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Prevalence of Eye Diseasesin Ughelli Clan

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Abstract

Vision refers to the intrinsic ability of humans to see objects at optimal focus, irrespective of their properties, including color, form, magnitude, specifics, complexity, and disparity. The aim of this study is to evaluate the prevalence of eye diseases in Ughelli Central hospital. A probability sampling technique was used for selection of 940 sample size. Details of medical records of every patient that visited the ophthalmology unit of central hospital Ughelliwere used to obtain data for this study. The information of patients diagnosed with eye disease was extracted and recorded in the data sheet; information collected included Gender, Age, Diagnosis, occupation and marital status. Data was analyzed with simple descriptive statistics and presented in frequency charts and tables using the Statistical Package for Social Sciences (SPSS V23). The results from this study showed that the prevalence of eye diseases in Ughelli Central Hospital was in the following order: Cataract 12.34% > Glaucoma 11.49%> Allergic conjunctivitis 10.11%> Amblyopia 9.79%> Presbyopia 8.98%> bacterial conjunctivitis 8.83%> Foreign body 8.10%> Corneal Abrasion 6.06%> pterygium 5.96%> Bilateral optic neuritis 3.09%> Astigmatism 2.87%> Age-related macular degeneration 2.45%> Anisometropia 2.13%> Ecchymosis 2.02%> Anterior Uveitis 1.49%> Chalazion 1.28%> Cortical Blindness 1.28%> Dry Eye 1.06%> myopia 0.85%> Hyperopia 0.53% .Amblyopia, which is lazy eye, was 9.79% and glaucoma, an irreversible condition, was second most prevalent. The eye diseases were more prevalent among females, accounting for 504(53.6%) compared with males that accounted for 436(46.4%).The present study concluded that advocacy on eye health should be prioritized to prevent avoidable blindness.

Keywords: prevalence, eye diseases, male and female, Amblyopia, Glaucoma

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INTRODUCTION

The prevalence and knowledge of ocular disorder is necessary for creating awareness to adopt preventive measure if applicable or otherwise (Ohwin, 2021; Ohwin, *et al.*, 2023).Eye disease is a visual disorder of the eye or a condition of abnormal functioning of the eye; it can be external or internal but may interfere with vision. It may also lead to blindness (Osuji *et al*., 2019).Ocular screening programmes help to identify ocular morbidities at an early stage of the disease. These diseases may cause visual impairment and blindness which interfere with the individual's quality of life, economic productivity and may result in untimely death.

Worldwide, more than one billion people suffer from one eye disease or the other. Some eye diseases are minor and resolve by themselves quickly, but others could be serious and lead to serious visual impairment while some can lead to total loss of vision, which can be sudden or gradual (Rushood, 2013). Eye disease is one of the major causes of visual impairment, visual handicap and depression in life; visual impairment due to eye disease is a significant public health problem in many parts of the world including Nigeria. The prevalence of ocular diseases seen at a screening programme may reflect diseases in a community. This may help in planning appropriate public health programmes for that community. Therefore, the current study assessed the prevalence of eye diseases in Ughelli Clan, Delta State. The study hopes that health authorities and ministry be provided with data which were helpful in formulating government policies and strategies to address the community health of the Ughelli people of Delta State.

Materials and Methods

Study Design

The study is a descriptive study, providing information about the naturally occurring health status, behavior, attitudes or other characteristics of a particular group. The research study was carried out in Ughelli Central Hospital under the Delta State Hospital Management Board in Delta State, Nigeria. Patients that visited the Ophthalmology and optometry unit of Ughelli central hospital between June 2022 to June 2023formed the study population while patients diagnosed with eye disease were recruited as study sample size and 940 patient's files were adopted. The information of patients diagnosed with eye disease was extracted and recorded in the data sheet. Inclusion Criteria include all cases of eye diseases available at the department and cases that were seen within 2022-2023.Exclusion Criteria included cases of disorders that were not present at the department.

