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AWARENESS OF GLAUCOMA IN AN ELITE COMMUNITY; A STUDY OF AHMADU BELLO UNIVERSITY, ZARIA

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ABSTRACT

Objective: This study aims to assess the level of awareness of glaucoma among members of a tertiary academic institution community in Northern Nigeria.

Materials and Methods: The study was conducted in a university community and it involved interview and descriptive cross-sectional analysis. Consenting participants who presented at the sick bay of the university health service were serially recruited in March, 2014. Semi-structured questionnaire was directly administered to obtain sociodemographic data and information about glaucoma awareness.

Results: The number of participants was 483(mean age 21.0 ± 20.0 years; range 1-79 years). There were 262 males (54.2%). Students were the most common participants 218 (45.1%). Those who had heard of glaucoma were 226 (46.8%) with no statistically significant difference between males 124 (47.3%) and females 102 (46.2%) (P=0.966). The most common source of information was radio (31.6%) followed by health facility (24.8%) and print media (19.2%). Predictors of glaucoma awareness with statistically significant values were level of education, family history of glaucoma and family history of blindness (P=0.000 in all three).

Conclusion: This study shows a moderate level of awareness of glaucoma in a university community. Increased health education and eye care services will improve the level of awareness and prevent ocular morbidity and blindness from glaucoma.

KEYWORDS: Awareness, Glaucoma, University Community

INTRODUCTION

The 2010 global estimates of visual impairment by the World Health Organization reported that glaucoma is the second leading cause of blindness worldwide, accounting for 8% of global blindness[1]. The Nigeria National Blindness survey reported the prevalence of glaucoma-related blindness at 0.7% second only to cataract-induced blindness. Glaucoma is also the most common cause of functional low vision in Nigeria[2]. Similar to Nigeria, glaucoma is the second leading treatable cause of irreversible blindness in Ghana and South India.[3,4]

Studies from Africa have reported low levels of awareness (2.4 -29.2%) of glaucoma among Nigerians, Ghanaians and Ethopians.[3,5-8] Level of awareness among Caucasians is higher and ranged between 22.9% and 93%.[7]

It is assumed that the elites in a university community can be effective in promoting the public awareness of glaucoma. However, this is only possible if these groups of people are aware of glaucoma and have a fair knowledge of the

disease. This study aims to assess the level of awareness of glaucoma among members of a tertiary academic institution community in Northern Nigeria.

MATERIALS AND METHODS

The study was conducted in a university community and it involved interview and descriptive cross-sectional analysis. Consenting participants who presented at the sick bay of the Ahmadu Bello University Health Service were serially recruited in March, 2014 during a programme to mark the World Glaucoma Week. Those who declined to participate were excluded. Ethical clearance was obtained from Ahmadu Bello University Teaching Hospital Ethical Committee and permission for the study was also granted by the management of Ahmadu Bello University Health Services that also provided the venue for the study and facilitated awareness campaign over the FM radio of the university community. Semi-structured questionnaire, designed by the authors, was directly administered to obtain sociodemographic data including age, sex and occupation. Other variables collected are level of education, awareness of glaucoma and medium of information and family history of glaucoma and blindness. Data was analysed using SPSS version 18.0 (SPSS, Inc., Chicago, IL, USA). The paired T-test and Chi-square test were used to compare means with statistical significance at $p < 0.05$.

RESULTS

The number of participants was 483, mean age 21.0 years (sd = ± 20.0 years; range 1-79 years). There were 262 males (54.2%) and 221 (45.8%) females. Students were the most common participants, 218 (45.1%). Those who had heard of glaucoma were 226 (46.8%) with no statistically significant difference between males 124 (47.3%) and females 102 (46.2%) (p = 0.966). The most common source of information was radio (31.6%) followed by health facility (24.8%) and print media (19.2%). Figure 1. Predictors of glaucoma awareness with statistically significant values were level of education (58.3% for tertiary), family history of glaucoma (78.6%) and family history of blindness (59.0%) (p = 0.000 in all three). Table 1.

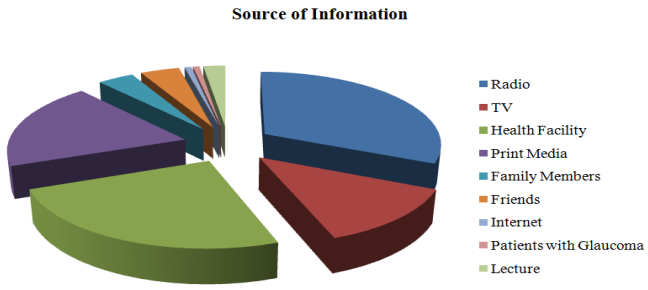

Figure 1: Respondents Source of Information on Glaucoma Awareness

Table 1: Socio-Demographic Variables by Awareness of Respondents

Variable	Awareness			X^2	Df	*P*-value
Age Group (yrs)	No Response	No	Yes			
	Freq. (%)	Freq. (%)	Freq. (%)			
1-9	20 (8.5)	111(47.0)	105(44.5)			
10-19	4(22.2)	7(38.9)	7(38.9)			
20-29	2(2.7)	36(48.6)	36(48.6)			
30-39	2(5.0)	22(55.0)	16(40.0)			

