



Unhealthy Lifestyle and Poor Healthcare Access: A Cross-Sectional Study in Rural Cross River State, Niger Delta Region, Nigeria

Authors

Eyo OA¹, Ekpenyong NO¹, Omoronyia OE¹, Mkpanam NE¹, Nwoha D²

¹Department of Community Medicine, University of Calabar, Calabar, Nigeria

²Department of Community Medicine, University of Calabar Teaching Hospital, Calabar, Nigeria

Abstract

Background: Practice of healthy lifestyle and regular medical screening are key cost-effective strategies for disease prevention. Regular medical screening promotes good health, as well as early diagnosis and treatment of diseases. Sustained healthy behavioral practices, regular medical screening and access to effective healthcare services, are therefore key determinants of good health and deterrents of morbidity and mortality. This study was aimed at assessing the practice of unhealthy behaviors, access to health care services and determinants of regular medical screening in a rural setting in the Niger-Delta region of Nigeria.

Methodology: A Cross-sectional study was employed, with use of multistage sampling method to recruit subjects from households in communities in Odukpani Local Government Area of Cross River State, Nigeria. Interviewer-administered questionnaire was used to obtain quantitative data on habits of smoking, alcohol consumption, physical exercise and regular medical screening as well as access to health care services. SPSS version 21.0 was used for data analysis.

Result: One hundred and eighty-five (185) subjects were surveyed, with a mean age of 35.7 ± 10.4 years. Regular alcohol consumption, smoking and inadequate physical exercise, was found in 152 (82.2%), 20, (10.8%) and 93, (50.3%) subjects, respectively. At least one of the three behavioral risk factors assessed, was found in 9 out of every 10 subjects (167, 90.3%). Eighty-three subjects (44.8%) had had medical screening within the last five years, while eighty (80,43.2%) had never done any screening before. The proportion of subjects that had screening done within the last 5 years was higher among those that were 40 years or older (56.9% vs. 39.4%, $p=0.03$). The commonest mode of procurement of health care services was through out-of-pocket (OOP) payment (178, 96.2%) and only seven subjects (7, 3.2%) were covered by health insurance.

Conclusion: There is a high prevalence of practice of unhealthy behaviors and irregular or non-medical screening for disease conditions. The predominance of OOP payment for health care services and inadequate health care facilities pose a huge barrier to healthcare access. It is imperative to intensify rural health education, widen the coverage of the National Health Insurance Scheme to cover rural communities and deepen its scope to include services like regular medical screening. The findings from this study should inform further studies to measure disease burden and determine the relationship between the lifestyle factors and disease patterns in Odukpani.

Keywords: Unhealthy lifestyle, medical screening, health care access, Niger Delta Region.

Introduction

There is overwhelming evidence to show that lifestyle factors such as smoking¹⁻², physical inactivity³⁻⁵, higher alcohol consumption⁶⁻⁸ among others are associated with morbidity and mortality. They are implicated in cardiovascular diseases, cancers and premature deaths⁹. In a seminal study in the United States, McGinnis et al concluded that premature deaths in that country could be prevented or more accurately deferred by modifying just 10 behaviours which are entirely subject to the individual's will. These are: tobacco use, dietary pattern, physical activity level, alcohol consumption, exposure to microbial agents, exposure to toxic agents, use of firearms, sexual behaviour, motor vehicle crashes and illicit use of drugs¹⁰. Of these, the top 3 factors were tobacco use, dietary pattern and physical activity level.

