



Health literacy among adult hypertensive patients in a tertiary hospital in South-South, Nigeria

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Abstract

Background: Health literacy is a concept that seeks to help patients to understand, appraise, use health information and decide on issues related to their health. Hypertension is a chronic disease and global health concern with consequences of increased health care cost and reduced quality of life. Good health literacy level with adherence to medication and good patient attitude are expected to improve outcomes in hypertensive patients.

Objective: The study was undertaken to determine the relationship between health literacy, adherence to medication and patient health attitude so as to expose patients to the concept of health literacy and how they can improve their health.

Method: Following ethical approval, a descriptive cross sectional study of 120 adult hypertensive patients attending DELSUTH was carried out over a six months period. Only those who met the inclusion criteria participated. Data was collected through interview based administered structured questionnaire with closed ended questions. Questionnaire had 4 sessions which included; sociodemography, health literacy level, health attitude and adherence to medications. Data was analysed with SPSS. Health literacy score and patient attitude were graded good, fair and poor while adherence to medications was assessed by asking the patient's if they took their medications regularly.

Results: With p value set at 0.05, there was statistical significance between health literacy and level of education of adult hypertensive patients (p=0.007)

There was also statistical significance between health literacy and patient's attitude (p=0.007)

Conclusion: level of education is strongly linked to the health literacy level of a patient and this inturn impacts patient's attitude to health care.

Keywords: Health Literacy; Adult Hypertensive Patients; Tertiary Institution; South-South Nigeria

1. Introduction

Health literacy refer to non public characteristics and social assets needed for Individuals and communities to access, understand, appraise and use information and services to make decisions about health¹. It includes the functionality to communicate, assert and enact these decisions².It also include the things people, communities and country needs in order to make good decisions about health for themselves, their families and the communities at large³.

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Health Literacy has been defined by the institute of medicine as "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make basic health decision"^{2,4,5}. The World Health Organisation defined Health literacy as the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways that promote and maintain good health^{2,4,5}.

Hypertension is a chronic disease which remain a global health concern^{7,8}. Also, it increases health care cost and reduce the quality of life of older adults^{7,8}. To achieve adequate control and prevent adverse health outcomes, patient's education and active participation is required^{6,9}. This is a core focus of the concept health literacy.

Inadequate health literacy contributes to poor compliance, uncontrolled chronic diseases, and rising health care costs^{6,9}. A recent report by the Agency for Health Care Research and Quality on health literacy concluded that "low reading skills and poor health are clearly related".

Lower health literacy is associated with less knowledge of chronic disease processes, poorer mental and physical health, limited use of preventive services, and higher rate of hospital admission^{11,14,15}.

Health literacy though a relatively new concept is a worldwide issue as various studies have shown that patients have inadequate/low health literacy. A study done in Ireland revealed 1 in 7 individuals have inadequate health literacy¹⁰. Another study carried out in Taiwan revealed that 30% of people had inadequate health literacy¹⁰. In Nigeria, paucity of studies makes it difficult to quote figures.

The study was undertaken to determine the relationship between health literacy, adherence to medication and patient health attitude so as to expose patients to the concept of health literacy and how they can improve their health.

2. Material and method

The study was carried out in Delta State University Teaching Hospital (DELSUTH). DELSUTH is located in Oghara, Ethiope West Local Government of Delta State, South-South Nigeria. Ethical approval to carry out this study was sought from the Health Research, Ethical Committee (HREC) of Delta State University Teaching Hospital, Oghara. Permission was obtained from head of units (doctors and nurses). Written informed consent was obtained from participant.

A descriptive cross sectional study design of Adult (18years and above) patients with hypertension in DELSUTH was done which spanned over a six months period. A total population study of 120 patients who met the inclusion criteria was carried out.

Inclusion criteria included;

- Patients attending out-patient clinics that have been diagnosed with hypertension.
- Patients admitted in the wards that have been diagnosed with hypertension.

Data collection was through interviewed based administered structured questionnaire with close ended questions. The questionnaire had four sections;

- Section A: Socio-demographic characteristics of respondents
- Section B: Health literacy among adult patient attending DELSUTH (definition, normal value, signs and symptoms, risk factors and complication)
- Section C: Health attitude
- Section D: Adherence to treatment

The data analysis was carried out using Statistical Package for Social Sciences (SPSS) Version 20.0 for windows program. For descriptive statistics such as frequencies, percentages were used for the study. Chi-square was used to determine the association between

- Health literacy and adherence to anti-hypertensive medications
- Health literacy and socio-demographic characteristics
- Health literacy of hypertensive patient attitude to their disease
- Number of questions asked for health literacy for hypertensive patients was 12 questions
- Number of questions asked for patient attitude of hypertensive patients was 9 respectively

- Adherence to medication was assessed by asking if they take their anti-hypertensive drugs.

