

Demographic Variations of a Modifiable Risk Factor for Hypertension in a Nigerian Rural Community

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Abstract

This reports a survey involving a sample of 300 rural citizens of Obioma in Udi Local Government Area, aimed at determining the demographic variations of a modifiable risk factor for hypertension. Instrument for data collection was a 5-item interviewer-administered questionnaire, which was validated by three experts and the reliability was established whose coefficient index value yielded 0.83. The cluster sampling procedure was adopted and conducted in two stages. Stage one involved a purposive selection of two villages out of the five villages while the second stage involved drawing of a non-proportionate sample of 150 males and females from each of the two villages using the systematic random sampling technique. Data collected were analysed using frequencies and percentages. It was found out that differences existed among the various demographic groups in the consumption of alcohol which has been established as a risk factor for hypertension. Finally, the implications for social health promotion were articulated before making recommendations.

Key-Words: Risk Factor, Hypertension

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Introduction

Non-communicable diseases (NCD) such as hypertension, diabetes, obesity and cardiovascular conditions have become major source of worry to public health in developing countries including Nigeria. The leading causes of mortality and morbidity recently could be traced to several modifiable risk factors associated with lifestyle practices that are often initiated during youth and may extend to adulthood. One of the risk factors associated with the development of hypertension, is alcohol consumption which is modifiable because it is as a result of adoption of health-risky lifestyles. Akinsola (2006) observed that, in sub-saharan African countries, one of the challenges facing individuals within the communities today was how to adopt a healthy lifestyle, which could be characterized by freedom from alcohol, practice of safe sex, eating wisely, and drug abuse.

Alcohol and alcohol drinking have been man's constant companion and habit respectively, since the earliest of times. This is evident in the story of the biblical Noah (Gen. 9:20-21), where drinking without control was recorded. Apart from the unethical offshoot of drinking without control as was seen in that story, excessive consumption of alcohol has obvious adverse

health consequences, which includes hypertension. Alcohol was so treasured in the early days in Scotland that the popular brand of spirit was named Whiskey, which means 'water of life' in the Gaelic language. Nonetheless, it remained a risk factor for hypertension, because Klatisky, Armstrong and Friedman (1992) noted that heavy alcohol consumption was positively associated with the occurrence of hypertension and the risk of heart failure in persons with high blood pressure. Similarly, prevalence rates of hypertension of 14.6 and 9.8 percents in urban and rural areas respectively have been established (Omuemu, Okojie & Omuemu, 2008).

Hypertension is a disease which affects the blood vessels. Blood pressure is the force exerted against the walls of the blood vessels as the heart contracts and relaxes. This pressure is expected to maintain a normal level. Hypertension therefore is said to exist when the level of blood pressure significantly exceed normal. Samuel (2006) listed lifestyle as one of the factors that may affect blood pressure. Alcohol drinking is being considered in this study as a modifiable risk factor for hypertension; because one of the lifestyle practices that affect a person's blood pressure is excessive alcohol consumption (Samuel, 2006).

Evidence of alcohol consumption has been established in Nigerian communities. NADUH (2008) reported that the 21 to 25 year old population had been shown to have the highest rate of alcohol consumption regardless of educational background. Oshodin (2005) established through a survey that alcohol use was common among students, with many of them having their first drink in family settings. In another survey conducted by Adelekan (1988) among 542 secondary school students in rural and urban communities in Ilorin Kwara state of Nigeria, it was found out that 20.1 percent of the males were binge drinkers while 33.3 percent of them had turned to lifetime drinkers. The most commonly consumed alcoholic drinks were palmwine (60.1%), followed by beer (20.8%), locally brewed distilled gin (14.7%). Given the relationship between alcohol drinking and hypertension, the results of these surveys send a deleterious signal to social health promotion, especially when lifetime drinking could be prevalent. Again these drinkers may be influenced by certain demographic variables such as age, gender, marital status, religious denominations and educational background. Whatever the demographic variations may be, one will be inclined to ask the reasons behind alcohol consumption. Many reasons

may be advanced as being responsible for this risk factor behavior. Social influences may account for initiation of experimental alcohol use. Onuoha and Obukohwo (2010) observed that adolescent alcohol consumption was influenced by their earlier social environment. The social environment may be peer group and family circle where some parents initiate their children into alcohol drinking without knowing it. Other factors that lead to alcohol consumption according to Engels and Knibbe (2000) included experimenting, problem of human relations and family, while Adelakan (1998) identified alcoholic parents and belonging to low socio-economic groups as being responsible for that. Since a casual relationship between alcohol consumption and many types of diseases such as hypertension has been established (Ene & Onyeoma, 1998; and Samuel, 2006), it constitutes a risk factor and need to be taken seriously. Risk has been perceived by Hattingh (2003) as a cumulative incidence of the likelihood that an individual will contract a disease. In the context of this study and human health, risk factor means the probability that alcohol consumption would culminate to contracting or developing hypertension. This is especially as it concerns rural dwellers. Focusing such studies as this, more on the rural areas of Nigeria where majority of Nigerians

