

Knowledge, attitudes, and self care practices associated with glaucoma among hospital workers in Ile-Ife, Osun State, Nigeria

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Abstract: This study was carried out to determine the level of correct knowledge about glaucoma and attitudes towards blindness prevention and treatment, and how these factors influence self care practices among teaching hospital workers. A random sample of the workers at Obafemi Awolowo University Teaching Hospital in Nigeria was interviewed. All respondents were asked the year of their last visit within the past one year to an eye care practitioner. A total of 205 members of staff were interviewed; 85 (41.5%) were males and 120 (58.5%) females. Female sex ($P=0.003$), medical profession ($P=0.007$), ophthalmic specialty ($P=0.0001$), secondary or tertiary education ($P=0.001$), and recent visit to an eye practitioner ($P=0.012$) were significant predictors of knowledge of glaucoma as a blinding disease. Younger people believed blindness prevention and treatment were the highest priorities compared with other diseases. Those who work in the ophthalmic unit and those who had relatives who had been blind from glaucoma also considered blindness treatment to be the highest priority compared with other diseases. People with a relative that had previous diagnosis of glaucoma ($P=0.0001$), older people ($P=0.003$), females ($P=0.001$), and people with correct knowledge of common eye diseases ($P=0.0005$) were significantly more likely to be under eye care. No interaction was found between knowledge and positive attitudes to self care practices. In conclusion, this study shows that there is a gap in the knowledge and understanding of glaucoma among Nigerian hospital workers, especially among the non-medical staff. There is therefore a need for eye health promotion activities targeting all workers at primary healthcare facilities.

Key words: Knowledge, attitudes, practices, glaucoma, prevention, hospital workers, Nigeria

Introduction

Glaucoma is one of the leading causes of irreversible blindness in developing nations. It is estimated to be the second most prevalent cause of blindness worldwide after cataract (Fraser *et al.*, 2001), causing a similar magnitude of blindness to that resulting from trachoma. Worldwide, glaucoma is now increasingly recognized as a major cause of ocular morbidity that requires urgent attention (Thomas *et al.*, 1997). This dreaded eye ailment is referred to as the "sneak thief of sight". It has been projected that there will be 60.5 million people with open angle glaucoma (OAG) and angle closure glaucoma (ACG) in 2010, increasing to 79.6 million by 2020, and of these, 74% will have OAG (Quigley *et al.*, 2006). Glaucoma blindness though known to be

medically and surgically irremediable, early detection and treatment can prevent progression of the disease. Some 90% of all glaucoma-related blindness could have been prevented with early and proper treatment (Quigley, 1996). Lack of knowledge and wrong attitude to blindness can cause delay in diagnosis and treatment.

To reduce visual impairment and blindness resulting from glaucoma in any community, timely eye examinations and appropriate treatment are necessary. Yet many people in the developing countries frequently do not have regular and timely eye examinations due to lack of awareness/ knowledge and wrong attitude towards blindness resulting from this condition. Population based study on awareness of glaucoma from a rural area in China (Xu *et al.*, 2001), and rural (Krishnaiah *et al.*, 2005) and urban areas of

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India (Dandona *et al.*, 2001) have shown that awareness is poor among the rural communities.

Implementation of health education programmes that encourage people in the community to obtain eye examination may identify those who are otherwise unaware or unwilling to seek examination and treatment. Community participation and involvement are often considered the most important prerequisite for the success of prevention and control programmes (Kisinza *et al.*, 2008). However, programme implementers need to understand the disease-related knowledge, attitudes, and practices of the community as important determinants of community participation (Singh *et al.*, 2006)). Hospital workers are considered important tools in the dissemination of knowledge about various medical ailments including eye disorders. An exploration of knowledge, attitudes, and the self care practices undertaken by the teaching hospital workers can aid in the effective promotion of preventive approaches to eye health care in the community. Despite its significance, little information is available on knowledge, attitudes, and self care practices (KAP) associated with glaucoma among hospital workers in Nigeria.

