

Knowledge and Experience of Ocular Morbidities Among Clients in Primary Healthcare Facilities in Rivers State

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ABSTRACT

Background and aim: Primary eye care (PEC) is a vital component of comprehensive eye care that focuses on the prevention and control of ocular morbidities through health promotion and education activities as well as the provision of services to address these morbidities. Ocular diseases however, are still experienced as a result of various factors including having poor knowledge of these morbidities. This study was thus aimed at assessing the knowledge of PEC services, as well as the experience of ocular morbidities among persons receiving care at Primary Health Care (PHC) facilities in Rivers State.

Materials and methods: This study utilized the descriptive cross-sectional study design and was conducted among 356 clients of PHC facilities in Rivers State, Nigeria. Data was collected using interviewer-administered questionnaires to identify their knowledge of PEC services, and ocular morbidities they had ever experienced. Data analysis was done using the Microsoft Excel spreadsheet and was presented on tables and charts.

Results: Most of the respondents were found to have good knowledge 243 (68.0%) of PEC services, and the common ocular morbidities experienced by them included conjunctivitis 229 (64.3%), red eye 202 (56.7%), eye irritations 194 (54.5%), near vision 154 (43.3%), loss of vision 151 (42.4%), far vision 149 (41.9%), cataracts 140 (39.3%) and so on.

Conclusion and recommendation: The knowledge of PEC among most PHC clients was found to be good, and they had also experienced various ocular morbidities. It is necessary that urgent interventions are put in place to tackle the prevailing occurrence of ocular diseases by relevant government ministries and agencies.

Keywords: Primary eye care (PEC), Knowledge, ocular morbidities, PHC, Patients

INTRODUCTION

Primary eye care (PEC) is a crucial component of overall eye health services. Its focus extends beyond preventing blindness and visual impairment (VI) to include the treatment of various eye-related health issues.[1] It is a health care service rendered in PHC facilities, involving prompt identification, management and treatment of ocular diseases before it has the opportunity to degenerate. It comprises eye health education, symptom identification, basic eye examination, diagnosis, prompt treatment and timely referral.[1, 2] The pattern of occurrence of ocular diseases has been reported to vary around the world and is influenced by racial, socioeconomic, geographic and cultural factors.[3] Previous research works reveals that blindness and visual

impairment are more prevalent in underserved, rural, and less educated communities, which encounter significant challenges in accessing eye care services.[4, 5]

Considering that most eye care services are being delivered through secondary and tertiary levels of the health system, initial access to services remains a barrier to addressing the problems of visual impairment. A key approach to improving access to these services and strengthening service delivery at all levels of care is the integration of eye care into primary health care [1, 6] A Global Action Plan has been earlier put in place by the World Health Organization (WHO), and it emphasizes strengthening Primary Eye Care (PEC) as an approach to achieving Universal Eye Health Coverage (UEHC).[7, 8] The UEHC guarantees that everyone can access essential visual health services, including promotive, preventive, curative, and rehabilitative care, ensuring these services are of high enough quality to be effective. Additionally, it ensures that individuals do not face financial difficulties when paying for these services. [8] Providing eye care services that are easily accessible and affordable ensures that a large proportion of the populace receive the needed care for ocular health and wellbeing.[1]

