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Research Article

Pattern of Eye Disease in Nenwe Rural Eye Clinic, Nigeria: A Seven Year Review

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Abstract

Background: The establishment of eye clinics in the form of rural outreach centers as a means of educating and providing eye care to rural residents was made necessary by the lack of eye care services in rural areas within Nigeria and the need to increase the cataract surgical rate among ophthalmologists in training. Understanding patterns of eye diseases in rural areas and eye health-seeking behaviors is crucial to achieving the goals of Vision 2020 especially for aspiring ophthalmologists.

Aim and objectives: To examine the types of eye conditions observed at Nenwe, a rural outreach post of a tertiary hospital, and to evaluate their distribution.

Methodology: A retrospective analysis of all patients who were seen at the community eye clinic during seven years was carried out. Records of patients at the Nenwe outreach eye clinic dating from November 2016 to August 2023 were examined, yielding information on patients examined during the period of study.

Results: Glaucoma was the most common eye condition to be diagnosed. Cataracts were the second most common eye condition accounting for 20.8%. Other common eye illnesses were refractive error (9%), pterygium (7%), and allergic eye disease (6%) with 129, 101, and 95 cases, respectively. Retinal detachment (51 cases), prebyopia (47 cases), corneal lesion (58 cases), and dry eye condition (47 cases) were less common.

Conclusion: The results show the burden of eye disorders in the Nenwe rural community and the importance of community-based eye care services.

More Information

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Keywords: Glaucoma; Cataracts; Refractive error; Pterygium; Allergic eye disease; Retinal detachment; Presbyopia; Corneal lesion; Dry eye syndrome; Community eye clinic; Eye health-seeking behaviors; Anterior segment findings; Posterior segment findings

Background of the study

Rural Ophthalmology services are not included in primary health care packages in Nigeria [1]. Therefore, existing ophthalmology health-care set-ups within rural communities have been instituted by voluntary initiatives or may be in the form of periodic outreaches by well-meaning charity organizations who are on blindness prevention missions. Nenwe, a Nigerian community situated in Enugu State in the eastern part of Nigeria has an established primary health center originally without ophthalmology services but benefits from rural ophthalmology services of ESUT Teaching Hospital, Parklane. This extended service was set up because there may be certain healthcare needs unique to its locality, especially regarding eye diseases. Although there is limited published research that is focused on this location, existing literature on eye diseases in Nigeria and its surrounding regions offers important insights into potential patterns of eye disorders and difficulties that the Nenwe population may be facing regarding eye health [2].

Eye care facilities within communities have been determined to be required since community outreach projects have been successful in sub-Saharan Africa in the early diagnosis of sight-threatening ocular diseases like glaucoma [2]. Secondly, community eye programs have demonstrated effectiveness in improving early diagnosis of sight-threatening eye conditions. According to both optic nerve head evaluation and patient referral data from University College Hospital, Ibadan, Nigerian patients referred via community eye outreach programs were more likely to have mild to moderate disease than patients referred from other sources, who were more likely to have severe disease [2].

Also, in rural African communities, the prevalence of presbyopia was determined to be as high as 63.4% (95% Confidence Interval (CI) 62.6%-64.2%) out of a total of 585 persons over the age of 35 who were investigated in Nigeria by Uche, et al. [3]. Furthermore, in these remote locations, most people who need presbyopia therapy do not have access to eye care facilities for presbyopic lenses to be prescribed for

their use. So, evidence has shown that there is a need for the presence of eye facilities in communities to improve access to ophthalmological services like refractive and presbyopic corrections [4].

Again, understanding patterns of eye diseases in rural areas and eye health-seeking behaviors is crucial to achieving the goals of Vision 2020 [5] especially for aspiring ophthalmologists. Therefore, where possible, short traineeships in rural primary health care centers are typically provided to doctors completing training in ophthalmology. Therefore, the establishment of eye clinics in the form of rural outreach centers as a means of educating and providing eye care to rural residents was made necessary by the lack of eye care services in rural areas and the need to increase the cataract surgical rate among ophthalmologists in training [2]. In various regions and locales both inside and outside of Nigeria, various patterns of eye conditions have been described. Furthermore, existing literature has demonstrated that socioeconomic factors may influence eye health-seeking behavior. The increased prevalence of preventable and treatable causes of blindness reported in developing countries as compared to developed nations of the world may be caused by the lower socioeconomic status of rural residents which makes it difficult for them to afford healthcare services, as well as the expenses on longer travel distances to eye care facilities. According to studies by Umeh, et al. who investigated the hurdles to eye care services in rural Nigeria, the patterns of eye disorders in this region of Nigeria may be significantly influenced by socio-economic factors, such as poverty and poor access to healthcare. Therefore, these previous studies give insight into possible difficulties in eye health-seeking behaviors that may be experienced by rural communities. It has been documented that economic hardships may be experienced by a sizeable section of the local population in and around Nenwe, which may make it difficult for them to get timely eye care. It has also been documented that late presentation of eye diseases increases the risk of blindness or visual loss and can result in more advanced diseases. Therefore, to enable recommendations to the health authorities for proper planning of eye care services in this part of Nigeria, this study aims to determine the pattern and prevalence of ocular disorders in a rural outreach center of a tertiary hospital in Enugu State where primary eye care facilities are scarce.

Justification for the study

This study investigates the prevalence and distribution of ocular morbidity in Nenwe, offering light on potential eye health issues that an agrarian population may encounter. Since Nenwe has been shown from previous research to demonstrate poor health-seeking behaviors, particularly in eye health issues [6] it is therefore essential to comprehend the prevalent eye conditions and their patterns in this community. This is important to properly customize healthcare interventions to local health objectives. There are not many elaborate studies that specifically focus on Nenwe, even though eye diseases such as glaucoma have a considerable impact on public health in Eastern Nigeria [7]. By offering important insights into the forms and incidence of eye diseases in the Nenwe community, this retrospective study seeks to close the knowledge gap. The research's findings will be an invaluable tool for ophthalmologists and healthcare providers at the Nenwe Community Outreach Centre and other nearby facilities. Based on the unique trends identified in this population, clinicians will be better prepared to identify and treat eye disorders.

