

# Knowledge, Attitude, and Health Beliefs of Glaucoma Patients in a Nigerian Hospital

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## Summary

To find out the knowledge, attitude and health beliefs of glaucoma patients in Sagamu, Nigeria. A Prospective hospital based case series of 90 patients aged 5-87 years who has been attending the glaucoma clinic of Olabisi Onabanjo University Teaching hospital (OOUTH) was conducted. Patients were interviewed using a questionnaire and the data obtained analyzed using Epi Info 2002. Overall 15.1% (13) had family history of glaucoma and only 18.1% had heard of glaucoma before their diagnosis was made. 93.9% believed that glaucoma is a serious condition which can damage vision and 7.1% believed that they can recover from the illness after treatment. We conclude that glaucoma awareness among glaucoma patients was not high. Majority believed that they can recover from the illness after treatment. Health education programmes may help increase the awareness and knowledge of glaucoma.

## Introduction

Glaucoma is the second most common cause of blindness worldwide. It is said to account for 13 percent of all new registrations of blindness annually in England. Glaucoma affects about two percent of Europeans aged forty and over and some four times this proportion in African-Americans and African Caribbean's(2)

Primary open angle glaucoma is the most common of all the glaucomas and it is usually symptomless, hence majority of cases present late, usually after they have developed profound visual loss in one or both eyes from the disease. Population studies have shown that only half of glaucoma sufferers are diagnosed and treated at any one time(3). For early diagnosis to occur patients may need to be aware of it and seek for regular assessment. When an individual understand a disease condition in this case glaucoma, he/she is likely to comply with whatever treatment given.

It has been noted that one of the factors that affects the uptake of appropriate eyecare is the knowledge of the disease(4). Oman study also showed that adequate knowledge about glaucoma and its complication was negatively associated with non-compliance with medical treatment(5). Other studies have also shown that there is paucity of knowledge (6,7,8,9,10) and awareness of this disease in other countries. Therefore the aim of this study is to determine the attitude, knowledge and health beliefs of glaucoma patients in Nigeria and to determine the factors that are associated with its awareness.

## Materials and Method

A prospective, hospital based case series of 90 patients aged 5-87 years who have been attending the glaucoma clinic in OOUTH was conducted. The doctors (from consultants to Registrar level) interviewed all patients face to face in the clinic using a questionnaire and recorded the demographic factors and their knowledge, attitudes and health beliefs. Communication was mainly through Yoruba and English since majority of our patient were from the Yoruba tribe. EPI info 2002 was used to analyze the data. The level of significance was taken at  $P < 0.05$  using the bivariate analysis. Bivariate logistic regression models estimating the factors that predict glaucoma awareness (Yes/ No) was conducted.

## Result

The mean age of glaucoma patients seen in this study was  $64.41 \pm 13.32$  years. The mean age for males is  $64.12 \pm 15.11$  years while that of females was  $64.91 \pm 9.54$  years. ( $P=0.79$ ;  $t=0.27$ ). There were 57 (63.3%) males and 33 females (36.7%). The educational levels of the patients were as follows: 25.8% (23) had no formal education; 16.9% (15) had primary education; 21.3% (19) had secondary education while 32% had tertiary, 2 defaults no answer. Only 15.1% of the patients has family history of glaucoma while 72.7% (64) has never heard of glaucoma before their diagnosis was made at our hospital (Table 1). 25.6% of the patients has history of hypertension and 10.1% are diabetic. The factors that are associated with glaucoma awareness are the age, educational status and family history (Table 2). The odds ratio (ORs) of glaucoma unawareness for older patients above 60 years is 0.45 (95% CI 1.2-1.59). Patients without family history of glaucoma were more likely to be unaware of the disease  $p=0.008$ .

