

Awareness of Heart Disease Prevention Among Patients Attending a Specialist Clinic in Southern Nigeria

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Abstract The incidence of heart disease is on the increase in Africa yet awareness about the disease and its prevention seem to be very low in many African countries. Two hundred and thirty-six patients attending a medical outpatient clinic in southern Nigeria were randomly selected and a structured questionnaire was administered on them to assess their knowledge of heart disease and its prevention. One hundred and seventy-eight (75.4%) respondents did not know the symptoms of heart disease while 215 (91.1%) had never been told about cardiovascular disease prevention by their doctors. A significant number (82%) had checked their blood pressure in the past 18 months while very few had checked their serum lipid levels (14.4%). Less than 50% of respondents engaged in regular exercise. There was no significant difference between level of education of respondents and awareness of heart disease ($p=0.561$) or education on heart disease prevention. ($p=0.251$) and also no significant gender difference in the awareness of heart disease prevention ($p=0.650$). This study shows that awareness of heart disease and its prevention among our patients is still very poor and we need to educate them on the disease and lifestyle modification so that the resulting adverse consequences are averted.

Keywords Heart Disease, Hypertension, Dyslipidemia, Prevention, Nigeria

1. Background

Cardiovascular diseases (CVD) are well established as a leading contributor to the burden of disease in low income and middle-income countries¹. An estimated 16.7 million, or 29.2% of total global deaths, result from the various forms of cardiovascular disease, many of which are preventable by action on the major primary risk factors: unhealthy diet, physical inactivity and smoking. Some 80% of all CVD deaths worldwide took place in developing, low- and middle-income countries, while these countries also accounted for 86% of the global CVD disease burden². The burden of non-communicable diseases in low and middle income countries is likely to increase substantially over the next decades, and will become one of the most important causes of death and disability, because of the expected health and demographic transition. CVD in sub-Saharan Africa (SSA) has a large economic impact, with an estimated financial burden of tens of billions of US dollars over the next decade³. Hypertension and diabetes mellitus have become significant problems in many developing countries experiencing epidemiological transition from communicable to non-communicable chronic diseases⁴. Despite the huge burden of heart disease in Sub Saharan Africa, the level of

awareness is very poor and as such the wrong attitudes have been adopted about the disease. There is no doubt that knowledge and attitudes of patients have impact on the management of their illnesses, and improving knowledge is known to improve compliance with treatment. According to the World Health Organization, non-compliance with long-term medication for conditions such as hypertension, dyslipidemia and diabetes is a common problem that leads to compromised health benefits and serious economic consequences in terms of wasted time, money and uncured disease⁵. There exist an erroneous perception among some patients that hypertension and diabetes are curable and this wrong information accounts for a significant number of patients who stop taking their medications. This aim of this study is to explore the knowledge of heart disease symptoms and its prevention among patients attending a specialist clinic in tertiary hospital in Port Harcourt, Nigeria. This study also tries to explore the practices of patients with respect to heart disease prevention.

2. Materials and Method

This study was conducted among a convenient sample of patients attending the medical outpatient clinic of the University of Port Harcourt Teaching Hospital. Two hundred and thirty-six subjects participated in the study. Consent was obtained from all the subjects. A well structured researcher administered questionnaire was used to obtain demographic data as well as awareness information and practice. Their

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Published online at <http://journal.sapub.org/ijpt>

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heights and weights were also obtained to calculate their body mass index. Data was entered into statistical package for social sciences (SPSS) version 17. For continuous variables, mean values and standard deviations were calculated and the means compared by using the independent sample t test. Categorical variables were compared using the chi-square test. Results are presented in tabular forms.

3. Results

A total of 236 subjects participated in the study, 100 (42.4%) males and 136 (57.6%) females with a M:F ratio of 0.9:1. (table 1) Their ages range from 16 to 82 years with a mean age of 42.1 ± 15.7 years. Fifty-eight percent of the respondents had tertiary education while only 39 (16.5%) had primary education as shown in table 2. A little over 60% of respondents were also married (60.2%) while 68 (28.8%) were single and 26 (11%) widowed. Most of the participants were in the middle and lower socio-economic class with only 7(3.4%) participants earning over 1,300 dollars monthly. Table 3 shows the body mass index of respondents. Ninety-five (40.3%) of the respondents had normal body mass index while 74 (31.3%) were overweight and 54 (22.9%) obese.