40-49	3(5.5)	18(32.7)	34(61.8)			
50-59	3(7.5)	15(37.5)	22(55.0)			
60-69	2(13.3)	7(46.7)	6(40.0)			
70-79	1(20.0)	4 (80.0)	0(0.0)	22.500	14	0.069
Sex						
Male	20 (7.6)	118 (45.0)	124 (47.3)			
Female	17 (7.7)	102 (46.2)	102(46.2)	0.069	2	0.966
Educational Status						
None	12 (40.0)	15 (50.0)	3(10.0)			
Primary	8 (11.1)	40 (55.6)	24 (33.3)			
Secondary	11 (11.2)	53 (54.1)	34 (34.7)			
Tertiary	6 (2.1)	112 (39.6)	165 (58.3)	83.085	6	0.000
Occupation						
Student	11(5.0)	103 (47.2)	104 (47.7)			
Civil Servant	13 (7.8)	77(46.4)	76 (45.8)			
House Wife	6(20.0)	12 (40.00	12(40.0)			
Teacher	1(4.0)	5(20.0)	19(76.0)			
Business	2 (10.0)	8 (40.0)	10 (50.0)			
Driver	1(25.0)	2 (50.0)	1(25.0)			
Farmer	1 (25.0)	2 (50.0)	1 (25.0)			
Pensioneer	0(0.0)	4 (100.00	0 (0.0)			
Artisan	0 (0.0)	2 (100.0)	0(0.0)			
Child	1 (100.0)	0 (0.0)	0(0.0)			
Mechanic	0(0.0)	1 (100.0)	0 (0.0)			
None	1 (12.5)	4 (50.0)	3 (37.5)	35.823	22	0.032
Family History of blindness						
No idea	10 (37.0)	7 (25.9)	10 (37.0)			
No	27 (6.5)	197 (47.2)	193(46.3)			
Yes	0(0.0)	16 (41.0)	23 (59.0)	27.341	4	0.000
Family History of glaucoma						
No idea	14(23.0)	25 (41.0)	22(36.1)			
No	22(5.8)	187(49.2)	171(45.0)			
Yes	1 (2.4)	8 (19.0)	33(78.6)	40.581	4	0.000

DISCUSSIONS

In our study, we observed that level of education significantly influenced the awareness of glaucoma; it was lowest in those with no formal education (10.0%) and highest in people with tertiary education (58.3%). This was consistent with studies done elsewhere.[4,7-9] Educational levels clearly seemed to influence glaucoma awareness independent of age, gender, religion and ethnicity.[4] This is not surprising because the study was conducted in an academic community with access to and interest in educational materials and internet. Komolafe et al[7] reported an awareness level of 68.6% among staff of a tertiary health institution, majority were from the clinical directorate and have had tertiary education.

The medium of information was mainly the radio (31.6%). This is probably due to the quest for information and the need to remain current with developments in the society by members of the academic community. Also, an awareness campaign was carried out over the FM radio of the university a few days before the programme commenced and many of the participants acknowledged learning about glaucoma through the broadcast. The radio is a well established medium of disseminating information to both urban and rural dwellers. A study in England showed an increase in the level of

glaucoma awareness from 22% before, to 69% after radio enlightenment among Indian population.[10] Similar studies reported sources of information from family members with glaucoma, visit to eye clinics and television.[3,4,8] These were also found in our study but with lower percentages compared to radio.

Whereas some studies have reported an increasing level of glaucoma awareness with age and female gender,[8,911] others showed male predominance.[12,13] We discovered no statistically significant difference in the level of glaucoma awareness between male and female and across the age groups (p = 0.069 and p = 0.966 respectively). In an academic community, age and gender are no barriers to knowledge access and acquisition; this may explain the pattern of findings in the study.

Family history of glaucoma and blindness were other factors that have positive correlation with higher level of awareness in the study (p = 0.000). A study in South India by Robin et al showed that people with family history of glaucoma when compared to those without family history were more likely to be aware of glaucoma.[4] The significantly high level of awareness among those with family history of glaucoma and blindness in our study is most likely due to the inquisitive nature of literate people, particularly in an academic community. They are more likely to ask questions from eye care personnel about their family members' eye problems and want to know if they are at risk. Also, due to the proximity of the teaching hospital to the university and presence of a functional eye clinic in the university health centre, relatives of glaucoma patients can readily access information when they accompany them. Other studies reported similar findings.[3,5]

CONCLUSIONS

This study shows a moderate level of awareness of glaucoma in a university community. Increased health education and eye care services will improve the level of awareness and prevent ocular morbidity and blindness from glaucoma.

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