Similarly, a large cohort study in Germany¹¹ identified 4 behaviours: -smoking, diet, physical activity and maintaining a BMI ≤ 30 as being responsible for most chronic diseases. McGinnis et al looked beyond the diseases which are merely proximal causes of death to the life style risk factors which are the causes of those diseases and indeed the root causes of death. An invited commentary on these studies stated that the difference between life and death and health and illness is substantially defined by just 3 behaviours- smoking, diet and physical activity which are seen as the "the familiar levers of destiny."¹² Long exposures to unhealthy lifestyles are associated with Non-Communicable Diseases (NCDs). NCDs impose a huge burden on human health generally¹³ and accounted for 63% of all deaths worldwide in 2015¹⁴. Traditionally in Africa, communicable diseases, maternal and perinatal and nutritional causes accounted for the greatest burden of morbidity and mortality in a study¹⁵. This scenario is fast changing as the prevalence of NCDs is rising rapidly thus compounding the unfinished agenda of

communicable diseases in Low and Middle Income Countries (LMICs) including Nigeria¹⁶. Changes in environmental and behavioural determinants, industrialization as well as the push and pull of urbanization with the concomitant epidemiological transition are driving an epidemic of NCDs^{17,18}. The co-existence of infectious diseases and NCDs results in a "double burden" of disease for those countries.¹⁹ A study by Ekpenyong et al found a prevalence of N32.8% for NCDs in Nigeria and attributed this to the cumulative effect of unhealthy lifestyles, urbanization and economic transition¹⁶.

Cigarette smoking, defined by Bewley et al as smoking even one stick a week²⁰ is an important risk factor for NCDs globally. The habit is estimated to have killed 100million people worldwide in the 20th century which figure could increase to one billion in the 21st century if no action is taken²¹. The prevalence of tobacco use continues to rise in developing countries^{22,23,24}. This is particularly noticed among teenagers as older smokers quit or die²⁵. Unfortunately, African countries are not responding appropriately. While gleefully accepting the revenue accruing to them from these companies, they completely ignore the disease burden imposed by tobacco use.^{26,27}

Alcohol consumption constitutes a major factor in the burden of diseases globally, regionally and nationally for the vast majority of countries in the world²⁸. The World Health Organization (WHO) estimates that there are about 3.3 million deaths annually resulting from harmful use of alcohol representing 5.9% of all deaths²⁹. Harmful use of alcohol is a causal factor in more than 200 diseases (including NCDs), injury conditions, and a range of mental and behavioural disorders.²⁹ Beyond the health consequences, it brings significant social and economic losses to individuals, families and society at large quite apart from unquantifiable cost on family life and disruption of social relationships.

Adequate physical activity including regular aerobic exercises has been shown to have health-promoting benefits. Both men and women who engage in regular physical activity experience reductions in risk of dying from coronary heart disease which are statistically significant and clinically important. Physical activity also reduces the risk of developing diabetes, mellitus, hypertension, improves muscle, bone, joint health and helps to maintain function and preserve independence in elderly adults³⁰. There is a relatively high level of physical activity in Sub-Saharan Africa. This is however changing due to the high rate of urbanization across the continent.^{31,32} There is now far less trekking, and cycling and a reduction in energy-demanding tasks like fetching water from the stream, chopping of wood and tilling of soil among others.¹⁵

Access to health care services is a multi-faceted process which encompasses the quality of care, geographical accessibility, availability of the right type of care for those who need it, acceptability of such services and financial accessibility³³. It is key in addressing poor health outcomes³⁴. Studies comparing the health status of peoples of various developed countries suggest that residents of countries that provide relatively greater access to a full range of primary care services generally fare better than those in countries with poorer access¹⁰. Lack of access to standard primary care, screening and preventive interventions is an important indicator of gaps in a health system. Healthcare utilization is generally low in SSA countries³⁵. In Nigeria, poor health care services are further compounded by inequity in distribution of resources, access and sub-optimal quality of care³⁶.

The objective of this study was to assess the burden of unhealthy lifestyle in a rural setting exposed to urban influence and the quality of health care access available to the participants. There are very few studies on this subject regarding the Niger Delta region of Nigeria.

Findings could therefore guide policy and enrich literature on the subject of enquiry for the study area.