The aim of this study was to assess the knowledge of glaucoma, attitudes to blindness prevention and treatment, and self care practices in a group of Nigerian hospital workers. It intended to investigate whether exposure to medical information induce any difference in the knowledge and practices of the hospital workers.

Materials and Methods

Study area and data collection

The study was carried out to involve health facility workers at the Obafemi Awolowo University Teaching Hospital. This is a tertiary hospital located in a semi-Urban area of southwestern Nigeria. This health institution was selected for this study because of proximity to the researchers.

A questionnaire about glaucoma was administered to a randomly selected group of hospital workers. The respondents were asked by trained interviewers in a standardized fashion about their knowledge, attitudes, and self care practices associated with glaucoma. The responses

of the subjects regarding awareness (heard of glaucoma), knowledge (understanding of the disease) and self care practices (attitudes towards the disease) of glaucoma formed the basis of this study. Their answers were rated for accuracy by a senior ophthalmologist. Interview procedures were refined during the course of the pilot study.

Subjects were asked if they had heard of glaucoma. Further questions were asked about the source of their information only if the subject responded positively. Those who had heard of glaucoma were asked to explain what this eye disease was. The questionnaire contained a list of possible responses. The interviewer marked the response provided by the subject against the response it most closely approached on the questionnaire. If the response did not correlate with any of the responses listed on the questionnaire, it was documented in greater detail. *Awareness* was defined as "having heard of glaucoma". *Knowledge* was defined as "when the subject had some understanding of glaucoma "for instance, "it is a high pressure in the eye", "it is a disease where nerve of the eye becomes weak", and "it is damage to the nerve of the eye due to high-pressure" causes tunnel vision; affects the elderly or any problem at the back of the eye. Self care practices were determined by asking questions on their attitudes towards the prevention and treatment of blindness knowledge of glaucoma. All participants were asked the year of their last visit to an eye practitioner that is, either an ophthalmologist or optometrist. The period of the most recent visit to an eye service was grouped as ≤ 1 year, 2 years, or 3 or more years, or never.

Data analysis

During statistical analysis, the participants were categorized as either the medical staff (consisting of nurses, doctors and laboratory scientist) or non-medical staff consisting of all other hospital workers. Data was analyzed using the SPSS for Windows. The relationship between awareness of glaucoma and demographic factors such as age, gender, socioeconomic status, education and social status was assessed using the Chi-square test or Fisher's exact test. A two-tailed p value of less than 0.05 was considered statistically significant.

Ethical consideration

Informed consent was obtained from the study participants after explaining the purpose of the study to them. The research protocol was approved by the local Research and Ethics Committee.

Results

A total of 205 teaching hospital workers, 85 males (41.5%) and 120 (58.5%) females participated in this study. The participants age ranged from 20 to 60 years (Mean age= 34.5; SD±5.6years). Most of them were of Yoruba ethnicity (85.4%), others were Igbos (7.3%), Ijaws (4.9%) and Hausas (2.4%). Majority were medical doctors 125 (61.0%), others were nurses 65 (31.7%), hospital orderly 10 (4.8%), non-medical administrative staff 5 (2.4%). Of the medical staffs, 71 (34.6%) were house officers and 15 (7.3%) were surgery residents. Other specialties included medicine (10), paediatrics (5), ophthalmology (5), microbiology (11), haematology (3) and consultants (5).

The majority of the participants (95.1%) has heard of glaucoma while 10 people (4.9%) had been diagnosed as having glaucoma and was on treatment for glaucoma. Eighty subjects (39.0%) felt that glaucoma was high pressure in the eye; another 74 (36.1%) responded that it was damage to the nerve of the eye due to high pressure. Nineteen (9.3%) defined glaucoma as one of the major causes of blindness while 18 (8.7%) defined it as a "silent thief of sight". Nine respondents (4.3%) responded that they did not know what glaucoma was and the remaining 5 (2.4%) said that it was damage to the retina, haloes around the eyes and pain in the eyes (Table 1).