The effectiveness of these centers in managing ocular morbidities depends heavily on clients' awareness of common eye conditions. Most people ignore the early warning symptoms of eye disorders, which leads to late presentation at the health care facilities, and this may result in permanent visual impairment and, in some cases, blindness. Raising community awareness and understanding of prevalent eye conditions and their treatment options is crucial for encouraging preventive eye care. Educating individuals about eye health, which encourages them to promptly seek eye care at medical facilities, could be the most crucial action to prevent unnecessary vision loss. In Nigeria, studies have reported disturbing prevalence of ocular abnormalities of 6.9% in a Nigerian systematic review study[9], 28.9% in Delta State[10], and 81.7% in Obio-Akpor, Rivers State.[2] Also, according to the Nigeria National Blindness and Visual Impairment Survey conducted in 2009, 84% of cases of blindness were reported to be avoidable.[11] Some studies conducted in Rivers State have also revealed common ocular morbidities to include blindness (13%), glaucoma (14%), refractive errors (13%) and presbyopia (13%).[3, 12] These are all pointers of the benefits of the provision of PEC and its integration into PHC in Rivers State and Nigeria at large. Various factors hindering the utilization of these services have however been reported to include poor access to services, insufficient manpower, poor knowledge of visual morbidities, among others[2, 4, 13] There is thus the need to improve the accessibility and quality of primary eye care in Nigeria, as well as knowledge and awareness of ocular morbidities among the populace, with the focus of improving the visual health indices and ocular well-being of the populace.

Assessing clients' knowledge and experience regarding ocular morbidities is highly important as it may provide insights into information gaps that may hinder eye care service utilization, and can also inform the implementation of eye health education program that may improve awareness, and improve health seeking behaviours among clients, thereby improving patient health outcomes. In Rivers State, Nigeria, there are scanty published studies assessing the knowledge and experience of ocular morbidities among clients in PHC facilities. Considering that ocular morbidities are still a source of public health concern,[2, 3, 5, 12] there is thus the need to conduct this study. This study thus aimed at assessing the knowledge of PEC services, as well as ocular morbidities experienced among persons receiving care at PHC facilities in Rivers State.

MATERIALS AND METHODS

A descriptive design was employed to determine the knowledge of PHC clients of PEC services, as well as the ocular morbidities ever experienced by the clients. It was conducted at selected Model PHC facilities and Comprehensive PHC facilities located in the 23 Local Government Areas (LGAs) of Rivers State, Nigeria. A sample size of 384 was calculated using the Cochrane's formula for sample size determination.[14]

Responses were elicited from all willing respondents using an interviewer-administered adapted questionnaire. Assessment of the respondents' knowledge of PEC services was done using a set of 15 questions with responses: "Yes" (2 points), "I don't know" (1 point) and "No" (No point allotted). Ocular morbidities experienced by the respondents were also elicited using a response scale of "present" and "absent". After seeking their consent alongside other ethical considerations for the research, the instrument was administered to the clients as they presented for clinical consultations at the PHC facilities.

Data was collected electronically and safely stored in a secure server of the Kobo toolbox Open-Source Mobile Data Collection platform. Data was cleaned, collated and analyzed on a Microsoft Excel spreadsheet, was expressed as frequencies/percentages and Mean±S.D., and was presented on tables and charts. Assessment of knowledge of the respondents on PEC services was done by adding all scores obtained after responses were made to the 15 questions assessing knowledge. This was done to obtain a knowledge score ranging from 0 to 30. Scores between 0 and 9 were categorized as poor knowledge, scores between 10 and 19 were categorized as moderate knowledge and scores between 20 and 30 were categorized as good knowledge.

