

Knowledge and Myths about Glaucoma Among Staff of a Nigerian Tertiary Hospital in South East Nigeria

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ABSTRACT

Purpose: The aim of this study is to report the myths and knowledge about glaucoma among workers in a tertiary hospital in South-East Nigeria.

Materials and Methods: This was a cross-sectional study among staff of the Federal Teaching Hospital Owerri, Imo state, Nigeria. One hundred and one participants were selected by systematic random sampling. A structured questionnaire was used to collect data on their sociodemographic characteristics as well as their knowledge and myths about glaucoma. Statistical analyses were done using Chi-square test. P value < 0.05 was considered statistically significant.

Results: Ninety-nine of the 101 participants completed the questionnaire. Majority (52%) were older than 40 years of age. Approximately 72% were non-health professionals and 78.2% attained tertiary level of education. About 88% of the respondents knew that glaucoma could lead to blindness; 83% knew that it can be caused by high pressure in the eye. Almost two-thirds of the respondents knew that glaucoma can occur without symptoms. Although 75.2% did not attribute glaucoma to be a family curse, 66.3% were aware that glaucoma can be inherited. The proportion of respondents who reported that

glaucoma can be cured was 57.4%. Old age, diabetes, and hypertension were identified as risk factors in a majority of respondents (78.2%, 78.2%, and 82.2% respectively).

Conclusion: Although the study showed a high level of knowledge of glaucoma and its risk factors amongst the workers, creating a stronger knowledge base on the disease, early presentation, and early intervention is highly recommended in order to dispel the myths about glaucoma.

Keywords: Glaucoma, Knowledge, Awareness, Myth

INTRODUCTION

Glaucoma also referred to as the “silent thief of sight” is defined as a group of disorders characterized by progressive optic neuropathy resulting in a characteristic appearance of the optic disc, and irreversible visual field defects that may be associated either with elevated intraocular pressure or normal pressure¹. It is a public health problem accounting for 8% of blindness worldwide². In Sub-Saharan Africa, 15% of blindness is caused by glaucoma³. Glaucoma is the second leading cause of blindness after cataract². The Nigerian National Blindness survey reported that the prevalence of blindness due to

glaucoma was 0.75%³. About 1.2 million Nigerian adults were said to have glaucoma, and only about 5.6% were aware that they had the condition⁴. There are so many misconceptions about glaucoma^{5,6}. It's crucial to dispel these misconceptions and raise awareness about glaucoma. Due to the nature of the disease, most people only present late to the eye care provider. The number of people with glaucoma worldwide is projected to increase to 111.8 million in 2040⁷. Glaucoma is associated with risk factors such as diabetes, old age, hypertension, family history of glaucoma, or blindness. Prompt evaluation of patients with these risk factors aids early detection and treatment⁸.

Timely intervention will reduce the visual impairment and blindness associated with glaucoma. Improving public knowledge and creating more awareness about the disease may help reduce late diagnosis. There are limited studies on the knowledge and myths about glaucoma among health care workers in the South East Nigeria. The aim of this study is to report the myth and knowledge of glaucoma among staff in a tertiary hospital in South-East Nigeria.

MATERIALS AND METHODS

Study design:

This was a hospital-based, cross-sectional study at the Eye Clinic of Federal University Teaching Hospital Owerri, Imo State, Southeast Nigeria. The study was conducted as part of the activities for the World Glaucoma Day 2022 tagged: "The World is bright, save your sight".

Ethical approval

Approval of the Ethics and Research Committee of the Federal University Teaching Hospital Owerri, Imo State was obtained before the study and informed consent was taken from participants. The guidelines of the Declaration of Helsinki were adhered to.

Data collection and analysis

All consenting workers aged 18 years and above who were eligible were recruited. Eye care workers were excluded.

One hundred and one participants were selected by systematic random sampling. The sampling frame was the serially arranged hospital nominal roll of all employees grouped into health and non-

health professionals. The first recruited participant was identified using a random counter-based generation of numbers. Subsequently, using a calculated sampling interval of 25, every 25th employee was selected from the sampling frame till the required sample size was achieved.

The data was collected using a self-administered structured questionnaire adapted from previous studies⁹⁻¹⁴. The questionnaire consisted of a section on sociodemographic characteristics and a section for questions on knowledge of facts and myths about glaucoma.

