

The Knowledge, Perception, and Attitude of Patients Living with Glaucoma and Attending the Eye Clinic of a Secondary Health Care Facility in South-East, Nigeria

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ABSTRACT

Background: In the developing countries, most patients present with advanced disease or glaucoma blindness. This has been attributed to lack of awareness and poor knowledge as major contributing factors. The outcome of glaucoma management, however, depends largely on the understanding and perception of the illness by the patients. **Objectives:** This study aims to determine the knowledge, perception, and attitude of patients living with glaucoma and attending the Eye Clinic of the Imo State Specialist Hospital Owerri Imo State, Nigeria. The information obtained can be utilized by the health authorities in planning eye health education programs. **Subjects and Methods:** This was a cross-sectional study involving all previously diagnosed glaucoma patients attending the eye clinic of the hospital during the study period. Data were collected on knowledge, perception, and social disclosure attitude of the subjects using a structured questionnaire. **Results:** Twenty-nine males and 25 females participated in this study. The majority (42.6%) had only primary school education with petty trading accounting for 38.9% of the different occupations. The mean age at presentation was 60.9 years. The majority (88.8%) identified their eye problem as glaucoma, 46.3% knew it caused a progressive, irreversible loss of vision, and most (68.5%) did not know glaucoma to be familial. Approximately 67% of the subjects rated their management as satisfactory, 37% considered the drugs expensive, 70% and 13%, respectively had no, and negative perception of glaucoma surgery while 87.0% had a poor disclosure attitude. **Conclusion:** The subjects had a good knowledge of their diagnosis but a poor knowledge of the disease process. There was also an appreciable poor disclosure attitude and a negative perception of glaucoma surgery. Education and interaction with eye care personnel and other glaucoma patients using focal groups may bring about the desired change.

Keywords: Attitude, education, glaucoma, knowledge, perception

INTRODUCTION

The general health belief and behavior of patients toward seeking timely care have been attributed to the underlying knowledge, which they possess.^[1-3] Attitudinal changing

knowledge of glaucoma is considered key in achieving greater treatment compliance and screening among the populace in order to reduce the scourge of glaucoma blindness.

Glaucoma, the leading cause of irreversible blindness is usually asymptomatic in the early stages. This often results in patients presenting late with advanced disease. Several studies have identified lack of awareness and

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poor knowledge as the major factors contributing to the high prevalence of glaucoma blindness and poor compliance to treatment.^[4-9]

When present, the knowledge base is observed to be skewed along socioeconomic and education lines^[4] with those less educated displaying poorer knowledge. In some cases, the messages are heard but not understood^[10] a fact, which buttresses the need for clearly articulated education targeting different audiences at their various levels of understanding.

This study seeks to understand the knowledge, perception, and attitude of patients living with glaucoma and attending the Eye Clinic of the Imo State Specialist Hospital Owerri Imo State, Nigeria. The findings from this study can be utilized in planning eye health education programs for Eye Care Centers and the public with a view to reducing glaucoma-related blindness.

SUBJECTS AND METHODS

Study area

This study was carried out in the Eye Clinic of the Imo State Specialist Hospital Owerri, a secondary care hospital located in Owerri municipality, Imo State, Nigeria. It has specialists in most of the clinical disciplines though virtually all of them work on a part time basis. As such the Ophthalmology Clinic was open for consultations only two times a week.

Study design

This was a cross-sectional study involving all previously diagnosed glaucoma patients attending the eye clinic of the hospital during the 6 months study from January to June 2010.

Inclusion criteria

All are consenting previously diagnosed adult glaucoma patients who were diagnosed prior to January 2010 and visited the hospital between January and June 2010.

Exclusion criteria

All newly diagnosed patients attending the clinic during the period of the study.

This is to ensure that all those involved in the study were those who should have been educated and, therefore, acquired some basic information on glaucoma.

Ethical consideration

Institutional consent was obtained in writing from the Ethics Committee of the Imo State Specialist Hospital Owerri while the informed verbal consent was obtained

from each subject who participated in the study after detailed explanation.

Data collection

Data were collected using a structured questionnaire administered by the interviewer.

The questionnaire was divided into four sections:

Section A: This consisted of details of the bio-data of the patient including age, sex, education, and occupation.

Section B: Determined the patients' basic knowledge of glaucoma. Questions such as what the patients ocular problem is, what glaucoma is, and if glaucoma is familial were used to elicit answers for this section.

Section C: Contains information on the patients' perception of glaucoma. The participants were asked questions such as what they know about glaucoma, their perception of their management, their perception of glaucoma surgery, the cost of drugs, and the greatest problem associated with their diagnosis.

