FISIO MU

Arrahim, M.R., Rosidah, N., Baruna, A.H., Muthohiry, M.R., Prastowo. B., Rizal & Prasetyo, D.A
Fisiomu. 2026, Vol 7(2):24-28
DOI : 10.23917/fisiomu.v7i2.16800

The Correlation Between Physical Activity and Quality of Life Among Physiotherapy Students at Muhammadiyah University of Malang, Class of 2022

Muhammad Rafli Arrahim[1], Nikmatur Rosidah[2]*, Arys Hasta Baruna[3], M. Raiz Muthohiry[4], Bayu Prastowo[5], Fahmi Rizal[6], Dwi Agung Prasetyo[7]

[1,2,3,4,5]Physiotherapy Department, Faculty of Health Sciences, University of Muhammadiyah Malang, Indonesia
[6]Physiotherapy Department, Faculty of Health Sciences University of Muhammadiyah Pekajangan Pekalongan, Indonesia
[7]Physiotherapy Department, Institute of Science and Health Technology (ITSK) Dr. Soepraoen Hospital Malang, Indonesia
Email: nikmaturrosidah@umm.ac.id

Submitted : 2026-03-27; Accepted : 2026-05-19; Published : 2026-06-01

ABSTRACT

Introduction: Physical activity is any activity that requires physical effort and can increase heart rate and breathing. Physical activity plays a role in maintaining physical fitness, strengthening the heart and lungs, reducing the risk of chronic diseases, and helping to improve mood, reduce stress, and enhance quality of life. This study aims to determine the relationship between physical activity and quality of life among students in Malang. **Methods:** This study employed a correlational design using total sampling. The instruments used were the Godin Leisure-Time Exercise Questionnaire (GLTEQ) and the WHOQOL-BREF, with data analysed using Pearson's or Spearman's correlation tests at a significance level of $p < 0.05$. **Results:** The results showed that the majority of respondents comprised 92 students, with a majority being female (71.7%) and in early adulthood with an average age of 21.52 years. The majority of respondents reported a very good quality of life (81.5%) and were classified as active in physical activity (58.7%). The results of the Spearman test showed a p-value of 0.472 ($p > 0.05$), indicating no significant relationship between physical activity and quality of life. **Conclusion:** Physical activity, which varies according to participant characteristics, does not determine an individual's quality of life; merely having a low level of physical activity does not imply that an individual's quality of life is poor.

Keywords: *Godin Leisure-Time Exercise Questionnaire, Leisure Time, Physical Activity, Quality of Life, Students*

ISSN 2722 – 9610
E –ISSN 2722 - 9629

INTRODUCTION

Students are a group of people aged between 18 and 24 who are pursuing higher education at a college or university (Kasingku, 2023). One of the main problems faced by students is a lack of physical activity due to high academic pressure, a packed lecture timetable, and an irregular lifestyle, which leads to some students engaging in insufficient physical activity (Saputra, 2022). Physical activity is a type of activity that requires high physical effort and results in an increased heart rate and breathing rate. Physical activity has positive effects on students by helping to maintain a healthy weight, strengthening the heart, lungs and immune system, reducing the risk of chronic diseases, helping to improve mood, reducing stress and depression, and enhancing quality of life (Rahman, 2023). A lack of physical activity can also have negative consequences such as obesity, high blood pressure, reduced quality of life, and other health issues (Kusumo, 2020).

As technology continues to advance, levels of physical activity, such as sport, are declining. In 2016, the WHO reported that 23% of men and 32% of women aged 18 and over did not get enough physical activity. In 2012 in Indonesia, 19.6% of the 20–29 age group engaged in sport;

Fisiomu. 2026, Vol 7(2):24-28
DOI : 10.23917/fisiomu.v7i2.16800

this figure is lower when compared to the percentage for the 10–19 age group, which stood at 72.3% (Djohan, 2020). According to the 2018 Riskesdas results, more than 30% of the Indonesian population were found to have low levels of physical activity, with the 18–24 age group generally comprising university students (Sukartidana, 2025). Quality of life is a crucial factor in assessing how healthy and well-being an individual is in their daily life (Najibah, 2020). A healthy lifestyle plays a vital role in the lives of all people, including students. Healthy habits such as eating a balanced diet, getting sufficient sleep, and engaging in physical activity can help students manage stress and improve their quality of life whilst navigating their university studies (Kasingku, 2023).