live appear more rewarding. One of such rural Nigerian communities is Obioma in Udi local government area of Enugu State. Obioma is one of the 23 communities that make up Udi local government area, while the local government is among the 17 local government areas that make up Enugu State. The local government is endowed with commercial tapping of palmwine and hosting the largest beer brewery in West Africa, the Nigerian Breweries Plc. Considering the availability and accessibility of alcohol in this locality, excessive consumption among the inhabitants is imminent.

The impact of hypertension on the lives of people is very serious when measured in terms of morbidity, mortality and economic loss to the individual, family and nation as a whole. In order to address the challenge of hypertension, therefore, efforts should be made to address modification of the risk factor through studies, to identify the demographic variables influencing the risk factors such as alcohol consumption. It is against this background that the researchers decided to investigate the demographic variables that may influence the risk factor.

The purpose of study therefore is to investigate the demographic variations of a modifiable risk factor for hypertension in Obioma, Udi local government area of Enugu

State. Specifically, the study aims to identify the

- 1) demographic characteristics of alcohol drinkers
- 2) influence of age on alcohol consumption
- 3) influence of gender on alcohol consumption
- 4) influence of educational background on alcohol consumption
- 5) influence of marital status on alcohol consumption

To aid the study the following research questions were raised:

- 1) what are the demographic characteristics of alcohol drinkers?
- 2) what is the influence of age on alcohol consumption?
- 3) what is the influence of gender on alcohol consumption?
- 4) what is the influence of educational background on alcohol consumption?
- 5) What is the influence of marital status on alcohol consumption?

Methods

The cross-sectional survey design was adopted for the study. The study population comprised all males and females aged 15 years and above who were resident in the community. Cluster sampling method was adopted for the study using each village as a cluster. Sampling was conducted in two stages. The first stage involved a purposive selection of two villages from the five villages that make up the community. Each of the villages represented the two ancestral families that make up the community. The second stage was drawing of a non-proportionate sample of 150 males and females from each of the two villages. This was done by random selection of 25 males and females from each of the six kindred in the two villages using the systematic random sampling technique. Through these procedures, a sample of 300 subjects was selected for the study.

Instrument for data collection was a 5-item interviewer-administered questionnaire. Information on demographic data, alcohol consumption and quantity consumed were gathered using the instrument. Two research assistants who are indigenes of the community accompanied the researchers, for the purposes of dialect and terrain guidance. The instrument was validated by three experts and pre-tested in Nsude, a

community sharing similar demographic characteristics with the study community. The reliability coefficient index value yielded 0.83 using the split half method and Spearman Brown statistic.

Alcohol consumption was categorized into three; Non drinkers, Moderate drinkers (1-20 units a week) and Heavy drinkers (21 and above units a week). A unit was regarded as ½ bottle of beer or 1 cup of wine or 1 shot of hot drink. Data collected were placed in frequency distribution tables and percentages used to describe the frequency distributions.

Results

Table 1 **Demographic Characteristics of Alcohol Drinkers**

S/No	Variables	Frequency	Percentage
1	Age (in yrs)		
	15 – 30	190	63.3
	31 – 45	50	16.7
	46 – 60	38	12.7
	61+	22	7.3
	Total	300	100
2.	<u>Sex</u>		
	Male	180	60
	Female	120	40
	Total	300	100
3.	<u>Marital Status</u>		
	Single	100	33.3
	Married	174	58.1
	Separated	4	1.3
	Widowed	22	7.3
	Total	300	100
4	<u>Educational Background</u>		
	Primary	95	31.7
	Secondary	190	63.3
	Tertiary	15	5
	Total	300	100

Table 1 contains the data that show the demographic profile of the respondents. While a greatest proportion (63.3%) of the respondents fall within the age range of 15 – 30 years, 60 percent were males, and another greater percentage (58.1%) were married. Again respondents with secondary school certificate were greatest (64%) with regard to educational background.