Planning and managing healthcare settings requires effective resource allocation. Therefore, policymakers and healthcare administrators can more efficiently allocate resources and make sure that the community receives essential eye care services and interventions by having a better grasp of common eye disorders. The findings of this study will guide public health initiatives aimed at preventing and controlling eye illnesses in Nenwe and similar communities. The creation of customized health promotion efforts, early detection initiatives, and community education programs will be made possible by the identification of certain risk factors and patterns. The success of healthcare projects depends on involving the local communities. So, public eye health knowledge can be increased, and people can be encouraged to seek treatment as soon as necessary to foster a culture of preventive eye care by performing this study and disseminating the results. Modern healthcare is built on the principles of evidence-based practice. The information gathered for this study will add to the corpus of knowledge on ocular conditions common in rural communities in Nigeria. It will help ophthalmic doctors, researchers, and policymakers make decisions based on the best available evidence. The findings of this study will have long-term effects on the spectrum of eye conditions in Nenwe and the surrounding area by lessening the burden of these disorders, preventing blindness, and improving the general well-being of the community. Also, findings can act as a basis for future research, policy development, and healthcare activities. Therefore, this study seeks to offer insightful information about the ocular health of people in this community and to guide focused initiatives for better eye care.

Aims and objectives

Aim: To determine the pattern and prevalence of ocular disorders at Nenwe via an eye outreach clinic of a tertiary hospital in Enugu State in a rural Nigerian community.

1) To examine the types of eye conditions observed at an outreach post at a tertiary hospital in Enugu State in a rural Nigerian community.

2) To evaluate the distribution of eye conditions seen at an eye outreach clinic in a rural Nigerian community.

Methods

Study type

A community-based retrospective study.

A retrospective analysis of all patients who were seen at the community eye clinic during seven years was carried out. Therefore, the study was conducted at Nenwe Primary Health Center Hospital, an eye outreach center of ESUT Teaching Hospital, Parklane operated by ophthalmology trainees. Records of patients at the Nenwe outreach eye clinic dating from November 2016 to August 2023 were examined, yielded information on patients examined was analysed for the study.

Study population

Nenwe is a Nigerian community situated in Enugu State in the eastern part of Nigeria and made up of four villages Uhueze, Emudo, Amoorji, and Agbada with a total population of 56,972 residents [8]. It has an established primary health center located centrally but originally without ophthalmology services. However benefits from rural ophthalmology services of resident trainees from ESUT Teaching Hospital, Parklane, Enugu with low-resource facilities. Utilization of the rural outpost is determined by patient awareness and health-seeking behaviour which is shown to be poor. The eye doctors consult during their rotational postings which is three months each and run outreach programs to promote awareness and increase clinic uptake monthly. There is a major Orie-agu market at Nenwe where the community dwellers go to sell off farm products in exchange for other commodities. The clinics that fall on the orie- Agu market day record the lowest patient turnout. This eye clinic offers daily emergency care, outpatient consultations three times a week, and refractive and minor surgical procedures.

Sample size calculation

The population studied consisted of all patients who had records of hospital visits from November 2016 to August 2023. The calculated average clinic attendance per year is 5 patients.

Ethical clearance

Ethical clearance ESUTHP/C-MAC/RA/034/181 was obtained from the ethical committee of Enugu State University of Science and Technology Teaching Hospital, Parklane, Enugu, Nigeria and study adhered to the tenets of the Helsinki Declaration for research involving human subjects.

Study procedure

Data containing patients' personal information such as age, sex, and occupation was retrieved from the records in addition to information on the diagnosis and the presenting complaints. Data on the measured visual acuity using standard Snell charts (literate and illiterate) and ocular examinations were also obtained from patient records. This includes the anterior segment findings of patients with a torch light examination and loupe, and the posterior segment findings with a direct ophthalmoscope with and without dilatation of the pupil. Examination records of those requiring dilated eye exams due to inadequate fundal view to rule out suspected glaucoma or posterior segment disorders were also obtained.

Analysis of data

The study was analyzed using Statistical Package for Social Sciences, SPSS version 29 (SPSS Inc., Chicago, IL, USA). The frequency and distribution of eye illnesses in Nenwe were identified by statistical analysis. A test of association was used in which ocular morbidity was compared to characteristics like age, gender, and occupation.

Results

A total of 1407 patients were reviewed within the study period of 7 years (November 2016 - August 2023) but 23 patients had poor age documentation. A majority (74.8%) of the participants were farmers with ages between 61-70 years (416, 29.6%).

There were more females 891(63.3%) than males 516(36.7%). Glaucoma was the most common eye condition to be diagnosed. Eighty-nine individuals had advanced glaucoma, and 63 were thought to be glaucoma suspects out of the 340 (23%) cases that were identified throughout the research period. Interestingly, 163 glaucoma cases (31.6%) were females while 177 cases (35.6%) of glaucoma presentations were made up of men. On the other hand, men were more likely than women to experience end-stage glaucoma (3 males *vs.* 0 females) and advanced glaucoma (63 males against 23 females).

Overall in this study, 202 females, or 22.6% of the total, *vs.* 92 males, or 17.8%, presented with lens opacity making cataracts the second frequently diagnosed ocular condition. Other common eye illnesses were, refractive error (9%), pterygium (7%), and allergic eye disease (6%) with 129, 101, and 95 cases, respectively. Retinal detachment (51 cases), presbyopia (47 cases), corneal lesion (58 cases), and dry eye condition (47 cases) were less common. In addition, female predominance was seen in the majority of ocular conditions, such as dry eyes syndrome, pterygium, and refractive errors.

New or first-time patients numbered 635 while total follow-up or old patients was 772 (Table 1). The most common diagnoses for new patients were cataracts (136 cases), refractive errors (70 cases), or diagnoses associated with glaucoma, such as advanced glaucoma, glaucoma, or

Table 1: New and Old patients.