The sources of information for awareness of glaucoma among the non-medical staff (n=15) were through the mass media in 8 (53.3%) subjects; a family member, relative or friend suffering from the disease in 3 (20.0%) subjects; and an ophthalmologist in 2 (13.3%) subjects. All the medical staff respondents have heard of glaucoma during the course of their training as students.

A total of 100 (48.8%) subjects consisting of 38 doctors, 53 nurses, and nine non-medical staff did not know whether visual loss due to glaucoma was permanent or reversible. Sex (female) (P=0.003), profession (medical doctors and nurses) (P=0.007), specialty (ophthalmic) (P=0.0001), secondary or tertiary level of education (P=0.001), and recent visit to an eye practitioner (within the past 1 year) (P=0.012) were significant predictors of knowledge of glaucoma as a blinding disease. Majority (51.0%) believed that treatment of glaucoma should be given highest priority compared with other diseases. However, 13% were undecided as to which disease should be given priority (Figure 1).

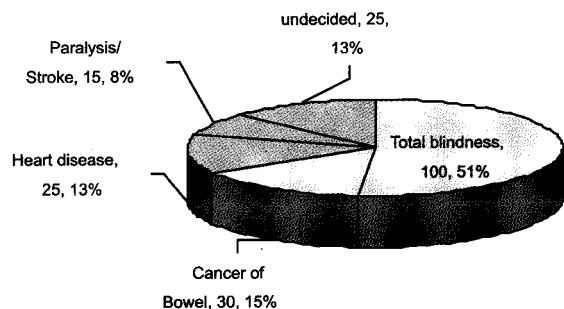


Figure 1: Priority of treatment of ailments among subjects

Table 1: responses of respondents to definition of glaucoma (N=205)

Response	Frequency	Percent
High pressure in the eye	80	39.0
Damage to the eye nerve from pressure	74	36.1
One major cause of blindness	19	9.3
Silent thief of the eye sight	18	8.7
Damage to the retina	5	2.4
Do not know	9	4.3

All participants were asked questions to determine their attitudes to the prevention of total blindness from glaucoma. Medical doctors (68.3%) and nurses in ophthalmology (23.4%) believed prevention of blindness from glaucoma were the highest priorities compared with other diseases ($P=0.003$). Only 5% indicated that they would prevent total glaucoma blindness first compared with paralysis/ stroke (32%), schizophrenia (26%), heart disease (16%), or cancer of the bowel (12%). Investigating the association between those who gave blindness prevention their first priority and specific socio-demographic factors highlighted that medical staff in ophthalmology unit were more likely to regard blindness as a high priority (Odds Ratio 3.13, 95% CI 2.14 -13.42; $P=0.003$).

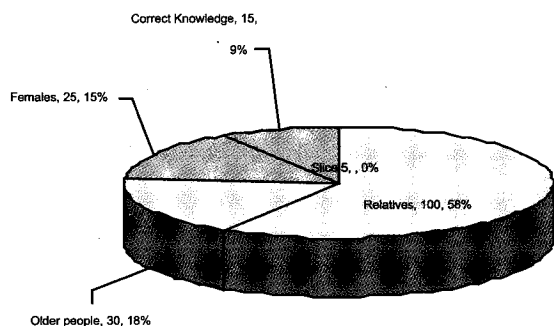


Figure 2: Utilization of regular eye care by subjects

Eighty-five (41.5%) participants had not seen an optometrist or ophthalmologist within the past two years. One hundred and seventy (82.9%) participants were under regular eye care (Figure 2). People with a relative that had previous diagnosis of glaucoma ($P=0.002$), females ($P=0.001$), and people with correct knowledge of common eye diseases ($P=0.005$) were significantly more likely to be under eye care. No significant association was found between knowledge and positive attitudes to self care practices among the non medical staffs ($P=0.13$). Fifteen (7.3%) participants affirmed that they would not want to have surgery for glaucoma even if that remains the only option. Reasons given for rejecting surgery included fear of complications in 10 (4.9%) and lack of awareness of its usefulness in 5 (2.4%).