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**Table 1 Knowledge/Awareness of Glaucoma**

Patients who had heard of glaucoma before they were diagnosed?	
Yes	24 (27.3%)
No	64 (72.7%)
Patients who think glaucoma is a serious condition that can damage vision?	
Yes	77 (93.9%)
No	5 (6.1%)
No response 8 (9.3%)	
Patients who think glaucoma is a treatable condition?	
Yes	78 (90.7%)
No	8 (9.3%)
No response 4	
Patients who think glaucoma can resolve on its own without seeing a doctor?	
Yes	7 (8.0%)
No	67 (74.4%)
No response 2	
Patients who had history of hypertension before their glaucoma was diagnosed?	
Yes	23 (25.6%)
No	67 (74.4%)
Patients with history of DM?	
Yes	9 (10.1%)
No	80 (89.9%)
No response 1	
Patients who think glaucoma patients can recover from the illness after treatment?	
Yes	57 (67.1%)
No	28 (32.9%)
Absentee 5	
How has the disease affected you most?	
Economy alone	10 (13.7%)
Economy ± Social interaction	1 (1.4%)
Social Interaction	8 (11%)
Vision	54 (66.2%)
No response	17

**Discussion**

This is a study showing the knowledge and health beliefs of glaucoma patients. A relatively small proportion of glaucoma patients have heard of glaucoma before they were diagnosed (27.3%) and awareness in Netherlands(6), 72% awareness in United State(11). 93% in Australia(12), but higher than India 2.3% (13) and Ghana(4) with 3.6% awareness. Population(4,13) studies have shown that people are more aware of cataract and blindness than glaucoma. From table 2, it will be noted that educated individuals were more likely to be familiar with glaucoma which is similar to what other authors reported(4, 11).

People with family history of glaucoma are more likely to be aware of the disease. This is similar to previous studies(9, 11, 12,15) We therefore advocate that health education to glaucoma patients should emphasize its familial tendency, so that they could encourage their relative to present themselves for screening thereby encouraging early diagnosis.

Majority (93.9%) accepted that it is a serious condition that can damage vision probably because they have lost vision in one or both eyes from the disease. Those who did not give response are those whose vision is still >6/12 without correction. 67.1% (57) believed that they can recover from the illness after treatment, and 90.7% (78) believed it is a treated condition. This may be due to inadequate information about the illness and may be one of the reasons why many glaucoma patients move from one hospital to the other since they are still expecting cure. Also, the high rate of noncompliance to medication by glaucoma patients may be linked to their belief that it is a curable disease; hence if there is no visual improvement after some time on regular medication(s) they usually discontinue the drugs. From this study one can say that glaucoma affects mainly the vision, social interaction and economy of patients. Though hypertension and diabetes are known risk factors for glaucoma, only 25.6% (23) had history of hy-

**Table 2 Factors related to the knowledge of glaucoma**

Statistics	Had Awareness/knowledge of glaucoma	No Awareness/knowledge of glaucoma	X <sup>2</sup>	OR(CT)	PValue
<b>Age</b>					
< 60 years	5	8	1.57	0.45(0.12-0.19)	0.2089
> 60 yaers	15	53			
<b>Educational status:</b>					
No formal	1	22			
Primary	1	14	*34.04		0.00001
Secondary	5	13			
Tertiary	17	5			
<b>Family History:</b>					
Yes	7	6			
No	14	58	7.01	4(1.40- 16.65)	0.008

Shows the factors relatd to the knowledge of glaucoma

X<sup>2</sup> for trend

The ORs of glaucoma unawareness was 0.45 (95% C.I 1.2 - 1.59 in older people i.e. patients > 60 years). Patients without family history of glaucoma were more likely to be unaware of glaucoma (P = 0.008)

pertension and 10.1% (9) had history of diabetes. This may however be due to the fact that the sample size is small. From table 2 the pValue of 0.2 for age shows that age is not associated with knowledge of glaucoma, while level of education and family history are associated with the knowledge of glaucoma Values of 0.00001 and 0.008 respectively.

In conclusion, only a small proportion of patients 27.3% have heard of glaucoma before they were diagnosed. This finding may however be limited by the fact that this study was done in only one tertiary institution and the small size.

Family history and educational status were statistically associated with awareness of glaucoma. We therefore advocate that nationwide health education programmes be intensified to increase the level of awareness of this blinding disease particularly targeted to the elderly without formal education and relatives of people with glaucoma.

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