Patient status	Frequency	Percentage
New Patient	635	45.1
Old Patient	772	54.9
Total	1407	100.0

suspect glaucoma (94 cases). Other conditions include uveitis (20), retinal detachment (17), Pterygium (49), allergic eye illnesses (47), Corneal lesions (34), Presbyopia (23), and dry eye syndrome (13). Children between 1 to 10 years old were shown to have a higher prevalence of allergic eye illness and VKC, whereas individuals between the ages of 20 and 30 were more likely to have corneal lesions. The age range for refractive error was 31–40 years.

The age distribution of the patients in the study shows that patients attending the rural ophthalmology outreach clinic were mainly older patients aged 61-70 years (Table 2).

There were more females 891(63.3%) attended the outreach center compared with male attendance of 516(36.7%) (Table 3).

The most frequently occurring occupation was farming. Students made up 9.7% followed by retirees (8.6%) (Tables 4,5).

Table 2: Age (Years).

Age in Years	Frequency	Percent
Missing	79	5.6
1-10	36	2.6
11-20	66	4.7
21-30	55	3.9
31-40	72	5.1
41-50	166	11.8
51-60	317	22.5
61-70	416	29.6
71-80	171	12.2
81-90	22	1.6
91-100	7	0.5
Total	1407	100.0

Table 3: Sex distribution of the population.

Sex	Frequency	Percentage
Female	891	63.3
Male	516	36.7
Total	1407	100.0

Table 4: Distribution of the population according to Occupation.

Occupation	Frequency	Percent	Valid percent	Cumulative percent
Apprentice	1	.1	.1	.1
Civil servant	2	.1	.1	1.6
Driver	1	.1	.1	1.8
Farmer	1055	74.8	74.8	76.8
Hairdresser	1	.1	.1	76.9
housewife	9	.2	.2	77.1
labourer	4	.1	.1	77.8
Motorcyclist	2	.1	.1	78.0
retiree	122	8.6	8.6	86.6
School teacher	2	.1	.1	86.6
student	136	9.7	9.7	96.4
trader	46	3.3	3.3	96.5
Trader/farmer	3	.2	.2	99.7
tailor	1	.1	.1	99.8
child	21	1.5.	1.5	100.0

Table 5: Occupation distribution according to new and old patients.

Occupation			New		Total
			New Patient	Old Patient	
Occupation		Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	apprentice	Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	child	Count	16	5	21
		% within New	2.5%	0.6%	1.5%
	civil servant	Count	0	2	2
		% within New	0.0%	0.3%	0.1%
	driver	Count	1	0	1
		% within New	0.2%	0.0%	0.1%
	farmer	Count	450	605	1055
		% within New	70.9%	78.4%	75.0%
	hair-dresser	Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	housewife	Count	5	4	9
		% within New	0.8%	0.5%	0.6%
	labourer	Count	1	2	3
		% within New	0.2%	0.3%	0.2%
	mason	Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	motor cyclist	Count	2	0	2
		% within New	0.3%	0.0%	0.1%
	retired	Count	11	9	20
		% within New	1.7%	1.2%	1.4%
	retired civil servant	Count	1	1	2
		% within New	0.2%	0.1%	0.1%
	retired farmer	Count	32	67	99
		% within New	5.0%	8.7%	7.0%
	retired teacher	Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	school teacher	Count	2	0	2
		% within New	0.3%	0.0%	0.1%
	student	Count	90	46	136
		% within New	14.2%	6.0%	9.7%
	tailor	Count	0	1	1
		% within New	0.0%	0.1%	0.1%
	trader	Count	24	22	46
		% within New	3.8%	2.8%	3.3%
	trader/ farmer	Count	0	3	3
		% within New	0.0%	0.4%	0.2%
Total		Count	635	772	1407
		% within New	100.0%	100.0%	100.0%

Table 6 reflects that all disease types were more common among farmers. However refractive errors were seen more among students.

The most occurring eye problem diagnosed at the Nenwe outreach center was mainly Glaucoma. Out of 340(23%) cases diagnosed for the study period, 89 patients had advanced glaucoma, and 63 were considered glaucoma suspects. The second most occurring eye disease was Cataracts (20.8%) with 298 identified cases. Refractive error (9%), pterygium (7%), and allergic eye disease (6%) were other frequently seen eye diseases with 129, 101, and 95 cases respectively. Corneal lesions (58 cases), Retinal detachment (51 cases), Presbyopia (47 cases), and Dry eye syndrome were less frequently seen (Table 7).

Table 6: Occupation distribution according to diagnosis of eye diseases.

