

POSTER PRESENTATIONS

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Musculoskeletal Strength, Balance, Cardiorespiratory Function, Psychological Status and Physical Activity Level among Morning and Evening Chronotypes

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ABSTRACT

Background and Objectives: Chronotype is an individual's preferred time of sleep and activity. Sleep disturbance is a common problem among university students that may influence physical and mental health. The objectives of this study were to (i) compare the musculoskeletal strength, balance, and cardiorespiratory function and (ii) determine the association between psychological status and level of physical activity among morning and evening chronotype groups. **Methods:** A cross-sectional survey was conducted among 257 health sciences students. The participants undergone screening using the International Physical Activity Questionnaire (IPAQ), Morningness-Eveningness Questionnaire (MEQ), Depression, Anxiety, and Stress Questionnaire (DASS-21), Hand grip dynamometer, Countermovement jump, Peak Flow meter (PEFR) and Modified Star Excursion test (SEBT). **Results:** Participants' mean $\pm$ SD age was 21.3 ± 3.32 years, consisting of 146 female and 111 males students. Of these, 200 students are considered intermediate chronotype, 46 students morning chronotype and 11 evening chronotype. Balance for posterolateral and posteromedial (09:00) shows a significant difference between chronotypes. **Conclusion:** Our results indicate that the morning chronotype has better balance than evening chronotype. Future study can be focused on the athlete by taking into account of the influence of time of the day and physical performance.

Keywords: Circadian rhythm; Chronotype; Strength; Balance; Cardiorespiratory; Physical activity

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