

An Innovative Rural Survey: The Experience of SEWA

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Introduction

SEWA Rural, a general development organisation established in 1980 in Gujarat, is engaged in eye care activities in Bharuch and adjoining districts in the southern part of the state. Other activities of the organisation include running a 100-bedded general hospital, a community health programme, training centre, the Vivekananda Technical Training centre and a women's programme. Various innovative approaches have been tried in the area including Comprehensive eye care and Community Eye Health programmes. Bharuch district has a population of 14 lacs and the annual performance of the district is 10,000 cataract surgeries¹ (SEWA rural performs > 5000 cataracts/year including 100 pediatric surgeries).

We approached the Govt. of India with a request to support a survey to estimate the level of blindness in the area. The Govt. immediately agreed with an addition of a component on childhood blindness. This was the first time two surveys would be combined, probably reducing cost and increasing efficiency in the use of human resources also.

The study team was trained at the Regional Institute of Ophthalmology, Ahmedabad in the presence of national survey monitoring agency officials. The actual field work was done between April and June 2005.

This survey provided an opportunity to piggyback childhood blindness on adult cataract blindness as we wanted to generate evidence that was consistent with national figures. Against the national average of 7% refractive errors among school children, we had been finding only 2% refractive errors, and when we analysed the data separately from primary and secondary schools the results were more interesting. Refractive errors were much less common in primary school children than in secondary school children. We hypothesized the differences were due to rural-urban differences on the one hand and age group –on the other. We were trying to find more references in the literature and that was when this survey was suggested by the Government of India.

Our experience in the CEH programme in the Dediapada block showed that children do not use spectacles when they are given the same frames even if it is given free of cost. However, those with a high degree of refractive error were found to be more likely to use glasses probably because of the level of discomfort. We subsequently decided to provide a choice of frames to children even when the glasses are provided free of cost. At the same time, the suggestion from ICEH

is to prescribe only when the myopia is > 1D, hypermetropia > 2D and astigmatism > 0.75D, labeled as “significant refractive error”.

In work done by National Society for Prevention of Blindness, Godhara², prevalence of refractive error among children of Fifth Standard was 2.5% whereas among children in the Ninth Standard it was 9.5%.

The Drishti Project, carried out by Nagari Hospital³, Ahmedabad reported the age of onset of refractive errors among kids in Ahmedabad city as 81% among children between the ages of 9 to 13, 10% among kids <9 years of age and 9% among those >13 years of age.

Findings

The results of the survey are summarized in the two tables.

- A total of 5400 children were examined in the survey.
- The results indicate that presenting VA with available correction is taken as the criterion, the number of blind children with a cut off of 6/60 are 19 but if we take uncorrected PVA, the number is 43.
- In the study conducted at AIIMS, the age group covered was 5 to 15; 46 of the 5950 children screened had a presenting visual acuity <6/60. Thirteen had the baseline visual acuity < 6/60 and 3 had a best corrected visual acuity less than 6/60. So the findings are quite similar⁴.
- Prevalence of high degrees of refractive error in the age group below 9 years is very low.
- Prevalence of refractive error among rural children⁵ is also substantially lower than urban children; 56% of the total refractive errors are among rural kids who comprise 80% of the total registered kids.
- The prevalence of high degrees of refractive errors, whether myopia or hypermetropia is also very low – 59 children out of 5400, which is 1.1% of the total kids.



Refraction of a child being carried out during the Survey

RURAL VS. URBAN DIFFERENCES in the Bharuch Survey

	RURAL			URBAN			TOTAL
	5-9 Yrs.	10-12 Yrs.	13-15 Yrs.	5-9 Yrs.	10-12 Yrs.	13-15 Yrs.	
Hypermetropia							
<1D	10	6	3	8	5	6	38
1.25 – 3 D	1	2	1	1	0	4	9
3.25 – 7 D	3	2	1	0	0	1	7
>7 D	0	1	0	0	1	0	2
TOTAL	14	11	5	9	6	11	56
Myopia							
<1D	41	46	32	14	21	33	187
1.25 – 3 D	10	8	14	9	9	23	73
3.25 – 7 D	0	4	8	1	1	9	23
>7 D	0	3	2	3	4	2	14
TOTAL	51	61	56	27	35	67	297
GRAND TOTAL	65	72	61	36	41	78	353

