

## **Prevalence and associated factors of myopia among grade 10 students in the Karaveddy Education Division**

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**Background and objective:** There is an increasing trend in the prevalence of myopia worldwide, linked with changing patterns of visual input, in turn, associated with changing educational media and tools, and increased usage of digital devices. This study aimed to determine the prevalence of myopia and its associated factors among grade 10 students in the Karaveddy Education Division in the Jaffna district.

**Methods:** A descriptive cross-sectional study was carried out among grade 10 students of Karaveddy Education Division using simple cluster sampling. Data were collected from September to November 2019. A self-administered questionnaire was used to elicit data on the factors associated with myopia and the Snellen chart was used to measure visual acuity. Chi-square test was applied to measure associations between variables, wherever applicable.

**Results:** The prevalence of myopia was 12.7% (n=64). Although more females (13.4%, n=36) were affected than males (11.9%, n=28), the association between sex and the presence of myopia was not significant (p=0.598). The majority of students used digital devices (97.8%, n=493), and engaged in sports (73.6%, n=371) and other outdoor activities (78.8%, n=397). The prevalence of myopia within possible groups at risk was as follows: students who used digital devices 12.4% (n=61); those who did not engage in sports activities 15.8% (n=21); those who did not engage in other outdoor activities 17.8% (n=19); those who did not have enough natural lighting in their homes 15.4% (n=6); and those whose siblings wore spectacles 27.1% (n=16). The association between the presence of myopia and the above-mentioned factors was not significant except with respect to having siblings who wore spectacles (p<0.05).

**Conclusion:** Prevalence of myopia among Grade 10 students of the Karaveddy Education Division is 12.7%. Its association with having siblings who wear spectacles, suggests that family history plays a role.

**Keywords:** Myopia, Secondary School Students, Visual Acuity, Jaffna