Section D: Sought to determine the patients' disclosure attitude to glaucoma. The authors believe that a patient is more likely to obtain family and societal support if he/she can disclose his ailment.

Data management

Data collected were analyzed with SPSS Version 20 International Business Machine Corporation (IBM) Licensed 2013 and presented in Tables and prose. A Chi-square was used to compare variables and a $P < 0.05$ was considered significant.

RESULTS

Ninety-five glaucoma patients were seen during the period of study. Of these, 63 were old patients while 32 were new patients. Nine of the old patients were diagnosed within the period of study and were therefore excluded during the analysis. The 32 new patients did not also meet the inclusion criteria and were also excluded from the study. None of the patients who met the criteria declined to participate in the study.

Twenty-nine (53.7%) males and 25 (46.3%) females were included in this study. Forty-six (85.2%) of these were more than 40 years. The mean age was 60.9 years [Table 1].

Twenty-five (46.3%) subjects were diagnosed within 1–2 years before the onset of the study, 17 (31.5%) <1-year while 9 (16.7%) and 3 (5.6%) subjects, respectively were diagnosed within 3–4 years, and above 4 years.

With respect to the knowledge of glaucoma, the majority (88.8%) of the subjects correctly identified their eye problem as glaucoma while 6 (11.1%) did not know their diagnosis.

This knowledge was not significantly associated with age ($P = 0.521$), sex ($P = 0.847$), level of education ($P = 0.416$), occupation ($P = 0.242$), and time of diagnosis ($P = 0.625$).

Twenty-five (46.3%) of the subjects know that glaucoma causes progressive, irreversible loss of vision while 42.6% said they didn't have any knowledge about glaucoma. The rest, 5.6%, 3.7%, and 1.9%, respectively think glaucoma causes a sudden loss of vision is a spiritual problem and is caused by poison. This knowledge was also not affected by age ($P = 0.879$), sex ($P = 0.213$), education ($P = 0.670$), occupation ($P = 0.409$), time of diagnosis ($P = 0.235$).

Most of the subjects (68.5%) reported that glaucoma is not familial [Table 2].

Age ($P = 0.879$), sex ($P = 0.507$), occupation ($P = 0.190$), and level of education ($P = 0.738$) were also not positively associated with this knowledge.

Forty-seven (87%) have not told any member of their family they have glaucoma [Figure 1].

No one in the family of 46 (85.2%) of the respondents has had their eyes examined [Figure 2].

Thirty-six (66.7%) of the subjects were satisfied with their management while 33.3% were not. Of the former, 24.1% felt they had some improvement while 29.6% said they were responding to treatment. The rest did not proffer any reason. Five (9.3%), and 5.6% noted no change in vision, and inability to read, respectively as the reason for the lack of satisfaction with their management. Age ($P = 0.786$), sex ($P = 0.177$), occupation ($P = 0.856$), education ($P = 0.823$), and time of diagnosis ($P = 0.773$) did not significantly affect this perception.

More than ½ (63.0%) of the respondents did not consider the drugs expensive [Table 3].

Only 14 (25.9%) were willing to accept surgery as a way of reducing the cost of treatment [Table 4].

Nine (16.6%) subjects had been offered surgery, and the same number believes surgery is curative. The rest 70.4% did not respond to the question while 13.0% felt that surgery is not a good method of treatment.

Table 1: Demographic distribution of subjects

Variable	Frequency (n)	Percentage
Age		
10-20 years	2	3.7
21-30 years	3	5.6
31-40 years	3	5.6
41-50 years	4	7.4
51-60 years	11	20.4
61-70 years	16	29.6
71-80 years	13	24.1
81-90 years	2	3.7
Sex		
Male	29	53.7
Female	25	46.3
Education		
No education	18	33.3
Primary	23	42.6
Secondary	7	13
Postsecondary/tertiary	6	11.1
Occupation		
Farmer	16	29.6
Trader/businessman	21	38.9
Housewife	3	5.6
Civil servant	5	9.3
Retired/pension	4	7.4
Student/applicant	5	9.3

Table 2: Response of the subjects to the question: Is glaucoma familial?

	Frequency	Percentage
Yes	17	31.5
No	37	68.5
Total	54	100.0

Table 3: Do you consider the drugs expensive?

	Frequency	Percentage
Yes	20	37.0
No	34	63.0
Total	54	100.0

Table 4: Would you accept surgery as a way of reducing the cost of treatment?

	Frequency	Percentage
Yes	14	25.9
No	40	74.1
Total	54	100.0

Twenty-six (48.1%) subjects reported poor vision as the greatest problem they have encountered since they were diagnosed with glaucoma, 20.4% said it was severe headache while 31.5% did not respond to the question.

