Primary School Vision Screening Involving Teachers in Nampula, Mozambique

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Primary school vision screening involving teachers in Nampula, Mozambique.

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Introduction
There is no plan for a national child eye care programme or existing human resource infrastructure to address the immediate challenge of child eye health in Mozambique. Furthermore, the prevalence and incidence of refractive error, visual impairment (VI) and child blindness (CB) in Mozambique is unknown. VI and CB have devastating personal, developmental, economic and social implications for the child, the family, the community and indeed, the nation. 

Aim
To design, implement and evaluate a school based pediatriic vision screening service, to identify those in need of eye care services, among Mozambique’s 11,561,000 children. 

Materials and methods
Primary School Screening took place in three schools (urban, suburban and semi-rural) in Nampula, Mozambique in September 2010 and March 2011. Selection of children for screening was random with a preference given to children with obvious eye abnormalities or children identified by teachers as having an eye problem or poor vision. Children’s vision was screened by an optometry student, ophthalmomter or teacher with LogMAR Illiterate E letter chart at 4 Meters. Other materials included a tape measure, black out sheets, record charts.

Results
770 children (408 male, 361 female, one sex not recorded, ranging from 5 – 18 years were screened in total. The mean (±SD) age was 11.5 (± 7) years.

The ocular abnormality detection rate was 10.65%, comprising 7.40% of children who required spectacle provision, and 3.25%, who required referral to the Ophthalmology Unit.

Conclusions
The prevalence of significant and uncorrected refractive error and other undiagnosed ocular abnormalities among the school-going population in Nampula, would support the concept of development of a low cost, school based vision and ocular health screening project.

Refractive Error was present among this population but none of the children observed wore spectacles.

Teachers appear to have an adequate level of education and interest to undertake vision screening in children. The ideal teacher profile for Vision Officers within schools is trained teachers who can be taught the basics of vision screening and eye health through through their existing studies.

Teachers are suitably placed in the community to become advocates for eyecare and can encourage students to become aware of eye conditions among their peers and in the community.

This study will inform a regional pilot teacher screening project for Nampula, which will include the addition of “Vision Screening” to teacher training modules at Universidade Pedagógica, Nampula, as part of a plan to develop a national child eye care programme for Mozambique.

References

Acknowledgments
Optometry Department of Unilario and partners of the Mozambique Eyecare Project mentioned below.

For further information
Please contact ophthelit@gmail.com. More information on this and related projects can be obtained at
www.mozeyecare.org

Figure 1. Learning in the shade and two classrooms in School C, Nampula, Mozambique

Figure 2. Screening Chart, Optometrist screening sheet, Teacher screening sheet

Figure 3. Schematic of screening process

Figure 4. School children at various stages in the screening process

Figure 5. Pie Chart of the breakdown of the Refractive errors found among school children

Figure 6. Bar Chart with the breakdown of ocular abnormalities detected

The distribution of myopia, hyperopia and astigmatism among children provided spectacles was 28.57%, 12.5% and 58.93% respectively, and overall prevalence in the study sample was 2.21%, 0.91% and 4.29% respectively.