3.1. Awareness of Heart Disease Prevention

Only 58 participants (24.6%) knew symptoms of heart disease while 215(91.1%) said that they have not been counseled on prevention of heart disease by their doctors. Slightly more women (91.8%) than men (85.4%) made that assertion. Only 8.9% of the participants had been educated on the symptoms of heart disease by their doctors and an overwhelming majority (97.5%) were eager to discuss prevention and treatment of cardiovascular disease with their doctor. Table 4 shows responses to some questions by respondents. There was no significant difference between level of education of respondents and awareness of heart disease ($p=0.561$) or education on heart disease prevention. ($p=0.251$) There was also no significant gender difference in the awareness of heart disease prevention ($p=0.650$) however the male respondents were more likely to have had discussions with their doctors on heart disease prevention. ($p=0.018$) More respondents aged between 30 and 60 years have had discussions with their doctors on heart disease prevention compared with those in other age groups. ($p=0.008$)

3.2. Practice of Heart Disease Prevention

Most of the respondents (83.5%) had not checked their blood cholesterol in the last 18 months. Among 39 patients who had checked their cholesterol in the last 18 months, 10 had hypercholesterolemia while 13 had normal levels of cholesterol. The remaining 16 respondents had no idea what the value of their cholesterol was or its significance. Majority of the respondents (82.6%) however have had their blood

pressure checked in the last 18 months with 83.6% of the female respondents responding positively compared with 79.2% of the men. Among those who have had their blood pressures checked, 84 (35.6%) had high blood pressure readings and 78 (33.1%) of them were on anti-hypertensive medication. Of the respondents, only 93 (39.4%) have had their blood sugar checked in the last 18 months while 27 (29%) of them had high blood sugar readings. None of the respondents smoked cigarettes while 57 (46.8%) respondents did some type of exercise up to 3 times weekly. Age was not a significant factor in the admission to regular exercise by respondents ($p=0.623$).

Table 1. Sex distribution of respondents

SEX	FREQUENCY	PERCENTAGE(%)
MALE	136	57.6
FEMALE	100	42.4
TOTAL	236	100

Table 2. Educational status of respondents

EDUCATIONAL STATUS	FREQUENCY	PERCENTAGE(%)
PRIMARY	39	16.5
SECONDARY	62	26.3
TERTIARY	135	57.2
TOTAL	236	100

Table 3. Body mass index of respondents

BODY MASS INDEX(kg/m ²)	FREQUENCY	PERCENTAGE(%)
<19	10	4.2
19-24.9	95	40.3
25-29.9	74	31.3
30-39.9	54	22.9
>40	3	1.3
TOTAL	236	100

Table 4. Response to some questions by respondents

QUESTIONS	YES(%)	NO(%)
HAVE YOU DISCUSSED HEART DISEASE PREVENTION WITH YOUR DOCTOR	28(11.9)	208(88.1)
WOULD YOU LIKE TO DISCUSS IT WITH YOUR DOCTOR?	230(97.5)	3(2.5)
CHECKED YOUR BP IN THE LAST 18 MONTHS?	195(82.6)	41(17.4)
CHECKED YOUR BLOOD SUGAR IN THE LAST 18 MONTHS?	93(39.4)	143(60.6)
CHECKED YOUR LIPID PROFILE IN THE LAST 18 MONTHS?	39(16.5)	197(83.5)

Hypertension, diabetes mellitus and malaria were considered the greatest health problem in 38 (16.1%), 29 (12.3%) and 23 (9.7%) respondents respectively. As for regular complete medical checkup, 108 (45.8%) of respondents have never had one while only 17 (15.3%) have regular checkups yearly. One hundred and fourteen (48.3%)

respondents knew some causes of heart disease while 122 (51.7%) had no idea of any cause of heart disease.