DISCUSSION

A total of 54 subjects participated in this study [Table 1]. Twenty-nine were males and 25 females with a male to

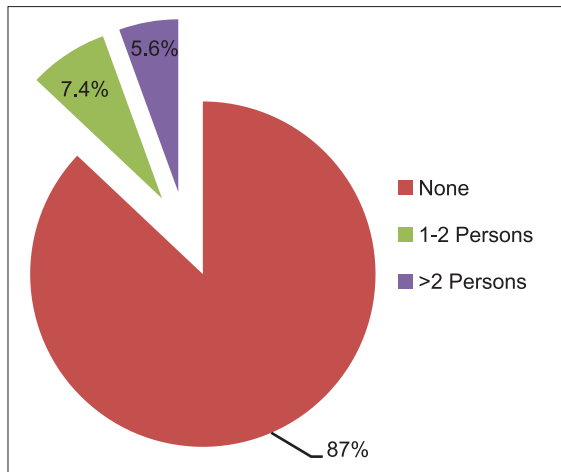


Figure 1: How many members of your family have you told about glaucoma?

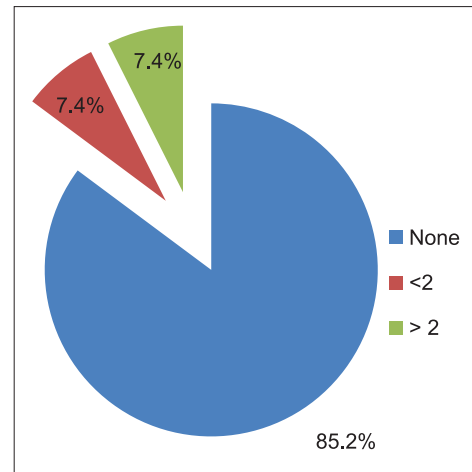


Figure 2: How many members of your family have had their eyes checked?

female ratio of 1.16:1. This is similar to the 1:1.04 ratio noted in the study on Jamaican glaucoma patients to assess their knowledge; feelings, attitudes, and social relationships following a diagnosis of glaucoma.^[11] The study assessed 50 females and 48 males while the study in Kenyatta National Hospital was with 78 subjects (47 males, 31 females) with a 1:1.56 male to female ratio.^[12]

Consistent with the disease process of glaucoma the ages of the subjects were skewed toward the older age groups with only 8 of the 54 subjects aged 40 years or younger [Table 1]. Forty-six (85.6%) were above 40 years with a mean age of 60.9 years. This agrees with the findings in other studies, which also reported a mean age of 60 and 61.1 years, respectively.^[11,12]

The majority of the participants in our study (42.6%) had only primary school education while only 11.1% acquired university education in contrast to the 4.1% in the Jamaican study.^[11] This finding may have implications on the understanding and reactions to glaucoma and its management by these subjects. In addition, this cadre of subjects who constitute the majority of the patients attending this clinic may not have access to the internet with its plethora of information on glaucoma.

Most of the participants (88.8%) correctly identified their ailment as glaucoma. Considering the cadre of subjects mostly involved in this study and the fact that this was a secondary health care facility, the researchers expected a larger number of the subjects to lean toward the options of spiritual problem and poisoning in describing glaucoma but this was not the case. There was, however, no significant relationship between knowledge of glaucoma with age, sex, occupation, and level of education.

Similarly in a study in Kenyatta,^[12] 53 (67.9%) of the subjects were classified as having some knowledge based on a predefined classification system. They included knowledge of risk factors and treatment options in their assessment, and these may account for the lower figure compared to ours noted in their study. Other studies^[6] focused on the subject's knowledge prior to their diagnosis and recorded a very low 18.1% among their 90 subjects.

There has been an increase in the awareness campaign for glaucoma in the public through the media, churches, and during medical outreaches that may have contributed significantly to the increase in this knowledge. Clearly, there is a need to go beyond just identifying their ailment as glaucoma as the majority (68.5%) of the subjects said glaucoma is not familial [Table 2]. The fact that glaucoma is genetic is information the researchers believe a glaucoma patient should be armed with and share with members of their family to enhance early diagnosis and treatment (the bedrock of glaucoma blindness prevention).

In a study carried out in South West Nigeria,^[6] only 13 (15.1%) subjects noted they have a family history of glaucoma while 31.8% in another study^[5] on 455 subjects who knew about glaucoma in an ophthalmic outpatient eye clinic said that glaucoma run in families.

