

Blindness and Visual Impairment in Adults Aged 50 years and Older in Ndele, A Rural Community In Rivers State, Nigeria

Komolafe, RD¹, Pedro-Egbe CN², Awoyesuku EA² and DR Aprioku IN¹

¹*Braithwaite Memorial Specialist Hospital, Rivers State.*

²*University of Port Harcourt Teaching Hospital, Rivers State.*

Corresponding author: *Komolafe, R.D. Email: drkomolafer@yahoo.com; drkomolafer@gmail.com*

Background: Ageing is described as a lifelong process of progressive changes in psychological, biological and social structure of a person which no medical or surgical intervention can reverse or stop.¹ An increasing ageing population is of importance in developing countries such as Nigeria where life expectancy has increased from 48 years to 52 years currently.² An increase in the ageing population implies an increase in dependency ratio, decline in the work-age population and increase in chronic illness and blindness from age related causes. The result of surveys on the prevalence of blindness and low vision in several African countries such as Uganda,³Tanzania⁴ and Nigeria⁵ also show higher prevalence with increasing age. Several community-based^{6,7} and hospital-based studies^{8,9} have highlighted the causes of blindness and low vision in Nigeria as well as a rise in prevalence and incidence with increasing age; however, only few have focused primarily on the elderly. The aim of this study was to determine the prevalence and common causes of blindness and visual impairment among adults aged 50 years and older in Ndele community, Rivers State, Nigeria.

Methods: The study was a population based cross-sectional descriptive study of adults aged 50 years and above in Ndele, Rivers State, Nigeria conducted between February 2014 and April 2014. Study participants were selected randomly using probability proportion to size of the six settlements in Ndele community. A structured interviewer-administered questionnaire was used to extract demographic data; and medical and ocular history from each participant. Subsequently, participants had general and ocular examinations including visual acuity, anterior and posterior segments examination, intra-ocular pressure measurement, and fundus photography.

Results: A total of 475 persons constituted the study population. There were 142 males and 333 females giving a male: female ratio of about 1: 2.3. The mean age of subjects was 59.1± 8.3 years (range of 50-95 years). The major causes of visual impairment in the better eye were cataract, uncorrected refractive errors, pterygium, and glaucoma. Unilateral blindness was noted in twenty-one respondents (4.4%) and commonly resulted from cataract (2.7%), glaucoma (1.1%) and cornea opacity (0.4%) while cataract (1.1%) and glaucoma (0.6%) resulted in bilateral blindness in eight respondents-giving a prevalence of 1.7%. Causes of avoidable blindness in the study participants were: cataract, glaucoma and corneal opacity.

Discussion: Pattern of eye diseases in adults aged 50 years and older. Refractive error, cataract, glaucoma and pterygium were the most common ocular diseases among adults aged 50 years and older in Ndele community, Rivers State.

Table 1: Age and sex distribution of study population

Age groups/Genders	Male n (%)	Female n(%)	Total n(%)
Years			
50-59	83(58.5)	193(58.0)	276 (58.1)
60-69	39(27.5)	91(27.3)	130 (27.4)
70-79	17(12.0)	37(11.1)	54 (11.4)
≥80	3(2.0)	12(3.6)	15 (3.1)
Total	142 (100.0)	333 (100.0)	475 (100.0)

Fishers exact chi-square test ($X^2= 0.665, df =3, p\text{-value- } 0.891$)

