

CHARACTERISTICS OF THE NIGERIAN LOW VISION POPULATION

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ABSTRACT

There are no studies available to describe the epidemiology and causes of low vision in Nigeria and Africa. A retrospective record review was conducted of low vision patients seen at the 2-weeks-per-month low vision clinic carried out at ECWA Eye hospital, Kano, by the Low VISION PROGRAMME between the periods 1999 to 2004. Records of 1200 patients, age range, 4 month - 92 years seen within the period was reviewed. 70.3% were males, 11.3% were between age range 4 months-14 years; 73.2%, 15-65yrs; 12.8%; 65 yrs and above. The major causes of low vision are glaucoma, 19.8%; followed by aphakia/unoperatable cataract 28.9% and maculopathy 8.8%. Majority of the patients (34%) had their best corrected Visual Acuity in the range of $<6/18$ ó $6/60$. 1515 optical aids were prescribed. 40.1% were refractive corrections, 36.4% magnifiers while 23.4% were telescopes. 88.3% of the patients seen were advised to cope with their education/employment. 7.6% were referred for Braille lessons. Information on characteristics of the Nigerian low vision population would help in policy formulation and funds allocation for low vision rehabilitation particularly in developing countries.

KEYWORDS: Low vision, Magnifiers, Telescopes, Braille.

INTRODUCTION

The World Health organization (WHO) has recently estimated in 2002, that there were 161 million visually impaired persons worldwide the vast majority of whom are in developing countries (report of Oslo workshop, 2004)¹. Low vision services, when made available to people with low vision, they can realize as much visual function as possible and enjoy the same quality of life as those with normal eyesight. However, low vision services are hardly available in developing countries; therefore, most people with low vision may exit eye care institutions without any form of low vision services. Part of the reason for non-availability of low vision services is the lack of/or inadequate research to report on the epidemiology, demography and prevalence figures for low vision. Furthermore, population-based studies to reveal economic and social impact of low vision in our society are necessary for advocacy, funding and policy formation.

Akpalaba² reported on age and etiologic characteristics of low vision in Benin City, Nigeria. There is need for such studies all over the country and in developing countries where low vision is more prevalent. There are research reports on low vision in some parts of Nigeria and Africa. Ejukonemu³ in reporting on the magnitude of low

vision and refractive errors among Braille reading children in Nigeria identified corneal, lens problems and glaucoma as causes of visual impairment. Susan⁴ also reported on the causes of low vision and blindness in East Africa and listed òwhole globeö óretina and corneal/phthisis as major cause in that order. These reports are based on anatomical site of impairment and not etiologic diagnosis of the causes of low vision.

There are other research reports on the causes of blindness in Africa. Oliveira⁵ reported cataract, glaucoma and onchocerciasis as major causes of blindness in a Toglese Hospital. Gilbert⁶ studied avoidable causes of blindness in sub-Sahara Africa and reported corneal, retinal and optic nerve problems in that order. Harrell, et al⁷ did a clinic-based study in Kenya and reported cataract, glaucoma and retinal diseases as major causes of bilateral blindness. These studies report on causes of blindness and therefore opened up the challenge for studies into causes of low vision.

This study is a retrospective record review of the 1200 low vision patients seen between the periods 1999-2004 in the 2 weeks- per-month low vision clinic at ECWA Eye Hospital Kano, Nigeria. The Low vision Programme runs this clinic-a National Programme supported by Chistoffel Blinden-Mission (CBM) International in Nigeria.

It described the characteristics of the Nigerian low vision population detailing on best corrected acuities, age and sex distribution, etiologic causes of low vision, types of optical aids prescribed and types of rehabilitation services offered. It is hoped that information obtained would help in policy formulation and funds allocation for low vision services particularly in developing countries.

METHODS

Records of 1200 low vision patients seen during the 2 weeks per-month low vision clinic at ECWA Eye Hospital Kano were reviewed. Consultant ophthalmologists and optometrists saw all patients before referral to the low vision clinic. The low vision clinic is run by the low vision programmes, which is supported by CBM International and in partnership with ECWA Eye Hospital Kano. The low vision therapist who runs the low vision programme carried out low vision assessment. Low vision assessment constituted low vision acuity testing and refraction, magnification assessment with telescope and magnification assessment with telescopes and magnifiers. Low vision was defined according to the WHO working definition. Patients who benefited from optical aids were trained on the use of such aids employing non-optical aids when necessary. Low vision aids dispensing was based on the decision of the Low vision therapist, the patient and/or parent.