This belief that glaucoma is not familial may have influenced the attitude of the subjects as 87% of them have not told any family member about glaucoma [Figure 1] and only 4 (7.4%) have had more than two members of their family examine their eyes [Figure 2]. Contrary to our findings, the study in Jamaica,^[11] reported that more than 78% of the 87 parents involved in the study had great concerns for their children getting glaucoma and to corroborate this, only 25.3% (22 of the 87 parents)

did not tell their children about their condition, while 65 (74.7%) did. Furthermore, 83% of their subjects were either willing or very willing to educate others outside their immediate family about glaucoma. The difference with our study may be attributed to the fact that their subjects were drawn from a pool of patients probably attending an established glaucoma clinic as they utilized a glaucoma appointment list in each clinic day to choose their subjects while our subjects were made up of walk-in, and scheduled glaucoma patients attending a busy general ophthalmology clinic. Their subjects, therefore, may have been exposed to a more detailed education on glaucoma than ours.

The subjects had different perceptions about their management. The response of some of the subjects that they have some improvement with treatment is rather subjective and therefore not measurable. The authors are of the opinion that future studies should objectively assess the response to treatment in terms of measurable factors such as reduction in intraocular pressure, as the damage from glaucoma as we already know is irreversible.

Twenty (37.0%) of the subjects in Table 4 considered the glaucoma drugs expensive but only 14 (25.9%) will consider surgery as a way to reduce the cost of management while 74.1% said they would not [Table 3]. This is similar to the findings in another study where the subjects preferred medical treatment to surgery.^[11] This response reflects a negative perception and attitude toward surgery for glaucoma, which may be attributed to a poor knowledge of the benefits of surgery.

The fact that only 9 (16.7%) of the subjects had been offered surgery may be because only this percentage of all those presenting to the clinic with glaucoma could have benefitted from surgery. The others may have presented with glaucoma too advanced to benefit from surgery as such they were not offered surgery. Furthermore, the hospital as at the time of this study carried out free cataract surgeries routinely so most of the patients could have presented with very poor vision hoping it would be reversed or cured with surgery.

Interestingly, on responding to the question on their perception of glaucoma surgery, 9 (16.7%) of the subjects believed surgery is curative, 13.0% felt surgery was not a good treatment method while 70.4% gave no response. Similarly, subjects in another study^[12] had wrong expectations of both medical treatment and surgery with 29.5% and 32.5% expecting a cure from medical and surgical treatment, respectively.

This shows the poor knowledge these subjects have about glaucoma surgery. The erroneous belief that

glaucoma surgery is curative may be because these subjects are confusing glaucoma for cataract. The 70.4% who did not respond to the question in our study may not have had any opinion on glaucoma surgery because they had not heard or encountered anyone who may have had surgery. This is the population waiting to be educated rightly on the benefits of surgery in helping to prevent further loss of sight from glaucoma.

In response to the question on the greatest difficulty encountered by the subjects since they were diagnosed with glaucoma, 48.1% reported poor vision implying that these subjects most likely have advanced glaucoma while the subjects with severe headache (20.4%) may have raised intraocular pressure, other concurrent pathologies causing the headache or their symptom may be the result of intense worry and/or depression about their condition.

Where most of the patients attending an ophthalmic clinic present with advanced glaucoma; there is no doubt, a gap in the knowledge of this disease and its natural course in the society. This is why, there has been an outcry to create awareness and educate the populace about glaucoma, its blinding consequence, and the disease process.

CONCLUSION

Beyond the basic knowledge of a glaucoma diagnosis, most of the subjects have a poor knowledge of other characteristics of glaucoma, a negative attitude to social disclosure which may have been influenced by their knowledge and a poor/negative perception of glaucoma surgery. There is a need to increase the glaucoma knowledge of patients and the public so as to enhance patient care and prevent avoidable blindness.

Recommendation

Based on these findings, the authors believe and emphasize that a glaucoma clinic should be set up separately from the General Ophthalmology Clinic in any established center. This relatively smaller clinic would create an environment for a more focal interaction among these patients and also between the patients and their hospital caregivers besides the general counseling sessions which take place in the General Ophthalmology Clinic as these "close units" have been shown to enhance patients' knowledge of the disease and compliance with medication.^[7] This knowledge will invariably rub off on the society at large.

A more extensive quantitative and qualitative assessment of informed consenting patients living with glaucoma needs to be carried out in such specialized glaucoma clinic over a longer period.

Limitations of the study

The pressures of a General Ophthalmology Clinic with its large number of nonglaucoma patients may have affected the depth of the study.

There may have been an attrition of patients with glaucoma attending the clinic on realizing that their poor vision could not be reversed with surgery as they had hoped.

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Conflicts of interest

There are no conflicts of interest.

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