

LEVEL OF AWARENESS AND KNOWLEDGE OF CATARACT AMONGST STAFF OF IRRUA SPECIALIST TEACHING HOSPITAL, IRRUA, EDO, STATE, NIGERIA.

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ABSTRACT

Aim: To assess the level of awareness and knowledge of cataract among workers at the Irrua Specialist Teaching Hospital, Irrua, Edo State, Nigeria.

Methods: Enrolled into the study were five hundred (500) participants, however only 370 consented. Data on demographics, awareness and knowledge of cataract was gathered through structured researcher-administered questionnaires using a systematic random sampling technique to participants, which included Accounts, Personnel, Laundry, Security, Pharmacy, Radiology, and Laboratory services. Staffs from the department of Ophthalmology were excluded from the study as a way of eliminating bias. Statistical Package for Social Sciences 21 (SPSS Inc. 2007. SPSS for Windows, Version 21.0. Chicago) Software was used to analyze data. Yates-corrected Chi-square test (χ^2)/Chi-square (χ^2) with trend or Fisher Exact Test as appropriate were used to determine association between discrete variables. Regression analysis to identify significant factors (e.g. demographics) affecting awareness and knowledge among the participants was also done. The level of knowledge among the staff categories was also compared using the Chi-square test. Statistical significance was taken as $P < 0.05$.

Results: A total of 500 participants from various departments were recruited for the study but only 370 consented and took part in the study, giving a 74% response rate. This represented 18.4% of the total population. There were 149 males and 221 females that participated in the study, with a male to female ratio of 1:1.5. The mean age of the participants was 39.9 (± 7.9) years. All participants had some formal education with a little over two-third of the participants 282(76.2%) having tertiary level of education. A total of 327(88.4%) of the participants were aware of cataract. Awareness of cataract was higher among the paramedical staff and among the respondents with higher education. Lectures during training (24.4%) and hospital seminars (23.5%) were the most common source of information among participants who had heard about cataract. Other sources of information were mass media, relatives with cataract and during an eye clinic visit.

Out of 327 participants who were aware of cataract, 61(18.7%) had good knowledge of cataract, 100 (30.6%) participants had fair knowledge and a little over half (50.8%) had poor knowledge.

The significant predictors found for knowledge of cataract was occupation, which was independently associated with the participants' knowledge of cataract after adjustment. The results showed that a medical staff is more likely to have better knowledge of cataract than a domestic/security staff ($p = 0.005$), < 0.05 .

Conclusion: Awareness of cataract was higher among the paramedical staff and among the respondents with higher education. The significant predictors found for knowledge of cataract was occupation, which was independently associated with the participants' knowledge of cataract after adjustment.

Key words: Cataract, awareness, knowledge.

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INTRODUCTION

Awareness and appropriate knowledge of common eye diseases, their symptoms and treatment play an important role in encouraging

people to seek timely eye care and therefore help in reducing the burden of ocular morbidity and visual impairment among the population in a society.¹ Cataract is the major cause of blindness worldwide. It is estimated that 41.8% of all global blindness is due to cataract. World global estimation of people visually impaired in 2010 was 285 million; 39 million blind and 246 million having low vision, with uncorrected refractive errors. Cataracts was found to be the principal cause of visual impairment.²

The total number of people who have cataracts in the US is estimated to increase to 30.1 million by 2020. Although treatment for the removal of cataract is widely available, barriers to accessing these services or lack of awareness of these services prevent many people from receiving the proper treatment.³ Health workers as individuals in the community are usually the first resort on health related issues and as such are useful in providing awareness and knowledge of common ocular problems within their community.

MATERIALS AND METHODS:

The study included a total of three hundred and sixty four participants. It was a cross-sectional study of hospital workers at the Irrua Specialist Teaching Hospital, Irrua, Edo State, Nigeria. Ethical approval was obtained by the Ethics and Research Committee of the Hospital and written informed consent was obtained from the patients.

