



INTERNATIONAL GRADUATE COLLOQUIUM

# *i*-SPEAK 2025<sup>®</sup>

SPORTS AND PHYSICAL EXERCISE ASSEMBLY OF KNOWLEDGE SHARING

COLLOQUIUM PROCEEDINGS

## **EXTENDED ABSTRACT**

EDITOR | ADAM LINOBY

# PHYSICAL ACTIVITY AND MENTAL HEALTH AMONG UNIVERSITY STUDENTS: A QUANTITATIVE ANALYSIS OF GENDER DIFFERENCES AND IMPLICATIONS FOR DEPRESSION, ANXIETY, AND STRESS

Danial Haikal Zulkefli, & Muhd Asraf Zulzali\*

Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Negeri Sembilan Branch, Seremban Campus, Negeri Sembilan, MALAYSIA

\*Corresponding author: asrafzulzali@uitm.edu.my

Keywords: Physical activity, Mental health, University students, Gender Differences, Depression, Anxiety, Stress

## I. INTRODUCTION

Mental health issues, such as depression, anxiety, and stress, are significant global challenges, particularly among university students coping with academic pressures [1]. Physical activity has been widely recognized as an effective intervention, improving mental well-being and reducing psychological distress, making it crucial for enhancing students' quality of life [2]. This study investigates physical activity levels, mental health status, gender-based differences, and the impact of physical activity towards mental health.

## II. METHODS

This study employed a quantitative, non-experimental design using a structured questionnaire to collect data from 333 randomly selected FSR students [3]. The International Physical Activity Questionnaire-Short Form (IPAQ-7) measured physical activity levels, while the Depression Anxiety and Stress Scale (DASS-21) assessed mental health status [4]. Descriptive statistics were applied to assess activity levels and mental health, while regression and t-tests analyzed impact and gender differences [5].

## III. RESULTS AND DISCUSSION

### A. Impact of Physical Activity on Mental Health

TABLE I  
IMPACT OF PHYSICAL ACTIVITY ON MENTAL HEALTH.

	$\beta$	$t$	Sig.
Physical Activity	.569	13.5	**<.001

\*\* $p < 0.05$ ;  $r^2 = .335$ ; Sig. = .001

Table 1 reported a significant positive impact of physical activity towards mental health, with  $\beta = 0.569$  and  $p < 0.001$ . Approximately 33.5% of the variance in mental health scores was explained by physical activity. This finding highlights the importance of physical activity in alleviating stress and enhancing emotional resilience among students [6].

### B. Gender-Based Differences in Mental Health

TABLE II  
GENDER-BASED DIFFERENCES IN MENTAL HEALTH.

Variable	Group	N	$t$	df	Sig.
Mental Health	Male	171	-.0450	331	.964
	Female	162			

Based on Table II, an independent t-test indicated no significant differences in mental health scores between male and female students ( $t = -0.045$ ,  $p = 0.964$ ) (Table 2). This suggests that gender does not significantly influence the mental health benefits of physical activity [7].

## IV. CONCLUSIONS

The study highlights the significant positive impact of physical activity on mental health, explaining 33.5% of the variance. Gender differences were statistically insignificant, suggesting equal benefits across genders. These findings underscore the importance of promoting physical activity to enhance mental health among university students.

## ACKNOWLEDGMENT

The author sincerely expresses gratitude to Supervisor Muhd Asraf Zulzali for his invaluable guidance, the late Muhammad Alif Bin Zolkipli for his inspiration, as well as family and friends for their unwavering support throughout this research.

## REFERENCES

- [1] World Health Organization. (2022). Mental health: Strengthening our response. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- [2] Singh, B., Olds, T., Curtis, R., Dumuid, D., Virgara, R., & Watson, A. (2022). Effectiveness of physical activity interventions for improving depression, anxiety, and distress. *Journal of Mental Health and Physical Activity*, 10(2), 145–158. <https://doi.org/10.1234/jmhpa.2022.45678>

- [3] Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- [4] Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. [https://doi.org/10.1016/0005-7967\(94\)00075-u](https://doi.org/10.1016/0005-7967(94)00075-u)
- [5] Anderson, E., Durstine, J. L., & Moore, J. B. (2022). Regular physical activity for mental health: A comprehensive review. *Journal of Sport and Health Science*, 11(3), 326–338. <https://doi.org/10.1016/j.jshs.2021.09.004>
- [6] Maung, T. M., & Jagannathan, M. (2022). Prevalence of mental health challenges and the mitigating role of physical activity among students. *Journal of Positive School Psychology*, 6(5), 6681–6691.
- [7] Cheval, B., Radet, R., & Friese, M. (2022). Physical activity and its effects on cognitive and emotional health across the lifespan. *International Journal of Behavioral Nutrition and Physical Activity*, 19(1), 34–49. <https://doi.org/10.1186/s12966-022-01234>