RESULTS

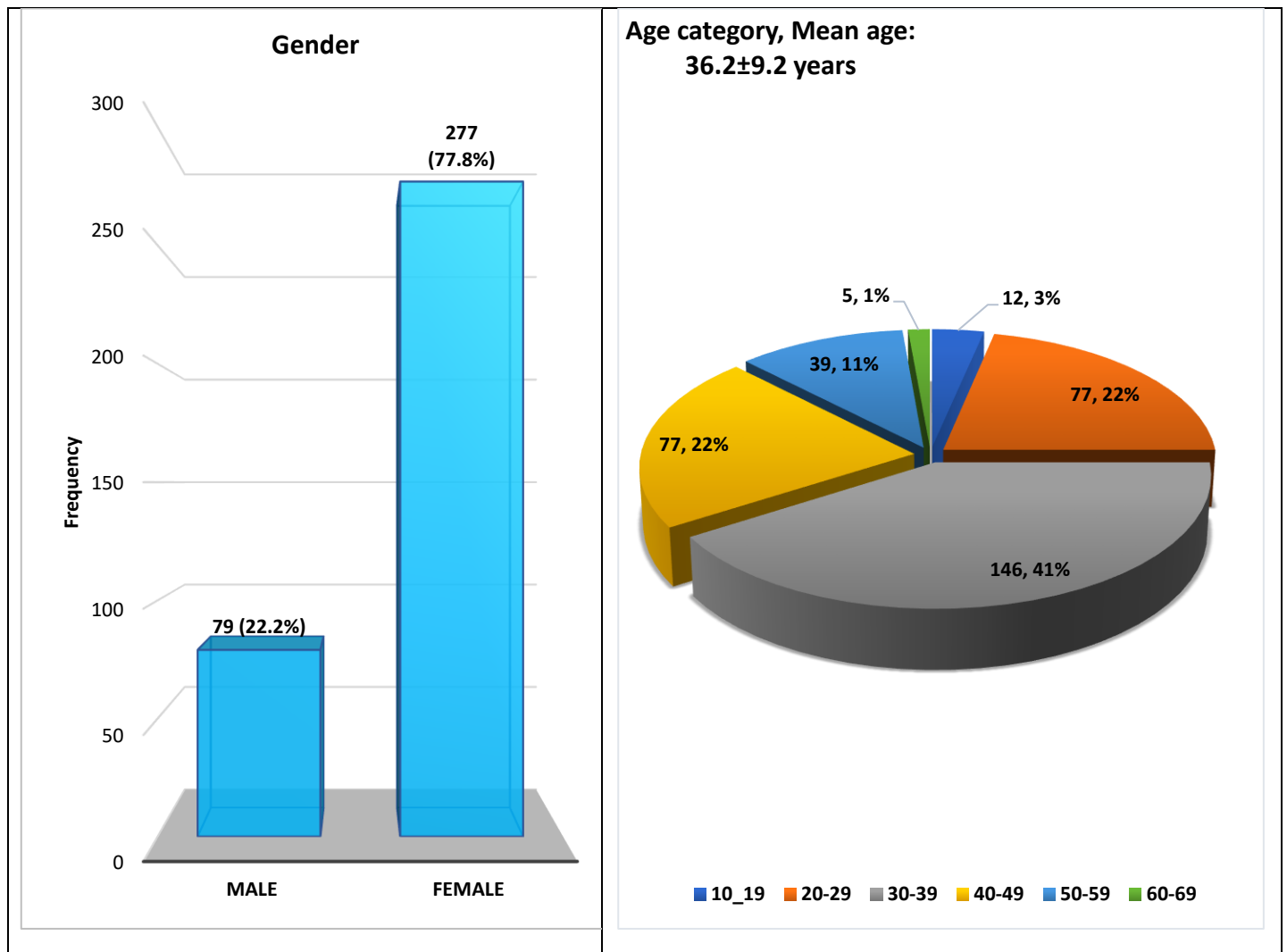
Sociodemographic Characteristics

Altogether, 356 respondents accurately responded to the 384 distributed study instruments, giving a response rate of 92.7%. Out of this number, as seen in Figure 1, it was identified that the majority of the respondents were female 277 (77.8%), aged between 30 and 39 years 146 (41.0%), had a daily income range of between 500 and 1000 naira 126 (35.4%), were married 304 (85.4%), self-employed 214 (60.0%) and had received tertiary education 187 (52.5%).

Knowledge of PEC among PHC Clients

Regarding the knowledge of PEC services among the respondents, most of them were found to have good knowledge 243 (68.0%) of services as seen in Figure 2.

