



Eye Care Cadre Utilization and Knowledge about Eye Care Professionals among University Students in Calabar, Nigeria

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Authors' contributions

All authors contributed to the development of the manuscript, data collection as well as final writing and approval of the manuscript. Authors BAE, AAI and MMEU conceived and designed the study. Authors BAE, AAI, SNO, CTA, UAU and ENE analysed and interpreted data, as well as drafted and revised the manuscript.

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ABSTRACT

Aim: This study is aimed at evaluating the eye care cadre utilisation and knowledge about the cadre of eye care professionals among undergraduate students of the University of Calabar, Nigeria.

Materials and Methods: This was a cross-sectional descriptive study among Eighty- seven undergraduate university students. After obtaining ethical clearance and informed consent, data was obtained using a self-administered, semi-structured questionnaire elucidating demographics with items on different cadre and utilisation of eye care professionals. Ocular examination including visual acuity, anterior and posterior segment examinations was also carried out. Data were analysed using SPSS for IBM (version 20.0 SPSS Inc, Chicago, IL, USA) for presentation as frequencies and tables.

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Results: Of the Eighty-seven respondents, 87.4% were females with mean age of all respondents being 21.5±4.0. About sixty-three percent (63.2%) of respondents had never had their eyes checked, 52.9% of them were unaware of the various cadres of eye care professionals, 52.9% felt an optometrist was a medical doctor while 60% knew that an ophthalmologist was a medical doctor. Thirty-four and a half percent (34.5%) had received a previous eye check of which 10.3% was at a teaching hospital.

Conclusion: The knowledge and awareness about a cadre of eye care professionals among university students was fair. The services of ophthalmologists and optometrists were most sought after compared to other eye care providers. There is some confusion about the status of the optometrist, and this may make the populace place more demand on them in areas of care outside their domain. The university students, as well as the public, therefore, need to be educated on eye care services and the cadre of eye care professionals to help them seek appropriate eye care service based on the expertise of the eye care worker.

Keywords: Eye care services; cadre of eye care professionals; university students; Calabar.

1. INTRODUCTION

A key factor in achieving the goals of "Vision 2020" is eye care services and its utilisation [1]. The World Health Organization (WHO) estimates that only 25% of those who need eye care globally actually utilise eye services with rates as low as 28% reported in Africa [2,3].

The primary factors influencing utilisation of eye care services are availability, accessibility and affordability [4]. But in the presence of affordable, available and accessible health care, utilisation of health care and a cadre of workers may presumably still be low depending on the geographical area and cultural variation. It is common knowledge that for one to seek appropriate health care service, knowledge of disease condition, knowledge of the cadre or personnel involved in taking care of various disease conditions and the facilities where they can be found are very important.

There is a general assumption that the knowledge about the different cadre of eye care service providers and their utilisation may be different in various subset of the general population. This arises from the fact that different communities, societies and institutions have different levels of exposure, awareness and education.

Various studies have elucidated eye care-seeking behaviour, knowledge and awareness of eye care services among different population subset [5-9]. Furthermore, one documented study among university students focused on the level of awareness of different cadre of eye care professionals, [10] but no study to the best of our knowledge, has been carried out amongst

undergraduate university students elaborating on the utilisation of the different cadre of eye care professionals.

This study, therefore, seeks to explore the knowledge base of university students about the different cadre of eye care professionals as well as their utilisation.

2. MATERIALS AND METHODS

This descriptive Cross-sectional study was conducted among students of the University of Calabar, Calabar. The University is located at Etta-Agbor road, Calabar Municipality which is in the Southern Senatorial district of Cross River State, Nigeria. The University was established in 1975 and has a population of about 45,000 students.

Ethical clearance was obtained from the ethics and research committee of the University of Calabar Teaching Hospital, Calabar, Nigeria. All undergraduate students were eligible for recruitment into the study. A total of 87 undergraduate students were recruited into the study by simple random sampling. With the use of pre-tested, semi-structured, self-administered questionnaires, information on socio-demographic characteristics, previous eye problem, knowledge about a cadre of eye care professionals, type of eye worker utilisation and glasses use were obtained. Informed consent was gotten from each participant before data collection. As part of screening and service provision, ocular examination including visual acuity measured at 6 meters with a Snellen's letter chart, anterior segment examination with a pen touch, and posterior segment examination with direct ophthalmoscopes was carried out and

documented in examination proforma. Data were analysed using SPSS for IBM (version 20.0 SPSS Inc, Chicago, IL, USA) for presentation as frequencies and tables.