A minimum sample size (n) of 364 individuals was calculated assuming a 95% confidence interval ($z = 1.96$). The nominal roll was used to group the staff separately. Systematic random sampling in which a random number from 1-10 was drawn and every 5th person on the nominal roll who was picked was used in selecting the 370 participants from each arm of the hospital directorate. The hospital directorate comprises of the clinical and non-clinical/administrative directorate.

The clinical directorate is comprised of the medical doctors, nurses, pharmacist, physiotherapists, and laboratory staff and; the non-clinical/administrative directorate is comprised of administrative, account, and audit

section staff. The hospital workers were then classified into four groups: Medical group (doctors and nurses), Paramedical group (pharmacists, radiographers, and laboratory scientists), Nonmedical/administrative group and lastly Domestic/security group. Data on demographics, awareness and knowledge of cataract was gathered through structured researcher-administered questionnaires to the systematic randomly sampled number of staff, which included Accounts, Personnel, Laundry, Security, Pharmacy, Radiology, and Laboratory services. Staffs from the department of Ophthalmology were excluded from the study as a way of eliminating bias. The questionnaires had a section for demographics. Awareness of cataract was assessed with the close-ended question: Have you heard of cataract? The source of information on cataract was obtained through a close-ended question with a list of possible responses. Only those who were aware of cataract were required to complete the next section on knowledge of cataract. Knowledge assessed included aetiology, risk factors, symptoms and treatment of cataract. Only fully completed questionnaires were included in analysis.

RESULTS

A total of 500 participants from various departments were recruited for the study but only 370 (74%) consented. This represented 18.4% of the total population.

The sociodemographic characteristics of the participants is as shown on (Table 1). There were 149 (40.3%) males and 221 (59.7%) females that participated in the study, with a male to female ratio of 1: 1.5. The mean age of the participants was 39.9 (± 7.9) years. All participants had some formal education with a little over two-third of the participants 282 (76.2%) having tertiary level of education.

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Variable	Male	Female	Total	χ^2	P
Age (years)				10.028	0.002
<= 30	10 (6.7%)	31	41 (11.1%)		
31 – 40	80	118	198 (53.5%)		
41 – 50	32	58	90 (24.3%)		
51 – 60	25	14	39 (10.5%)		
>60+	2 (1.3%)	0 (0.0%)	2 (0.5%)		
Occupation				3.736	0.0053
<i>Medical staff</i>	26	63	89 (24.1%)		
<i>Paramedical staff</i>	20	32	52 (14.1%)		
<i>Non-medical staff</i>	63	65	128 (34.6%)		
<i>Domestic/Security</i>	40	61	101 (27.3%)		
Department					
<i>Non-clinical</i>	97	95	192 (51.9%)	17.434	<0.001
<i>Clinical</i>	52	126	178 (48.1%)		
Educational					
<i>Primary</i>	22	9 (4.1%)	31 (8.4%)	8.976	0.003
<i>Secondary</i>	22	35	57 (15.4%)		
<i>Tertiary</i>	105	177	282 (76.2%)		
Tribe				0.033	0.984
<i>Edo (Esan)</i>	91	136	227 (61.4%)		
<i>Edo (Non -Esan)</i>	31	43	74 (20.0%)		
<i>Others</i>	27(18.1%)	42	69 (18.6%)		
Religion					

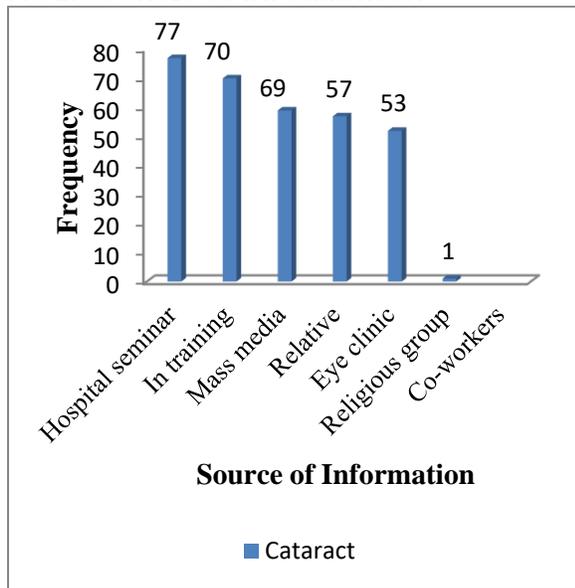
Lectures during In-training (24.4%) and hospital seminars (23.5%) were the most common source of information among participants who had heard about cataract, while via religious groups was the least (Fig 1). Other sources of information were mass media, relatives with cataract and during an eye clinic visit.

