

The background of the entire cover is an abstract, high-energy image. It features a blurred figure of a person, likely a runner, in motion. The figure is overlaid with vibrant, streaky light trails in shades of teal, blue, and orange, creating a sense of speed and dynamic movement. The overall composition is energetic and modern.

INTERNATIONAL GRADUATE COLLOQUIUM

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SPORTS AND PHYSICAL EXERCISE ASSEMBLY OF KNOWLEDGE SHARING

COLLOQUIUM PROCEEDINGS

## **EXTENDED ABSTRACT**

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# EXPLORING THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND SLEEP QUALITY: INSIGHTS FROM INDONESIA UNIVERSITY STUDENTS

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## I. INTRODUCTION

Physical inactivity and poor sleep quality are growing public health concerns, particularly among university students [1]. This study examines the relationship between physical activity and sleep quality among Faculty of Sports and Health Education (FPOK) students at Universitas Pendidikan Indonesia [2]. By assessing activity levels, sleep quality, and gender differences, the research aims to provide insights into lifestyle behaviors affecting student well-being and academic performance, emphasizing the need for targeted health interventions [3].

## II. METHODS

This study employed a stratified sampling technique, selecting 341 FPOK students from four academic programs at UPI Bandung. Physical activity levels were assessed using the International Physical Activity Questionnaire (IPAQ), categorizing participants into high, moderate, or low activity levels. Sleep quality was measured using the 28-item Sleep Quality Scale (SQS). Data were collected through self-reported questionnaires, ensuring a representative sample for analysis.

## III. RESULTS AND DISCUSSION

### A. Physical Activity Level

The majority of FPOK students (83.8%) exhibited high physical activity levels, with only 11.2% classified as moderate and 4.9% as low. This suggests that most students engage in regular exercise, aligning with expectations for a physically active cohort. The dominance of high activity levels contrasts with global trends of increasing physical inactivity among university students, reinforcing the unique fitness culture within FPOK.

### B. Sleep Quality Score

The average sleep quality score among respondents was  $2.49 \pm 0.42$ , indicating relatively stable and moderate sleep quality. Minimal variability suggests that sleep patterns are consistent across the sample. These findings align with research highlighting university students' struggles with sleep consistency due to academic stress and lifestyle habits, underscoring the need for interventions promoting better sleep hygiene.

### C. Relationship Between Physical Activity and Sleep Quality

A significant relationship was found between physical activity and sleep quality ( $p < 0.05$ ), with a strong contingency coefficient (0.978; Table 1). This indicates that higher physical activity levels are associated with better sleep quality. These findings reinforce prior studies suggesting that regular exercise improves sleep efficiency and duration. However, further research is needed to explore causal mechanisms influencing this relationship.

TABLE I  
RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND SLEEP QUALITY

Physical Activity	Sleep Quality	
	Pearson Chi-Square	9664
	df	9360
	Sig. (p-value)	0.014
	N	444
	Contingency coefficient	0.978

### D. Gender Differences

The independent t-test revealed no significant difference in sleep quality between male ( $2.51 \pm 0.42$ ) and female ( $2.45 \pm 0.43$ ) students ( $p > 0.05$ ). This contrasts with previous studies suggesting females often experience poorer sleep due to hormonal and psychological factors. The lack of gender disparity in this study suggests that other lifestyle factors may play a more dominant role in determining sleep quality.

## IV. CONCLUSIONS

This study highlights the strong physical activity levels among FPOK students and their moderate sleep quality. A significant relationship was found between physical activity and sleep quality, emphasizing exercise's role in sleep improvement. No gender differences in sleep quality were observed, suggesting other lifestyle factors may influence sleep patterns.

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