The myths that were enquired about included: "glaucoma results from poor feeding", "glaucoma is a family curse", "glaucoma can be cured", and "glaucoma results from poison".

The questions on facts included: "can glaucoma lead to blindness?", "can glaucoma be caused by high pressures in the eye?", "can glaucoma occur without symptoms?", and "can glaucoma be inherited?".

Data was coded, entered into Excel, and then cleaned and analyzed with the use of SPSS Version 25. Results were analyzed using simple proportions. The tests for association between variables was done using Chi-square test. Level of significance was set at 0.05.

RESULTS

Ninety -nine participants completed the questionnaire. The majority of the participants (52%) were >40 years old. More than half (66.3%) were females, and the remaining 31.7% were

Table 1: Socio-demographic characteristics of respondents

Age group (years)	Number	Frequency
<20	1	1.0
20-30	8	7.9
30-40	39	38.6
>40	52	51.5
Sex		
Female	67	66.3
Male	32	31.7
Educational level		
None	1	1.0
Primary	2	2.0
Secondary	17	16.8
Tertiary	79	78.2

males. Seventy-nine participants had a tertiary level of education (Table 1).

Figure 1 shows the occupation of the workers. The respondents were grouped into health professionals (28.3%) and non-health professionals (71.7%).

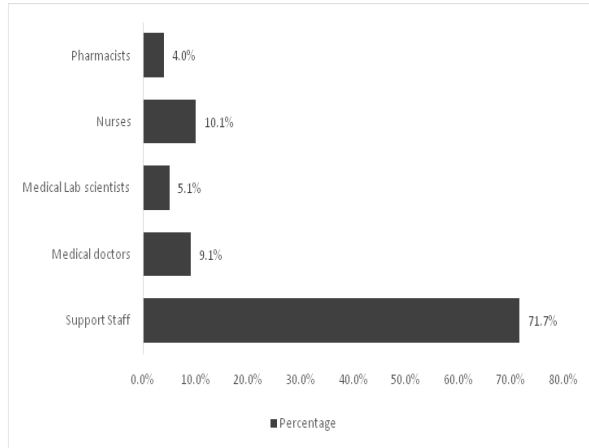


Figure 1: Occupation of the respondents

be inherited. Seventy-six (75.2%) respondents did not think that glaucoma is a family curse. The majority did not believe that glaucoma results from consumption of poisonous substances (78.2%) or from poor feeding (53.4%). However, 57.4% of participants thought that glaucoma could be cured. Many of the participants knew about the risk factors associated with glaucoma such as old age (78.2%), high blood pressure (78.2%), diabetes (82.2%) and black race (50.5%).

The respondents' knowledge of facts and myths were significantly associated with older age and level of education (Table 2).

Table 2: Demographic characteristics associated with knowledge of facts and myths

Age groups (years)	n	<20 n (%)	20-30 n (%)	30-40 n (%)	>40 n (%)	Total n (%)	Exact	p-value
Glaucoma is caused by high pressure	93							
Yes		1 (1.1)	7 (7.5)	36 (38.7)	38 (40.9)	82 (88.2)	7.4	0.04
No		0 (0.0)	0 (0.0)	1 (1.1)	10 (10.8)	11 (11.8)		
Glaucoma can be inherited	95							
Yes		0 (0.0)	2 (2.1)	29 (30.5)	28 (29.5)	59 (62.1)	12.2	0.003
No		1 (1.1)	6 (6.3)	7 (7.4)	22 (23.2)	36 (37.9)		
Educational level	n	None n (%)	Primary n (%)	Secondary n (%)	Tertiary n (%)	Total n (%)		
Glaucoma occurs without symptoms	92							
Yes		0 (0.0)	0 (0.0)	14 (15.2)	52 (56.5)	66 (71.7)	8.2	0.02
No		1 (1.1)	2 (2.2)	2 (2.2)	21 (22.8)	26 (28.3)		
Glaucoma is a family curse	90							
No		1 (1.1)	0 (0.0)	13 (14.4)	61 (67.8)	75 (83.3)	7.2	0.04
Yes		0 (0.0)	2 (2.2)	2 (2.2)	11 (12.2)	15 (16.7)		

* P-value less than 0.05 is statistically significant

Facts, myths and risk factors

Eighty-three (82.2%) of the participants knew that glaucoma is caused by high pressure in the eye. The majority were aware that glaucoma can lead to blindness (88.1%). Sixty-six respondents (65.3%) reported that glaucoma can occur without symptoms and 58.4% knew that glaucoma can

