period. This situation has affected the magnitude of the association between rural and urban populations in terms of alcohol use and abuse.

Participation in the study was open; no attempt was made to exclude eligible respondents from the study since appropriate scientific steps were taken in the sampling of the respondents, the results are adjudged to be a fair reflection of the study.

CONCLUSION

A lot of factors such as peer group pressure, influence of family members and wrong perceptions, and alcohol advertisement may, undoubtedly, be responsible for the indulgence of the respondents in alcohol use in both rural and urban schools. Knowledge differentials of alcohol related harm and pattern of consumption among rural and urban secondary school adolescents in Ibadan is poor.

Therefore, achievement of prevention of alcohol abuse among adolescent becomes a task for all these stakeholders.

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