RESULTS

Of the 1200 low vision patients seen, 70.30% were males, 29.3% female. Age range was 4 months-92 years, 11.3% were in the age range, 4 month-14 years; 73.2%, 15-64 years and 12.88%, 65 years and above; 2.7% had their ages unspecified.

34% of the patients had best corrected visual acuity between $<6/18$ - $6/60$, 13.2% have unspecified and/or unquantifiable visual acuity (See figure 1). The major causes of low vision are glaucoma 19.8%, aphakia/unoperatable cataract, 8.9%, maculopathy, 8.8%. 12.13% had unspecified diagnosis (see figure 2).

Figure 3 shows optical aids uptake. A total of 1515 optical aids were prescribed, 40.1% were refractive corrections, 36.4% were magnifiers while 23.4% were telescope. Figure 4 illustrates the telescopic powers prescribed. The telescopic powers ranged from X2-X8. The major power prescribed is X4, 42.3%. In figure 5, it was shown

that 36.4% of optical aids prescribed were magnifiers. Powers ranged between +4D-+50D, +4D-+8D magnifiers were the most accepted and most prescribed.

Figure 6 illustrates the final rehabilitation services offered 4.1% were referred for Braille lessons either in the School for the Blind or Centers for the visually impaired. This represents children and literate adventitiously impaired. Patients without formal education or training were referred for vocational (Job) training and placement and this represents 7.6%. 88.3% were certified to cope in school and/or employment with the aid of low vision devices and were therefore un-referred.

DISCUSSION

Records of 1200 low vision patients seen between 1999 and 2004 have been presented. It is shown that the age group, 15-64 years were most affected and this represents the working/independent population. This reveals that there is huge economic impact of low vision in Nigeria. The study shows that glaucoma is a major cause of low vision followed by maculopathy and crystalline lens related problems (aphakia/unoperatable cataract). Cataract surgical rate increases in most parts of world due to effective vision 2020 campaign has seen the emergence of glaucoma as the major cause of visual impairment. It is shown that of the 1515 optical aids prescribed, 40% were refractive corrections, 36.4% magnifiers and that +4-+8D magnifiers were the most prescribed. It thus reveals that refraction and high plus add may be all that the low vision patient need. It is shown that 88% of the low vision population was advised to cope with their schooling and/or employment. The effectiveness of low vision services is thus revealed. These patients may have either dropped out of school or go into premature retirement. This is a good point of advocacy for low vision services. Further study is needed to quantify the economic value of low vision services and to effectively measure the quality of life outcomes. This study has shown that in low vision rehabilitation, no case is hopeless since patients can be made to live a quality life either through visual or tactile information. Information obtained in this study would be useful in planning for low vision programmes and for funds allocation for low vision services, particularly in developing countries where the services may be at early stages or non-existent.