DISCUSSION

In this study, the majority of the participants were knowledgeable about the facts and myths of glaucoma based on their responses. Awareness of glaucoma was characterized by the level of understanding of the disease. Eighty-three

participants (82.2%) of the participants knew that glaucoma was associated with high pressures in the eyes. This high level of glaucoma awareness was comparable to studies done by Osaguona and Edema¹¹ in Benin City, Monsundi *et al*¹³ in Northwest Nigeria, Onabolu and Bodunde in Southwest Nigeria¹², as well as Negussie and Alemu¹⁴ in Ethiopia. Although Osaguona and Edema¹¹ reported glaucoma awareness of about 74.3%, of which the majority of the respondents were made of paramedics and those with a higher level of education, the level of knowledge was noticed to be worse in the domestic and security staff. This shows that not all personnel who work in a hospital are knowledgeable about the disease. Tefbana and Haning¹⁵ in Indonesia also reported 84.3% awareness of glaucoma among health workers. In contrast, some studies in Nigeria reported low knowledge of glaucoma among non-health workers. A study by Adegbehingbe and Isiriyu¹⁶ reported low knowledge (39%) of glaucoma among non-health workers. This may be due to the low number of non-health workers recruited for the study. Another study done by Komolafe *et al*¹⁰ reported a low level of knowledge among non-health staff. This was attributed to a lack of access to information on glaucoma.

Several risk factors are associated with glaucoma such as thin cornea, family history of glaucoma, hypertension, etc. Knowing some of these risk factors is essential to ascertain those who run the risk of developing glaucoma. The majority of the respondents knew that glaucoma can occur in families. This is similar to a study done by Padmajothi *et al*¹⁷ in a tertiary hospital in Northern India. Although 58.4% reported glaucoma as being inherited. Majority of the participants (66%) had no idea if they had any family history of glaucoma. Most family members do not share information concerning their health and this may have been attributed to their poor family history information. Other risk factors such as hypertension, diabetes, and old age were also reported to be associated with glaucoma. This level of awareness may be due to the high level of education and health-seeking behaviors associated with this class of participants.

While our study found that a relatively high proportion of respondents knew some of the risk factors associated with glaucoma, 57.4% of participants stated that glaucoma can be cured.

This is similar to studies that reported that respondents stated that glaucoma blindness can be cured or reversed.^{10,11,13,15,17} This shows that more in-depth facts on disease progression and treatment options should be made available via media, bulletin, or health talks while also emphasizing the fact that glaucoma management is lifelong and cannot be cured permanently. The majority of the respondents reported that glaucoma can occur without symptoms and finally lead to blindness. This is in contrast to a study done in Lome that reported that eye pain, gradual loss of visual acuity, and tearing are suggestive of glaucoma⁹. The study done by Onabolu and Bodunde¹² also reported that primary health workers in the study assumed glaucoma to be a painful eye disease.

This study showed that older age was significantly associated with the knowledge that glaucoma is caused by high eye pressure and that it can be inherited. This may be because the respondents might have had access to correct information in the hospital or other sources. Also, level of education was significantly associated with knowledge of some of the myths and facts about glaucoma. The higher the level of education, the more likely that respondents were aware that glaucoma is not a family curse and that it can occur without having any symptoms. This is similar to studies that showed a significant relationship between high educational level and knowledge of glaucoma^{11,17}.

Myths about glaucoma originating from poor feeding, family curse, and poison were refuted in this study. The need to dispel myths about glaucoma is very necessary and this can be done by promoting awareness of glaucoma via different channels such as health talks, social media, bulletins, leaflets, etc.

Study limitations include the fact that this study was a hospital-based study and cannot be generalized to the population. In addition, it is a single center study, thus, it is proposed that a multi-center study should be carried out soon to determine the situation in other tertiary institutions.

CONCLUSION

Although this study showed a high level of knowledge among the workers, more in-depth and accurate knowledge about glaucoma is necessary

because most people seek information from those who work in the hospital. Health institutions should improve awareness and glaucoma knowledge among workers through health education, glaucoma workshops, social media platforms, leaflets, continuing medical education, and the integration of primary eye care programs in the country. Annual eye checks should be encouraged as this would curb late detection of glaucoma.

Conflict of interest

There was no conflict of interest.

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