Methodology

Study Setting: This study was carried out in Odukpani Local Government Area (LGA) -one of the 18 LGAs in Cross River State in the Niger Delta region of Southern Nigeria. Although classified as a rural community, Odukpani is fast-developing and has in the last three decades witnessed an influx of civil servants and blue collar workers from Calabar, (the state capital a distance of about fifteen kilometers away) and adjoining towns. This factor has introduced some degree of urban lifestyle into an otherwise purely rural setting. The Niger Delta region of Southern Nigeria is host to multi-national oil companies and militancy and youth restiveness are rife. The study design was cross sectional descriptive and was carried out between September and December, 2016. The research targeted civil servants, petty traders and various artisans like carpenters, welders, tailors, hair dressers, food vendors etc. engaged in small scale business enterprises in the various communities of the LGA.

A multistage sampling method was used to recruit 185 participants for the study. Simple random sampling was done to select three wards and a systematic sampling method adopted in selecting willing participants from these for the study. An interviewer-administered, semi-structured questionnaire was used by trained research assistants to obtain data from the participants. Statistical analysis was done with SPSS version 21.0 and ethical approval for the study was obtained from the Cross River State Ethical Review Committee.

Result

Table 1 shows one hundred and eighty-five (185) subjects provided complete data, with

male-female ratio of 0.85-1 and mean age of 35.7 ± 10.4 years, ranging from 19 to 71 years. Most subjects were 40 years old or less (127, 68.7%), married (99, 53.5%), Christians (171, 92.5%), and from the Efik tribe (112, 60.5%). Farming (54, 29.2%) was the most common occupation and most subjects (165, 89.2%) had at least secondary level of education. Mean number of dependents per household was 3.76 ± 3.0 , ranging from 0 to 10, and approximately half of the subjects (92, 49.7%) had 3 or fewer dependents.

followed by subjects with less than ₦18,000 group (71, 38.4%) (Figure 1).

■ N <18,000 ■ N 18,001-50,000
 ■ N 50,001-100,000 ■ N 100,001-300,000

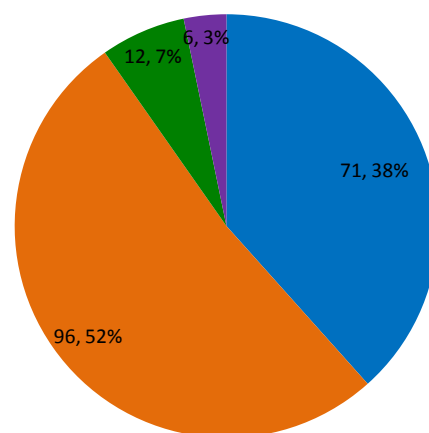


Figure 1: Pie chart showing monthly income groups of respondents (N=185)

Table 1: Sociodemographic characteristics of respondents (N=185)

Variable	Frequency	Percentage
Sex		
Male	85	45.9
Female	100	54.1
Age group (in years)		
≤ 20	14	7.6
21-40	113	61.1
41-60	56	30.3
> 60	2	1.1
Marital status		
Married	99	53.5
Single	75	40.5
Divorced	5	2.7
Widowed	6	3.2
Ethnicity		
Efik	112	60.5
Ejagham	22	11.9
Ibibio/Annang	28	15.1
Others	23	12.5
Religion		
Christianity	171	92.5
African traditional religion	11	5.9
Islam	3	1.6
Educational level		
None	1	.5
Primary	19	10.3
Secondary	77	41.6
Tertiary	88	47.6
Occupation		
Farmer	54	29.2
Business / trader	34	18.4
Unemployed	34	18.4
Civil servant	26	14.1
Others	37	20.0
Number of dependents		
≤ 3	92	49.7
> 3	93	50.3

One hundred and fifty-two (82.2%), one-tenth (20, 10.8%) and half (93, 50.3%) of subjects regularly consumed alcoholic drinks, smoked cigarette and had inadequate physical exercise respectively (Table 2). Most subjects (167, 90.3%) had at least one of the three behavioral risk factors assessed. Seventy-six subjects (41.1%) reported illness in at least one household member within the last one month. Fifteen subjects (8.1%) had at least one household member on regular medication for a diagnosed chronic disease.