3. RESULTS

The study involved 87 participants. Eleven (12.6%) were males while 76(87.4%) were females with a male to female ratio of 1:7. The mean age of participants was 21.5± 4.0.

Table 1. Shows the demographics of undergraduate participants

| Variable | Frequency | Percentage (%) |
|----------------|-----------|----------------|
| Age | | |
| Below 20 years | 42 | 48.3 |
| 21-30 | 37 | 42.5 |
| 31- 40 | 8 | 9.2 |
| Mean age | 21.5±4.0 | |
| Sex | | |
| Male | 11 | 12.6 |
| Female | 76 | 87.4 |

Table 2. History of previous eye checks and where eye care was obtained

| Variable | Frequency | Percentage (%) |
|-----------------------------------|-----------|----------------|
| Previous Eye check is done | | |
| Yes | 30 | 34.5 |
| No | 55 | 63.2 |
| No response | 2 | 2.3 |
| Place of eye check | | |
| Teaching Hospital | 9 | 10.3 |
| General Hospital | 4 | 4.6 |
| Health centre | 5 | 5.7 |
| Private general clinic | 6 | 6.9 |
| Free screening | 4 | 4.6 |
| Others | 2 | 2.2 |
| No response | 2 | 2.2 |

Table 3. Below displays the knowledge about eye care professionals and their utilisation

| Awareness of cadre of eye care professionals | Frequency | Percentage |
|--|-----------|------------|
| Yes | 41 | 47.1 |
| No | 46 | 52.9 |
| An optometrist is a medical doctor | | |
| Yes | 46 | 52.9 |
| No | 22 | 25.3 |
| No response | 19 | 21.8 |
| An ophthalmologist is a medical doctor | | |
| Yes | 60 | 69.0 |
| No | 8 | 9.2 |
| No Response | 19 | 21.8 |
| Do all cadres of Eye care professionals do the same work? | | |
| Yes | 21 | 24.1 |
| No | 46 | 52.9 |
| No response | 20 | 23.0 |
| Who do you visit when you have eye problems? | | |
| Dispensing optician | 10 | 11.5 |
| Optometrist | 25 | 28.7 |
| Ophthalmologist | 26 | 29.9 |
| Pharmacist | 1 | 1.1 |
| No response | 25 | 28.7 |
| Who did your last eye check? | | |
| Ophthalmologist | 10 | 11.5 |
| Optometrist | 10 | 11.5 |
| Health Care Worker | 4 | 4.6 |
| Nurse | 13 | 14.9 |
| Don't know | 2 | 2.3 |
| No response | 48 | 55.2 |

Table 4. Glasses use

| Any previous glasses prescription? | Frequency | Percentage |
|--|------------------|-------------------|
| Yes | 18 | 20.6 |
| No | 46 | 52.9 |
| No response | 23 | 26.4 |
| Current glasses use | | |
| Yes | 10 | 11.5 |
| No | 48 | 55.2 |
| No response | 29 | 33.3 |
| Health facility where glasses were prescribed | | |
| Teaching Hospital | 4 | 4.6 |
| General Hospital | 1 | 1.1 |
| Private hospital | 4 | 4.6 |
| Free Screening | 1 | 1.1 |
| College of Health Technology | 4 | 4.6 |
| Nigerian Navy Hospital | 1 | 1.1 |
| Unical Medical Centre | 1 | 1.1 |
| No response | 71 | 81.8 |

Table 2 Majority of participants (63.2%) had not done any previous eye check. Of the 34.5% of respondents who had had a previous check, the majority (10.3%) had that done in the teaching hospital.

Table 3 46 (52.9%) of participants were unaware of the organisation of eye care professionals while 41(47.1%) were aware.

Table 4 18(20.6%) had a previous glasses prescription while 10(11.5%) were currently using glasses. The teaching hospital, college of Health Technology and private hospitals dispensed majority of the glasses.

4. DISCUSSION

The knowledge of available eye care services and awareness of the different cadre of eye care professionals and service providers are important in utilisation. Proper consultation with appropriate eye care service provider would have a positive impact on the management of patients. Knowledge about eye care professionals, awareness and capability of the different cadre of eye service providers by clients have been reported to have a direct correlation with ocular morbidity and blindness resulting from mismanagement cases [10,11].