Ethical clearance was processed and received from the, Faculty of Basic Medical Sciences, College of Health Sciences, Delta State University, Abraka. Ethical clearance was also processed and approved from the Ethical Clearance Committee, Ughelli central hospital. The data collected for the study was analyzed with simple descriptive statistics presented in frequency charts and tables using the Statistical Package for Social Sciences (SPSS V22). Variation between eye diseases and age was evaluated using one sample t-test, and p-value was significant at ≤ 0.005.

RESULTS

The study analysis was based on a retrospective study of the prevalence of eye diseases. The age, sex, occupation, marital status and prevalence of diagnosed cases are shown in Figure 1 to 5 below:

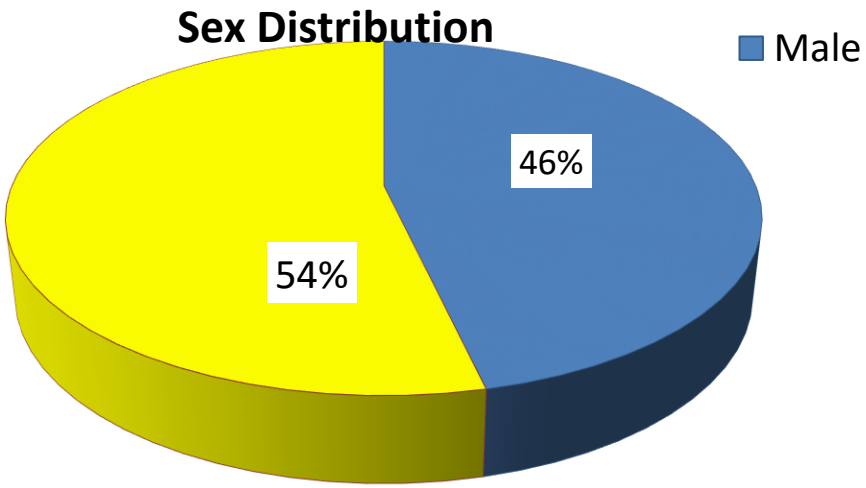

Fig 1: Sex Distribution of Participants revealed the sex distribution of eye diseases.

Data gathered revealed that eye diseases were more prevalent among females, accounting for 504(53.6%) when compared with males that accounted for 436(46.4%).

