ISSUES IN PUBLIC HEALTH

'Urban insight': A high level of undiagnosed need reflects limited access to and availability of eye-care services in South Africa

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Findings from an urban community optometry clinic in a poor area of Johannesburg, South Africa (SA), highlighted a high level of undiagnosed need, raising questions concerning access to and availability of eye-care services in SA. It is imperative that we understand vision as a requisite for poverty alleviation, and the need for a public health approach to service delivery.

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Poor vision impairs children's and adults' ability to fulfil their potential for health and productivity. Preventable disabling visual impairment and the overall lack of eye-care services are often both the cause and the result of social, economic and developmental challenges such as poverty, lack of education, inadequate healthcare services and lack of opportunity for people to control or influence their healthcare.[1] Uncorrected visual impairment is often viewed as an issue pertaining to remote rural areas, where access to eye care and corrective eyewear is difficult. However, a research project in a Johannesburg community has highlighted a high level of undiagnosed optometric need, particularly among children, with severely impaired quality of life resulting from undetected refractive error, raising the issue of access to and availability of eye-care services in urban South Africa (SA).

The Health, Environment and Development study

The World Health Organization Collaborating Centre for Urban Health (WHOCCUH) is a partnership of academic, governmental and research institutions. For 8 years the WHOCCUH partnership has been conducting the Health, Environment and Development (HEAD) study in five deprived areas of Johannesburg. In one of these areas, Riverlea, the HEAD study highlighted a number of health issues, including high rates of diabetes.[2] Because of the known high prevalence of correctable visual impairment in diabetics, the Department of Optometry of the University of Johannesburg was requested to supplement the rudimentary, treatment-based response to diabetes at the local clinic with additional optometry, podiatry and environmental health promotion services, as part of student in-service training programmes. Results from the first 6 months of optometry services are reported in Table 1.

Optometry clinic findings

Optometry screening has been offered weekly since February 2010. During the first 6 months of the service, clients' ages ranged from 6 to 84 years, and for 60% it was their first-ever optometry screen. Table 1 sets out the patient profile according to age category, diagnoses and intervention status.

For all the children (n=7), the test represented their first vision examination. All required spectacles and/or referral for further treatment. The vast majority (99.2%) of clients aged ≥40 years required treatment for cataracts or spectacles for near or far vision.

For the first 6 months of the clinic's operation, the intervention requirement rate was 98%. Individuals have described remarkable improvements in quality of life outcomes; for example, a 13-year-old girl who was struggling at school reported a dramatic improvement in her vision, and consequently her school performance, after receiving her first-ever pair of spectacles. An older woman whose visual deterioration had prevented her from sewing reported being able to resume income-generating activities.

Research conducted in other urban areas suggests that the findings in this study are not limited to one community but represent a wider concern.[3] This study suggests that, in addition to lack of services, lack of awareness among parents and teachers may provide an additional barrier to children accessing eye care, even where services are available.

World Health Organization Vision 2020 recommended that all schoolchildren have a simple vision-screening examination service provided through school health programmes.[4] However, the National Vision Screening Programme has been discontinued in many provinces of SA, owing to a lack of resources.[5] Child screening through schools often occurs on an *ad hoc* basis, implemented by non-governmental bodies such as the South African Optometric Association. In the light of budgetary constraints preventing school vision screening programmes by optometrically trained staff, it is crucial that basic sight screening skills be introduced into standard teacher training curricula, in order to raise consciousness of the association between learning difficulties and compromised vision and to prevent the avoidable disabling effects of uncorrected vision. Given the low levels of educational attainment in SA schools, and the implications for

Table 1. Riverlea optometry clinic patient profiles

	Age groups (yrs)			
	0 - 17 (*N*=7) *n* (%)	**18 - 39** (*N*=15) *n* (%)	**≥40** (*N*=129) *n* (%)	**Total** (*N*=151) *n* (%)
Intervention status				
Required intervention	7 (100.0)	13 (86.7)	128 (99.2)	148 (98.0)
Previously screened/received intervention	-	2 (13.3)	58 (45.0)	60 (39.7)
Diagnosis* (among those who required intervention)				
Refractive error	5 (71.4)	10 (66.7)	128 (99.2)	143 (94.7)
Accommodative/binocular disorders	2 (28.6)	-	-	2 (1.3)
Cataract	-	2 (13.3)	11 (8.5)	13 (8.6)
Macula/other pathology	-	2 (13.3)	9 (7.0)	11 (7.3)

*Some patients had multiple diagnoses.

quality of life, it is vital that the issue of children's eyesight be elevated on the national public health and education agendas.

Conclusion

In Riverlea, a poor urban area of Johannesburg, a high level of undiagnosed optometric need was identified. Simple interventions such as provision of spectacles resulted in dramatic improvements in quality of life. Preliminary investigations highlighted limited availability of public sector eye-care services, and high costs of consultations, spectacles and transport.

Cases of uncorrected visual impairment among urban children are of particular concern, the small numbers of children attending the clinic suggesting a lack of awareness of eye-care needs among parents and teachers. Lack of screening among school-age children is the key barrier preventing earlier access to eye care, and poor vision has detrimental impacts on children's learning ability. Similarly, poor vision limits adults' ability to fulfil their potential for health and productivity.

In urban SA there is a need for raised awareness of, and improved access and availability to, eye-care services.

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