

Refractive Errors In The Mentally Handicapped

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It was felt that mentally handicapped children were neglected regarding their refractive errors. Correction of these errors should be beneficial to their development. All students of a local institute for mentally handicapped were examined and refracted. Thirty two percent were found to have refractive errors of which only one third were already corrected. Mentally handicapped individuals do not complain of their visual problems and thus these remain undetected. This necessitates their screening.

Key words: Refractive errors; Mentally handicapped

A mentally handicapped individual has a much lower mental age than his real age and thus in many ways behaves like a child. These individual may not complain of a visual problem. With this aim a study was designed to find out the incidence of refractive errors in such individuals. The study was carried out at a local institution for mentally handicapped in Lahore. The refractive errors in these individuals were detected and proper corrective glasses were prescribed. An attempt was then made to assess the benefit that these individuals had from their glasses.

Materials and Methods

A well known local institution was approached for this purpose with the help of their psychologist. The arrangements were made at the site and a group of doctors were engaged for this purpose. Snellens chart and picture tests were made available for use. A total number of 78 individuals were refracted and their eyes examined for any eye disease. Those already wearing glasses were re refracted and any change of glasses was prescribed. Those individuals who were not very cooperative were given cycloplegic drops and retinoscopy was performed. The cycloplegic used was 1% solution of cyclopentolate instilled one hour and then half an hour before the retinoscopy. Retinoscopy was performed at a distance of two thirds of a meter and + 1.50 was the standard deduction from the retinoscopy findings in all cases. Those individuals who had a cycloplegic retinoscopy had an additional deduction of + 1.00 before the final prescription was given. Although the institution caters for both sexes the ratio was in favour of males.

Results:

Number

A total number of 78 students were refracted. The sex distribution was mainly in favour of males as there were 60 males as compared to 18 females.

Age

The age ranged between 5 to 40 years. The maximum number of students were between the ages 12 to 20 years. Their mental age was however much lower in all of them and it ranged between 1.1 to 8 years.

Refractive errors

These are given in table 1.

Table 1:

Refractive error	n=	%age
Hypermetropia	7	8.97
Myopia	11	14
Astigmatism	5	4
Presbyopia	2	2.5

A total of 25 individuals (32%) were found to have refractive errors. This is a much higher percentage than a comparable normal population where it is estimated to be somewhere around 20%. There are slight variations reported by different investigators^{1,2}. The other major difference was the number of individuals with uncorrected errors. Out of the 25 individuals with refractive errors only 10 had been previously refracted and had glasses. The rest 15 had never been refracted as they had never complained.

Table 2:

Ocular disorder	n=	Previous consultation
Squint	8	None
Amblyopia	4	None
Aphakia	1	Yes
Blocked nasolacrimal duct	1	None
Megalocornea	1	None
Telecanthus	1	None
Trichiasis	1	None

The sex distribution of refractive errors was also a very interesting finding. Myopia was detected in 6 females which gives a percentage of 33.3. The number in males was 5 which is 8%. This meant a three times higher myopia in females as compared to males. In normal population myopia occurs almost equally between the male and the female population.³ This is hard to explain clinically. The rest of the refractive errors were distributed equally between the two sexes. Presbyopes had been noted to have difficulties with their picture books but it never occurred to them that this may be due to difficulty with near vision as difficulty in almost any task in these individuals was usually put down to developmental deficiency. There were other eye problems detected which are given in table 2.

Refractive Errors

Here again the significant observation was the number of individuals with other eye problems and the very few of them that had any eye consultation.

Discussion.

This was the first study of its type that actually aimed not only to detect the presence of refractive errors in the mentally handicapped individuals but also an attempt was made to correct them, to assess the benefit if any of this correction and also with the help of the psychologist to determine the reason why these were not refracted before. The most probable cause of these children not being refracted before was their non complaint and perhaps shyness on the part of the parents to take them to an optician or an ophthalmologist.

It is difficult to assess the progress in such individuals and one can only rely on their increased interest in their class room activities and interest in watching television which was mainly shown by the two presbyopes and the myopes. There is definitely a need that all such individuals are refracted at some point and it would seem logical to predict that a better vision can even

have a positive impact on their development of mental age and activities.

Conclusion:

Mentally handicapped individuals form a significant proportion of every population and need proper medical and supportive care. Their need may be even more in many ways from the needs of normal people. They have deficiencies in other finer senses and a better visual perspective should benefit them more. This study clearly indicates such a high percentage of these individuals with uncorrected refractive errors. This should alert people involved with the care of such individuals to get them screened and this would improve the performance and have a positive effect on their development.

References:

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