Sociodemographic characteristics of PHC clients



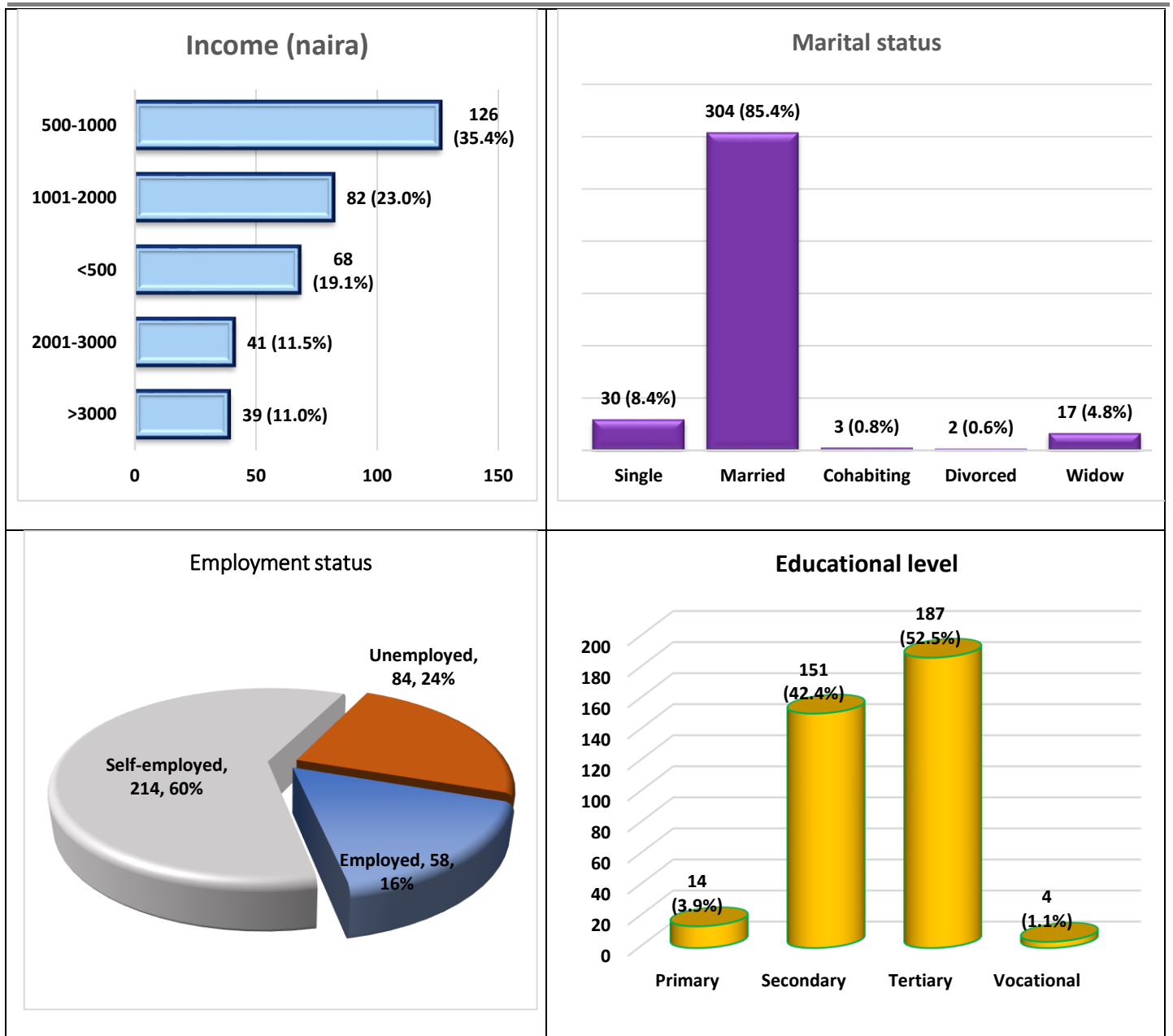


Figure 1: Sociodemographic characteristics of PHC clients

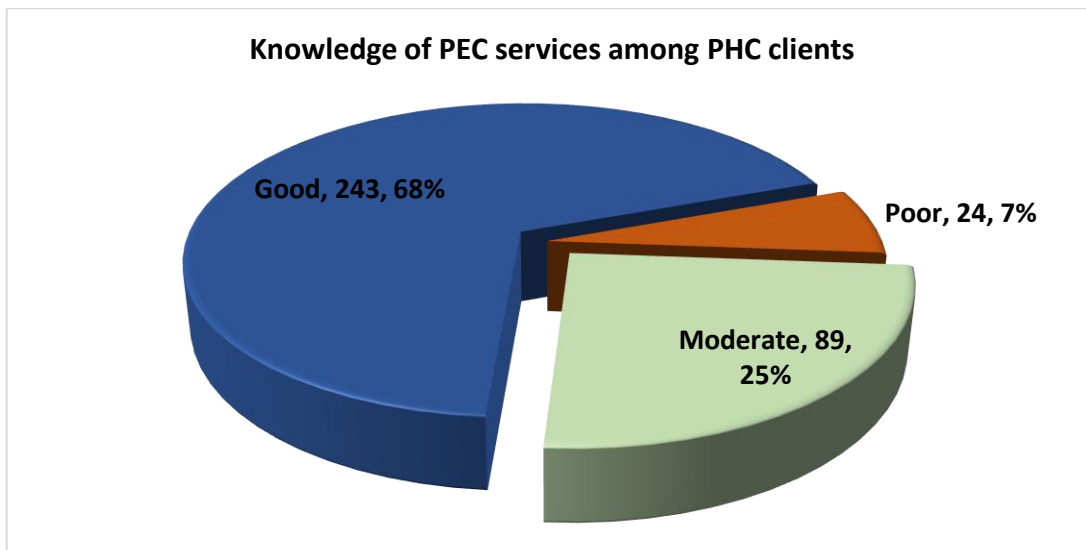


Figure 2: Levels of Knowledge of PEC services among PHC clients

Ocular morbidities ever experienced

Assessment of the ocular morbidities ever experienced by the respondents as shown in Figure 3, revealed that among all the ocular morbidities enquired about, the common ocular morbidities experienced included conjunctivitis 229 (64.3%), red eye 202 (56.7%), eye irritations 194 (54.5%), near vision 154 (43.3%), loss of vision 151 (42.4%), far vision 149 (41.9%), cataracts 140 (39.3%) among others.

