

Primary Health Care Workers' Knowledge and Attitude to Eye Care

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ABSTRACT

Background: Eye diseases are common. But they are treatable or preventable. Primary health care (PHC) workers, with requisite knowledge and attitude, can attend to most of the cases. **Objectives:** To determine the knowledge and attitude of PHC workers to eye care in Dunukofia Local Government Area (LGA), Anambra State, Nigeria. **Materials and Methods:** Randomly selected PHC staff in Dunukofia LGA responded to pre-tested questionnaire containing 10 questions each on knowledge, and attitude to eye care. The responses were graded into poor, good and very good. **Results:** 54 participants in 16 PHC facilities were studied. There were 12 (22.2%) males and 42 (77.8%) females. The age range was 18 - 58 years; median - 37 years. The job experience was 1 - 26 years; median - 11 years. The participants' knowledge of eye care and eye disease were good; all participants knew that "traditional eye medication makes eye disease worse". The participants' attitude to eye care for infected eyes, eye injuries, glaucoma surgery, and eyeglass wear by children was poor; 43(79.6%), considered attending to ophthalmic patients in PHC centres unnecessary; none of the participants would want to urgently treat an eye discharging pus. **Conclusion:** While the eye care knowledge of PHC workers was good, their attitude was poor. The poor attitude may jeopardize the integration of primary eye care into PHC. Therefore, for a successful integration, an attitudinal change of PHC workers is required. Repeated targeted training, performance monitoring, evaluation and effective policy guidelines are required.

Key Words: Knowledge, Attitude, Health worker, Eye care

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Article Metrics

Submitted: 16 Dec 2024

Accepted: 4 Feb. 2025

Published: Jan-June 2026

Citation:

A C. Ibemesi, S N.N. Nwosu, N E. Okpala Adanma C. Ezenwa, C U. Uba-Obiano, A A. Onyiaorah. Primary Health Care Workers' Knowledge and Attitude to Eye Care. Trop J Med Res. 2026;25(1);17-23. DOI: 10.5281/zenodo.21445262.

Journal Metrics

ISSN: p1119-0388, e2505-0338

Website: www.tjmr.org.ng

E-mail: info.tjmr@gmail.com

Publisher: cPrint, Nig. Ltd

Email: cprintpublisher@gmail.com

Access Code



www.tjmr.org.ng

INTRODUCTION

Worldwide, visual loss is of great concern to health planners, policy makers and eye health workers. Of the 2.2 billion people with visual impairment throughout the world, 90% live in developing countries. [1] On the other hand, at least 80% of all visual impairment is avoidable in the sense that technology and knowledge exist to treat or prevent the causes of visual impairment even at primary health care level. [1]

Eye disease treatment, blindness prevention and vision restoration can be achieved at all levels of healthcare delivery. However, eye health promotion, eye disease prevention and ocular first aid constitute the bulk of eye care activities at the primary health care (PHC) level. [2] To be able to perform these tasks, PHC workers are expected to have the requisite knowledge of eye diseases as well as appropriate attitude to eye care. Good knowledge and attitude are thus essential for effective delivery of eye care services.

In an attempt to ensure a minimum package of healthcare for all the citizens of the world, the global conference on primary health care was convened in 1978 in Alma Ata in the former Soviet Union. This United Nations-inspired conference chose the strategy of PHC as a means of ensuring good health for all people in the world. This is popularly known as Alma Ata Declaration. [3] In line with the Alma Ata Declaration the Nigeria Health Policy has primary health care as its cornerstone. [4]

Currently, there is a clamour for the integration of primary eye care (PEC) into the PHC services both within and outside Nigeria. [5,6] However, Aghaji and Gilbert [7] had identified gaps in policy that may militate against such integration in Nigeria. For instance, while the National Eye Health Programme advocates the promotion of eye care at all levels of healthcare delivery, the National Guidelines for the Development of Primary Health Care Systems in Nigeria does not include eye health as a component of PHC.[7] They also found that supportive policies on eye health in Nigeria are scattered in various PHC documents and then emphasized the importance of synthesizing these policy provisions into a single

composite document.[7] Deriving from the evaluation of Sightsavers-supported programmes in Tanzania, Sierra Leone and Pakistan, Yasmin and Schmidt [8] argue that systems thinking should be the best approach to ensuring integration of PEC into PHC.