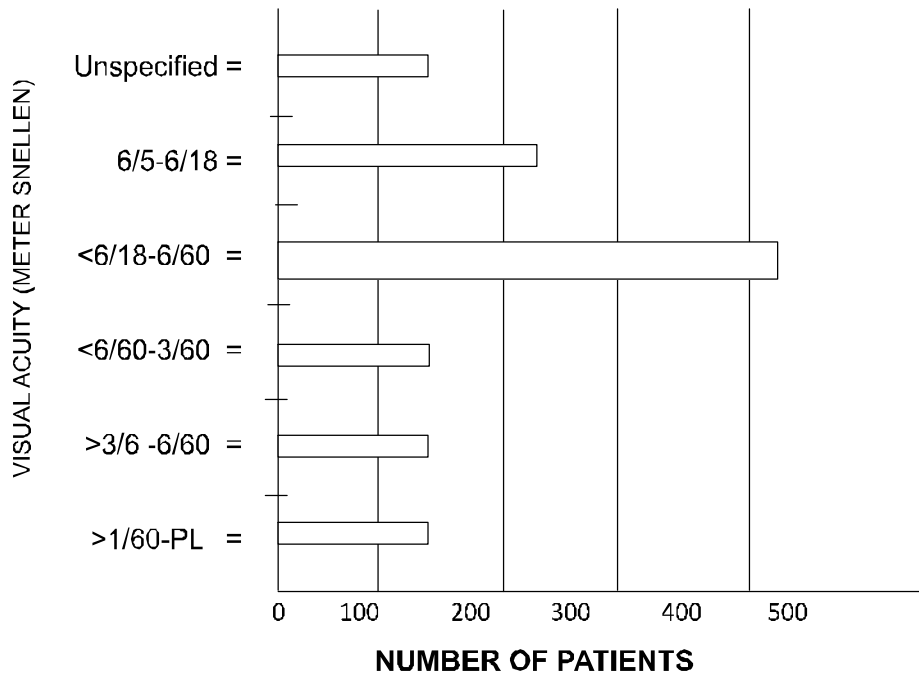


FIG1: BEST CORRECTED DISTANT ACUITY

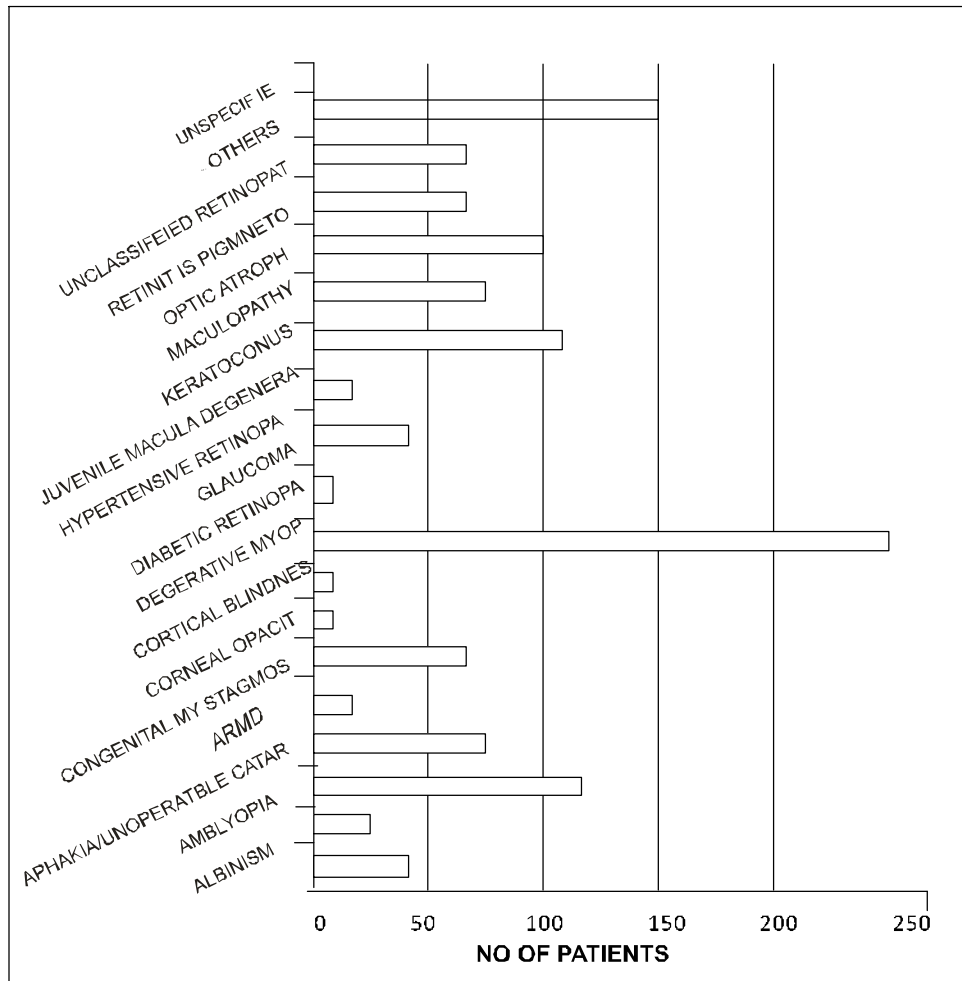


