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

Childhood Blindness and Uncorrected Refractive Error are two of the major priorities of the Vision 2020 initiative.1 Preauricular Eye Health was prioritised in the last national ophthalmology plan for Mozambique. Teachers have identified visual impairment in school children and distributing Snellen charts were among the planned activities.2 There is no current plan for a national child eye care programme or existing human resource infrastructure to address the immediate challenge of child eye health in Mozambique. Some children with eye health screening programmes have been carried out sporadically in some provinces, no data from these screenings has been published yet. Furthermore, the prevalence and incidence of refractive error, visual impairment and child blindness in Mozambique is unknown. Visual impairment and blindness in children has devastating personal, developmental, social and economic implications for the child, the family, the community and indeed, the nation.3,4 According to Balham et al annual eye health screening in schools is a cost effective method of vision impairment intervention.5

Aims

This study aims to design, implement and evaluate a simple vision screening not performed by teachers, to identify those in need of eye health services, among Mozambican’s children (estimated at over 10 million)6.

Materials and methods

Setting and Participants

Primary School Screening took place in three schools (urban, suburban and semi-rural) in Nampula, Mozambique in September 2010 (Study 1), March 2011 (Study 2) and March 2012 (Study 3). Due to the volume of children in each school (over 1000) and lack of resources, children with obvious eye abnormalities or children identified as having eye problems or poor vision were sought out and underwent screening along with a random selection of children. Teachers were selected to perform screening based on willingness to participate.

Study Procedures

Teachers were given a ‘very brief’ tutorial on how to perform vision screening with the chart. The child then performed the test monocularly on the child and indicated if the child could see with the right eye and left eye (blue arrow: Figure 2). The child then underwent the full screening process (green arrow: Figure 2). The results were recorded on the charts as seen in figure 1.

Anchors

1. Sensitivity of the screening tool
2. Specificity of the screening tool
3. Cost
4. Time

Results

During Study 2 and 3, 206 children had the vision screening performed by 24 teachers who were eager to participate in the study. 17 children had the screening performed by 2 teachers. Of the 223 children screened the teachers identified 174 passes and 49 fails. On further screening (as outlined in figure 2) 200 of these children were normal, 9 required refraction and 14 required referral for ophthalmological assessment. Further analysis of these results will be done at a later date.

Conclusions

These studies found that there is a cohort of students attending school in Nampula who are in need of eye care service provision. Refractive Error was present among this population tested in these studies but none of the children observed wore spectacles. Astigmatism was prioritised in the last national ophthalmology plan for Mozambique; training teachers to identify vision impairment in school children and distributing Snellen charts were among the planned activities.3, 4 There is no current plan for a national child eye care programme or existing human resource infrastructure to address the immediate challenge of child eye health in Mozambique. Some child health screening officers within schools is trainee teachers who can be taught the basics of vision screening and eye health through their existing studies. From interviews carried out with school principals, department of health and education and teacher training institutes there seems to be no support for development of a low cost, school based vision and ocular health screening project. 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 in the community.

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References


Acknowledgments

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

For further information

Please contact aoife.phelan@dit.ie. More information on this and related projects can be obtained at www.mceseyat.org.