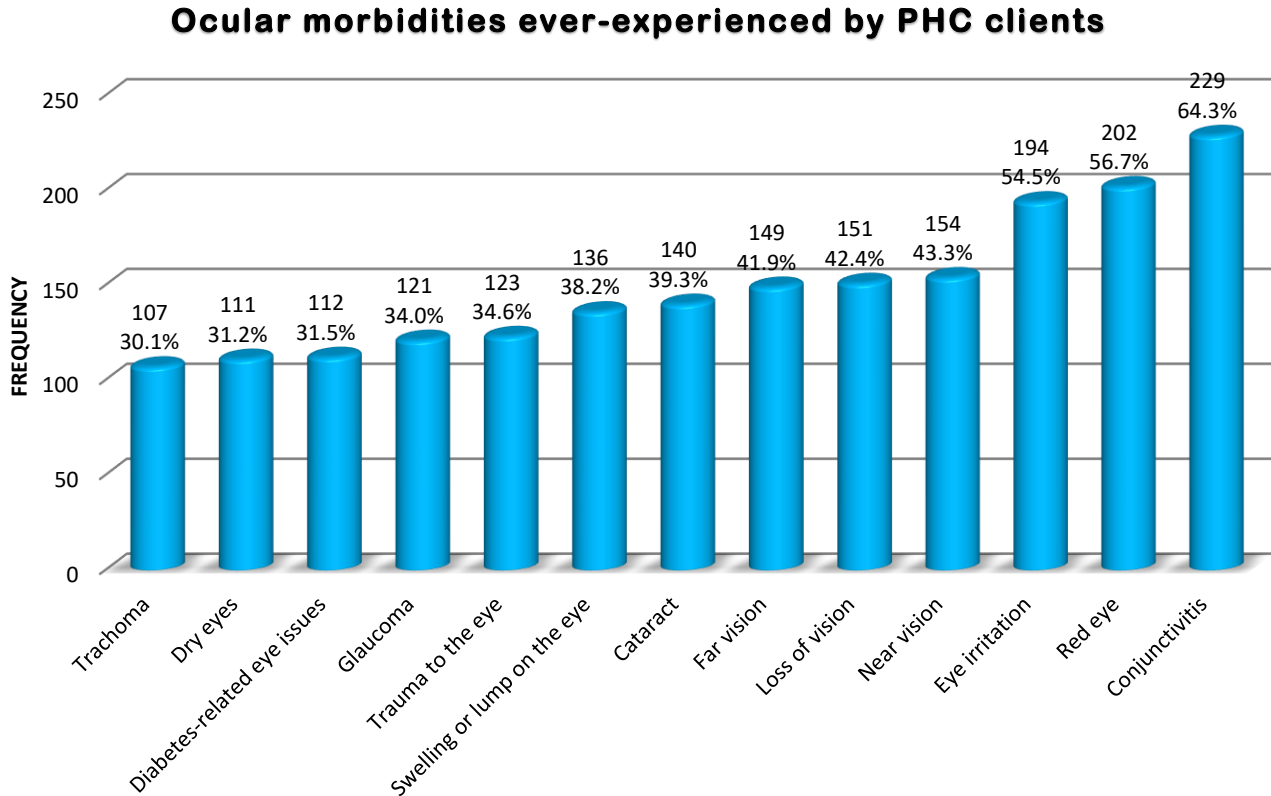


Figure 3: Ocular morbidities ever experienced by the PHC clients

DISCUSSION

Assessment of the knowledge of PEC services among the respondents, revealed that most of them had good knowledge of these services. Also, ocular morbidities commonly ever experienced by the respondents, included conjunctivitis, red eye, eye irritations, near vision, loss of vision, far vision as well as cataracts, among other ocular diseases including ocular lumps, trauma, and glaucoma.

In this study, most of the respondents had good knowledge of PEC services, which implies having a population that has some level of knowledge of what PEC services entail and will be willing to utilize these services whenever the need arose. This finding corroborates the reports of a study which revealed that majority of participants in the study had good knowledge of the benefits of eye examinations, which is an important component of PEC services.[15] This finding is however in disagreement with the reports from other studies which state that the lack of awareness of the availability of PEC services still occurred and was a potential barrier to the utilization of PEC which is a necessary means to abolish preventable causes of eye diseases.[16, 17] The public health implication of this finding is suggestive of a potential propensity for high levels of utilization of these services considering their proximity to the populace, leading to early detection and treatment of ocular morbidities.[15, 17] This inadvertently results in the prevention of more severe visual impairments, reduction in the burden of ocular morbidities and promotion of overall eye health.[18, 19] When a population is highly informed of the benefits of primary eye care services, they are likely to become empowered to advocate for better eye care resources and policies from concerned stakeholders of government. This ultimately results in improved public health outcomes and an enhanced quality of life of the populace.[4] Promoting eye healthcare however requires continuous advocacy, eye health education to the populace, amongst others.[17]

Regarding the ocular morbidities ever experienced by the respondents out of the various options enquired about in this study, common ocular morbidities that had ever been experienced included conjunctivitis, red eye, eye irritations, near vision, loss of vision, far vision, cataracts, ocular lumps, trauma, and glaucoma, among others. This is similar to reports from other studies that have shown similar range of prevalence of conjunctivitis, red eye [20], glaucoma, blindness. [2, 3, 12] It is important to note that with the prevailing shortages in healthcare manpower to adequately provide eye care services, primary healthcare workers can be trained and deployed in the management of minor conditions such as red eyes, conjunctivitis among others. This ensures that, available eye care specialists are able to attend to more serious ocular conditions requiring specialist care. [21] In addition, in Nigeria, there are guidelines for the scope of practice of primary eye care and manuals for training of PHCWs which effectively equips them with the required knowledge and skill to provide the basic eye care services. [19] It is however worrisome that despite the various interventions put in place in Nigeria, the problem of ocular morbidities persists with manifestations of such in this study. This thus highlights the need for concerted efforts in eye health education, provision of screening services as well as improvement of access to care considering that these are proven public health initiatives required to improve ocular healthcare indices. [17, 19] In order to avoid the inadvertent physical, psychological and social consequences and complications of visual impairments and ocular morbidities, it is vital that efforts are geared towards tackling the socioeconomic, environmental and demographic factors known to promote the occurrence of these morbidities. [4, 11, 13]

