The South African (SA) government pledged to ‘Put Children First’ by becoming a signatory to the Convention on the Rights of the Child, and by according children special recognition in the Bill of Rights of the SA Constitution, promulgated in 1996. This commitment requires that children’s rights are upheld and that adequate provision is made for them to reach their full potential in every aspect of their lives.

Since the right to optimal health and development is especially significant during the early school years, the National School Health Policy of 2002 stipulates that primary school learners should have their vision, speech, hearing, mental health, teeth, nutrition and development screened annually. In reality, especially in under-resourced areas such as the Eastern Cape, many learners with disabilities are not identified, with profound consequences for their ability to learn.

In Ibadan, Nigeria, a pilot study trained teachers in visual acuity (VA) testing and eye care. This project concluded that teachers can become effective primary care workers, but that school authorities must organise continuing education to prevent deterioration in knowledge and interest in school health.

The Department of Optometry and Visual Science at City University, London, UK conducted a study using a computer-based programme for vision screening in schools, a method which the study found to be efficient, sensitive and specific.

The School of Public Health at the University of Texas, USA, conducted a major literature review to determine the social, economic and political barriers that contribute to the underuse of vision screening among preschool-aged children. The conclusion was that low-income, minority and uninsured families are at high risk of not utilising vision screening. Ignorance remains a major problem at all levels, and improvements in the distribution of information and education are required.

There is currently nothing in the literature regarding training secondary school learners as VA screeners.
Aim
This study tested whether learner-to-learner visual acuity screening would prove effective in the SA setting, using structures already in place in the community.

Method
The involvement of Rotary International in teaching the principles of community service to learners, aged 12 - 18, through local Rotary Interact clubs, provided an ideal platform from which to commence and sustain learner-to-learner visual acuity screening.

The Interact Club at Clarendon Secondary School for Girls in East London was approached to act as the pilot group for screening Grade R learners at the school. The proposal was warmly welcomed by this club, which falls under Arcadia Rotary and whose members aspire to interact with those less fortunate.

Grade 11 Interact learners were trained using course material designed for the project. The course covered social interaction, basic anatomy, physiology, optics, data collection and VA screening using an Illicitrate E Snellen Chart. This chart was selected because many Grade R learners are not yet familiar with identifying and naming basic letters and numbers.

Appropriate permission was obtained from the school authorities, parents and the East London Hospital Complex Ethics Committee. The Interact learners then screened Grade R learners on a day that fitted in with the school curriculum.

Results
Twenty Grade 11 learners were trained in VA screening in a 2-hour session. The following week, in another 2-hour session, 90 Grade R learners were screened. Twenty-seven learners were identified as having reduced VA and were referred for ophthalmic or optometric evaluation. As an added benefit the project taught secondary school learners basic data collection skills, which is one of the modules in their Life Orientation curriculum. The project also created a greater awareness of abnormal VA among learners, teachers and parents, and promoted interaction between secondary and primary school learners.

Discussion
This method of VA screening is cost-effective in terms of time and human resources, relieving teachers or nurses who already have substantial professional work loads. Secondary school learners were trained outside school hours. Grade R learners were screened during school hours.

The material resources used were: school classrooms, Ilicitrate E Snellen Charts, tape measures, tissues (as eye patches), class lists and feedback forms - all readily available and inexpensive.

Through Rotary International, the Interact clubs are an ideal organisation to roll out this initiative and ensure its sustainability and annual application. The next logical step is for the trained pupils to conduct training for Interact clubs in other schools so that they can also undertake VA screening. This would ensure transfer of knowledge and further promote community interaction and resource sharing.

Approximately 8% of a normal test population would be expected to require referral for impaired VA. However, a higher referral figure is to be expected when schools are screened for the first time, reflecting teachers’, parents’ and learners’ lack of awareness of the issue. Referrals are also typically higher from schools serving underprivileged populations of poor socio-economic status.

Use of the Illicitrate E Snellen Chart might also have influenced the high referral figure in this study, by making it harder for Gr R learners to discern the letters, and highlighting laterality difficulties rather than reduced VA. In this context use of the ‘TVOXHA ‘ chart, the letters of which cannot be reversed, might be expected to reduce the number of false negative results.

Conclusion
VA screening is not conducted regularly in SA. When it is, it is usually conducted by an expert from outside the school setting, such as a local optometrist, which means there is often no knowledge transfer and no growth in the community’s knowledge about eye health. This study has shown the benefit of training secondary school learners in basic eye screening, so that potential visual impairment can be attended to early in the learner’s education. The more people trained in basic eye screening, the greater the general community’s awareness of eye abnormalities will be. This will empower the community and allow early identification of visual impairment. We have demonstrated that learner-to-learner visual screening can be successfully undertaken in SA and merits wider application.

References

Further reading


Accepted 8 October 2012.