Table 2. Prevalence of Alcohol Consumption by Age

Consumption Rate	15- 30		31 - 45		46 - 60		61+		Total	
	F	%	F	%	F	%	F	%	F	%
None	11	5.8	5	10	20	52.6	17	77.3	53	17.7
1-20 Units Per week	69	36.3	14	28	16	42.1	4	18.2	103	34
21+ Units Per week	110	57.9	31	62	2	5.3	1	4.5	144	48
Total	190	63.3	50	16.7	38	12.7	22	7.3	300	100

Table 2 indicates that a highest proportion (62%) of heavy drinkers fall within the age bracket of 31 – 45 years while those whose age are 61 and above are more of non drinkers. Data show that 77% of those within this age bracket are non-drinkers.

Table 3. Prevalence of Alcohol Consumption According to Gender

Consumption Rate	Gender					
	Male		Female		Total	
	F	%	F	%	F	%
None	5	2.8	24	20	29	9.7
1-20 Units Per week	63	35	69	57.5	132	44
21+ Units Per week	112	62.2	27	22.5	139	46.3
Total	180	60	120	40	300	100

Table 2 shows that a highest proportion of the males (62.2%) were involved in a consumption rate of 21 units and above in a week, while a highest proportion of the females (57.5%) were involved in a consumption rate of between 1 and 20 units per week. Data also revealed that there were more female abstainers (20%) than the male (2.8%).

Table 4 Prevalence of Alcohol Consumption According to Educational Background

Consumption Rate	Level of Education							
	Primary		Secondary		Tertiary		Total	
	F	%	F	%	F	%	F	%
None	4	4.2	5	2.6	2	13.3	11	3.7
1-20 Unit per Week	31	32.6	84	44.2	6	40	121	40.3
21+ Units Per Week	60	63.2	101	53.2	7	46.7	168	56
Total	95	31.7	190	63.3	15	5	300	100

Data in Table 3 show that the highest proportion of (63.2%; 53.2% & 46.7%) the three levels of education respectively consume 21 and above, units of alcohol in a week. The Table also indicates that the highest proportion of nine none drinkers (13.3%) fall within the tertiary level of education.

Table 5. Prevalence of Alcohol Consumption According to Marital Status

Consumption Rate	Marital Status									
	Single		Married		Separated		Widowed		Total	
	F	%	F	%	F	%	F	%	F	%
None	9	9	8	4.6	0	0	10	45.5	27	9
1-20 Unit per Week	42	42	50	28.7	2	50	8	36.4	102	34
21+ Units Per Week	49	49	11	66.7	2	50	4	18.1	171	57
Total	100	33.3	174	58.1	4	1.3	22	7.3	300	100

Table 4 shows that a highest proportion (66.7%) of the married one and the single ones (49%) consume 21 and more units of alcohol per week. Data in the Table also indicates that the highest proportion of the non-drinkers (45.5%) were the widowed.

Discussion

Results from the study revealed interesting developments regarding alcohol consumption and demographic distributions. The study indicated that a greatest proportion of those aged 15 to 30 years were heavy drinkers. This is evident in the data available in Table 1 which shows that 57.9 percent of the age category were involved in a weekly consumption rate of 21 and above of alcohol units. Nonetheless, the researchers were not surprised because, the result was in tandem with NADUH (2008) which reported that the highest rate of alcohol consumption was prevalent among the 21 to 25 year old population irrespective of educational background. The implication of this development therefore is that loss of control of one's health and its determinants will become obvious.

WHO (2005) had stated that health promotion was the process of enabling people to increase control over their health and its determinants. It then follows that heavy

alcohol consumption at this age may lead to life time drinking, consequently loosing control over this risk factor for hypertension. Similarly, Lotrean, Laza, Ionut and Vires (2010) observed that leading causes of mortality and morbidity were often initiated during youth and may extend into adulthood. Heavy alcohol drinking may be one of the actions that lead to such causes. Moronkola (2002) noted that problems confronting the world today were caused by actions and inactions of the people who may be male or female.

Variations in the gender alcoholic consumption rate were established in this study. It was clear that a highest proportion of 62.2 percent of heavy alcohol consumers were males. The finding was in line with the earlier study where Schwartz, Forthun, Ravert, Zambaanga, Umana-Taylor et al (2010) established that binge drinking was more prevalent in males than the females. Low prevalence of alcohol consumption in the female than male had been established in earlier studies (Akinkugbe, 1997; and Li, Fang, & Stanton, 1996). One may blame experimenting and peer group influence as accounting for this variation, because, men are believed to be more adventurous and keep alcohol during peers more than the females.