3. Result

Table 1 Frequency distribution of socio demographic characteristics of adult hypertensive patients in Delta State University Teaching Hospital, Oghara

Variable	Hypertension frequency n=120(%)
Age	
18-45	14(11.7)
46-59	68(56.7)
60-90	38(31.6)
Sex	
Male	52(43.3)
Female	68(56.7)
Level of education	
None	5(4.2)
Primary	24(20.0)
Secondary	52(43.3)
Tertiary	39(32.5)
Marital status	
Cohabiting	2(1.7)
Married	88(73.3)
Single	13(10.8)
Widowed	17(14.2)
Occupation	
Unemployed	13(10.8)
Self employed	79(65.8)
Civil servant	15(12.5)
Others	13(10.9)
Religion	
Christianity	119(99.2)
African traditional	1(0.8)
Islamic	0(0)
Ethnicity	
Urhobo	60(50.0)
Isoko	24(20.0)
Itsekiri	9(7.5)
Ijaw	2(1.7)
Yoruba	5(4.2)

Igbo	11(9.2)
Hausa	1(0.8)
others	8(6.6)

Table 2 Health literacy level of adult hypertensive patients in Delta State University Teaching Hospital, Oghara

Variable	Hypertension n=120(%)
Literacy Score	
Good	45(37.5)
Fair	38(31.7)
Poor	37(30.8)
Knows definition of hypertension	104(86.7)
Knows value of normal blood pressure	80(66.7)
Knows risk factors	
Age	94(78.3)
Obesity	78(65.0)
Inactivity	50(41.7)
Hereditary	68(56.7)
Too much salt intake	52(43.3)
Race and Ethnicity	-
Knows complication	
Blurred vision	77(64.2)
Stroke	103(85.8)
Heart failure	70(58.3)
Aneurysm	22(18.3)
Blindness	-
Kidney failure	-

Table 3 Adherence to medication among adult hypertensive patients attending Delta State University Teaching Hospital, Oghara

Variable	Hypertension n=120(%)
Take Medication regularly	102(85.0)
Reasons for not taking medication regularly	
Lack of finance	9(7.5)
Feeling drug is not effective	3(2.5)
I forget	117(2.5)

I have been taking them	
since many years	2(1.7)
Side effects	1(0.8)
Poor family support	2(1.7)
Modified the dose of drug prescribed	27(22.5)
Modified the timing of the drugs	28(23.3)
Have good knowledge of the prescribed drugs	62(51.7)
Know importance of medication	92(86.7)

Table 4 Attitude of Response of hypertensive patients attending DELSUTH, Oghara

Variable	Hypertension n=120(%)
Check blood pressure regularly	91(75.8)
Keep records of measurement	73(60.8)
Keep to doctor appointment	107(89.2)
Take alcohol	103(85.8)
Smoking	3(2.5)

Table 5 Relationship between health literacy and adherence to antihypertensive drugs

Health literacy	Adherence		Total
	Yes	No	
Good	42 (93.30%)	3 (6.70%)	45 (100%)
Fair	32 (84.21%)	6 (15.78%)	38 (100%)
Poor	28 (75.68%)	9 (24.32%)	37 (100%)
X ² =4.993, p=0.082			

There is no statistically significant difference between health literacy and adherence to anti-hypertensive medication; however those with good health literacy were adherent to medication 42(93%) compared to those with fair health literacy 32(84%) and poor health literacy 28(75%).

There was statistical significant difference between level of education and health literacy score among hypertensive patient; p value=0.007. Those that had tertiary education 23(19%) had good health literacy compared with those with secondary level of education 16(13%), primary level of education 6(5%) and none 0(0%).there was no significant between health literacy and age, sex and occupation.

Table 6 The Relationship between socio demographic characteristics and health literacy in Hypertension

Variables	Good (%)	Fair (%)	Poor (%)
Age (Years)			
Young (18-45)	69(5)	4(3)	4(3.3)
Middle (46-59)	26(21)	24(20)	18(15)
Elderly (≥ 60) $X^2=2.258$, p-value=0.688	13(10.8)	10(8.3)	15(12.5)
Sex			
Male	16(13.3)	18(15)	18(15)
Female $X^2=1.786$, p=0.409	29(24.2)	20(16.7)	19(15.8)
Level of education			
None	0(0)	1(0.83)	4(3.3)
Primary	6(5)	8(6.7)	10(8.3)
Secondary	16(13.3)	21(17.5)	15(12.5)
Tertiary $X=17.563$, p=0.007	23(19.2)	8(6.7)	8(6.7)
Occupation			
Unemployed	6(5)	2(1.7)	5(4.2)
Self employed	26(21.7)	30(25)	23(19.2)
Civil servant	7(5.8)	3(2.5)	5(4.2)
Others $X=4.679$, p=0.409	6(5)	3(2.5)	4(3.3)

Table 7 Relationship between health literacy of hypertensive patient and patient attitude to their disease

Health literacy	Patient attitude		
	Good	Poor	Total
GOOD	41 (91.11%)	4 (8.89%)	45 (100%)
FAIR	25 (65.79%)	13 (34.21%)	38 (100%)
POOR	24 (64.86%)	13 (35.14%)	37(100%)
$X^2=9.976$ p-value=0.007			

There was statistical significant difference between health literacy and the attitude of anti-hypertensive patient; p-value=0.007. Those with good health literacy 41(91%) had good attitude towards their disease compared with those with fair health literacy 25(66%) and poor health literacy 24(65%).