In this study, more than half of the respondents (63.2%) had never received any form of eye care while the remaining 36.8% had received some attention. The percentage of those that had received eye care was lower than the 54.1% in a population-based study in Nigeria [8] while the percentage of those that had never receive eye care was higher than the 51.1% found in a

population-based study in Ghana [12]. On knowledge of cadre of eye care professionals, 52.9% of respondents were unaware of any difference in the cadre whereas 47.1% were aware of a different cadre of eye care professionals. This finding is higher than the 45.4% in a study in Enugu, Nigeria [8]. The differences between these studies could be due to differences in sampling technique as well as variations in the sociodemographic characteristics with a predominantly younger population of university students seen in the present study. The study in Enugu had a variation in the literacy level of the respondents which this present study did not have. However, the knowledge of which cadre of eye care professionals to consult among the respondents was good with more than 50% of them either having seen an ophthalmologist or an optometrist. In terms of awareness of the existence of a different cadre of eye care professionals, this study is like the findings documented by Owoeye et al. [10] in Ilorin, Nigeria, which reported that 61.3% were unaware that different cadres of eye care professionals exist. Thirty-five percent were sure of the different cadres of eye care professionals with 65.8% being more familiar with opticians compared to any other cadre.

Of the 62(71.3%) undergraduate respondents who seek eye care consultation when they have eye problems, ophthalmologists (29.9%) and optometrists (28.7%) were the most utilised eye care professionals. Having a good knowledge of the existence of a different cadre of eye care professionals alone, may not suffice as there are identified barriers which may hinder the utilisation of the available cadre of eye care professionals.

Factors such as accessibility, availability, affordability, peer group influence, cultural or traditional beliefs and negative reports from previous service users are strong determinants that should be addressed in any society to promote appropriate eye care service and different eye care cadre utilisation.

Good knowledge of the public's eye care-seeking behaviour and their understanding of the differences amongst the different cadre especially between ophthalmologist and optometrists will be helpful in guiding public education campaigns regarding eye care [11]. Health care managers and other health professionals must be conversant with them for appropriate education and referrals of eye care service users. Eze et al. [8] in a study among the general population in Enugu State, reported that only 55.6% of respondents were aware of the professional differences between Ophthalmologists and optometrists; and a good knowledge of these differences was significantly associated with educational status, employment status and previous eye examination.

In this study, 52% wrongly perceived the optometrist as a medical doctor. This is higher than the 45.5% reported in another study [9]. Sixty-nine percent of respondents in this study rightly responded that the ophthalmologist is a medical doctor. This is lower than the 88.3% reported by Ayanniyi et al. in another study [9]. This difference may be attributed to the fact that the population composition of Ayanniyi's study was mostly made up of experienced government workers compared to a population of young university undergraduates in the present study, who are still learning to understand different professional or trade demarcations. Awareness and knowledge among eye care service consumers of the training hierarchy, licensure requirements, professional roles, capabilities and responsibilities of the two main clinical eye care service providers, the ophthalmologists and optometrists, has also been identified as important in influencing utilisation of available eye care services [11].

Interestingly, 21.8% were not sure who an optometrist was, a similar fraction was not also sure who an ophthalmologist was, and about 17% felt that the ophthalmologist was the same as an optometrist. (Table 3). This further underscores the need for public enlightenment through the media and educational institutions about the various cadre of eye care and health

workers, their training certifications, and the professional services they can render. Furthermore, adequate knowledge about the various cadre of eye care professionals will encourage early and appropriate presentation and could help reduce the time and money wasted from wrong consultations. It has been documented that with an appropriate and informed eye health-seeking behaviour, ocular morbidities and blindness caused by such delays in presenting to the wrong service provider will be significantly reduced [12].

5. CONCLUSION.

The utilisation of cadre of eye care professionals and eye care services is influenced by awareness and knowledge of eye care service consumers about a different cadre of eye care providers amongst other factors. The relatively higher utilisation of ophthalmologist and optometrist compared to other eye care and health care providers in this study is a positive finding for this pool of young undergraduates who can further serve as eye care cadre and service awareness advocates. Although the knowledge about the existence of the various cadre of eye care professionals was fair, it is important to note that lack of awareness concerning eye care and the providers of such care could negatively impact on uptake and utilisation of available services and compliance to prescribed treatment. The university students, as well as the public,, therefore, needs continuous enlightenment on eye care services and the cadre of eye care professionals to enable them to seek appropriate eye care service based on the expertise of the eye care worker.

CONSENT

After obtaining ethical clearance and informed consent, data was obtained using a self-administered, semi-structured questionnaire elucidating demographics with items on different cadre and utilisation of eye care professionals.

ETHICAL APPROVAL

Ethical clearance was obtained from the ethics and research committee of the University of Calabar Teaching Hospital, Calabar, Nigeria.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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