The PHC workforce is central to the integration policy. But there is concern that the integration may not achieve the expected goals if the PHC workforce lack the appropriate knowledge and attitude for eye care delivery. Such concerns include the lack of information about the readiness of the PHC workforce to effectively take up the PEC duties. These duties can only be satisfactorily delivered by a workforce that has good knowledge and attitude towards eye care.

Previous studies have shown that the common eye diseases in Nigeria are due to causes that could be treated or prevented with appropriate deployment of PEC at the PHC level. [9,10] These diseases include infective conjunctivitis, allergic conjunctivitis, vernal conjunctivitis, ulcerative keratitis, eye injuries and refractive errors. [10]

In anticipation of the integration of PEC into PHC services in Anambra State and in order to ensure that the PHC workers are prepared to take on the task of eye care, the present study was conducted to determine the knowledge, attitude and practice of eye care among PHC workers in Dunukofia Local Government Area (LGA), Anambra State, Nigeria. This article reports on the knowledge and attitude of the PHC workers to eye care.

MATERIALS AND METHODS

This was a cross-sectional study of 54 PHC workers in all the 16 primary health care facilities in Dunukofia Local Government Area (LGA) in Anambra State. A minimum sample size based on 95% confidence interval was calculated using Kish formula and its adjustment for population <10,000. [11] Only PHC workers engaged with clinical duties were studied. Ethical approval for this study was obtained from the Anambra State Ministry of Health Research Ethics Committee. Permission was also obtained from the authorities of the Local

Government Health Department as well as the authorities of each PHC facility.

The staff register of all the PHC workforce was obtained from the Health Department of the Local Government and compared with the staff nominal roll in each PHC facility. The study participants were then selected using the harmonized staff list. Selection was by random sampling technique using the lucky dip approach as follows: the names of the staff members involved in clinical duties were each written on a 2 cm x 2cm pieces of paper and folded; the folded pieces of papers were put in a bag and churned; an assistant who was not involved with the writing of the names picked out the folded papers from the bag until the required number is obtained. The folded papers are then opened and staff members whose names appeared on the papers were enrolled.

The study instrument consisted of a self-administered, pre-tested questionnaire on socio-demographics as well as knowledge, and attitude eye care based on the training curriculum for PHC workers as well as the World Health Organization Eye Care Manual for PHC workers. The questionnaire also obtained information on each participant's socio-demographic characteristics and 10 questions each on knowledge and attitude to eye diseases and eye care. Data obtained were analysed using descriptive statistics. The internal consistency of the questionnaire was tested with the Cronbach's alpha and a value of 0.85 was obtained. In analysing

the data, correct response on knowledge and attitude were graded as follows: 0 – 40% = poor; 41 -70% = good; 71 – 100% = very good. This study was conducted in July - September 2023.

RESULTS

Based on minimum sample size calculation, 54 out of 71 staff members involved in clinical duties in the 16 PHC facilities were studied. There were 12(22.2%) males and 42(77.8%) females. The age range was 18 - 58 years; median – 37 years. Table 1 shows the age distribution. The experience on the job was 1 - 26 years with a median of 11 years. Table 2 shows the job experience distribution.

Table 3 shows the participants' knowledge of eye diseases and eye care. The participants' scores on all the 10 metrics on knowledge of eye care and eye disease were good, with the knowledge that "traditional eye medication makes eye disease worse" being correctly answered by all the participants. Table 4 shows the respondents' score on attitude to eye care. The scores of the respondents were good in 4 items and poor 6 other items. The poorest score was on "Give urgent treatment to eye discharging pus" in which none of the respondents gave the correct answer. Interestingly, only 11(20.4%) participants answered correctly to the question that "Attending to person with eye problem at the primary health care center is an unnecessary burden". In other words, 43(79.6%) considered attending to ophthalmic patients PHC centres unnecessary.