One hundred and twenty hypertensive patients participated in the study with mean age of 56;7 years, 56.7% were females, 43.3% were males. Majority (50.0%) were from the Urhobo ethnicity, 73.3(%) were married, 43.3(%) had tertiary level of education and 65.8% were self-employed.

Majority of the study participants had good health literacy score 37.5% with 31.7 and 30.8 having fair and poor scores respectively.

Health literacy level showed no significance with age ($p=0.688$), sex ($p=0.409$), occupation ($p=0.409$). Level of education showed statistical significance ($p=0.007$) with health literacy level.

From the study, adherence to medications was high across all health literacy scores was 93 for good health literacy score, 84.2 and 75.68 for fair and poor health literacy scores respectively. However, this was not statistically significant ($p=0.082$). Patient attitude correlated positively with health literacy scores (64.86, 66.79 and 91.11) for poor, fair and good health literacy scores and this was statistically significant ($p=0.007$).

4. Discussion

Majority of respondents were from the urhobo ethnicity which is due to the fact that the study was done in an urhobo populated land. Also, most of the study participants are self-employed which reflects the poor economic situation of the country despite tertiary level of education.

Out of the 120 adult hypertensive patients, only 45 (37.5%) had good health literacy level. Minority (30.8%) had poor health literacy level which is in keeping with a study on the degree of health literacy and treatment compliance in patients with high blood pressure in a national hospital in Lima, Peru by Rosas Chavez (2019) which showed that 36% of hypertensive patients had inadequate health literacy¹².

This study found no statistical significance between health literacy and medication adherence ($p=0.082$). However, we observed that 28 (75.86%) of those with poor health literacy remained adherent to their medications. This was in keeping with a study conducted to determine the correlation between health literacy and medication adherence among hypertensive patients by Phitchayaphat Wannasirikul(2016) which showed that almost half 48.7% of studied subjects had inadequate health literacy, 98.3% had good medication adherence⁷. It could be opined that majority of patients know the importance of the medications, are aware of the complications of hypertension and also take their medications. This insignificance maybe due to the small sample size of this study

On the relationship between socio-demographic characteristics (age, sex, level of education and occupation) and health literacy of hypertension patients, only level of education was found to be statistically significant. This is in keeping with a study conducted by OC Aghoja, PO Okinedo and VU Odili (2017) aim carried out a descriptive prospective study to determine the Knowledge, Attitudes and Practice (KAP) of hypertensive patients towards hypertension the study showed that patients with tertiary level of education has good health literacy¹³.

This study found out that 41 (91.11%) of hypertensive patients had good health literacy and good patient attitude and this was statistically significant and this was in keeping with a study by Helen Levy(2016) aimed at determining the relationship between health literacy and access to health care¹⁶. The statistically significant association observed could be attributed to the fact that majority of the patients are aware of the complications of hypertension, they check their blood pressure levels regularly and keep a record of values, they keep to doctor's appointments, and are non-smokers neither do they consume significant amounts of alcohol. Also, the study population is in a community where cigarette smoking and excessive alcohol consumption is not morally encouraged.

Recommendation

Intense and rigorous health education about chronic diseases such as hypertension should be carried out. Government, non-governmental organizations and families should endeavour to make sure every member of the society gets a good and standard education as it is a necessary tool for good health literacy. Patients should be more involved in decisions about their medications and there should be good communication between doctors and their patients. Finally, more local studies are encouraged in other to assess health literacy and other chronic diseases which will in turn give managing physicians insight on how to better serve patients.

5. Conclusion

Conclusively this study has revealed that there is good health literacy among hypertensive patients attending Delta State University Teaching Hospital, Oghara. The study also showed that the relationship between health literacy and attitude of hypertensive patients was statistically significant and that there is a significant relationship between health literacy level and level of education of hypertensive patients.

We can conclusively infer that level of education of a patient is strongly linked to his/her health literacy level and this impacts the patient's attitude to health care.

Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest.

Statement of ethical approval

Study involved human subject and full ethical approval was obtained from the Health Research Ethics Committee of Delta State University Teaching Hospital with subsequent approval.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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