Table 6(a): Diagnosis * Occupation Crosstabulation

Count

		Occupation								
		retired civil servant	retired farmer	retired teacher	school teacher	student	tailor	trader	trader/ farmer	
Diagnosis	Normal	0	0	0	0	1	0	0	0	2
	Allergic Eye Disease	0	4	0	0	26	0	1	0	95
	ARMD	0	3	1	0	1	0	0	0	19
	Conjunctival inflammation	0	2	0	0	5	0	1	0	31
	Blunt ocular trauma	0	0	0	0	6	0	0	0	25
	Cataract	0	37	0	1	2	0	7	0	293
	Dislocated lens	0	0	0	0	0	0	0	0	6
	Dry eye syndrome	0	1	0	0	2	0	3	0	33
	Endstage glaucoma	0	0	0	0	0	0	0	0	3
	Glaucoma suspect	0	3	0	0	6	0	2	0	63
	Hypertensive retinopathy	0	0	0	0	0	0	0	0	8
	Pterygium	0	2	0	1	8	0	7	2	101
	Post- pterygium excision	0	0	0	0	0	0	0	0	7
	Uveitis	0	0	0	0	3	0	2	0	33
	Refractive error	0	1	0	0	27	0	5	0	129
	RD	0	3	0	0	0	0	2	0	51
	Advanced glaucoma	1	13	0	0	1	0	2	0	86
	Presbyopia	0	0	0	0	3	0	4	0	47
	Squint	0	0	0	0	1	0	0	0	3
	Scleritis	0	0	0	0	1	0	0	0	3
	RP	0	0	0	0	0	0	0	0	2
	TED	0	0	0	0	1	0	0	0	1
	Vitreous Syneresis	0	0	0	0	1	0	0	0	1
	VKC	0	0	0	0	19	0	0	0	26
	Stye	0	0	0	0	0	0	0	0	2
	R.CRAO	0	1	0	0	0	0	0	0	6
	PVD	0	0	0	0	1	1	1	0	11
	Pthisis bulbi	0	0	0	0	0	0	0	0	1
	Pupil block ac-iolinduced	0	0	0	0	0	0	0	0	1
	Optic atrophy	0	0	0	0	0	0	0	0	2
	Orbital cellulitis	0	0	0	0	0	0	0	0	2
	Orbital lipoma	0	0	0	0	0	0	0	0	1
	Panophthalmitis	0	0	0	0	0	0	0	0	1
	Ocular albinism	0	1	0	0	0	0	0	0	4
	Neonatal conjunctivitis	0	0	0	0	0	0	0	0	2
	NLDO	0	0	0	0	1	0	0	0	4
	Macula hole	0	0	0	0	0	0	0	0	3
	Macula edema	0	0	0	0	0	0	0	0	7
	Post-op sics	1	1	0	0	6	0	0	0	24
	R. Aphakia	0	1	0	0	0	0	0	0	4
	Subconj haem	0	0	0	0	2	0	0	0	7
	Toxo scar	0	0	0	0	0	0	0	0	2
	Corneal lesion	0	3	0	0	10	0	1	1	58
	Glaucoma	0	23	0	0	1	0	7	0	188
	Dermatochalasis	0	0	0	0	0	0	1	0	3
	Chalazion	0	0	0	0	0	0	0	0	1
	Conj. Squamous cell ca	0	0	0	0	1	0	0	0	1
	Conjunctival naevus	0	0	0	0	0	0	0	0	2
	R. Macular scar	0	0	0	0	0	0	0	0	1
	Optic neuropathy	0	0	0	0	0	0	0	0	1
Total		2	99	1	2	136	1	46	3	1407

Table 6(b): Chi-Square Tests.

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1259.049[a]	931	.000	.000
Likelihood Ratio	616.113	931	1.000	.[b]
Fisher's Exact Test	.000			.000
N of Valid Cases	1407			

[a]962 cells (96.2%) have an expected count of less than 5. The minimum expected count is .00.

[b]Cannot be computed because there is insufficient memory.

Table 7: Diagnosis of presenting eye problems.

Diagnosis	Frequency	Percentage
Normal	2	0.1
Allergic Eye Disease	95	6.8
ARMD	19	1.4
Conjunctival inflammation	31	2.2
Blunt ocular trauma	25	1.8
Cataract	293	20.8
Dislocated lens	6	0.4
Dry eye syndrome	33	2.3
Endstage glaucoma	3	0.2
Glaucoma suspect	63	4.5
Hypertensive retinopathy	8	0.6
Pterygium	101	7.2
Post- pterygium excision	7	0.5
Uveitis	33	2.3
Refractive error	129	9.2
RD	51	3.6
Advanced glaucoma	86	6.1
Presbyopia	47	3.3
Squint	3	0.2
Scleritis	3	0.2
RP	2	0.1
TED	1	0.1
Vitreous Syneresis	1	0.1
VKC	26	1.8
STYE	2	0.1
R.Crao	6	0.4
PVD	11	0.8
Pthisis bulbi	1	0.1
Pupil block ac-iolinduced	1	0.1
Optic atrophy	2	0.1
Orbital cellulitis	2	0.1
Orbital lipoma	1	0.1
Panophthalmitis	1	0.1
Ocular albinism	4	0.3
Neonatal conjunctivitis	2	0.1
NLDO	4	0.3
Macula Hole	3	0.2
Macula edema	7	0.5
Post-op sics	24	1.7
R. Aphakia	4	0.3
Subconj haem	7	0.5
Toxo scar	2	0.1
Corneal lesion	58	4.1
Glaucoma	188	13.4
Dermatochalasis	3	0.2
Chalazion	1	0.1
Conj. Squamous cell ca	1	0.1
Conjunctival naevus	2	0.1
R. Macular scar	1	0.1
Optic neuropathy	1	0.1
Total	1407	100.0

A high number of females, 201(22.6%) presented with cataracts compared to males 92(17.8%). This was the same for glaucoma case presentations with 177 cases (35.6%) being females and 163 males (31.6%). However, males were more likely to have advanced glaucoma compared with females (63 males versus 23 females) and endstage glaucoma(3 males versus 0 females). Also, female preponderance was seen in most ocular diseases including, Refractive errors, Pterygium, and dry eyes syndrome (Table 8).

Table 8: Diagnosis based on Sex.