Furthermore, family problems have been known to contribute to alcohol consumption (Engels and Knibbe, 2000). This may account for the finding in the study that the greatest proportions (66.7% and 50%) of heavy alcohol consumers were married and separated people. As earlier stated, the finding in this study sends a damaging signal to social health promotion. This is because research (Omuemu, Okojie, & Omuemu, 2008) had established that apart from the risk of developing heart failure in hypertensive patients, alcohol consumption above certain levels could lead to physical and mental addiction. Above all, alcohol consumption above certain levels is a harmful practice and a risk factor for hypertension. This is why it has become important now to modifying this harmful practice through a change agent. Although changing people from what they were traditionally used to was not easy (Moronkola, 2002), alcohol consumption is modifiable and the risk for hypertension may have been reduced for social health promotion.

Recommendations

1. Community Health Extension Workers (CHEW) should be deployed into the community to

educate the indigenes on the health implications of alcohol consumption.

2. Various organizations in the community, such as Age Grades, Youth League and Social Clubs should be encouraged to enforce sanctions on citizens that got involved in alcohol consumption above certain level, irrespective of status.
3. Efforts should be made by Town Unions and Churches to introduce some cultural and religious control that would stabilize marriages so as to stem the tide of marital problems that may lead to binge drinking.
4. Engaging youths in more meaningful activities would help keep them busy so as to reduce the chances of their making alcohol consumption a past time exercise.

References

- Adelakan, M.L (1998). Trends analysis of substance use among undergraduates of University of Ilorin, Nigeria. *African Journal of Drug and Alcohol Studies. 1(1), 39-52*
- Akinkugbe, O.O (1997). Non-communicable diseases in Nigeria. *Series 4. Final Report of a National Survey. Federal Ministry of Health and Human Services. Lagos.*
- Akinsola, H.A (2006) *A – Z of community health in medical nursing and health education practice.* Ibadan. College Press & Pub Ltd.
- Ene, O.C; and Onyeoma, U. (1998). Suicide counseling in Nigerian universities. In Onuoha GBI and Animba, O (eds.) *Counseling for survival_Enugu.* Edge Pub.
- Engels, R.C and Knibbe, R.A (2000). Young people's alcohol consumption from an European perspective: Risks and benefits. *Journal of Chemical Nutrition. 54 (suppl), 52-55*
- Genesis 9:20-21. *Revised Standard Version Bible.*
- Hattingh, S.P. (2003). Occupational safety. In J.Acutt & S.P. Hattingh (eds.). *Occupational health management and practice for health practitioners.* South Africa Juta Academic.
- Klatisky, A.L; Armstrong, M.A; and Friedman, G.D (1992). Alcohol and mortality. *Ann. Intern. Med. 117.646 – 654*
- Li, X; Fang, X; and Stanton, B. (1996). The rate and pattern of alcohol consumption among Chinese adolescents. *Journal of Adolescent Health. 19. 353-361*
- Lotrean, L.M; Laza, V; Ionut, C; and Vries, H. (2010) Assessment of health risk behaviours and their interrelationship among young people from two counties of Romania. *Journal of Public Health (18) 403 – 411*
- Moronkola, O.A (2002). Health education or health promotion. What is in a name? In Z.A Ademuwagun, J.A Ajala, E.O Oke, O.A Moronkola & A.S Jegede (eds.) *Health education and health promotion.* Ibadan. Royal People (Nig) Ltd.

- NSUDH (2007). National Survey on Drug Use and Health. NSUDH Series H-34. DHHS Publication. www.medicnet.co/alcohol.14/11/2010
- Omuemu, V.O; Okojie, O.H; and Omuemu, C.E. (2008). Socio-demographic correlates of modifiable risk factor for hypertension in a rural community in Edo State Nigeria. *Journal of Community Medicine & Primary Health Care* 20(1), 25-34
- Onuoha, N.O; and Obukohwo, O. (2010). Alcohol consumption and the nutritional status of young men: A case study of Ekpan community. Delta State. Nigeria. *Paper Presented at the 11th Annual Conference of Home Economics Research Association of Nigeria (HERAN) at the University of Nigeria, Nsukka.*
- Oshodin, O.G (2005). Health promotion and safety education in the workplace. *Nigerian Journal of Health Promotion* 1 (1&2) 15-23
- Samuel, E.S. (2006). *Adolescent and adult health.* Nsukka Afro-Orbis Pub Ltd.
- Schwartz, S.J; Forthun, L.F; Ravert, R.D; Zamboanga, B.I; Umana-Taylor, A.J. et al (2010). Identity consolidation and health risk behaviours in college students. *American Journal of Health Behaviour.* 34(2), 214-224.
- WHO (2005). *6th Global Conference on Health Promotion.* Geneva.

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