- The prevalence of hypermetropia goes down with increasing age and that of myopia increases; this is a natural phenomenon that should be expected.
- The prevalence of refractive errors is more among males (54.7%) – this could be due to higher literacy rate among men.
- Of the total 331 children with refractive errors, 65 are using spectacles – which is 19.6%. Almost one out of five children having refractive errors was using glasses at the time of examination.
- Of the 59 children with a high degree of refractive errors, 25 are wearing glasses at the time of examination, which is 42.4% of the total number with high refractive errors. That means, high degrees of refractive errors prompt the children and parents to have the error corrected and use the necessary glasses because of the amount of disability caused by it.
- Interestingly, the correction used overall is much higher among urban children. If all types of refractive errors are considered, the percentage of children using glasses among those with a high degree of refractive errors is not much different in rural and urban areas.

This suggests that high degrees of errors produce so much disability that even rural children and parents get it corrected to an equal extent.

- The average age of prescription of glasses in children is >9 years; this suggests that we need to change the approach of the national programme. We can thus stop screening primary school children.
- At the national conference it was suggested that we need to reconsider the need to screen rural children and school dropouts.
- Similarly it was suggested that the visual acuity cut off of 6/12 should be used instead of 6/9 for school eye screening to ensure that only significant refractive errors are detected, since only those children are likely to use spectacles.

Conclusions

The major findings of the survey can be summarized as below.

- The report calls for a change in the policy of school screening programmes to screen secondary school children (10 to 14 years) and avoid screening primary school children (5 to 9 years). This has also been suggested by an expert from ICEH, London.

- Since children with low degrees of refractive errors are less likely to use the correction and it is not a blinding condition, we can change the visual acuity cut off from 6/9 to 6/18; a study on this aspect was proposed at the Refractive Error workshop conducted under the banner of the VISION 2020 programme in New Delhi in 2005.
- Though not analysed separately, it was observed that refractive errors are less common among school dropouts, so we can avoid screening non school going children. The figures from the developed countries also suggest the same - by the time the children reach their teens, almost 85% of them develop refractive errors.
- Children should be given a choice of designs of frames that they find attractive even if the glasses are provided free but the options should be limited and controlled keeping in view the visual needs.

References

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VISUAL IMPAIRMENT

VISUAL ACUITY	BILATERAL			UNILATERAL		
	PVA without using glasses	PVA with using glasses	BCVA	PVA without using glasses	PVA with using glasses	BCVA
<= 3/ 60	15	8	6	11	11	6
<= 6/60	43	19	6	17	17	7
<= 6/18	123	71	13	32	32	16

Management Training and Systems Development for Hospital Administrators/Managers (April 14 - May 24, 2008)

Lions Aravind Institute of Community Ophthalmology (LAICO) - A WHO Collaborating centre, part of Aravind Eye Care System is offering the 16th six weeks Programme on "Management Training and Systems Development for Hospital Administrators/Managers" beginning from April 14 - May 24, 2008.

This course is highly recommended for those who would like to increase the patient load of their hospital, improve the financial viability as well as quality of patient care.

The entire course is sub-divided into various structured modules. The first 4 weeks of the course the participants will have the opportunity to undergo lectures on various topics from various experts at LAICO-AECS & few other Guest Faculties. Besides lectures the teaching methodology also incorporates Group exercises, Case study discussions, Brainstorming, Role Plays, Case Analysis, and Experience sharing sessions covering a wide range of topics in healthcare administration.

In the last two weeks the participants will be posted in two different functional departments for the practical

training of their choice to get hands on experience & also to deliver a short term project. The Participants are expected to prepare a set of strategies for all the modules out of their learning & interactions with the faculties which is applicable to their situation which is the key factor for the success of the course.

For more details:

<http://www.aravind.org/education/hospadmin.asp>

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