4. Discussion

The results of this study show that awareness of heart disease prevention among patients of both sexes attending a specialist clinic is very poor. Over 70% of the respondents did not know about heart disease symptoms while over 90% of respondents admitted that they had not been educated on heart disease prevention despite attending a specialist clinic. The findings in this study are similar to studies in Nigeria and Africa that concluded that control of cardiovascular disease is unacceptably poor because of poor knowledge of cardiovascular disease and adverse practices by patients.^{6,7,8} This may not be unconnected to the extremely busy clinics run by physicians which leave little time for education of their patients as well as the dysfunctional health system in the country where there is acute shortage of workforce with large populations of patients. In a similar vein, another Nigerian study⁹ suggested that physicians should allocate special time for health education, having concluded that lack of time by physicians and inadequate knowledge about cardiovascular disease by patients are some of the potent barriers to effective CVD prevention and care. In a survey conducted in 1000 US households, only 8% of respondents identified heart disease and stroke as their greatest health concerns while less than 33% identified heart disease as the leading cause of death¹⁰. Sanderson *et al*¹¹ in their study showed that only 9% of their study population were able to identify lifestyle risk factors for heart disease which demonstrates poor knowledge of heart disease and risk factors associated with it. Our study showed that almost all the participants (97.5%) were eager to discuss cardiovascular disease prevention with their doctors suggesting a positive attitude towards their illness which, if harnessed, could improve compliance levels to prescribed medication.

In terms of practice of cardiovascular disease prevention, most of the respondents had had their blood pressures checked in the past 18 months and about 50% of them had elevated blood pressure. Ulasi *et al* in a community based study done at a market place found that the prevalence of hypertension was 32.4% and 70.4 % of those found to be hypertensive were not aware of it¹². The fact that our study was done in a specialist hospital explains the high percentage of respondents who have had their blood pressures checked compared with the community based study cited above. It is important to note that many patients still have a lopsided understanding of the aim of their treatment as a significant number of them still believe that they can be cured of hypertension.⁴ This obviously has a ready consequence in poor compliance, poor control of hypertension and increased risk of morbidity and mortality.

Only 43 (38.7%) of respondents had checked their blood sugar over the last 18 months and 27.9% of them had high blood sugar levels. The above findings show the poor

practices of patients as far as cardiovascular prevention is concerned and this practice is largely due to poor knowledge about these diseases and their complications. Maina *et al*¹³ in their study revealed a serious deficiency in knowledge of diabetes among community members in Kenya. It is therefore important to identify interventions that reinforce peoples' attitudes despite their perceived levels of knowledge of a particular disease. Proper education and awareness programs have previously been shown to change the attitude of the public regarding diabetes. Improving knowledge of the people can improve their attitude towards diabetes and in the long run change their practices to embrace healthier lifestyles such as eating healthy foods, and engaging in physical activity.

Very few of the respondents (14.4%) had checked their serum lipid levels and this indicates the poor knowledge of dyslipidemia as a cardiovascular risk factor. Goldman *et al*¹⁴ in a study of 7 focus groups found that most participants had inadequate knowledge of hypercholesterolemia and cardiovascular risk and also noted that few participants knew their cholesterol numbers. Nearly 50% of the respondents had never had a complete medical check-up while only 15.1% have yearly medical checks. About half of the respondents were either overweight or obese while less than 50% admitted to doing some form of exercise regularly. This is not surprising as a lot of people are consuming a more energy-dense, nutrient-poor diet and are less physically active. Imbalanced nutrition, reduced physical activity and increased tobacco consumption are the key lifestyle factors responsible for increased incidence of heart disease.

5. Limitations

The fact that the study was conducted in the hospital setting among patients attending a specialist clinic may have affected responses to our questions as they are more likely to be enlightened than the general population about heart disease and its prevention.

6. Conclusions

The findings in this study have public health implications. Most of our patients are not aware of symptoms of heart disease and have not been educated on heart disease prevention. Furthermore, nearly all of them are eager to be educated on prevention of heart disease. We need to find the time within our very busy schedules to provide this education considering that writing a prescription is only part of the wholistic management of our patients. Sharing educational leaflets on heart disease prevention in the clinics will go a long way in providing this knowledge and not only saving time but also our patients' lives. The government also has a role to play by promoting health enlightenment campaigns to educate people on healthy lifestyle practices that prevent heart disease as well as providing sufficient

capacity and equipment at our hospitals to cope with the huge number of patients with heart problems.

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