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# The Effect of Physical Activity on Stress Levels Among Multimedia University Students

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## I. INTRODUCTION

University students often experience high levels of stress due to academic workload, examinations, financial concerns, social adjustment, and the transition to independent adult life. Stress occurs when students perceive that academic or personal demands exceed their ability to cope, as explained in the stress appraisal and coping model by [1]. If stress is not managed effectively, it may contribute to anxiety, depression, reduced academic performance, poor sleep, and lower overall well-being. Previous studies have shown that depression, anxiety, and stress are common among university students, highlighting the need to identify practical strategies that support student mental health [2][3]. Physical activity is one potential protective factor against stress. [4] defined physical activity as any bodily movement produced by skeletal muscles that results in energy expenditure. Regular physical activity and exercise may help reduce stress by improving mood, regulating physiological arousal, and supporting healthier coping responses. Earlier research has suggested that exercise may influence brain monoamines and stress-related behavioural responses, which may partly explain its positive effect on anxiety, depression, and stress sensitivity [5][6]. [7] also recommends regular physical activity and reduced sedentary behaviour to support physical and mental health.

Despite these benefits, many university students remain physically inactive because of busy schedules, fatigue, academic pressure, and prolonged screen-based learning. Sedentary behaviour, such as sitting for long periods, has also become a growing concern. [8] described excessive sitting as a distinct health risk, while [9] reported an association between sedentary behaviour and increased risk of anxiety. This suggests that both low physical activity and high sedentary time may influence students' psychological well-being. In Malaysia, research examining the relationship between physical activity and stress among university students remains limited. Understanding this relationship is important because university students face increasing academic and lifestyle demands. Therefore, this study aims to examine the relationship between physical activity and stress among Malaysian university students. This

study may help provide evidence for promoting active lifestyles as a practical approach to improving student mental health and stress management.

## II. METHODS

This study used a survey with 200 full-time university students, mostly aged 20 to 30. Two tools were used: the International Physical Activity Questionnaire (IPAQ) to measure exercise frequency and duration, and the Perceived Stress Scale (PSS) to assess stress levels. Data were collected through an online questionnaire after students gave informed consent. The data were analysed using statistical tests to identify associations between physical activity and stress.

## III. RESULTS AND DISCUSSION

The findings show that most participants were young adult university students aged 20 to 30 years. Most were male bachelor's degree students and year 3 students. This group may face common university stressors such as assignments, examinations, time pressure, and lifestyle changes. These factors have been linked with stress and anxiety among students [2][3]. Most students were not highly active. Many did vigorous or moderate exercise only one to two days per week. This may happen because students are busy, tired, or less motivated to exercise. Physical activity is important because it helps improve health and well-being [4][7]. The results showed that vigorous and moderate exercise was not significantly related to stress. This means higher-intensity exercise was not clearly associated with lower stress in this study. This may be because students did not exercise regularly enough to gain mental health benefits. Regular exercise has been linked with better mood and lower stress [5][6]. Walking was the only activity related to lower stress. This indicates that simple daily movement may help students manage stress better. Walking is easy to do, does not need equipment, and fits naturally into student life, such as walking to class, the library, or the hostel. Many students also spent long hours sitting. However, sitting time was not significantly related to stress in this study. Although too much sitting is generally linked with health concerns [8][9], stress among students may also depend on other factors such as

workload, sleep, coping style, and social support. Overall, the study suggests that walking may be the most practical physical activity for reducing stress among university students. Universities should encourage simple activities such as walking breaks, active movement between classes, and campus walking programmes to support student mental health.

TABLE I  
CORRELATION BETWEEN PHYSICAL ACTIVITY, SITTING TIME,  
AND STRESS

| VARIABLE                                | CORRELATION<br>WITH STRESS | P-<br>VALUE |
|-----------------------------------------|----------------------------|-------------|
| VIGOROUS PHYSICAL<br>ACTIVITY FREQUENCY | -0.012                     | 0.872       |
| MODERATE PHYSICAL<br>ACTIVITY FREQUENCY | -0.080                     | 0.250       |
| WALKING TIME                            | -0.177                     | 0.012       |
| SITTING TIME                            | 0.106                      | 0.136       |

This table shows how different types of physical activity and sitting time relate to students' stress levels. The results indicate that walking more is linked to lower stress, while vigorous and moderate exercise frequency, as well as sitting time, do not have a significant effect on stress in this group. This suggests that walking may be the most effective activity for reducing stress among university students.

#### IV. CONCLUSIONS

This study concludes that physical activity plays an important role in stress management among university students in Malaysia. Although vigorous and moderate exercise was not significantly related to stress, walking showed a meaningful association with lower perceived stress. This suggests that simple and consistent activities may be more practical and beneficial for students than structured or high-intensity exercise. The findings also indicate that students may understand the benefits of physical activity but still face barriers such as academic workload, fatigue, limited time, and low motivation. Therefore, universities should promote physical activity in a way that fits students' daily routines. Walking routes, active breaks, campus walking programmes, and easy access to recreational spaces may help students become more active without adding extra pressure. Overall, walking appears to be an accessible and realistic strategy to support student mental health. Future health promotion programmes should focus on flexible, low-cost, and routine-based physical activity to help students manage stress more effectively.

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