	Sex		Total	Chi-square (p - value)
	Female	Male		
Normal	2 0.2%	0 0.0%	2 0.1%	
Allergic Eye Disease	67 7.5%	28 5.4%	95 6.8%	
ARMD	15 1.7%	4 0.8%	19 1.4%	
Conjunctival inflammation	19 2.1%	12 2.3%	31 2.2%	
Blunt ocular trauma	19 2.1%	6 1.2%	25 1.8%	
Cataract	201 22.6%	92 17.8%	293 20.8%	
Dislocated lens	4 0.4%	2 0.4%	6 0.4%	
Dry eye syndrome	19 2.1%	14 2.7%	33 2.3%	
Endstage glaucoma	0 0.0%	3 0.6%	3 0.2%	
Glaucoma suspect	47 5.3%	16 3.1%	63 4.5%	
Hypertensive retinopathy	7 0.8%	1 0.2%	8 0.6%	
Pterygium	76 8.5%	25 4.8%	101 7.2%	
Post- pterygium excision	5 0.6%	2 0.4%	7 0.5%	
Uveitis	21 2.4%	12 2.3%	33 2.3%	
Refractive error	91 10.2%	38 7.4%	129 9.2%	
RD	37 4.2%	14 2.7%	51 3.6%	
Advanced glaucoma	23 2.6%	63 12.2%	86 6.1%	
Presbyopia	33 3.7%	14 2.7%	47 3.3%	
Squint	0 0.0%	3 0.6%	3 0.2%	
Scleritis	1 0.1%	2 0.4%	3 0.2%	
RP	1 0.1%	1 0.2%	2 0.1%	
TED	1 0.1%	0 0.0%	1 0.1%	
Vitreous Syneresis	0 0.0%	1 0.2%	1 0.1%	
VKC	13 1.5%	13 2.5%	26 1.8%	
STYLE	2 0.2%	0 0.0%	2 0.1%	128.632 (<0.0001)
R.Crao	5 0.6%	1 0.2%	6 0.4%	
PVD	5 0.6%	6 1.2%	11 0.8%	
Pthisis bulbi	1 0.1%	0 0.0%	1 0.1%	
Pupil block ac-iolinduced	1 0.1%	0 0.0%	1 0.1%	
Optic atrophy	2 0.2%	0 0.0%	2 0.1%	
Orbital cellulitis	1 0.1%	1 0.2%	2 0.1%	
Orbital lipoma	0 0.0%	1 0.2%	1 0.1%	
Panophthalmitis	0 0.0%	1 0.2%	1 0.1%	
Ocular albinism	2 0.2%	2 0.4%	4 0.3%	
Neonatal conjunctivitis	2 0.2%	0 0.0%	2 0.1%	
NLDO	1 0.1%	3 0.6%	4 0.3%	
Macula hole	1 0.1%	2 0.4%	3 0.2%	
Macula edema	4 0.4%	3 0.6%	7 0.5%	
Post-op sics	12 1.3%	12 2.3%	24 1.7%	
R. Aphakia	1 0.1%	3 0.6%	4 0.3%	
Subconj haem	6 0.7%	1 0.2%	7 0.5%	
Toxo scar	2 0.2%	0 0.0%	2 0.1%	
Corneal lesion	29 3.3%	29 5.6%	58 4.1%	
Glaucoma	107 12.0%	81 15.7%	188 13.4%	
Dermatochalasis	2 0.2%	1 0.2%	3 0.2%	
Chalazion	0 0.0%	1 0.2%	1 0.1%	
Conj. Squamous cell ca	1 0.1%	0 0.0%	1 0.1%	
Conjunctival naevus	1 0.1%	1 0.2%	2 0.1%	
R. Macular scar	1 0.1%	0 0.0%	1 0.1%	
Optic neuropathy	0 0.0%	1 0.2%	1 0.1%	

New case diagnoses were more likely to be cataracts (136 cases), refractive errors (70 cases), or glaucoma-related diagnoses including advanced glaucoma, glaucoma, or glaucoma suspects (94 cases). Others include Pterygium (49), allergic eye diseases (47), Corneal lesions (34), Presbyopia (23), Uveitis (20), retinal detachment (17), and dry eye syndrome (13) (Table 9).

Allergic eye disease and VKC were noted to be prominent among children aged between 1-10 years, Corneal lesions were seen more in patients between 20-30 years, and Refractive error was 31-40 years (Table 10).

Discussion

According to our analysis, most of the cases of eye diseases that were seen within the study period were older patients between the ages of 61 and 70(416, 29.6%). In terms of the study subjects (all ages), the research conducted by Muhammad and Dantani [9] in Sokoto State, Nigeria, is similar to ours. Also, 51 to 65 years old (17.91%) made up the bulk of the age distribution in the research subject of Baranwal, et al. [10] Furthermore, according to a study by S.C Ogwuruike [11], who examined patterns of eye diseases from northern Nigeria, 52% (236) of the patients were greater than 50 years, with 99 patients in the 34-50 age range coming as second place (21.6%). The implication of age in this research finding is that depending on the population's age, some eye conditions may be more prevalent than others. For instance, it was observed in this study that whereas people between the ages of 20 and 30 were more likely to develop corneal lesions, children between the ages of 1 and 10 had a greater frequency of allergic eye disease and VKC. The refractive error age range was 31-40 years old [6,12- 15].

There were more females 891(63.3%) than males 516(36.7%) in this research. Similarly, according to a study by Komolafe, et al. [16], there was also a greater likelihood of visual impairment rising with age, and female patients had 1.6 times the likelihood of becoming cataract-blind compared to male patients. The results of our study are comparable to those of Achigbu, et al. 's study [17], which revealed that the majority of the study group were females. Also, in their investigation, Ademe and Edmealem [18] found that 186 (48.4%) were men and 197 (51.3%) were women. The results of this study are however, contrary to those of Bhoi [19], who found that, of the 2348 patients in his study, 1364(58.1%) were men and 984(41.9%) were women. Again, the research by Mehari Z. [15] on ocular morbidity in rural Ethiopia revealed that 214 individuals were evaluated, with 50.5% of them being male. This might be because different nations have different sample sizes and gender distributions. However, it may be inferred that a significant proportion of patients diagnosed with eye diseases from 2016-2023 who visited the Nenwe outreach center were women further demonstrating the health-seeking behavior of women in the study population compared to their male counterparts.

Table 9: Diagnosis made in New versus old patients.