Discussion

This study examined the knowledge, attitudes, and self care practices associated with glaucoma among teaching hospital workers in Nigeria. To our knowledge, no other study has investigated the influence of profession (medical and non-medical) or the potential role of family history of glaucoma and knowledge, attitudes and practice in Nigeria. Information acquired could enhance the design of public health campaigns to reduce the prevalence and incidence of this preventable common cause of blindness.

Studies on the knowledge of people about glaucoma have been conducted in the USA (Javitt, 1995) and Europe (Saw *et al.*, 2003; Pfeiffer *et al.*, 2002). Similar community surveys on the knowledge, attitude and eye care practices of people to glaucoma have been carried out in rural and urban areas of China (Xu *et al.*, 2001) and India (Ramakrishan *et al.*, 2003; Jacob *et al.*, 1998). The studies in India revealed a very low knowledge among the population studied and awareness was very poor in the rural population compared to the urban population (Ramakrishan *et al.*, 2003; Jacob *et al.*, 1998). Adequate access and proper utilization of eye care could create greater awareness and exposure to information about various eye diseases including glaucoma in a community. All people working in a hospital should be equipped with adequate knowledge about glaucoma in order to be able to provide the necessary relevant information to the common people.

Awareness of glaucoma among hospital workers including doctors and nurses was high as expected but it was very poor among non-ophthalmic doctors, and non-medical staff. It has been suggested that information programmes that highlight the consequences of age related eye disease on the individual, the benefits of regular eye examinations, and appropriate treatment could be undertaken by general practitioners. General practitioners have been found to be important agents of health behaviour change as they have the opportunity to affect, at a population level, at least 80% of the population in Australia each year (Attebo *et al.*, 1997). In Nigeria, hospital staff members who are not doctors (such as nurses, orderlies and

laboratory workers) are closer to the people at the grass-root level and are usually the first point of contact when there is a need to seek medical advice. Unless they are well informed, the risk of misinformation and wrong counselling of the common people is very high. The findings of this study indicate that the assumption of adequate knowledge and appropriate attitude among hospital workers can be very risky.

Medical doctors and nurses who worked in ophthalmology units believed that the prevention of blindness from glaucoma were the highest priorities compared with other diseases. Those who work in the ophthalmic unit and those who had relatives who had been blind from glaucoma also considered glaucoma treatment to be the highest priority compared with other diseases. Findings of this and other studies (Michielutte *et al.*, 1984; Dandona *et al.*, 1997; Gasch *et al.*, 2000) have indicated that knowledge of a condition or disease can positively influence self care practices.

Women were more likely to participate in regular eye health care. This is consistent with the previous reports of women's overall perception of health care and the propensity for women to seek out preventive health care compared with men (Saw *et al.* 2003). Interestingly, people who had correct knowledge of age related eye disease were more likely to participate in regular utilization of eye services. However, a combination of both correct knowledge and attitudes that considered prevention and treatment of total blindness as the highest priority did not appear to interact with self care practices.

Lack of adequate knowledge associated with glaucoma poses a challenge for health professionals. There is a need for more intensive eye health education and information dissemination especially since majority of the non-medical staff had the mass media as their primary source of information. Educating hospital workers on the causes of blindness and visual impairment especially glaucoma will be an important useful component in the promotion of preventive ophthalmic care. This can be achieved through regular hospital seminars and workshop/health talks where all cadres of health workers will be expected to participate and learn. Organized seminars and health talk on glaucoma and other

causes of preventable blindness to other health workers in primary and secondary health institutions are highly desirable.

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