A poor quality of life significantly affects a student's ability to cope with university life. Students often face various problems, such as a decline in concentration, stress and anxiety. These conditions can affect the achievement of academic goals and ultimately impact academic performance (Nurdin, 2018). A decline in a student's quality of life is also influenced by physical activity. A lack of physical activity can affect psychological and social aspects, as well as lead to a decline in students' health (Suharmanto, 2025). Students can engage in simple physical activities; although these may be brief, they are highly beneficial for physical health and improve students' quality of life. This is because physical activities, such as exercise, can reduce stress and levels of depression among students due to the demanding nature of their academic schedules. This study aims to investigate the relationship between physical activity and quality of life among students in the city of Malang

METHODS

This study was conducted in the city of Malang in November 2025. It employed a correlational research design to determine the relationship or correlation between two or more variables. The population in this study consisted of students in the city of Malang. All participants in this study agreed to take part in the research process, as demonstrated by the provision of online informed consent prior to completing the questionnaire. This consent was given without a written signature because the entire data collection process was carried out using an online questionnaire; consequently, participants' consent was expressed through a consent agreement at the start of the survey.

The instruments used in this study were the Godin Leisure-Time Exercise Questionnaire (GLTEQ), used to measure the frequency of exercise, and the WHO Quality of Life - BREF (WHOQOL-BREF), used to measure the quality of life of the respondents. The Kolmogorov-Smirnov test was used to assess normality, and the results indicated that the data were not normally distributed; consequently, the Spearman Correlation Test was used for the subsequent correlation analysis. The significance level was set at $p = 0.05$.

RESULTS

The results of the study show that there were a total of 92 respondents, with women outnumbering men: 66 female respondents (71.7%) compared with 26 male respondents (28.3%) (Table 1).

Table 1. Characteristics of the Respondents

		Mean ± SD	n(%)
Gender	Men	-	26 (28.3)
	Women	-	66 (71.7)
Age (Years)	20–25	21.52 ± 0.895	92 (100)
Quality of Life	Good	73,82 ± 5,365	17 (18,5%)
	Very good	95,48 ± 9,331	75 (81,5%)
Physical Activity	Poor	5,31 ± 4,438	16 (17,4%)
	Fair	18,82 ± 2,630	22 (23,9%)
	Active	50,20 ± 38,644	54 (58,7%)

Based on the respondents' age characteristics, it was found that they fell within the 20–25 age range, which corresponds to the early adulthood category. This indicates that this study exclusively involved respondents falling

FISIO MU: Physiotherapy Evidences

ISSN 2722 – 9610
E –ISSN 2722 - 9629

Fisiomu. 2026, Vol 7(2):24-28
DOI : 10.23917/fisiomu.v7i2.16800

within the young adult age category. The mean age of 21.52 years suggests that, generally speaking, the respondents were around 21–22 years old. Meanwhile, the standard deviation of 0.895 indicates that the variation in the respondents' ages is relatively small or homogeneous.

Based on quality of life, 17 respondents (18.5%) reported a good quality of life, whilst 75 respondents (81.5%) reported a very good quality of life. The mean value of 91.59 indicates that the average quality of life score of the respondents falls within the very good category. Furthermore, the standard deviation of 11.903 indicates variation in quality of life scores among the respondents, although generally these scores remain within the good to very good categories.

Based on physical activity, 16 respondents (17.4%) were found to be physically inactive, 22 respondents (23.9%) were moderately physically active, and 54 respondents (58.7%) were physically active. The mean score of 34.89 indicates that the overall average physical activity score of the respondents falls within the 'active' category. Meanwhile, the standard deviation of 35.072 indicates a considerable degree of variation in physical activity scores.

