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EYE HEALTH-SEEKING BEHAVIOUR OF SAWMILL WORKERS IN ONITSHA, NIGERIA

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ABSTRACT

Background: A hazard of sawmilling is ocular affliction which may eventuate in visual impairment. The visual loss could be ameliorated if eye care is sought early. But timeous treatment is a function of eye health-seeking behaviour of the afflicted.

Aim: To determine the eye health-seeking behaviour of sawmill workers in Onitsha, Nigeria.

Materials and Methods: Consenting adult male sawmill workers at Onitsha, selected by simple random sampling were studied using pre-tested a questionnaire on eye disease symptoms, and eye health-seeking behaviour. Examination included visual acuity assessment, external eye examination, refraction, and ophthalmoscopy.

Results: Eighty-five sawmill workers with an age range 18 – 61 years; median – 42 years participated; 50 (58.8%) were self-employed. Eighty (94.1%) had symptoms of eye disease. Tearing, 75 (88.2%), and foreign body sensation, 62 (72.9%), were the common symptoms. Sixty-five (76.5%) participants sought eye care only when they consider the symptoms serious; 20 (23.5%) never did. Self-medication, [58 (68.2%)] and consulting traditional healers, [9 (10.6%)] were popular practice. Cost of treatment, [58 (68.2%)] and a feeling that the symptom was not serious, [44 (51.8%)] were the commonest barriers.

Conclusions: The eye health-seeking behaviour of this cohort of sawmill workers is poor. Treatment cost and not taking eye disease symptoms were the two most important barriers to

seeking eye care. To improve the eye health-seeking behaviour of these workers, subscribing to health insurance scheme and eye health education are recommended.

Key words: sawmill workers, eye health, barriers

INTRODUCTION

Eye diseases and blindness are of public health concern in Nigeria. The nationwide eye disease survey has documented the burden of blindness and eye diseases among Nigerians[1]. No population or geographic segment is spared. Some of the studies have also documented late presentation, and seeking eye care from unqualified persons as factors that contribute to poor outcome of treatment of eye diseases[2,3]. But visual loss can be minimized if the afflicted is takes proactive measures to address the problem by seeking eye care early.

Sawmill workers constitute a distinct occupational group with eye diseases especially those associated with ocular and adnexal trauma as occupational hazard[4]. But the attitude of sawmill workers in Anambra State to eye care is unknown. In an effort to bridge this knowledge gap, a study of eye health-seeking behaviour, among sawmill workers in Onitsha was conducted.

MATERIALS AND METHODS

This was a cross-sectional study of sawmill workers at the Bridge Head Onitsha Anambra State Nigeria. The study was conducted between August and September 2024. Ethical clearance was obtained from the Anambra State Ministry of Health Ethics Committee. Permission was obtained from the chairman of the sawmill workers union. Each participant gave informed consent. A minimum sample size of 77 participants, based on 95% confidence interval was calculated using the Leslie Kish formula, adjusted for population <10,000[5]. Allowing for 10% attrition, the final sample size was 85 participants. Included in the study were sawmill workers aged ≥18 years who willingly consented to participate in the study. Excluded were sawmill workers too ill to participate, those who were absent during the study duration, and those who refused to give consent.

The selection of the participants was by simple random sampling technique viz: using the register of the sawmill workers union, the names of the workers were extracted and written on a 2cm by 2 cm piece; the paper was folded and put in a bag. The bag was churned several times and an assistant not involved with writing the names picked the folded papers from the bag until the calculated sample size was met. The papers were unfolded and the workers whose names were on the papers were interviewed and examined.

The study tool included a questionnaire on socio-demographic profile, eye disease symptoms, and eye health-seeking behaviour. This questionnaire was pre-tested among saw mill workers at Nkwo Nnewi, more than 35 kilometres from our Onitsha study site. Examination included recording

visual acuity separately for each eye, penlight examination of the anterior segment and ocular adnexa, refraction, and ophthalmoscopy.