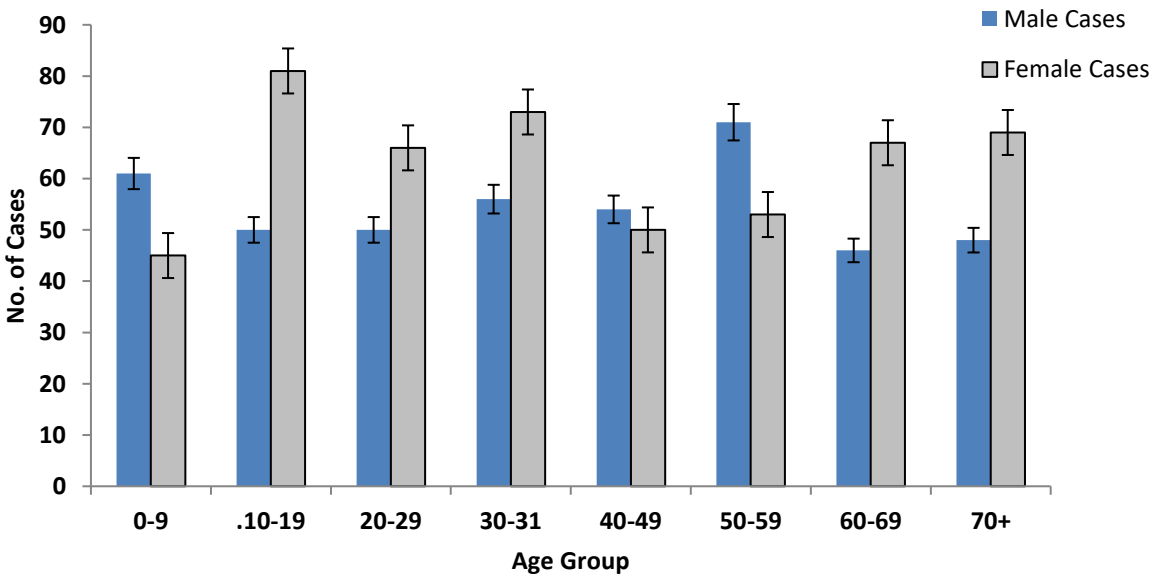

Fig 2: Age and Sex Distribution

Study showed prevalent the age and sex distribution of all the cases reviewed for male and female participants. A 6.5% of males had their ages between ranged from 0-9years when compared to 4.8% that were females with an average mean of 53±11.3, 8.6% of females falls within the ages of 10-19 years when compared to males accounting for 5.3% with a mean of 65.5±21.9. Consequently, 7% of the study population that fell within the ages of 20-29years were females when compared to 5.3% that were males with a mean of 58±11.3, 7.8% of the cases reviewed were females were within the ages of 30-39 years when compared to 6% that were males with a mean of 64.5±12.0, while 5.7% of males were within the ages of 40-49 years when compared to 5.3% that were females with a mean of 52±2.82, also, 7.6% of the female cases had their ages between 50-59years when compared to the males that accounted for 5.6% with a mean of 62±12.7; meanwhile, 7.1% of the study population that falls within the ages of 60-69years were females when compared to 4.9% that were males with a mean of 56.5±14.8. Finally, 7.3% of the cases reviewed were females within the ages of 70 years and above when compared to male cases that accounted for 5.1% with an average mean 58.5±14.8.

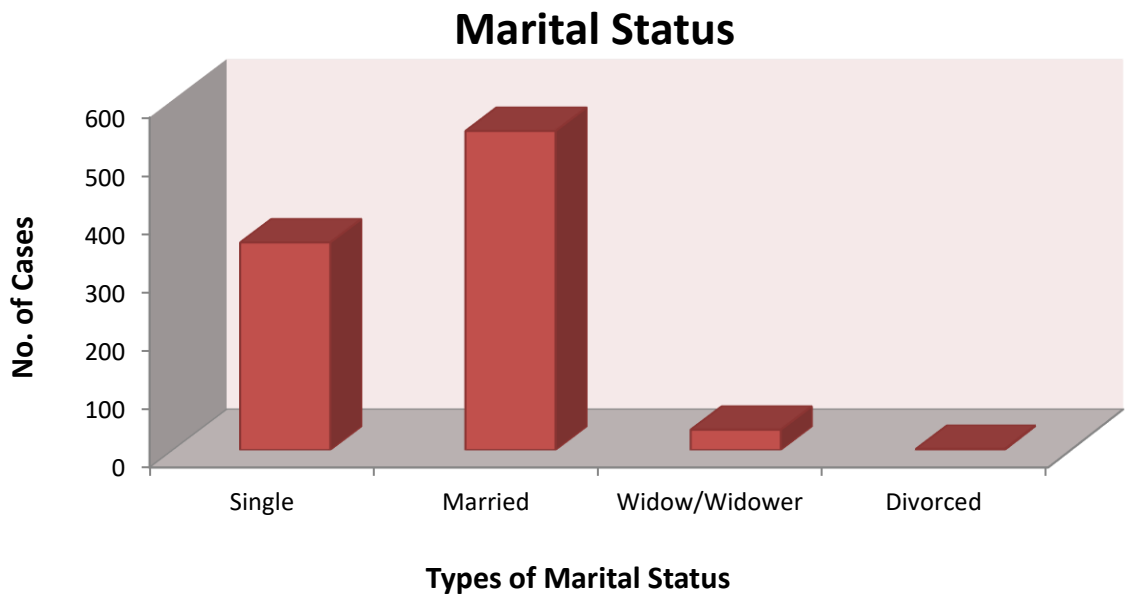

Fig 3: Marital Status of Participants

The information gathered shows that 356(37.8%) were single patients when compared to majority of the cases were married accounting for 547(58.2%) of the study population, meanwhile, 35(3.7%) were widows or widowers and the remaining 2(0.2%) were divorced.

