Abstract 11:

Quality of sleep and associated factors among GCE A/L biology and mathematics stream students of Nallur Educational Division

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Background and objective: Sleep is critical for cognitive functions like memory consolidation and learning. Yet academic pressures and poor sleep hygiene can negatively affect sleep among GCE A/L students, particularly biology and mathematics students who spend more time on private classes and have a greater academic workload. This study aims to evaluate sleep quality and associated factors among biology and mathematics stream students in the Nallur Educational Division.

Methods: A descriptive cross-sectional study was conducted from November 2023 to February 2024, involving 415 biology and mathematics stream G.C.E. Advanced Level students (2024 & 2025 A/L). Students were recruited by proportionate stratified sampling. Data were collected using a self-administered questionnaire; sleep quality was assessed by the Pittsburgh Sleep Quality Index (PSQI). Data were analysed with SPSS. Frequencies and proportions were used to describe sleep quality, while chi-square tests were conducted to identify associations between sleep quality and sociodemographic, lifestyle, environmental and academic factors. Ethics approval was obtained from the Ethics Review Committee, Faculty of Medicine, Jaffna.

Results: Among 415 invited participants, 388 responded, resulting in a response rate of 93.5%. Among 388, 57.2% (n=222) were males and 42.8% (n=166) were females. Among the participants, 34.3% (n=133) experienced poor sleep quality, while 65.7% (n=255) reported good sleep quality. Male gender showed a statistically significant association with good sleep quality (p=0.049) Caffeine consumption (p<0.001) and end-of-day fatigue exhibited an association with poor sleep quality (p=0.002). Optimum room temperature was identified as a notable environmental factor, with variations significantly affecting sleep outcomes (p=0.003). Academic factors like stream, self-study time, time spent in tuition class did not show a statistically significant association with sleep quality.

Conclusions and recommendations: Although most students had good sleep quality, certain modifiable factors such as caffeine intake and room temperature can improve sleep. Addressing these factors may enhance sleep quality.

Keywords: Sleep quality, Secondary school students, Biology and Mathematics streams, Environmental factors, Lifestyle factors