Table 2: Pattern of ocular diseases in different age groups

Ocular diseases	50-59 n= 276 n(%)	60-69 n=130 n(%)	70-79 n=54 n(%)	≥80 n=15 n(%)	Total n
Refractive Error	226(81.9)	61(46.9)	23(42.6)	-	310
Cataract	60(21.7)	94(72.3)	43(79.6)	12(80.0)	209
Glaucoma	32(11.6)	27(20.8)	24(44.4)	8(53.3)	92
Conjunctival Diseases	23(8.3)	28(21.5)	15(27.8)	3(20.0)	69
Dry Eye Syndrome	12(4.3)	25(19.2)	8(14.8)	-	45
Diabetic Retinopathy	3(1.1)	12(9.2)	7(13.0)	1(6.7)	23
Corneal Diseases	5(1.8)	12(9.2)	4(7.4)	-	21
Lid Diseases	4(1.4)	3(2.3)	2(3.7)	2(13.3)	11
ARM	1(0.4)	1(0.8)	2(3.7)	1(6.7)	5
Uveitis	4(1.4)	-	-	-	4
Retinal vein Occlusion	-	3(2.3)	-	-	3
Macular Hole	-	-	1(1.9)	1(6.7)	2
Optic Atrophy	-	1(0.8)	1(1.9)	-	2

n (%) percentage of total population at different age groups

Cataract was the most common cause of visual impairment as well as monocular and binocular blindness among adults aged 50 years and older in Ndele. Mathenge *et al*¹⁰ and Habiyakire *et al*⁴ also reported cataract as the leading cause of visual impairment and blindness in adults aged 50 years and older in Kenya and Tanzania respectively. Ocansey *et al*¹¹ had similar report in adults aged 60 years and older in Ghana and the Nigerian National Blindness and Visual Impairment Survey of adults aged 40 years and older corroborated this also.⁵

The findings of this study suggest causes of visual impairment in adults aged 50 years and older in Ndele are treatable or preventable and further buttress the need to eliminate avoidable blindness in line with the vision 2020 initiative of the right to sight.

Limitation of study: Language barrier: Majority of participants communicated only with Ikwerre language which reduced the pace of the study.

References

1. Ikoro N. The ageing eye" functional changes from cradle to gray: A review. *J Niger Optom Assoc* 2011; 13.
2. WHO Nigeria: www.who.int/countries/nga/en. Accessed 1st January, 2015.
3. Kawuma M. Eye diseases and blindness in Adjumani refugee settlement camps, Uganda. *East Afr Med J* 2000; 77: 580-582.
4. Habiyakire C, Kabona G, Courtright P, Lewallen S. Rapid assessment of avoidable blindness and cataract surgical services in Kilimanjaro region, Tanzania. *Ophthalmic Epidemiol* 2010;17: 90-94.
5. Dineen B, Gilbert CE, Rabiou M, Kyari F, Mahdi AM, Abubakar T, *et al*. The Nigerian national blindness and visual impairment survey: Rationale, objectives and detailed methodology. *BMC Ophthalmol* 2008; 8: 17.
6. Caleb M, Perpetue O, Olukorede A, Lohdip V and Amos N. Prevalence and Causes of Blindness and Visual Impairment in Plateau State, Nigeria. *TAF Prev Med Bull* 2010; 9: 401-406.
7. Pedro-Egbe C, Chukwukah I, Babatunde S, Umeh R. Blindness and visual impairment in the Niger Delta: A study of Ahoada East Local Government, Rivers State, Nigeria. *Port Harcourt Med J* 2007;1: 56-61.
8. Nwosu S, Onyekwe L. Ocular Problems of the Elderly in Onitsha, Nigeria. *Niger. J. Clin. Pract.* 2005; 5: 123-126.
9. Abdulraheem IS, Adepoju FG, Salaudeen AG, Akanbi AA. Pattern of Eye Problems of the Elderly in a Nigerian Tertiary Health Institution. *Niger Med Pract* 2008; 51: 29-32.
10. Mathenge W, Kuper H, Limburg H, Polack S, Onyang O, Nyaga G, *et al*. Rapid assessment of avoidable blindness in Nakuru district, Kenya. *Ophthalmology* 2007; 114: 599-605
11. Ocansey S, Awusabo-Asare K, Kumi-Kyereme A, Boadi-Kusi SB. Ocular Health of the Emerging Elderly Population in Ghana: Evidence from a peri-urban Community. *Heal Aging Clin Care Elder*; 2013: 21-31