Table 1: Age distribution of the participants

Age Range (Years)	No.	%
18-25	10	18.5
26-35	20	37.1
36-45	16	29.6
46-55	6	11.1
≥56	2	3.7
Total	54	100.0

Table 2: Job experience of the participants

Duration (Years)	No.	%
1-5	11	20.4
6-10	16	29.6
11-15	14	25.9
16-20	8	14.8
≥21	5	9.3
Total	54	100.0

Table 3: Knowledge of primary health care workers on eye care

Knowledge of Eye Care	Correct (%)	Remarks
Eye discharging pus is a symptom of eye infection	41(75.9)	Very Good
Conjunctivitis is the redness of the white part of the eye	40(74.1)	Very Good
Redness of the eye could be due to injuries and inflammation	32(59.3)	Good
Vitamin A deficiency is a cause of blindness	43(79.6)	Very Good
Redness of the eye in the new born is often due to maternal genital infection.	43(79.6)	Very Good
Good ante-natal care include treating maternal genital infection.	39(72.2)	Very Good
Measles immunization can prevent blindness.	36(66.7)	Good
Traditional eye medication often makes eye disease worse.	54(100)	Very Good
Cataract is the same as glaucoma.	31(57.4)	Good
Green Vegetable or paw-paw are good for the eyes.	30(55.6)	Good

Table 4: Primary health care worker's attitude towards eye care

Attitude towards eye Care	Correct(%)	Remarks
Give urgent treatment to eye discharging Pus.	0(100)	Poor
Give urgent treatment to persons with eye injuries.	2(3.7)	Poor
No person with eye problem should receive care at the primary health care center	20(37.0)	Poor
Discouraged eye glass wear by children.	4(7.4)	Poor
Attending to person with eye problem at the primary health care center is an unnecessary burden.	11(20.4)	Poor
Apollo should not be treated at the primary health care level.	40(74.1)	Very Good
All cataract cases should be referred to the eyes specialist.	43(79.6)	Very Good
Any child with eye disease should be referred to the eye specialist.	41(75.0)	Very Good
Glaucoma patients should be advised not to have surgery.	5(9.3)	Poor
Patients with chemical injuries to the eyes should have the eyes copiously washed with water.	29(53.7)	Good

DISCUSSION

For this study, the cross-sectional design was chosen as the cheapest and quickest means of obtaining the required information. However, other methods such as cohort or panel studies would have yielded more robust information. But these are expensive and time consuming. The lucky dip sample method used ensured representativeness of the PHC workers

because as a blind procedure, the choice was not pre-determined.

Knowledge can be defined as familiarity, awareness or understanding of facts, information, skills and so on; knowledge also refers to practical or theoretical understanding of a subject. [12] Attitude, on the other hand, can be regarded as a settled way of

thinking and feeling about something; it is an opinion about something. [13] All the study participants were adults with median age of 37 years and median job experience of 11 years. Therefore, all information freely given by them regarding their knowledge and attitude to eye care can be considered reliable.

The knowledge of the workers regarding some very common eye diseases is uniformly good with all participants knowing that traditional eye medicines often worsens eye diseases. This is similar to the findings of two separate studies in Pakistan which reported good knowledge of eye care among PHC workers. [14,15] On the other hand, it differs from the findings of a study in rural communities in Cross River State Nigeria in which Ekpenyong and colleagues [16] reported very poor knowledge of eye care by PHC workers. Poor knowledge of eye care was also reported in South Africa. [17] and Swaziland [18]. The dismal findings were attributed to absence of policies and guidelines on eye health. On the other hand, Fatima and Ahmad [19] attributed the lack of knowledge of eye care by the PHC workers they studied to short training the practitioners received on eye care.

While the knowledge of eye care found in the present study was uniformly good, the same was not the experience with positive attitude. This is similar to the experience in Cross River State, Nigeria where poor attitude to eye care was recorded. However, our findings differ from the experience in Pakistan where studies reported that majority of PHC workers have positive attitude to eye care.

In the present study, the attitude to care for infected eyes, eye injuries, glaucoma surgery, and eyeglass wear by children was extremely poor. This is comparable with the findings of Echieh and colleagues [20] in Calabar, Nigeria who then recommended continuous training on ophthalmic diseases and provision of standard operating manuals for PHC workers. The PHC workers are expected to give preliminary care ("first aid") to patients with ocular infections as well as those with eye injuries before referral. They are the workforce the clients rely upon for correct eye care information and are thus expected to maintain a positive attitude

to eye care matters. It is, therefore, distressing to document very poor attitude to eyeglass use by children as well as surgical care for glaucoma.

