

Prevalence of Refractive Errors among School Children in Kuala Krai

Nurulain MZ, Abdul Mutalib O, Syarmilla CS, Tg Aida TAA,

Syahirul KM, Aznor Azwan AA, Laila A

Department of Ophthalmology, Kuala Krai Hospital

Maizun MZ

Jabatan Kesihatan Negeri Kelantan

Zaki AI

Management and Science University

Abstract

The aim of this study is to determine the prevalence of refractive error among school children in Kuala Krai, Kelantan, Malaysia. A total of 5200 students, aged from 7 to 17 years from 7 schools were screened by 83 trained school teachers using Log Mar Chart. Positive Predictive value of visual acuity equal or worse than 0.3 in any eye were referred to optometrists and ophthalmologists for further examination. The examined population was 94.08 % ethnic Malay, 4.75 % ethnic Chinese, 0.87 % ethnic Indian and 0.30 % others. The prevalence of uncorrected (unaided) and best-corrected visual impairment (visual acuity < 0.3 in the better eye) was 3.44% and 3.98% respectively. Myopia was the most common type of refractive error among children with prevalence of 88.3%, hyperopia at 0.6 % and astigmatism at 11.1 %. There was a significant correlation between age and myopia development ($p < 0.05$). The prevalence rate of myopia is 88.3% among population screened in Kuala Krai. Primary vision screening by teachers can help in early detection and treatment of refractive errors and other eye diseases so that visual impairments can be identified and treated. Further studies on other areas in Kelantan and screening methods and tools are warranted.

Keywords: Children, refractive error, vision screening