Based on the response of participants to the questions assessing their knowledge of cataract, a scoring system was created in

which every positive response was given +1 and negative response -1. Their score was used to grade them into having good, fair and poor knowledge.

Out of the 327 participants who were aware of cataract, 18.7% had good knowledge of cataract, 30.6% had fair knowledge and 50.8% of the participants who had heard of cataract had poor knowledge.

FIG 1: SOURCES OF INFORMATION



Adj OR: 3.639, CI: 1.468-9.018, (p = 0.005), <0.05
 The significant predictors found for knowledge of cataract was occupation, which was independently associated with the participants' knowledge of cataract after adjustment. The results showed that a medical staff is more likely to have better knowledge of cataract than a domestic/security staff (p = 0.005), <0.05 (Table 2).

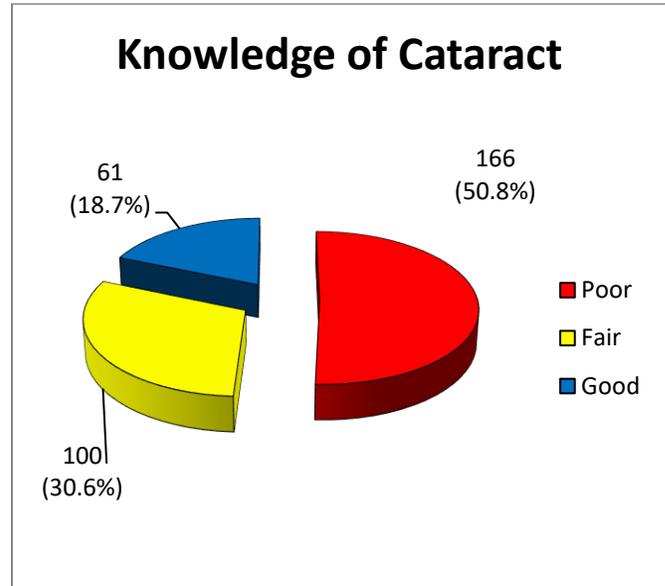
DISCUSSION:

Cataract is the major cause of blindness worldwide. It is estimated that 41.8% of all global blindness is due to cataract. Several studies have been done on awareness of cataract with other diseases, most of which are community based studies. Awareness of cataract was highest among medical staff (97.8%) but was also noticed to be very good among non-medical (90.6%) and domestic/security(74.3%) staff and among those with tertiary level of education, both of which were statistically significant p (<0.001), (<0.05). There was no significant relationship between awareness and department of the participant (p = <0.670).

This high level of awareness is expected as this is a hospital based study among staff who attend to the patients presenting to the hospital with various disease conditions. This could also be

attributed to the fact that during the World Glaucoma Week (WGW) in 2015, the Department of Ophthalmology, Irrua Specialist Teaching Hospital, organized a two day seminar educating the staff about the leading causes of blindness.

FIG 2: KNOWLEDGE OF CATARACT



This finding is similar to other studies like the cross sectional study conducted to assess the level of awareness and knowledge of common eye diseases (cataract, glaucoma, diabetic retinopathy and refractive errors) among the academic staff (non-medical faculties) of University Malaya which revealed 88.2% awareness of cataract among the respondents.⁴ The study done in Australia showed a higher level of awareness of cataract (98%). This high level of awareness might be the productive outcome of the public awareness campaign carried out by the Glaucoma Foundation of Australia (GFA) in conjunction with the Australian government.⁵ There was a significant relationship between awareness of cataract and the level of education and occupation of the participants. Those with higher level of education had a higher level of awareness of cataract. The study done by Thapa et al⁶ in Bhaktapur district of Nepal also showed that awareness of cataract was higher among males and literates.