Of particular worry is the finding that nearly 80% of the participants felt that persons with ophthalmic problems should not be attended to in primary health care centres. This pernicious negative attitude may be borne out of the fact that persons with eye disorders rarely present to PHC facilities. Currently child immunization and midwifery (obstetric) care dominate clinical activities at the PHC centres. Therefore, the PHC workers need drastic attitudinal re-orientation in order to prepare them to accommodate eye care activities. The 6 areas where the attitude was poor (Table 4), would require urgent repeated interventions.

The metrics used in this study are based on the common ocular disorders prevalent in the practice environment of the primary health care workers. The results of the present study points to the need to improve the attitude of the primary health care workers through frequent re-training workshops. Although conceptually, the PHC should be linked to at least the secondary level of healthcare delivery, at present, such link is practically non-existent. A policy of formally linking primary healthcare establishments to secondary and tertiary eye care establishments within Anambra State is needed. Such relationship will assure the primary health care worker of who to approach in times of uncertainties. Similarly, the feeling by PHC workers that PEC is an unnecessary additional burden could be mitigated by enhancing their remuneration. These measures will also boost the PHC workers' confidence as they would be assured of being part of the larger eye care team with attendant higher income. It is in this way that integrating primary eye care into primary health care will be accomplished seamlessly.

Some socio-cultural issues may also account for the negative attitude of the PHC workers. For instance, there numerous misconceptions about use of eyeglasses especially by children in Nigeria. Similarly, many people believe that glaucoma should not be surgically operated upon and that purulent discharge among babies is a normal accompaniment of growing up. In any case, PHC

workers should not continue to harbour these socio-cultural misconceptions.

Aghaji and Gilbert [7] had identified policy gaps that may militate against the integration of PEC into PHC. These include inconsistent policy statements. For instance, while the National Eye Health Policy clearly stated that government would promote quality eye care at all levels of healthcare delivery, eye health as part of PHC was completely omitted in the Nigeria's National Guidelines for the Development of PHC systems. Similarly, while the National New Born Policy recommends topical erythromycin for prevention of ophthalmia neonatorum, the drug was not listed in the Essential Medicines List for PHC. The policy inconsistencies need to be streamlined in order to improve the engagement of PHC workers with PEC.

Some of the limitations of the present study include the relatively small sample size of the participants as well as the fact that the information available was the way they were reported by the participants. A study involving a larger sample as well as using methods that entail direct observation and recording the eye care performance of the PHC workers are advised. We also suggest further studies which should focus on training interventions and their effectiveness in changing the attitude of the PHC workers.

In conclusion, the results of this study suggest that while the knowledge of the PHC workers of eye care is good, the attitude is poor. This has the practical implication of jeopardizing the integration of primary eye care into PHC. Therefore, a lot need to be done to improve the attitude of PHC workers for the goal of integrating primary eye care into PHC to be attained.

Finally, targeted training and re-training the PHC workers on the care of common eye diseases such as neonatal eye infections is recommended. The training should emphasize the need for the PHC workers to know their limits and promptly refer ophthalmic patients beyond their expertise for specialist care. Such training which should be repeated at several intervals, should also endeavour to bridge the knowledge-attitude gap. There should be periodic monitoring and evaluation of the PHC

workers' performance, in order to track the progress made and amend any deficiencies. A formal link of each primary health care centre with a specific secondary eye care facility is hereby recommended. However, this would involve streamlining policy guidelines as earlier recommended by Aghaji and Gilbert. [7]

Acknowledgement: Not Applicable

Author contributions: ACI, SNNN and AAO conceptualized and designed the study. ACI contributed to data collection. NEO, EAC, UCU contributed to literature search. Data analysis was by SNNN and ACI. All authors were involved in the writing and revision of the manuscript. All the authors read, approved the final manuscript and agree to be accountable for all aspects of the work.

Data availability The data used to support the findings of this study are available from the corresponding author upon reasonable request.

Funding: No funding sources.

Conflict of interest: None

Ethical approval: The study was approved by the Anambra State Ministry of Health Research Ethics Committee.

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