RESULTS

A total of 85 sawmill workers participated in the study. All participants were of the male gender. The age range 18 – 61 years; median – 42 years; 70 (82.4%) were married. While 7 (8.3%) did not attain formal education, 3 (3.5%) had tertiary education and 50 (58.8%) were self-employed. Table 1 shows the socio-demographic profile of the participants.

Table 2 shows the participants' self-reported symptoms of eye diseases. Eighty (94.1%) had symptoms of eye disease. Some reported more than one symptom. Tearing (watery eyes) was the commonest symptom reported by 75 (88.2%) participants; the least was visual blur reported by 10 (11.2%).

While 65 (76.5%) participants went for eye care consultation only when they consider the symptoms serious, 20 (23.5%) including 15 (17.6%) that had eye disease symptoms never sought any eye care. In Table 3 is shown the where the participants went for eye care. Some consulted multiple healthcare facilities. While self-medication, reported by 58 (68.2%) was the commonest practice, 9 (10.6%) consulted traditional healers.

Table 4 shows barriers to eye care consultation. Some participants mentioned multiple barriers. Cost of treatment, 58 (68.2%), and a feeling that the symptom was not serious, 44 (51.8%), were the commonest barriers.

Table 1: Socio-demographic profile

Variable	No.	%
Age (years)		
≤20	2	2.4
21 – 30	11	12.9
31 – 40	27	31.8
41 – 50	23	27.0
51 – 60	17	20.0
≥61	5	5.9
Total	85	100.0
Marital status		
Married	70	82.4
Single	15	17.6
Total	85	100.0
Educational level		
Non-formal	7	8.3
Primary	45	52.9
Secondary	30	35.3
Tertiary	3	3.5
Total	85	100.0
Employment status		
Self-employed	50	58.8
Apprentice	35	41.2
Total	85	100.0

Table 2: Self-reported eye disease symptoms*

Symptom	No.	%
Tearing	75	88.2
Foreign body sensation	62	72.9
Pain	25	29.4
Glare	22	21.9
Redness	18	21.2
Blurred vision	10	11.8

*% based on 85

Table 3: Health facilities patronized for eye care*

Facility	No.	%
Self-medication	58	68.2
Public hospital	37	43.5
Chemist	26	30.5
Private hospital	13	15.2
Traditional healer	9	10.6

*% based on 85

Table 4: Self-reported barriers to eye care*

Barrier	No.	%
Cost of treatment	58	68.2
Symptom not serious	44	51.8
Lack of time	32	37.6
Lack of awareness	28	32.9
Fear of diagnosis	17	20.0
Distance to health facility	8	9.4

*% based on 85

DISCUSSION

Sawmill workers are an important segment of the population that contribute to the economic development of any nation. However, part of the occupational hazards of sawmilling is proneness to eye disorders[6]. The commonest eye disease symptoms reported by the participants were tearing (watery eyes) and foreign body sensations. The findings were not surprising as these symptoms may result from sawdust particles generated during work. Some of the disorders underlying the symptoms of eye diseases among sawmill workers may lead to visual impairment. On the other hand, the ensuing visual loss could be mitigated by early treatment. Therefore, assessing the eye health-seeking behaviour of sawmill workers is important.

That 94.1% of the participants in the present study had symptoms of eye disease symptoms points at a high burden of eye diseases among sawmill workers. On the other hand, with 76.5% of the participants seeking eye care only when the symptoms were considered serious and the rest of the participants not going for eye care at all, the eye health-seeking behaviour of this cohort

of sawmill workers is poor. Although some participants consulted orthodox healthcare facilities, the finding that up to 68.2% indulged in self-medication and another 10.6% relied on traditional healers for eye care, also constitute cause for worry. These findings portend danger for the eye health of this vital occupational group.

