

Al-Shifa-Al-Moor (ASAN) refractive error study of one million school Children

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Objectives: To investigate the prevalence of refractive errors in school children. **Design and Setting:** 10-16 years old children studying at schools of districts Rawalpindi and Islamabad were initially screened by trained teachers. The children identified to have visual acuity equal to or less than 6/12 subsequently underwent refraction with autorefractometer (with cycloplegia where needed) by Al-Shifa team and were prescribed with glasses. **Main outcome measures:** Proportion of children with myopia, hypermetropia and astigmatism. **Results:** From 1992-99 a total of 1,018,741 children were screened. 4.62% of the total children screened had impaired visual acuity while 4.27% were found to have refractive errors. The prevalence of natural refractive errors was found to be slightly more common among females. Myopia was found to be three times more common (3.26%) than hypermetropia (0.99%). The overall prevalence of astigmatism was found to be 1.78% 62% of all refractive error was up to 2 diopters. Majority of the simple myopic children (63%) were found to have refractive error of up to 2 diopters, while majority of simple hypermetropic children (55%) had refractive error greater than 2 diopters. Large majority of astigmatic error (71%) did not exceed 2 diopters. **Conclusion:** Refractive errors are significant cause of visual disability in school children. While primary vision screening by teachers tremendously decreases the workload for ophthalmic staff. Teachers can effectively identify those children with poor vision for refraction and corrective spectacles. Experience of Al-Shifa in school screening and recommendations by WHO provide standard guidelines for carrying out such programmes at national level.