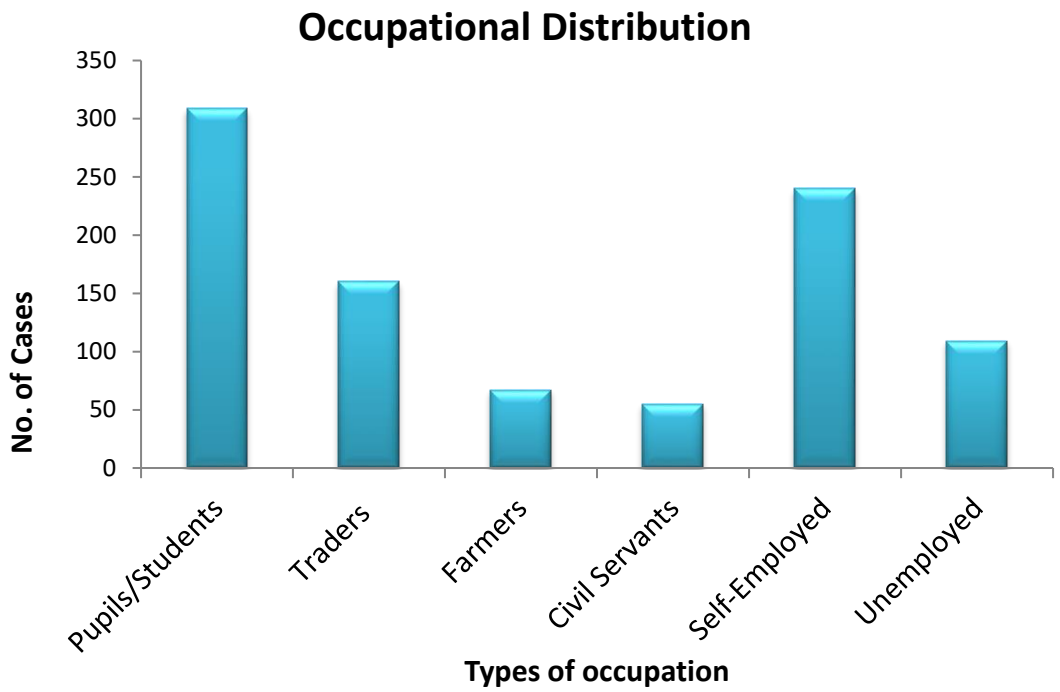

Fig 4: Occupation of Participants Diagnosed for eye diseases in Ughelli

Study observed that 309(32.9%) cases were pupils/students and this formed the highest category. This was immediately followed by 240(25.5%) of the observed cases that were self-employed, meanwhile, 160(17%) of the observed cases were traders, whereas 109(11.6%) were unemployed while farmers accounted for 67(7.1%) of the observed cases. Finally, 55(5.9%) of the observed cases were civil servants both working and retired.

Table 1: Prevalence of Eye Diseases in Ughelli Hospital

Category of Eye disease	Total Cases of Eye Disease	
	Freq.	Percentage (%)
Glaucoma	108	11.49
Cataract	116	12.34
Presbyopia	84	8.93
Age - Related Macular Degeneration	23	2.45
Bacterial conjunctivitis	83	8.83
Anisometropia	20	2.13
Anterior Uveitis	14	1.49
Astigmatism	27	2.87
Bilateral optic Neuritis	29	3.09
Pterygium	56	5.96
Allergic conjunctivitis	95	10.11
Chalazion	12	1.28
Cortical Blindness	5	0.53
Hyperopia	5	0.53
Foreign Body	77	8.19
Dry Eye	10	1.06
Myopia	8	0.85
Amblyopia	92	9.79

Ecchymosis	19	2.02
Corneal Abrasion	57	6.06
Total	**940**	**100.0**

Table 1 above shows the prevalence of Eye Diseases in Ughelli

The study showed that Cataract was the most prevalent eye disease, accounting for 116(12.3%).Patients with diagnosis of Glaucoma were second most prevalent cases with a record of 108(11.5%). However, hyperopia and cortical blindness were least prevalent, accounting for 5(0.53%) respectively.