Self-medication and treatment prescription by unskilled or non-healthcare worker was reported by 36 (40%) of subjects, who had at least one ill person in the last one month. The commonest mode of payment for health care services was through out-of-pocket (178, 96.2%). One hundred and two subjects (55.1%) had neither done general medical screening (80, 43.2%) nor had screening done later than the five years preceding the study (22, 11.9%) (Table 3)

Monthly income group within ₦18,000 and ₦50,000, was the commonest (96, 51.9%),

Table 2: Basic health behavioral risk, illness frequency and care (N=185)

Variable	Frequency	Percentage
Smoking		
Yes	20	10.8
No	165	89.2
Alcohol beverage consumption		
Yes	152	82.2
No	33	17.8
Physical exercise		
>30 minutes daily most days of the week	93	50.3
<30 minutes daily or only 1-2 days of the week	92	49.7
At least one of three health behavioral risk present		
Yes	167	90.3
No	18	9.7
Last general medical screening		
≤ 12 months ago	48	25.9
1-5years ago	35	18.9
>5years ago	22	11.9
Never	80	43.2
At least one household person ill in past one month		
Yes	76	41.1
No	109	58.9
Source of healthcare during last illness (n=75)		
Went to a hospital for treatment	39	52.0
Used medications/treatment prescribed by self	22	29.3
Used medications/treatment prescribed by unskilled persons	14	18.7
Household member on regular medication		
Yes	15	8.1
No	170	91.9
Mode of payment for medication / healthcare		
Out-of-pocket	178	96.2
Health Insurance	7	3.8

There was significantly higher proportion of medical screening within the past 5 years among subjects that were 40 years and older, compared with those that were younger than 40 years ($p=0.03$, table 3). Other socio-demographic characteristics including sex, marital status, educational level, number of dependents and income, were not significantly associated with compliance with medical screening ($p>0.05$, table 3). Proportionally

fewer subjects that smoked had medical check-up within the last 5 years, compared with non-smokers, although this difference was not statistically significant (25% vs. 47.3%, $p=0.06$). Consumption of alcohol, inadequate physical exercise and monthly income were not significantly associated with compliance with practice of regular medical screening ($p>0.05$, Table 3).

Table 3: Factors associated with medical screening behavior (N=185)

Variable	Last medical check-up		Total n (%)	Chi- square	p- value
	≤5yrs ago n (%)	>5yrs/Never n (%)			
Age group(in years)					
≤ 40	50 (39.4)	77 (60.6)	127 (100)	4.9	0.03
> 40	33 (56.9)	25 (43.1)	58 (100)		
Sex					
Male	38 (44.7)	47 (55.3)	85 (100)	0.02	0.97
Female	45 (45.0)	55 (55.0)	100 (100)		
Marital status					
Married	48 (48.5)	51 (51.5)	99 (100)	1.1	0.29
Unmarried	35 (40.7)	51 (47.4)	86 (100)		
Educational status					
Primary or none	6 (30.0)	14 (70.0)	20 (100)	2.0	0.16
Secondary or higher	77 (46.7)	88 (53.3)	165 (100)		
Number of dependents					
≤ 3	40 (43.5)	52 (56.5)	92 (100)	0.14	0.71
>3	43 (46.2)	50 (53.8)	93 (100)		
Smoking					
Yes	5 (25.0)	15 (75.0)	20 (100)	3.6	0.06
No	78 (47.3)	87 (52.7)	165 (100)		
Alcohol					
Yes	69 (45.4)	83 (54.6)	152 (100)	0.1	0.76
No	14 (42.4)	19 (57.6)	33 (100)		
Inadequate physical exercise					
Yes	42 (45.7)	50 (54.3)	92 (100)	0.05	0.83
No	41 (44.1)	52 (55.9)	93 (100)		
At least one behavioral risk					
Yes	76 (45.5)	91 (54.5)	167 (100)	0.29	0.59
No	7 (38.9)	11 (61.1)	18 (100)		
Monthly income (N)					
< 18,000	29 (40.8)	42 (59.2)	71 (100)	0.75	0.39
≥ 18,000	54 (47.4)	60 (52.6)	114 (100)		