	Status		Total
	New Patients	Old Patients	
Normal	2	0	2
	0.3%	0.0%	0.1%
Allergic Eye Disease	47	48	95
	7.4%	6.2%	6.8%
ARMD	9	10	19
	1.4%	1.3%	1.4%
Conjunctival inflammation	17	14	31
	2.7%	1.8%	2.2%
Blunt ocular trauma	16	9	25
	2.5%	1.2%	1.8%
Cataract	136	157	293
	21.4%	20.3%	20.8%
Dislocated lens	3	3	6
	0.5%	0.4%	0.4%
Dry eye syndrome	13	20	33
	2.0%	2.6%	2.3%
Endstage glaucoma	2	1	3
	0.3%	0.1%	0.2%
Glaucoma suspect	24	39	63
	3.8%	5.1%	4.5%
Hypertensive retinopathy	5	3	8
	0.8%	0.4%	0.6%
Pterygium	49	52	101
	7.7%	6.7%	7.2%
Post- pterygium excision	3	4	7
	0.5%	0.5%	0.5%
Uveitis	20	13	33
	3.1%	1.7%	2.3%
Refractive error	70	59	129
	11.0%	7.6%	9.2%
RD	17	34	51
	2.7%	4.4%	3.6%
Advanced glaucoma	24	62	86
	3.8%	8.0%	6.1%
Presbyopia	23	24	47
	3.6%	3.1%	3.3%
Squint	1	2	3
	0.2%	0.3%	0.2%
Scleritis	1	2	3
	0.2%	0.3%	0.2%
RP	2	0	2
	0.3%	0.0%	0.1%
TED	1	0	1
	0.2%	0.0%	0.1%
Vitreous Syneresis	1	0	1
	0.2%	0.0%	0.1%
VKC	17	9	26
	2.7%	1.2%	1.8%
Style	0	2	2
	0.0%	0.3%	0.1%
R.Crao	4	2	6
	0.6%	0.3%	0.4%
PVD	10	1	11
	1.6%	0.1%	0.8%
Pthisis bulbi	0	1	1
	0.0%	0.1%	0.1%
Pupil block ac-iolinduced	1	0	1
	0.2%	0.0%	0.1%
Optic atrophy	1	1	2
	0.2%	0.1%	0.1%
Orbital cellulitis	2	0	2
	0.3%	0.0%	0.1%
Orbital lipoma	1	0	1
	0.2%	0.0%	0.1%
Panophthalmitis	0	1	1
	0.0%	0.1%	0.1%
Ocular albinism	3	1	4
	0.5%	0.1%	0.3%
Neonatal conjunctivitis	1	1	2
	0.2%	0.1%	0.1%
NLDO	4	0	4
	0.6%	0.0%	0.3%
Macula hole	1	2	3
	0.2%	0.3%	0.2%
Macula edema	3	4	7
	0.5%	0.5%	0.5%
Post-op sics	8	16	24
	1.3%	2.1%	1.7%
R. Aphakia	1	3	4
	0.2%	0.4%	0.3%
Subconj Haem	6	1	7
	0.9%	0.1%	0.5%
Toxo scar	1	1	2
	0.2%	0.1%	0.1%
Corneal lesion	34	24	58
	5.4%	3.1%	4.1%
Glaucoma	44	144	188
	6.9%	18.7%	13.4%
Dermatochalasis	1	2	3
	0.2%	0.3%	0.2%
Chalazion	1	0	1
	0.2%	0.0%	0.1%
Conj. Squamous cell ca	1	0	1
	0.2%	0.0%	0.1%
Conjunctival naevus	2	0	2
	0.3%	0.0%	0.1%
R. Macular scar	1	0	1
	0.2%	0.0%	0.1%
Optic neuropathy	1	0	1
	0.2%	0.0%	0.1%

Table 10: Age distribution of Ocular diseases/Diagnosis*

Diagnosis	Age											Total
	Missing	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	
Normal	0	0	0	2	0	0	0	0	0	0	0	2
	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Allergic Eye Disease	11	11	14	8	7	8	18	13	5	0	0	95
	13.9%	30.6%	21.2%	14.5%	9.7%	4.8%	5.7%	3.1%	2.9%	0.0%	0.0%	6.8%
ARMD	3	0	0	0	0	0	4	8	4	0	0	19
	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	1.9%	2.3%	0.0%	0.0%	1.4%
Conjunctival inflammation	1	3	1	5	3	6	6	4	2	0	0	31
	1.3%	8.3%	1.5%	9.1%	4.2%	3.6%	1.9%	1.0%	1.2%	0.0%	0.0%	2.2%
Blunt ocular trauma	0	3	1	2	3	2	8	3	3	0	0	25
	0.0%	8.3%	1.5%	3.6%	4.2%	1.2%	2.5%	0.7%	1.8%	0.0%	0.0%	1.8%
Cataract	20	0	2	1	2	19	63	126	49	6	5	293
	25.3%	0.0%	3.0%	1.8%	2.8%	11.4%	19.9%	30.3%	28.7%	27.3%	71.4%	20.8%
Dislocated lens	1	0	0	0	0	0	0	2	2	1	0	6
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	1.2%	4.5%	0.0%	0.4%
Dry eye syndrome	3	0	1	0	1	7	7	10	4	0	0	33
	3.8%	0.0%	1.5%	0.0%	1.4%	4.2%	2.2%	2.4%	2.3%	0.0%	0.0%	2.3%
Endstage glaucoma	0	0	0	0	0	1	0	0	2	0	0	3
	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	1.2%	0.0%	0.0%	0.2%
Glaucoma suspect	1	0	1	3	6	3	16	26	7	0	0	63
	1.3%	0.0%	1.5%	5.5%	8.3%	1.8%	5.0%	6.3%	4.1%	0.0%	0.0%	4.5%
Hypertensive retinopathy	0	0	0	0	1	0	6	1	0	0	0	8
	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	1.9%	0.2%	0.0%	0.0%	0.0%	0.6%
Pterygium	5	0	0	5	16	20	35	15	4	1	0	101
	6.3%	0.0%	0.0%	9.1%	22.2%	12.0%	11.0%	3.6%	2.3%	4.5%	0.0%	7.2%
Post- pterygium excision	1	0	0	0	2	0	1	1	2	0	0	7
	1.3%	0.0%	0.0%	0.0%	2.8%	0.0%	0.3%	0.2%	1.2%	0.0%	0.0%	0.5%
Uveitis	2	0	0	3	3	10	9	4	1	0	1	33
	2.5%	0.0%	0.0%	5.5%	4.2%	6.0%	2.8%	1.0%	0.6%	0.0%	14.3%	2.3%
Refractive error	4	2	21	9	14	32	31	13	3	0	0	129
	5.1%	5.6%	31.8%	16.4%	19.4%	19.3%	9.8%	3.1%	1.8%	0.0%	0.0%	9.2%
RD	0	0	0	0	0	9	10	23	9	0	0	51
	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	3.2%	5.5%	5.3%	0.0%	0.0%	3.6%
Advanced Glaucoma	4	0	0	1	0	1	10	45	22	3	0	86
	5.1%	0.0%	0.0%	1.8%	0.0%	0.6%	3.2%	10.8%	12.9%	13.6%	0.0%	6.1%
Presbyopia	0	0	0	0	4	18	16	8	1	0	0	47
	0.0%	0.0%	0.0%	0.0%	5.6%	10.8%	5.0%	1.9%	0.6%	0.0%	0.0%	3.3%
Squint	0	0	1	0	2	0	0	0	0	0	0	3
	0.0%	0.0%	1.5%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Scleritis	0	0	1	0	0	1	0	0	1	0	0	3
	0.0%	0.0%	1.5%	0.0%	0.0%	0.6%	0.0%	0.0%	0.6%	0.0%	0.0%	0.2%
RP	0	1	0	0	0	1	0	0	0	0	0	2
	0.0%	2.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
TED	0	0	0	0	1	0	0	0	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Vitreous Syneresis	0	0	0	1	0	0	0	0	0	0	0	1
	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
VKC	1	13	12	0	0	0	0	0	0	0	0	26
	1.3%	36.1%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
Stye	1	0	0	0	0	1	0	0	0	0	0	2
	1.3%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
R.Crao	0	0	0	0	0	0	2	2	1	1	0	6
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.5%	0.6%	4.5%	0.0%	0.4%
PVD	0	0	1	0	0	2	5	2	1	0	0	11
	0.0%	0.0%	1.5%	0.0%	0.0%	1.2%	1.6%	0.5%	0.6%	0.0%	0.0%	0.8%
Pthisis bulbi	0	0	0	0	0	0	0	1	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%
Pupil block ac-iolinduced	0	0	0	0	0	1	0	0	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Optic atrophy	1	0	0	0	0	0	1	0	0	0	0	2
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%