DISCUSSION

Eye disease is very common in society which could be due to vary numbers of environmental and genetic factors. Patterns of eye disorders vary in different parts of the world as influenced by racial, geographic, socioeconomic and cultural factors.
In this present study, the prevalence of eye diseases was evaluated in Ughelli central hospital. Results from this present study showed that from a total of 940 case files that were examined, eye diseases were more prevalent among females, accounting for 504(53.6%)compared with males that accounted for 436(46.4%).Prevalence according to marital status showed that married individuals had a higher prevalence of ocular disease. Also, prevalence according to occupation showed that the category of Students/pupils showed a higher prevalence of eye diseases followed by self-employed/business personnel and traders.

The pattern of eye disease prevalence seen in Ughelli central hospital was in the following order: Cataract 12.34%, Glaucoma 11.49%, Allergic conjunctivitis 10.11%,Amblyopia 9.79%, Presbyopia 8.98%,bacterial conjunctivitis 8.83%, Foreign body 8.10%, Corneal Abrasion 6.06%, pterygium 5.96%, Bilateral optic neuritis 3.09%, Astigmatism 2.87%, Age-related macular degeneration 2.45%, Anisometropia 2.13%, Ecchymosis 2.02%, Anterior Uveitis 1.49%, Chalazion 1.28%, Cortical Blindness1.28%, Dry Eye1.06%, myopia0.85%, Hyperopia 0.53%.The observations of present research is in agreement with previous studies of Goddey *et al*., (2001) who reported the prevalence to be cataract 7.4%, glaucoma 3.7%, optic atrophy 0.6% and uveitis 18 (5.5%) in Aniocha North local government area of Delta State, Nigeria; Patrick-Ferife *et al*., (2005) who reported Glaucoma as presumed to be cause of blindness in Ozoro, a rural town of Delta State; Wokoma and Ichenwo, (2011) who reported Glaucoma (19.4%); Cataract (11.1%); allergic conjunctivitis (17.5%), and optic atrophy (5.6%), were the most frequent ophthalmologic disorders encountered in Ogbodo rural community rivers state; Monsudi *et al*., (2015) reported the predominant ocular diseases to be cataract (32.3%), glaucoma (18.3%), and refractive error (17.9%).

Refractive error could have been reported to be 16.17%(astigmatism 2.87%;myopia 0.85%; hyperopia 0.53% and amblyopia9.79%) if amblyopic cases presented early to the hospital. Therefore, advocacy policy should be put in place to present avoidable blindness.

Current study observed that the pattern of eye diseases observed in this study is similar with that found in other studies in Nigeria and other developing countries. This may be due to similar environmental conditions, weather and climatic influences andthe same level of eye health care availability in these regions.

CONCLUSION

This study concludes that the commonest eye diseases found in Ughelli clan are Cataract (12.34%) and Glaucoma (11.49%). Amblyopia, which is lazy eye was 9.79% and glaucoma, an irreversible condition, was second most prevalent. The eye diseases were more prevalent among females, accounting for 504(53.6%) compared with males that accounted for 436(46.4%).The present study concluded that advocacy on eye health should be prioritized to prevent avoidable blindness.

Recommendations

This study hereby recommends that more studies with a broader scope of study should be carried out to evaluate the prevalence of eye diseases in a particular region. Furthermore, the eye health care services should put preventive and treatment measures in place against the common eye diseases in Ughelli clan as observed in this study.

REFERENCES

Adenuga, O.O., and Oluyinka, J.S. (2012). Pattern of eye diseases in an air force hospital in Nigeria. *Pak J Ophthalmol*;28(3):144-148.

Ajaiyeoba, A.I., and Fasina, F.O. (2003). The prevalence and cause of blindness and low vision in Ogun state, Nigeria. *Afr. J. Biomed Res.* 6(2):63-67.

Cheng, K.P., Biglan, A.W., and Hiles, A.H (2007). Ophthalmology In: Zitelli B.J, Davis H.W Ed. Atlas of Pediatric Physical Diagnosis, 3rd ed. Mosby, Inc. St. Louis;19:563-566.

Chukwuka, I.O., Pedro-Egbe C.N., Chibuike, S.E., Sotonibi, A. H., and Onua, A.A. (2019). Pattern of Eye Disorders at the Ophthalmology Clinic of a Tertiary Health Facility in the Niger-delta Region: The Implications for Preventive Ophthalmology Research: *An International J.;* 10(1): 1-5.