FIGURE 2: CAUSES OF LOW VISION

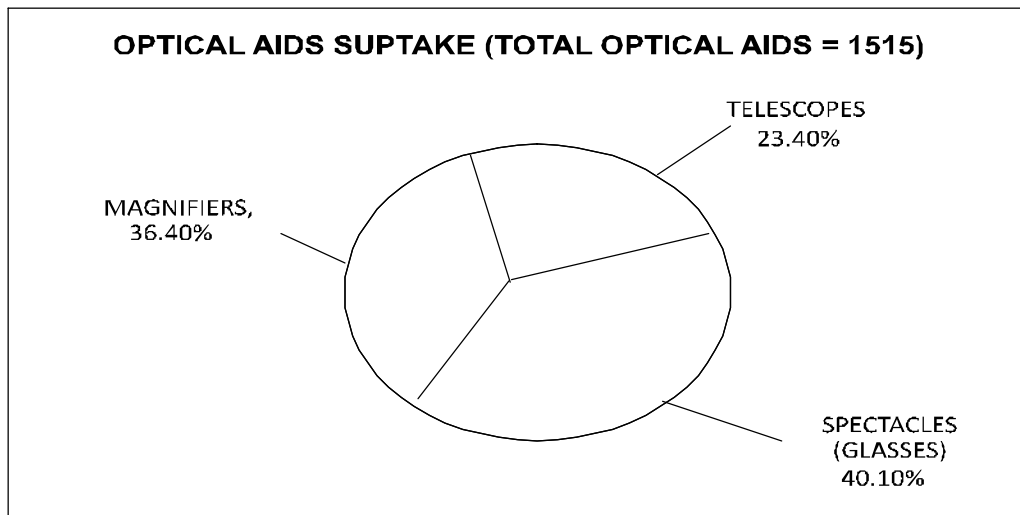


FIGURE 3: OPTICAL AIDS UPTAKES (TOTAL OPTICAL =1515)