Orbital cellulitis	1	0	0	0	0	0	0	1	0	0	0	2
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%
Orbital lipoma	1	0	0	0	0	0	0	0	0	0	0	1
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Panophthalmitis	0	0	0	0	0	0	0	0	1	0	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.1%
Ocular albinism	1	0	0	0	0	0	2	0	1	0	0	4
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.6%	0.0%	0.0%	0.3%
Neonatal conjunctivitis	2	0	0	0	0	0	0	0	0	0	0	2
	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
NLDO	1	2	1	0	0	0	0	0	0	0	0	4
	1.3%	5.6%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Macula hole	0	0	0	0	0	2	1	0	0	0	0	3
	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.2%
Macula edema	0	0	0	0	1	0	2	4	0	0	0	7
	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.6%	1.0%	0.0%	0.0%	0.0%	0.5%
Post-op sics	2	0	1	5	1	2	2	9	0	2	0	24
	2.5%	0.0%	1.5%	9.1%	1.4%	1.2%	0.6%	2.2%	0.0%	9.1%	0.0%	1.7%
R. Aphakia	0	0	0	0	0	0	0	4	0	0	0	4
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.3%
Subconj haem	0	1	1	0	1	0	3	1	0	0	0	7
	0.0%	2.8%	1.5%	0.0%	1.4%	0.0%	0.9%	0.2%	0.0%	0.0%	0.0%	0.5%
Toxo scar	1	0	0	0	0	0	0	0	0	0	1	2
	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.1%
Corneal lesion	3	0	5	8	2	5	16	12	7	0	0	58
	3.8%	0.0%	7.6%	14.5%	2.8%	3.0%	5.0%	2.9%	4.1%	0.0%	0.0%	4.1%
Glaucoma	8	0	1	2	1	15	39	76	38	8	0	188
	10.1%	0.0%	1.5%	3.6%	1.4%	9.0%	12.3%	18.3%	22.2%	36.4%	0.0%	13.4%
Dermatochalasis	0	0	0	0	0	0	2	1	0	0	0	3
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.2%	0.0%	0.0%	0.0%	0.2%
Chalazion	0	0	1	0	0	0	0	0	0	0	0	1
	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Conj. Squamous cell ca	0	0	0	0	1	0	0	0	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Conjunctival naevus	0	0	0	0	0	0	0	1	1	0	0	2
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.6%	0.0%	0.0%	0.1%
R. Macular scar	0	0	0	0	0	0	1	0	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%
Optic neuropathy	0	0	0	0	0	0	1	0	0	0	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%

The distribution of eye diseases differs throughout different regions of the world. On the other hand, common ocular conditions include cataracts, glaucoma, conjunctivitis, corneal ulcers, uveitis, refractive errors, and pterygium. The majority of cases in this study were related to glaucoma eye disorders. Eighty-nine individuals had advanced glaucoma, and 63 were thought to be glaucoma suspects out of the 340(23%) cases that were identified throughout the research period. This is in contrast to earlier publications that listed glaucoma as the second most prevalent cause of vision impairment and blindness after cataracts, as well as a report from tropical Africa where it ranked third after cataracts and aphakia. On the other hand, in agreement with some worldwide publications, glaucoma has been implicated as a major cause of permanent visual impairment. The prevalence of glaucoma in Nigeria as highlighted by studies, such as those by Kyari, et al. [20] & Abdull, et al. [21] showed that glaucoma prevalence especially in elderly populations is high. It is logical to suppose that Nenwe, an aging population, may also suffer from a serious glaucoma burden.

Globally, cataract continues to be the leading cause of blindness [22]. However, despite this, the distribution of eye diseases may still differ in different regions of the world. Furthermore, nationwide data from the Blindness and Visual Impairment Survey in 2005, which was carried out to determine the prevalence of eye diseases in Nigeria showed that the topmost causes of blindness and visual impairment were cataracts, followed by glaucoma [7]. However, this is contrary to this study as 298 cases of cataracts were reported making cataracts the second most common eye condition (20.8%). These results are consistent with those of prior research by Monsudi, et al. [23].

