

ABSTRACT

THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY, PAIN TOLERANCE, STRESS LEVELS, AND SLEEP QUALITY AMONG MEDICAL STUDENTS OF 2024 AT THE FACULTY OF MEDICINE UNIVERSITY OF LAMPUNG

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Background: Physical activity contributes to the modulation of pain, stress, and sleep quality. Medical students often experience a high academic workload that may affect their physical activity levels and physiological well-being. This study aimed to evaluate the relationship between physical activity and pain tolerance, stress levels, and sleep quality among medical students.

Methods: This cross-sectional study involved 192 undergraduate medical students from the Faculty of Medicine, University of Lampung, class of 2024. A total of 142 respondents were selected using the Lemeshow sampling formula. Data collection was conducted from September to November 2025 using the International Physical Activity Questionnaire–Short Form (IPAQ-SF, 7 items), Chronic Pain Grade Questionnaire (CPGQ, 7 items), Medical Student Stressor Questionnaire (MSSQ, 36 items), and Pittsburgh Sleep Quality Index (PSQI, 18 items). Data were analyzed using the Chi-square test with a 95% confidence level.

Results: Most respondents demonstrated moderate physical activity levels (46.5%). No significant relationship was found between physical activity and pain tolerance, with most respondents categorized as Grade 1 (65.5%; $p=0.808$), nor between physical activity and stress levels, with most respondents experiencing moderate stress (52.8%; $p=0.496$). However, a significant relationship was observed between physical activity and sleep quality, with a majority reporting good sleep quality (52.1%; $p=0.041$).

Conclusion: Physical activity was significantly associated with sleep quality but showed no significant association with pain tolerance or stress levels.

Keywords: Medical students, pain tolerance, physical activity, sleep quality, stress.

ABSTRAK

HUBUNGAN AKTIVITAS FISIK TERHADAP TOLERANSI NYERI, TINGKAT STRES, DAN KUALITAS TIDUR PADA MAHASISWA KEDOKTERAN ANGKATAN 2024 FAKULTAS KEDOKTERAN UNIVERSITAS LAMPUNG

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Latar Belakang: Aktivitas fisik berkontribusi dalam memodulasi nyeri, stres, dan kualitas tidur. Mahasiswa kedokteran memiliki beban akademik tinggi yang dapat memengaruhi aktivitas fisik dan kondisi fisiologis mereka. Penelitian ini bertujuan mengevaluasi hubungan aktivitas fisik dengan toleransi nyeri, tingkat stres, dan kualitas tidur pada mahasiswa kedokteran.

Metode: Penelitian ini menggunakan desain *cross-sectional* dengan populasi responden mahasiswa Pendidikan Dokter Fakultas Kedokteran Universitas Lampung angkatan 2024 berjumlah 192. Sampel sebanyak 142 responden diperoleh menggunakan rumus Lemeshow. Penelitian dilakukan dari bulan September-November 2025. Data dikumpulkan menggunakan *International Physical Activity Questionnaire Short Form* (IPAQ-SF) berjumlah 7 pertanyaan, *Chronic Pain Grade Questionnaire* (CPGQ) berjumlah 7 pertanyaan, *Medical Student Stressor Questionnaire* (MSSQ) berjumlah 36 pertanyaan, dan *Pittsburgh Sleep Quality Index* (PSQI) berjumlah 18 pertanyaan. Analisis dilakukan menggunakan uji Chi-square dengan tingkat signifikansi 95%.

Hasil: Mayoritas responden memiliki aktivitas fisik sedang (46,5%). Tidak terdapat hubungan bermakna antara aktivitas fisik dengan toleransi nyeri dengan populasi *Grade 1* 65,5% ($p=0,808$) dan tingkat stres dengan populasi stres sedang 52,8% ($p=0,496$), namun terdapat hubungan signifikan dengan kualitas tidur dengan populasi tidur baik 52,1% ($p=0,041$).

Kesimpulan: Aktivitas fisik memiliki hubungan signifikan terhadap kualitas tidur, namun tidak signifikan terhadap toleransi nyeri dan tingkat stres.

Kata Kunci: Aktivitas fisik, kualitas tidur, mahasiswa kedokteran, stres, toleransi nyeri.