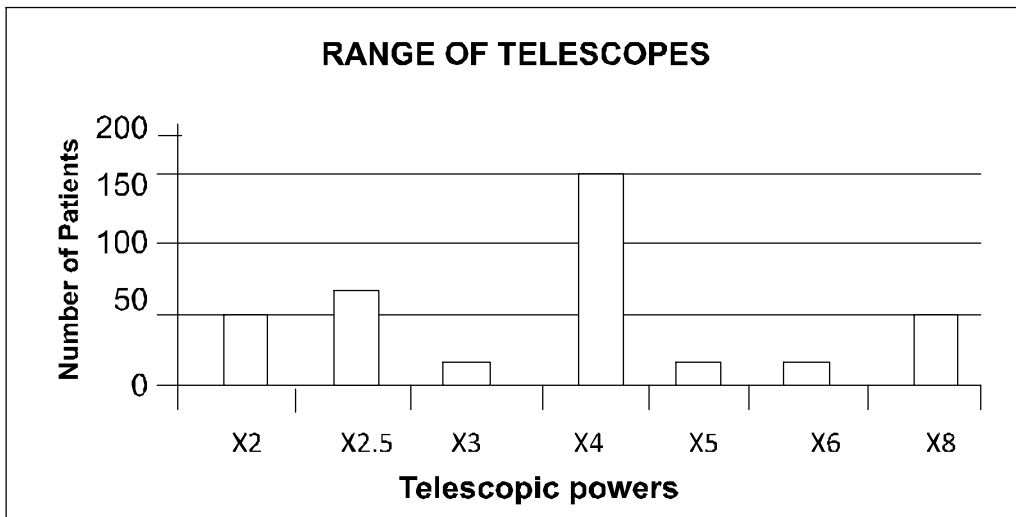


FIGURE 4: RANGE OF TELESCOPES

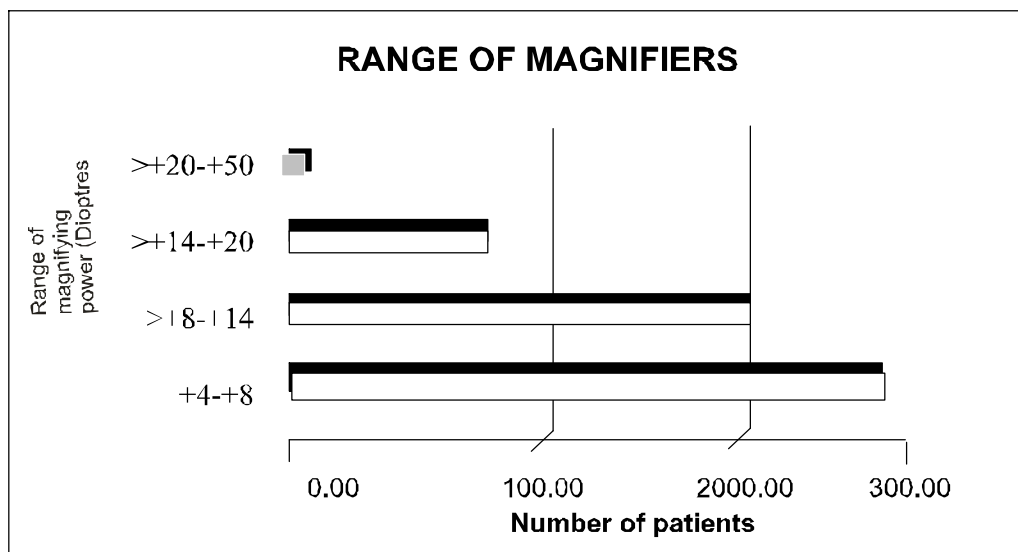


FIGURE 5: RANGE OF MAGNIFIERS

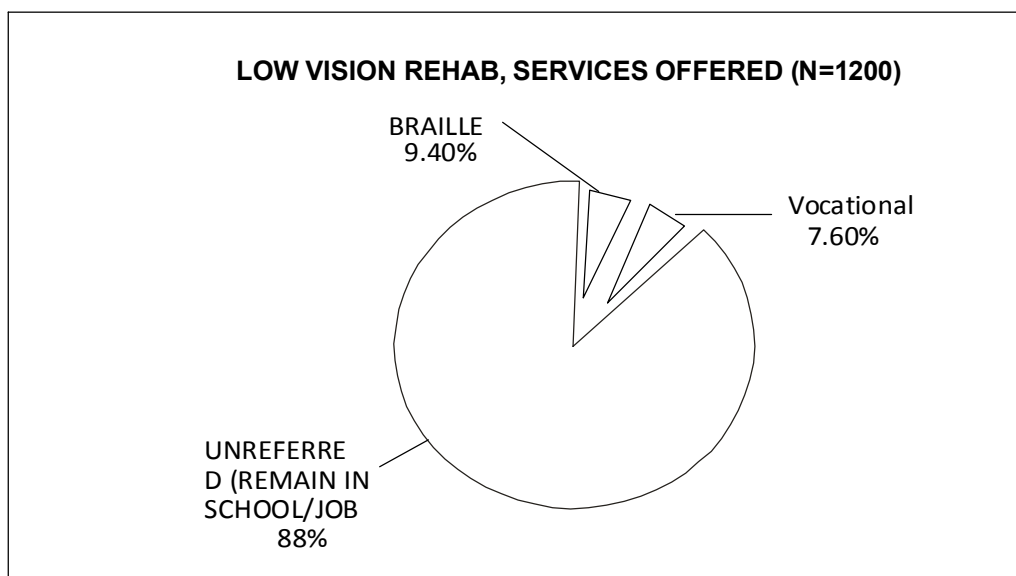


FIGURE 6: LOW VISION RAHAB SERVICES OFFERED (n=1200)

REFERENCES

1. Oslo Workshop (2004): Towards a reduction in the global impact of low vision, ISLRR.
2. Akpalaba, R. E. U. (2002): Age and etiologic characteristics of low vision in Benin City, Nigeria. Unpublished research report.
3. Ejukonemu, B. O. M. ((2001): Magnitude of refractive errors and low vision among Braille-reading children in Nigeria. VIR, 3(1): 35.
4. Susan, B. (2004): Causes of Low vision in East Africa. Research report.
5. De Oliveira, E. (1997): Causes of blindness in a Togolese Hospital. J. Comm. Eye Hlth, 14(40): 32.
6. Gilbert C. (2001): Avoidable causes of Blindness in children in sub-Sahara Africa. J. Comm. Eye Hlth.
7. Harrell, J., Larson, N. D., Menza, E. and Mobit, A. (2001): A clinic-based survey of blindness in Kenya. J. Comm. Eye Hlth, 14(40):68-9.