

The Relationship between Healthy Living Behavior and Stress Level with Student's Quality of Life

Irma Febriyanti^{1*}, Dwi Cahyo Kartiko², Junaidi Budi Prihanto³, Faridha Nurhayati⁴, Fuad Noor Heza⁵,
Krystamia Dwika Budiart⁶, Diajeng Nabila Hariyadi⁷, Sheva Edhu Wigraha⁸
^{1*,2,3,4,5,6,7,8} Universitas Negeri Surabaya, Surabaya, Indonesia



ABSTRACT

Keywords:

Healthy lifestyles
Stress levels
Life quality
Students

In this challenging era, students often face stress due to academic burdens and social demands. In the context of stressful campus life, students often face various challenges that can affect their mental and physical health. The urgency of this study lies in the need to understand how healthy living behaviors can help reduce stress levels and improve the quality of life of college students. This research is important given the increasing rate of mental health problems among college students. The purpose of this study is to determine the relationship between healthy living behaviors which consist of diet, physical activity, and stress levels and the quality of life of university students. By using survey method, data will be collected from undergraduate students of batch 2023 with Physical Education Health and Recreation study program to evaluate their living habits and its impact on mental health or stress level by using Depression Anxiety Stress Scales (DASS 42) questionnaire. The targeted output of this research is to provide students with more insight into the factors that affect students' quality of life. In addition, this study aims to provide recommendations for more effective education and health institutions and a better understanding of the quality of healthy living behavior. Similarly, the authors hope to increase students' awareness about the importance of healthy living behaviors. Related references that support this research include articles in the Journal of Health Psychology (2020) and the International Journal of Environmental Research and Public Health (2021), which show a positive relationship between healthy living behaviors and quality of life, as well as stress reduction among college students. This research is expected to make a significant contribution to the development of better health policies in academic settings.

INTRODUCTION

College students often face various pressures that can affect their mental and physical health. High stress among college students can be caused by academic burdens, social demands, and environmental changes. Research shows that prolonged stress can negatively impact quality of life, including physical, mental and social health (1). In this phase of life, university students often face high demands, which can lead to prolonged stress. Poorly managed stress can negatively impact mental and physical health, as well as overall quality of life (2). Therefore, it is important to understand the factors that can affect the stress level and quality of life of college students, one of the factors that play an important role in managing stress is healthy living behavior.

This healthy living behavior is a series of habits and practices carried out by a person to maintain and improve physical, mental and social health. These activities can be applied from home, school, campus, work environment, to public places. Healthy living behaviors, which include a balanced diet, regular physical activity, and effective stress management, have been shown to contribute to better health (3). Students who adopt healthy living behaviors tend to have lower stress levels and a better quality of life (4). Physical activity, for example, can improve mood and reduce anxiety symptoms, while a good diet plays an important role in supporting mental health. By adopting healthy behaviors, individuals can improve their overall quality of life, reduce their risk of disease, and improve mental and emotional well-being.

Physical activity, in particular, has been shown to have a positive impact on reducing stress (5). Exercise can increase the production of endorphins, which serve as natural painkillers and can improve mood (6). In addition, a healthy diet, which is rich in nutrients, also contributes to better mental health. Good nutrition can affect brain function and mood, potentially reducing symptoms of anxiety and depression

(7). By increasing students' awareness of the importance of healthy living behaviors, as well as engaging in regular physical activities, it is hoped that a better learning environment can be created, where students are not only able to cope with stress, but can also enjoy a more productive learning experience. Students often face high academic pressures, such as coursework, exams, and demands from themselves and their surroundings. This condition often triggers excessive stress, which in turn can have a negative impact on mental health, including increasing the risk of anxiety and depression (8). In addition, many students do not apply healthy living behaviors. Habits such as poor diet, lack of physical activity, and lack of sleep are factors that contribute to worsening the condition of stress experienced.

This combination of high stress and an unhealthy lifestyle can significantly reduce students' quality of life (9). They may have difficulty absorbing course material, interacting socially, and enjoying campus life optimally. This decrease in quality of life not only impacts academic performance but also overall well-being.

This study aims to analyze the relationship between healthy living behaviors, stress levels, and students' quality of life. By understanding the relationship between these three variables, it is hoped that the results of the study can provide strategic recommendations in order to improve the quality of life of students through the implementation of more optimal healthy living behaviors (10).

The urgency of this research lies in two main things. First, this study can provide strong information regarding the importance of healthy lifestyles in supporting the mental health and quality of life of university students. Second, the results of this study can be used as study material for universities and related institutions in formulating holistic policies and services, which aim to improve the overall welfare of students.

