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Relationship Between Physical Activity Level and Sleep Quality Level Among UiTM Seremban 3 Students

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I. Introduction

Physical activity has been recognized as an important factor in maintaining overall health and well-being among university students [1]. However, despite regular exercise participation, many students continue to report poor sleep quality [2]. Sleep quality is a crucial determinant of cognitive performance, emotional regulation, and academic achievement. This study examines sleep quality, assesses physical activity levels, and explores their relationship among university students, with particular attention to gender differences, in order to inform health promotion and student wellness strategies.

II. Methods

This quantitative study investigated the relationship between physical activity and sleep quality among UiTM Seremban 3 students. Data were collected from 207 students using the IPAQ-SF and PSQI questionnaires. Participants were selected through simple random sampling, and demographic data were also gathered. Statistical analysis, including Chi-square and Independent t-test, was conducted to examine the relationships and gender differences. This approach allowed a clear understanding of how physical activity relates to students' sleep quality.

III. Results and Discussion

Table I
Frequencies of Physical Activity Level

	Frequency (n)	Percentage (%)
Low	103	49.8%
Moderate	64	30.9%
High	40	19.3%

The majority of UiTM Seremban 3 students reported low physical activity (49.8%), followed by moderate (30.9%) and high (19.3%) levels. This suggests that many students may not meet recommended PA guidelines. As noted in previous studies, reductions in physical activity and increases in sedentary behaviour during lifestyle disruptions indicate a general trend of decreased activity across populations [3].

Table II
Frequencies of Sleep Quality Level

	Frequency (n)	Percentage (%)
Good sleep quality (≤5)	115	55.6%
Poor sleep quality (>5)	92	44.4%

The results of this study show that a majority of UiTM Seremban 3 students had good sleep quality (55.6%), while 44.4% experienced poor sleep quality. This indicates that almost half of the students may struggle to maintain adequate sleep. Similar findings have been reported in university students using the PSQI, with around 45.1% experiencing poor sleep quality [4].

Table III
Gender Differences in Sleep Quality Among UiTM Seremban 3 Students

	Group	N	Mean (SD)	t	p
SQ SCORE	Female	105	5.32 (3.42)	0.333	0.739
	Male	102	5.19 (2.42)		

Results from the Independent t-test showed no significant difference in sleep quality between female (M = 5.32, SD = 3.42) and male students (M = 5.19, p = 0.739), indicating that gender does not influence sleep quality among UiTM Seremban 3 students. The lack of a gender gap may indicate that both male and female students face similar academic and lifestyle pressures at university. Prolonged periods of university life often involve schedules such as late-night studying, which can affect sleep quality for both genders [5].

TABLE IV
RELATIONSHIP BETWEEN PHYSICAL ACTIVITY LEVEL AND SLEEP QUALITY LEVEL AMONG UITM SEREMBAN 3 STUDENT

	Value	df	p
χ^2	1.13	2	0.570
N	207		

A Chi-square test indicated that physical activity level and sleep quality were not significantly associated (χ^2 (2) = 1.13, p = 0.570). University students often experience academic stress, irregular lifestyles, and prolonged sitting, which may reduce the positive effects of physical activity on sleep [6]. These findings highlight the need for a comprehensive approach to improve sleep quality through physical activity combined with sleep hygiene, stress management, and behavioural strategies.

IV. CONCLUSIONS

This study examined physical activity, sleep quality, their relationship, and gender differences among UiTM Seremban 3 students. Results showed varying levels of physical activity and sleep quality, indicating that academic workload and study habits influence health behaviours. No significant association was found between physical activity and sleep quality, and no gender differences were observed. These findings suggest that lifestyle and academic factors may have a stronger impact on sleep than exercise or gender. Promoting balanced time management, healthy study habits, and integration of physical activity with rest is essential to enhance student well-being and academic performance.

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