TABLE 2: LOGISTIC REGRESSION OF PREDICTORS OF FAIR/GOOD KNOWLEDGE OF CATARACTS

Variables	p	Adjusted OR	95% CI for AOR	
			Lower	Upper
Age (years)				
<i><= 30</i>		1.000		
<i>31 – 40</i>	0.222	1.594	0.754	3.372
<i>41 – 50</i>	0.270	1.582	0.700	3.573
<i>>50</i>	0.148	1.886	0.798	4.459
Sex				
<i>Female</i>		1.000		
<i>Male</i>	0.613	0.880	0.536	1.444
Educational Status				
<i>Primary</i>		1.000		
<i>Secondary</i>	0.083	0.469	0.199	1.104
<i>Tertiary</i>	0.296	0.634	0.270	1.490
Occupation				
<i>Medical staff</i>	0.005	3.639	1.468	9.018
<i>Paramedical staff</i>	0.692	1.201	0.487	2.962
<i>Non-medical staff</i>	0.140	1.792	0.826	3.885
<i>Domestic/Security Staff</i>		1.000		
Department				
<i>Clinical</i>		1.000		
<i>Non-clinical</i>	0.006	0.412	0.220	0.772

Also, those who were medical and paramedical staff had a higher level of awareness of cataract. This could be because these groups of staff would have received information on cataract during the course of their training.

Only 30% of the participants had good knowledge of cataract. This finding was similar to the study done by Attebo et al on knowledge and beliefs about common eye diseases in Australia which showed 98% awareness of cataract among respondents but only 20% showed some knowledge about cataract.⁷ However this was different from the study done by Chew in which about 77% of respondents had good knowledge of cataract.⁴ The study done in India on Awareness of eye diseases in an urban population in southern India showed 73.1% awareness of cataract among the subjects. Of the 73.1% who had an awareness of cataract, 15.0% only had knowledge of it.¹ In another study carried out in Muscat, Oman, on knowledge and attitude for eye diseases and satisfaction for services among urban citizens of Oman, the knowledge about cataract and diabetic retinopathy was found to be good in more than 70% of respondents. Knowledge regarding cataract surgery and blindness due to diabetes, attitude towards use of spectacles, perceived need for visual rehabilitation and satisfaction with eye care services was positive in more than 60% of the interviewed people in this study.⁸

Knowledge of cataract was also low even in people who had previous eye treatment such as cataract surgery, a situation also reported in Australia.⁵ The study done by Thapa et al⁶ in Bhaktapur district of Nepal showed that awareness and knowledge of cataract was very poor (6.7%) among the population. This was alarming and could not be explained by the researchers as there have been several screening programs and outreaches held in the area in the past. The knowledge of cataract was found to be significantly affected by the level of education, occupation and department of the participants. Majority of those who had good knowledge of cataract had tertiary level of education. Also, knowledge of cataract was similarly high among those who were medical and paramedical staff.

This finding was expected as those who have higher level of education will have a better understanding of information than those with primary education. Worthy of note is that being in a clinical department significantly affected the knowledge of cataract, irrespective of the occupation of the individual. During the course of this study, it was noticed that domestic in clinical department had better understanding of the treatment and visual recovery of cataract than their counterparts in non-clinical departments. This shows that their exposure to medical information at their duty post had an influence on their knowledge of the disease.

Source of information about cataract included hospital seminar, mass media and during training. There was a significant relationship between knowledge of cataract and having received information from mass media and during training. In conclusion, providing basic education on the eye diseases of public health significance such as cataract and other causes of low vision would be needful to various categories of hospital workers who can then assist to disseminate the information to their homes and friends. Proactive measures to improve the knowledge of health care personnel should be included in the professional development programs of the various professional associations in the hospital.

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