

Symptoms of digital eye strain and reduced visual acuity among A/L students in Jaffna Educational Division

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Background: Visual impairment has become a global challenge especially in developing countries due to the changing patterns of visual input associated with the use of modern educational media and tools, urbanization, and sedentary life style. This study was designed to determine the prevalence of symptoms of digital eye strain and reduced visual acuity among Advanced Level (A/L) students in the Jaffna Educational Division, northern Sri Lanka.

Methods: A descriptive cross-sectional study was carried out among A/L students in Jaffna Educational Division. Single stage cluster sampling was used. A self-administered questionnaire was used to assess symptoms of digital eye strain and the Snellen chart was used to measure visual acuity. Data were analyzed using SPSS (Statistical Package for Social Sciences) version 21. Percentages and proportions were used to describe the data.

Results: 700 A/L students participated in the study. Symptoms of digital eye strain associated with watching television were: headache 28.3%, burning sensation of eyes 13.9%, blurred vision 14.3% and straining to see small fonts 5.3%. Symptoms associated with computer usage were: headache 6.3%, burning sensation of eyes 4.6%, blurred vision 3.6%, and straining to see small fonts 2.0%. Symptoms associated with laptop use were: headache 9.9%, burning sensation of eyes 9.6%, blurred vision 4.7%, and straining to see small fonts 2.3%. Symptoms associated with mobile phones were: headache 18.9%, burning sensation of eyes 19.7%, blurred vision 12.4% and straining to see small fonts 9.1%. Lastly, symptoms associated with tablet use were: headache 4.6%, burning sensation of eyes 4.0%, blurred vision 1.3% and straining to see small fonts 3.4%. The prevalence of reduced visual acuity (<6/6) was 19.6%.

Conclusion: The findings suggest that symptoms of digital eye strain and reduced visual acuity are substantial among A/L students. Extensive studies are needed to confirm these findings.

Key words: adolescents, symptoms of digital eye strain, reduced visual acuity, digital devices