Discussion

The main objective of this study was to assess the burden of unhealthy life-style in a semi-urban population in Nigeria as shown by the prevalence of cigarette smoking, consumption of alcohol and physical inactivity. The study also assessed access of the study participants to health care services.

The prevalence of cigarette smoking in the study was 10.8%. Odukpani, the study site is located a little distance away from Calabar-one of the 75 sites in the Global Youth Tobacco Survey Collaborating Groupstudy which recorded a prevalence of 7% among youths in Calabar³⁷. The rates for some other sites were Blantyre – 11.3%, Ghana – 13.2% and Monica Land in Zimbabwe 12.8%. Another study by Odey et al among adolescents in Calabar found a male prevalence of 13%²⁴. The rates vary

widely in Nigeria depending on the region and the study population. Since the mean age of initiation of cigarette, smoking is about 18 years²⁴, smokers in this study with the mean age of participants being 35.7 ± 10 years would have been in the habit for at least 7 years. This is of great concern considering the harmful effect on health inflicted by the habit. The study area is semi-urban by description and harbours civil servants, artisans, as well as construction workers apart from the indigenous population. It is therefore highly exposed to urban influence with its attendant anonymity. Cigarettes are not only freely available in Nigeria but are both accessible and affordable. Apart from warning messages which follow adverts and are printed on cigarette packages, there are no strict laws against smoking of cigarettes by individuals and in public places.

The public is therefore invariably exposed to second hand smoke. The government has to do more to protect the public and save smokers from themselves.

82.2% of participants in this study consume alcohol regularly. The rates in other studies are comparable. Among students in Owerri, South Eastern Nigeria (mean age 24.7 years) the rate was 78.4% out of which 77% were heavy drinkers²⁸. In another study among students in South West Nigeria the prevalence of regular alcohol consumption was 72%.³⁸ The mean age of the students was 18 years with males having a higher rate of consumption of 85%. In still another study involving commercial drivers in Uyo, a state capital in South/South Nigeria, 93.75% of participants were regular consumers of assorted alcoholic drinks³⁹. Even in spite of the known risk of foetal alcohol syndrome and pre-term birth complications, pregnant women attending ante-natal clinic in Port Harcourt, South-South Nigeria took alcohol regularly⁴⁰. Of the 221 respondents in that study, 59% had taken alcohol during the index pregnancy. 39.4% of them drank regularly while 25.7% admitted to binge drinking. Elsewhere in Africa, a study of alcohol consumption among high school students in Lesotho reported a rate of 54% and 42% among boys and girls respectively⁴¹.

Alcohol is liberally consumed in Nigeria and by both sexes especially in the southern regions where there is no restriction imposed by religion. Various local and foreign brews are freely sold and are affordable. Among many cultures in Nigeria, alcohol has a high social value and is an essential ingredient in ceremonies and rituals and features prominently in dowry items. Apart from the self-regulatory appeal of "drink responsibly", there are apparently no laws restricting sales based on any criteria. Although small to moderate intake of alcohol is inversely associated with the risk of Coronary Heart

Disease⁴², the line between moderate and heavy consumption is ill-defined.

The key determinants in the use of alcohol and tobacco are availability and demand⁴³. As a substance becomes more accessible and its consumption is seen as desirable, the use increases. There is a compelling need for African countries to learn from the examples of the pattern of alcohol-related deaths in developed countries through legislations that discourage people from adopting damaging lifestyles such as smoking and alcohol abuse. This is particularly pertinent in the Niger Delta region of Nigeria where youths are getting increasingly restive and militant. There is strong anecdotal evidence linking this tendency to cigarette smoking, alcohol, drugs and substance abuse.