A study presented by Komolafe, et al. [16] corroborated this finding and also demonstrated that cataracts were the main reason for adult blindness in southern Nigeria [24]. In their study, 1031 participants were examined out of the 1200 subjects who were enrolled for the study. In the population under study, the incidence of visual impairment from cataract/lens opacity was 11.9% (95% CI: 10.1-14.0),

while the prevalence of cataract blindness was 2.0% (95% CI: 1.3-3.0). Similar to this study, 7.2% of the participants in a study by Wokoma and Ichenwo [12] within southeastern Nigeria, had bilateral blindness, with cataracts being the most prevalent cause and accounting for 40% of the blindness [25]. Patterns of eye disorders may be frequently constant across a nation; therefore, these results might be representative of the whole eastern region, including Nenwe though pockets of data generated from different parts of Nigeria may differ slightly. Therefore, in Nigeria, cataracts are a major problem and are frequently brought on by aging and UV radiation exposure, and given the comparable environmental conditions and demographic traits, this may account for similar patterns seen in Nenwe. Meanwhile, according to Bhoi, from India, cataracts rank third among ocular morbidities in frequency [19].

The study's findings indicated that among all eye conditions, refractive errors were the third most commonly identified category. Contrary to this study, Baranwal, et al. [10 study said that refractive error was the most prevalent ocular morbidity in their investigation, followed by cataracts and allergic conjunctivitis. This study supports that of Lakho and Ali [26], who found that the third most frequent eye condition is refractive error consistent with earlier findings. Refractive errors have a major influence on life quality, which in turn affects economic and educational aspects of life, according to Balarabe, et al. [27]. Refractive error influences life's educational components, hence there could be fewer incidences in the Nenwe community overall.

Furthermore, the outcomes of research on patterns of eye diseases may vary based on the average population age. Therefore contrary to findings by Ajaiyeoba, et al. [28] conjunctiva diseases 91(51.4%), refractive error 66 (37.3%), lid disorders 7(4.0%), and corneal abnormalities (staphyloma and keratoconus) 5(2.8%) were the most common ocular conditions found in Ilesa East community of Osun state, Nigeria in a survey involving students aged 4-24 years. Also, within Ahmadu Bello University's community, which is primarily made up of students, eye problems were discovered to be widespread [29]. Out of 1448 patients, 856 males and 592 females presented at the university sick bay, with patients ranging in age from 0 to 60 years, and an average age of 24.3 years. Infective conjunctivitis, allergic conjunctivitis, refractive errors, glaucoma, and cataracts were the most prevalent eye problems examined, accounting for 40.3%, 32.7%, 1.9%, and 1.8% of all cases, respectively. Because of this, the age distribution of the research group that visited the outpost clinic may have contributed to the lack of significant conjunctival disease occurrences at Nenwe.

Also, several data generated from hospital-based studies have reflected patterns of eye disease in the urban area near the study zone. The study conducted by Onyiaora, et al. demonstrated that lens and conjunctiva abnormalities were the most prevalent eye diseases presenting in the general outpatient department of the base hospital of the current research representing 13.6% and 12.0% of participants respectively. In contrast to the above findings the pattern of eye diseases among patients in an air-force hospital located in an urban area showed that allergic conjunctivitis (42%), refractive errors and presbyopia (33%), and degenerative conjunctival disorders (5%) were the most prevalent eye conditions among civilians while the most prevalent condition among members of the armed services was refractive error and presbyopia (43%) [30]. However, research conducted in the same area but among rural residents revealed a different pattern of eye disease occurring there. At the outreach, 458 patients were seen, of whom 197 (43%) were men and 261 (57%) were women. A total of 148 cases of cataracts (32.3%), 84 cases of glaucoma (18.3%), and 82 cases of refractive error (17.9%) were observed.

The occupation or source of livelihood may influence patterns of eye disease in a particular locality. In this study, the pattern of eye disease observed was mainly among farmers and retirees (Tables 4-6). This was different from those seen in a community of welders in Nigeria [21]. In their study, the pattern of eye disease observed varied from that seen in a farming community [28]. For instance, pinguecula, pterygium, corneal opacity, and pigmentary macular deposits were among the most prevalent eye conditions found in a survey of welders in Ile-Ife while for an agricultural community, in addition to the risks involved with farming, inhabitants are more likely to develop eye problems linked to prolonged exposure outdoors [31]. However, this study disagrees with the results of similar research by Omoso, et al. [31] carried out in an agricultural area in Nigeria which showed that presbyopia was the most prevalent eye disease, accounting for 47.5% of the sample group. Allergy-related conjunctivitis (17.2%), pterygium (16.5%), refractive error (15.2%), age-related macular degeneration (8.6%), cataract (7.6%), trauma-related visual abnormalities (3.6%), and glaucoma (3.3%) were among the other eye problems identified too. There were three blind farmers (1.0%). One instance (33%) of bilateral blindness and five cases (83%) of monocular blindness brought about by trauma.

Conclusion

This study emphasizes how important it is to incorporate ophthalmology services into rural primary healthcare. According to the research, community outreach initiatives like the one run by ESUT Teaching Hospital, Parklane, are essential for the early detection and treatment of eye disorders. These initiatives not only increase accessibility to eye care but also help with early intervention—an important step in treating illnesses like cataracts and glaucoma, which if left untreated can result in blindness. The results also underscore the significance of targeted health promotion campaigns, early detection programs, and community education activities in raising public awareness of eye health issues and promoting

prompt medical attention. Ophthalmologists may more effectively manage resources and create therapies that are more sustainable and successful by addressing the particular risk factors and patterns of eye diseases found in this study.

In summary, the creation and maintenance of rural eye clinics is crucial to reducing the prevalence of ocular illnesses in neglected areas such as Nenwe. Resource allocation to these areas should be prioritized by policymakers and healthcare managers based on evidence-based data from research like this one. To meet the objectives of Vision 2020 and enhance general eye health in rural Nigeria, it will be imperative to keep up efforts in patient education, community engagement, and healthcare infrastructure development.

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