



ABSTRACTS: VOLUME 8, SPECIAL ISSUE {8th Undergraduate Conference}

THE INTERPLAY OF SLEEP QUALITY AND SELF-EFFICACY ON MEDICAL STUDENT SYNDROME: A CROSS-SECTIONAL STUDY

Baraa Mohammed Nassar¹, Saeed Bakeer², Mohammed Amer Kamel³, Ayman Khaled², Oday Shaar², Ibrahim Barham², Ahmad Hanani^{2*}

Supervisor: Ahmad Hanani²

¹ College of Medicine and Health Sciences, Palestine Polytechnic University, Palestine

² Faculty of Medicine, An-Najah National University, Palestine

³ Faculty of Medicine, Al-Quds University, Palestine

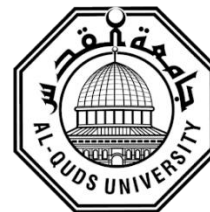
Abstract

Background: Medical Student Syndrome (MSS) is a form of health-related anxiety in which medical students misattribute normal bodily sensations to diseases encountered during their studies. Its global prevalence ranges from 5% to 81%, making it a significant concern in medical education. Sleep disturbances affect 30–76% of medical students, impairing emotional regulation and increasing stress reactivity. Low self-efficacy—defined as an individual's belief in their ability to execute goal-directed behaviors—has been consistently linked to heightened anxiety and depression. Despite evidence linking both sleep quality and self-efficacy to anxiety, no prior study has examined their combined relationship with MSS.

Objectives: This study aimed to assess the prevalence and severity of MSS among Palestinian medical students and to determine whether sleep quality and self-efficacy independently predict health anxiety, both individually and in combination with demographic variables.

Methods: A cross-sectional study was conducted among 617 Palestinian medical students in Years 2–6 (mean age 20.47 ± 1.46 years; 54% female). Three validated instruments were used: the Short Health Anxiety Inventory (SHAI), the General Self-Efficacy Scale (GSE), and the Pittsburgh Sleep Quality Index (PSQI). Normality testing showed significant deviation from normal distribution for all scales ($p < 0.001$), justifying the use of non-parametric methods. Kruskal–Wallis tests, Spearman correlations, and multiple linear regression models were applied to identify predictors of health anxiety. Ethical approval was obtained from the IRB at An-Najah National University.

Results: Mean scores were SHAI = 16.91 ± 7.54 , GSE = 29.06 ± 4.56 , and PSQI = 6.71 ± 3.30 . Sleep quality differed significantly across academic years ($p = 0.002$), with earlier-year students reporting poorer



sleep. Higher health anxiety was correlated with poorer sleep quality ($\rho = 0.311$, $p < 0.001$) and lower self-efficacy ($\rho = -0.187$, $p < 0.001$). In multivariable regression, poorer sleep quality ($\beta = 0.333$), lower self-efficacy ($\beta = -0.130$), and female gender independently predicted higher health anxiety ($R^2 = 0.148$, $p < 0.001$). Incorporating PSQI subcomponents improved model fit ($R^2 = 0.209$), with sleep disturbance ($\beta = 0.161$), daytime dysfunction ($\beta = 0.187$), subjective sleep quality ($\beta = 0.159$), and sleep medication use ($\beta = 0.106$) emerging as key predictors. Age and academic year were not significant predictors in regression models.

Conclusions: Poor sleep quality and low self-efficacy are significant independent predictors of Medical Student Syndrome among Palestinian medical students. Earlier academic years are particularly affected by sleep disturbances, representing an important modifiable target. These findings support integrating sleep-focused interventions—such as CBT-I-based programs—and self-efficacy-enhancing strategies into early medical education to reduce health anxiety and improve student well-being.

Keywords: Medical Student Syndrome, Health anxiety, Sleep quality, Self-efficacy, PSQI, SHAI, GSE, Palestinian medical students.