In this study, only half of the respondents (50.3%) engage in regular physical activity. The rest do so once in a long while or not at all. The indigenous people of Odukpani are still engaged in subsistent farming and fishing which involve considerable energy expenditure. The white collar workers and artisans rarely engage in exercise. This aversion may be due to the influence urban lifestyle on the community. Such rural/urban disparity in exercise disposition has been reported in other studies in Nigeria by Ezenkwa et al and by Sobngwi et al in Cameroon^{44,45}. Forest et al also in their study reported a higher level of physical activity among junior civil servants than their senior counterparts and attributed this to upward mobility on the career ladder⁴⁶. Social and environmental factors that promote physical inactivity must be identified and addressed.

In Nigeria, there are concerns in the health system about physical and financial accessibility of health care services⁴⁷. There is poor knowledge of what services exist and lack of education about how best to utilize them. There is a Primary Health Centre in Odukpani local government headquarters but the services

are poor and unappealing thereby posing a barrier to access. This is expressed (at least partly) in a high prevalence of common ailments among the study participants. 41.1% of respondents reported that at least one household member was sick in the preceding month of which 47.4% sought treatment from unskilled persons or resorted to self-medication. 8.1% of participants reported that at least one household member was on regular treatment for an NCD (Diabetes Mellitus and or Hypertension). Payment for health care services was predominantly by Out Of Pocket (OOP) (96.2%) while only 3.8% of participants were covered by any form of Health Insurance whether private or social. Although the National Health Insurance Scheme (NHIS) has existed in the country since 2005, the Community-Based component of the scheme which is targeted at rural communities is yet to be rolled out in most rural communities including Odukpani. OOP payment for health care services is by far the greatest hindrance to access and this has conceivably affected the care-seeking habit of the respondents.

Among the study participants, the practice of regular screening is poor as is the attitude to it. Only 44.8% of participants had done any form of screening in the past five years. 43.2% of respondents had never done any screening whereas only 11% had done screening in less than the past five years. Medical screening in the previous five years was significantly associated with age. 56.9% of such respondents were aged 40 years and over whereas 39.4% were less than 40 years ($p = 003$). One can infer from these figures that there is a huge gap in the health system. A large proportion of the participants had not availed themselves of secondary preventive services with their potential for early detection of disease conditions.

Conclusion and Recommendations

This study showed that 90% of respondents had at least one unhealthy lifestyle. As pointed out in a study by Ezenkwa in Nigeria, some patients have as many as five chronic disease risk factors which tend to have a synergistic effect on total chronic disease risk⁴⁴. The prevalence of unhealthy lifestyles is thus very high among the study participants. As has been conclusively shown in large prospective studies, there is a strong trend of decreasing mortality risk associated with an increasing number of positive health behaviours. Those who have at least one positive health behaviour have about $\frac{1}{4}$ the mortality risk of those who have none^{9,10}. Benjamin Franklin's adage that an ounce of prevention is worth a pound of cure is a useful counsel. Adopting common sense health practices requires neither expensive technology nor highly trained personnel or elaborate state-of-the-art facilities. Yet, adopting them in addition to secondary preventive practices can prove effective in maintaining good health and reducing morbidity and mortality from NCDs. Policies to limit availability and reduce demand for cigarettes and alcohol is thus strongly advocated at population level. Aggressive health education and promotion is key in alerting people to the dangers of unhealthy lifestyles and to the need for behavioural change even for those who are set in their ways. Access to health care services is limited while the attitude to secondary preventive practices is poor. Emphasis in the health system should shift from reactive to pro-active, from curative to preventive and from facility-based to the proven Community-based model of delivering health care services. In order to enhance access, more health care facilities should be provided by stakeholders while the gaps in the implementation of the NHIS should be urgently addressed with health education and secondary preventive services integrated into the scheme.

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