Table 2. Normality Test

	Variables	Asym.Sig
Kolmogorov-Smirnov	Quality of Life	.053
	Physical Activity	.000

The normality test in this study, which used the Kolmogorov–Smirnov test, yielded p-values of 0.053 and 0.000 for quality of life and physical activity respectively, indicating that the data were not normally distributed; consequently, the correlation analysis will proceed using the non-parametric Spearman's rank test.

Table 3. Spearman Rank Correlation Test (N=92)

Variables	r	*p-value*
Quality of Life	1.000	.472
Physical Activity	.076	

The results of the Spearman's rank correlation test indicate that there is no significant association between physical activity and quality of life among university students (r = 0.076; p = 0.472), with a very weak correlation.

DISCUSSION

Gender differences are associated with variations in the level of physical activity undertaken. In general, male students tend to engage in physical activity of moderate to high intensity, whether in the form of structured sports or everyday physical activity. Conversely, female students are more likely to engage in light to moderate-intensity physical activity, such as walking, or activities of longer duration but lower intensity (Anwar, 2024). Differences in physical activity patterns between male and female students are influenced by various factors, one of which is physiological. Men generally have greater muscle mass and cardiorespiratory capacity, making them better able to perform physical activities at a higher intensity. Conversely, female students tend to choose physical activities that are light to moderate in nature and more flexible, as these are considered suitable for their physical condition and daily routines (Kurniawan, 2024).

Students aged between 20 and 25 are generally in relatively good physical condition. In early adulthood, the musculoskeletal, cardiovascular, and respiratory systems still function efficiently, thereby supporting an individual's ability to engage in physical activity at various levels of intensity. These biological and physiological conditions provide an opportunity for students to derive maximum benefit from physical activity, both in terms of improving physical fitness and supporting overall quality of life (Tamba, 2022).

The fact that quality of life is largely in the 'very good' category indicates that students are well-equipped to manage academic activities and daily life. Regular physical activity plays a role in maintaining fitness, reducing stress, and enhancing comfort during daily activities (Suharmanto, 2025). Furthermore, the very good quality of life among these respondents is influenced by their healthy and fit physical condition. Regular physical activity helps maintain the function of the musculoskeletal, cardiovascular, and metabolic systems, as well as supporting hormonal regulation and nervous system function. These factors play a role in improving stamina, maintaining mood, reducing

FISIO MU: Physiotherapy Evidences

ISSN 2722 – 9610
E –ISSN 2722 - 9629

stress, and preserving physical and mental balance, thereby having a positive impact on overall quality of life (Mutiara, 2023).

The results of the study indicate that there is no significant association between physical activity and quality of life among university students in Malang. Physical activity refers to any bodily movement produced by skeletal muscles that requires energy expenditure and plays a role in maintaining physical fitness and health (Purwanto, 2023). Physical activity also plays a vital role in supporting students' quality of life as it can improve fitness, help them perform academic activities effectively, and provide interrelated physical, psychological, and social benefits (Wicaksono, 2021; Suharmanto, 2025).

The results of the study show that the majority of respondents fell into the category of being physically active (58.7%), followed by the 'moderate' category (23.9%) and the 'insufficient' category (17.4%). Furthermore, the majority of students reported a 'very good' quality of life (81.5%), whilst the remainder reported a 'good' quality of life (17.4%). Quality of life itself is an individual's perception of their overall life circumstances, encompassing physical, psychological, social, and environmental aspects, and is influenced by various factors such as health status, academic stress, social relationships, family support, and the campus environment (Jajiyah et al., 2024; Mahin, 2025; Christanti et al., 2024).

The absence of a relationship between physical activity and quality of life in this study may be due to the fact that the majority of students were already physically active and had a very high quality of life, resulting in relatively small variations among respondents. Furthermore, students' quality of life may also be influenced by other factors such as the academic environment, social relationships, and the ability to manage academic stress (Gür & Ayan, 2024). These results are also consistent with the study by Nie et al. (2025), which showed that the effect of physical activity on life satisfaction is not direct but is mediated by psychological factors such as physical self-esteem and emotional regulation (Nie et al., 2025).