The study addresses an important issue-ocular morbidity and awareness of PEC-which is critical in preventing avoidable blindness and visual impairment in developing regions. This study however had some limitations. The reliance on self-reporting of ocular morbidities ever experienced by the respondents is capable of introducing a potential for recall bias, considering that individuals may inaccurately recall or misinterpret their health status or experiences with symptoms, leading to overestimation or underestimation of disease prevalence. This is further compounded by variations in individuals' health literacy, cultural beliefs, and perceptions of illness. This notwithstanding, this approach was still utilized in this study because of the need to identify cases of ocular morbidity that chose not to seek conventional healthcare services as at the time of experience of the morbidity. Furthermore, provision of responses for this particular objective was done together with the help of trained PHC workers providing services in these facilities. Using a cross-sectional study design in this study was also a limitation as this inhibits causality and temporality. This study also did not control for confounding variables like age, education level, socioeconomic status, or access to care. Analysis using Microsoft Excel only suggests limited statistical depth, with no mention of advanced statistical tests to determine associations or significance. This study may also be exposed to potential interviewer bias if interviewers unintentionally influence responses while administering the questionnaire. Although poor knowledge is mentioned as a factor, the study does not deeply explore other determinants (e.g., environmental, occupational, or behavioral factors) contributing to ocular diseases.

CONCLUSION

The knowledge of PEC services among the respondents was mostly good, and common ocular morbidities ever experienced by them included conjunctivitis, red eye, eye irritations, near vision, among others. It was recommended that:

- Agencies of government and all other concerned stakeholders of PEC services and public orientation in Rivers State and Nigeria at large should constantly reinforce health promotion and education initiatives targeted at improving public health knowledge and awareness of maintaining optimal ocular health and well-being.
- Considering that the occurrence of ocular morbidities was still a problem experienced among members of the Rivers State populace, it is necessary that urgent interventions are put in place to adequately mitigate the occurrence of these diseases through the provision of PEC services by the relevant government ministries and agencies. These could be done by integrating PEC services into PHC in Rivers State, as well as providing regular in-service training for PHC workers on quality healthcare service delivery.
- There is need for capacity building for healthcare providers on basic eye care services, early identification of eye conditions, and appropriate referral systems.

- Conduct eye health outreach camps and awareness programs in communities to reach individuals and the populace.
- Future research should employ statistical software (e.g., SPSS, R) to explore associations and predictors and predictors of ocular morbidity more robustly. Also future research on longitudinal studies and experimental studies can be conducted to establish causality and evaluate the effectiveness of the intervention.

Conflicts of Interest: No conflict of interest was declared by the authors.

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Ethics Approval: This was obtained for this study from the Health Research Ethics Committee of the Rivers State Hospital Management Board (Approval number: RSHMB/RSHREC/2024/012). Permission to carry out the evaluation was obtained from the Executive Secretary and Director Planning, Research and Statistics of the Rivers State Primary Health Care Management Board (RSPHCMB) as well as the Medical-Officers-of-Health and facility heads of the various PHC facilities in Rivers State. Informed consent was also obtained from each respondent before conducting interviews and surveys. Also, the data collection tools were anonymised to ensure protection of the privacy of respondents and confidentiality of their responses.

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Abbreviations

PEC	Primary eye care
PHC	Primary Health Care
VI	Visual Impairment

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