Cost of treatment, reported by 68.2% of the participants, was the commonest barrier to accessing eye reported by the study participants. Treatment cost and other hidden or indirect cost had been reported as constituting significant hindrance to gaining access to healthcare services, including eye care, especially in countries without health insurance scheme[6]. The Nigeria National Health Insurance Scheme[7] was signed into law in 1999 and superseded by the National Insurance Authority (NHIA) Act of 2022[7,8]. The scheme was designed to cater for the health needs of Nigerians with regard to offsetting treatment bills. But scheme commenced with registration of workers in the formal sector (mainly civil servants). Its effect on the informal sector where most of the sawmill workers belong is for now very limited. However, the Anambra State Health Insurance Agency (ASHIA)[9] has recently embarked on enrolling citizens in the informal sector of the economy. It is therefore recommended that sawmill workers in Anambra State should register and access healthcare services underwritten by the Anambra State Insurance scheme in order to minimize out-of-pocket expenditure when obtaining eye care services.

Another important barrier to eye care reported by 72.9% of the participants was the feeling that 'the eye symptom was not serious. This misconception is common among the populace especially when the symptom, especially at the initial stages, does not cause pain or redness of the eyes. But it is known that some blinding diseases like glaucoma and diabetic retinopathy cause neither redness nor pains at the initial stages. Glaucoma has the highest prevalence among the Igbo ethnicity in Nigeria and this study was conducted among the Igbos[1]; similarly, diabetic retinopathy previously considered rare in Nigeria now has a hospital incidence of up to 33% and up to 7% within the general population. Therefore, targeted health education is required in order to persuade sawmill workers to minimize self-medication and seek eye care early. The available eye health care facilities should also be made known and accessible to them.

CONCLUSION

This study has revealed a poor eye health-seeking behaviour among sawmill workers in Onitsha, Nigeria. Treatment cost and not taking eye disease symptoms were the two most important factors found to encourage the poor attitude. While subscribing to health insurance scheme would provide financial relief to the sawmill workers, targeted eye health education is needed in order to effect attitudinal change and encourage the workers to seek eye care early even when symptoms may appear trivial.

REFERENCES

1. Entekume G, Patel J, Sivsubramaniam S, Gilbert CE, Ezelum C, Murthy GV, Rabiu MM. Prevalence, causes and risk factors for functional low vision in Nigeria: results from the national survey of blindness and visual impairment. Invest Ophthalmol Vis Sci 2011; 52: 6714 – 9.

2. Nwosu SNN. Domestic ocular and adnexal injuries in Nigerians. *West Afr J Med* 1995; 14(3): 33 -35.

3. Gilbert CE, Murthy GV, Sivsubramaniam S, Kyari F, ImamA, Rabiu MM, Abdull MM, Tafida A. Couching in Nigeria: prevalence, risk factors and visual acuity outcomes. Ophthalmic Epidemiol 2010; 17: 269 - 75.

4. Uhumwangho OM. Occupational eye injury among sawmill workers in Nigeria. Asian Journal of Medical Sciences 2021; 2(5): 233 – 6.

5. Araoye MO. Research methodology with statistics for health and social sciences. Ilorin: Nathadex Publishers 2004:119.

6. Oluleye TS. Cataract blindness and barriers to cataract surgical intervention in three rural communities of Oyo State, Nigeria. Niger J Med 2004; 13(2): 156-60.

7. Ajala-Damisa D, Agbaoye K. From a scheme to an authority – 5 things you need to know about the new NHIA Act. Nigeria Health Watch. 25 May2022.https://nigeriahealthwatch.com. Accessed 18 November 2023.

8. Ahmad DM, Lucero-Prisno III. The new National Health Insurance Act of Nigeria: How it will insure the poor and ensure universal health coverage. Popul Med 2022; 4(Dec): 33.

9. Oluigbo T. Increasing access: ASHIA cracks the code on health insurance for Anambra informal sector. Nigeria Health Watch. August 2025. https://nigeriahealthwatch.com. Accessed 22 May 2026.