Dain, S.J. (2004). Clinical color vision test. *Clin Exp Optom*; 87:276-293.

Dandana, R., Dandona, L., Srinivas, M., Sahare, P., Narsanah, S., Munoz, S., Pokharel, G.P., and Ellwein, L.B. (2002). Refractive Error in Children in a rural population in India. *Investigative Ophthalmology and Visual Science*; 43:615-622.

Erlich, M.I., Reineke, R.D., and Simons, K. (2006). Pre-school vision screening for amblyopia and strabismus; programs, methods and guidelines. *Surv Ophthalmol*; 28:145-163.

Goddey, N.O., Oladokun, O.A., Andy, E., and Emmanuel,O. (2001). Eye lesions and onchocerciasis in a rural farm settlement in Delta State, Nigeria. *J Commun Dis*;33(3):185-191.

Gupta, V. B., Rajagopala, M., and Ravishankar, B. (2014). Etiopathogenesis of cataract: an appraisal. *Indian J. Ophthalmol.* 62, 103–110.

Haddad, N. M. N., Sun, J. K., Abujaber, S., Schlossman, D. K. and Silva, P. S (2014). Cataract surgery and its complications in diabetic patients. *Semin. Ophthalmol.* 29, 329–337.

Hassan, M.B., Olowookere, S.A., Adeleke, N.A., Akinleye, C.A., and Adepoju, E.G (2013). Patterns of presentations at a free eye clinic in an urban state hospital. *Niger J Clin Pract*; 16:145-148

Kenneth, L.L. (2017). Eye Diseases in Akon Payan South Sudan". *Indian Journal of Ophthalmology* 5.3 (2017): 27-22.

Lakho, K.A., Mohamed-Ali, A.B (2015). Pattern of eye diseases at tertiary eye hospital in Sudan (Makah Eye Hospital, Khartoum). *Albasar Int J Ophthalmol*; 3:15-8.

Louis, P., Abiose, A., Ffytche, T., Duerkson, R., Taylor, H., Faal, H., Gullapali, R., Kocur, I., and Resnikoff, S. (2004). Vision 2020 The Right to Sight. A global initiative to eliminate avoidable blindness. *Arch Ophthalmol*;122: 615-620.

Monsudi, K.F., Saka, E.S., and Azonobi, R.I (2015). Pattern of eye diseases present at a free outreach in a rural community in Northwestern Nigeria. *Sudan Med Monit*; 10:113-116.

Murad, M.A., Alam, M.S., and Kabir, M.H. (2007). Pattern of eye diseases in a tertiary hospital in a suburban area: A retrospective study. *The ORION Medical Journal*; 28:492-494.

Ogwurike, S., and Pam, V. (2004). Pattern of eye diseases in Kaduna State - A rural community outreach experience. *Nigerian Journal of Ophthalmology*; 12:1-5.

Ohwin, P.E. (2021). Teacher's knowledge, awareness and perception of primary school pupil's eye health; implications for eye health policy in DELSU demonstration staff primary school. *Nig. Research. J. Clinical Research*.; 3(6):212-219.

Ohwin, P.E., Abadom, E.G., Nwabuoku, U.S., Emurotu, E, and Beteren I.G. (2023). Retrospective study of the pattern of eye disorders among patients in Delta State University Teaching Hospital, Oghara. Carlabar J. Health Sci.; 7(1): 29-34.

Ono, K., Hiratsuka, Y. and Murakami, A. (2010). Global inequality in eye health: country-level analysis from the Global Burden of Disease Study. *Am. J. Public Health* 100, 1784–1788.

Osaguona, V.B., Osho, F.O., Olowolayemo, M.U., Uhumwangho, O.M., Osahon, A.I., and Igbinosa, L.O (2017). Is there any change in spectrum of eye disorders over the past 3 years at a screening health facility in SouthSouth Nigeria?. *Port Harcourt Med J*;11:6-9.

Osaguona, V.B., Ukponmwan, C.U., Kayoma, D.H., and Okojie, O.H (2012). Ocular health status of patients seen at the screening centre of the University of Benin Teaching Hospital, Benin City, Nigeria –A preliminary report. *J Med Biomed Res*; 11:44-50.