CONCLUSION

The results of this study conclude that the majority of respondents are classified as physically active and that the majority enjoy a very good quality of life. However, the results indicate that physical activity does not have a significant association with quality of life. Therefore, students are encouraged to maintain regular physical activity to support their physical, psychological, and social health; institutions are encouraged to optimise their promotive and preventive roles through physical activity education; and further research is recommended to increase the number of respondents and examine other factors such as academic stress, sleep patterns, and nutritional status that may influence students' quality of life.

REFERENCES

Christanti, D., Prasetyo, E., & Tedjawidjaja, D. (2024). *The student ' s quality of life : an overview of roles of social support of family , friend , and significant others Kualitas hidup mahasiswa : tinjauan dari peran dukungan sosial keluarga , teman , dan significant others*. *19*(April), 59–72.

Djohan, G. A., & Dewi, S. M. (2020). Hubungan antara tingkat intensitas latihan fisik dengan prevalensi rhinitis pada mahasiswa Universitas Tarumanagara berusia 18-24 tahun. *Tarumanagara Medical Journal*, *2*(2), 282–288. https://doi.org/10.24912/tmj.v3i1.9729

Gür, F., & Ayan, V. (2024). *How Does Physical Activity Affect the Quality of Life of University Students ? 10*(December), 140–150.

Jajiyah, N. K., Gumilar, A., Hambali, B., Darajat, J., Negara, K., & Kunci, K. (2024). *Analisis Kualitas Hidup Siswa Sekolah Menengah Berdasarkan Aktivitas Olahraga dan Demografi Wilayah*. *14*(1), 13–19.

Kusumo, M. P. (2020). Buku Pemantauan Aktivitas Fisik Mahendro Prasetyo Kusumo. In *Yogyakarta: The Journal Publishing*. http://repository.umy.ac.id/bitstream/handle/123456789/35896/Buku pemantauan aktivitas fisik.pdf?sequence=1

ISSN 2722 – 9610
E –ISSN 2722 - 9629

Mahin, M. I., Rahman, S., Rahman, S. M., & Ilias, F. B. (2025). *Factors impacting university students ' quality of life*. 1–16. https://doi.org/10.1371/journal.pone.0329851

Najibah, D. A. I. N., & Wahyuni, E. S. (2020). Hubungan Perilaku Sehat Dengan Kualitas Hidup Pada Mahasiswa Fakultas Ilmu Olahraga Universitas Negeri Surabaya. *Jurnal Pendidikan Olahraga Dan Kesehatan*, *8*(1), 81–85.

Nie, Y., Wang, T., Guo, M., Zhou, F., & Ma, W. (2025). *The relationship between physical activity , life satisfaction , emotional regulation , and physical self esteem among college students*. 1–10.

Nurdin, M. A., Arsin, A. A., & Thaha, R. M. (2018). Kualitas Hidup Penderita Insomnia Pada Mahasiswa. *Media Kesehatan Masyarakat Indonesia*, *14*(2), 128. https://doi.org/10.30597/mkmi.v14i1.3464

Rahman, D. (2023). Analisis gaya hidup sehat mahasiswa olahraga. *Jurnal Patriot*, *5*(3), 239–246. https://doi.org/10.24036/patriot.v5i3.1018

Saputra, M. B., Putra, I. G. P., & Udiyani, D. P. (2022). Hubungan Aktivitas Fisik dan Daya Tahan KardiovaskularPada Mahasiswa Laki-Laki Tim Bantuan Medis BaswaraPrada Angkatan 2018 dan 2019. *Aesculapius Medical Journal*, *2*(1), 57–62.

Sukartidana, I. N., & Anam, K. (2025). Hubungan Antara Kebugaran Fisik, Beban Akademik, Gaya Hidup Sedentari, dan Aktivitas Fisik terhadap Tingkat Kebugaran Mahasiswa. *Jurnal Pendidikan Jasmani Kesehatan*, *3*(1), 69–77.

Wicaksono, A. (2021). *Buku Aktivitas Fisik dan Kesehatan* (Issue July). https://www.researchgate.net/publication/353605384

ISSN 2722 – 9610
E –ISSN 2722 - 9629