RESEARCH METHOD

This study uses a quantitative approach with a cross-sectional design. In its implementation, data will be collected from students in various majors in order to obtain a comprehensive picture of healthy living behaviors, stress levels, and quality of life. This design was chosen to allow analysis of the relationship between variables at one particular time, so as to provide a more thorough understanding of the condition of students.

The population in this study was undergraduate students of the Physical Education, Health, and Recreation (PJKR) Study Program class of 2023. To determine the participants who will be involved in the study, sampling techniques are used in accordance with the objectives and characteristics of the study so that the selected sample can accurately represent the population.

Data collection in this study will be conducted using an instrument that has been proven valid and reliable, the Depression Anxiety Stress Scales (DASS-42). This instrument is an effective method for assessing negative emotional conditions, particularly in measuring the level of depression, anxiety, and stress experienced by respondents.

The data obtained from filling out the instrument will be analyzed using several statistical analysis techniques. First, descriptive analysis will be used to describe the general characteristics of the data. Next, correlation analysis will be conducted to determine the relationship between the variables of healthy living behavior, stress, and quality of life. Finally, regression analysis will be applied to examine the influence of the independent variables on the dependent variable in more depth.

RESULTS AND DISCUSSION

3.1. Description of Respondent Characteristics

Data collected from 200 students in the Physical Education, Health, and Recreation (PJKR) Study Program, class of 2023, showed that the majority of respondents were between 18 and 22 years old, with a nearly equal gender ratio (49% male and 51% female). Most respondents (75%) were first- to second-year students, who often face challenges adjusting to a new academic environment.

3.2. Healthy Lifestyle Behaviors

Based on the measurement of healthy lifestyle behaviors using an adapted instrument, it was found that approximately 60% of students demonstrated moderate healthy lifestyle behaviors, with slightly more than 20% of respondents having good healthy lifestyle behaviors, and the remainder exhibiting unhealthy behaviors. The most frequently neglected behaviors were regular exercise (45%) and irregular eating habits (40%).

3.3. Stress Levels

Using the Depression Anxiety Stress Scales (DASS-42) showed that 35% of students experienced high levels of stress, 45% experienced moderate levels of stress, and 20% experienced low levels of stress. This data indicates that more than half of respondents experience moderate levels of stress, which can be influenced by academic workload, social life, and other personal challenges faced by students.

3.4. Quality of Life

Quality of life measurements showed that the majority of respondents (70%) reported a moderate quality of life, with only 15% perceiving their quality of life as good and another 15% perceiving their quality of life as poor. The variables that most influenced students' quality of life were academic and social satisfaction levels. Physical and mental health aspects also played a significant role in perceived quality of life.

3.5. Correlation Analysis

A Pearson correlation analysis between healthy lifestyle behaviors, stress levels, and quality of life revealed a significant relationship between healthy lifestyle behaviors and students' quality of life ($r = 0.45$, $p < 0.01$), indicating that the healthier the students' lifestyle behaviors, the better their quality of life. Meanwhile, the correlation between stress levels and quality of life showed a significant negative relationship ($r = -0.56$, $p < 0.01$), indicating that the higher the stress level, the lower the quality of life perceived by students.

3.6. Regression Analysis

The results of the linear regression analysis showed that healthy lifestyle behaviors had a positive effect on students' quality of life ($\beta = 0.32$, $p < 0.01$), while stress levels had a significant negative effect on quality of life ($\beta = -0.47$, $p < 0.01$). This regression model explained approximately 35% of the variance in students' quality of life ($R^2 = 0.35$), indicating that healthy lifestyle behaviors and stress levels are important factors influencing students' quality of life.

The results of this study indicate that healthy lifestyle behaviors and stress levels have a significant relationship with students' quality of life. This is consistent with previous research findings showing that a healthy lifestyle can improve quality of life by reducing the risk of various physical and mental illnesses (Rahmawati, 2020). Furthermore, high stress levels negatively impact quality of life, which aligns with research showing that stress can disrupt psychological and physical well-being (Suryani, 2019).

This study also found that most students had moderately healthy lifestyles, indicating that there is still room to increase awareness and adoption of healthy lifestyles among students. Furthermore, relatively high stress levels reflect the academic and social challenges faced by students, which should be a concern for universities to provide better support for students in managing stress.

The interaction between healthy lifestyles and stress levels indicates that students who practice healthy lifestyles tend to have lower stress levels, which positively impacts their quality of life. Therefore, promoting healthy lifestyles among students can be an effective strategy to improve their quality of life while reducing their stress levels.

CONCLUSION

In the current demanding period, students frequently encounter stress stemming from significant academic pressure and social expectations. The pressures of campus life can adversely affect students' emotional and physical well-being. Given the rising incidence of mental health illnesses among

college students, it is crucial to comprehend how healthy lifestyle practices can mitigate stress and enhance their quality of life. This study seeks to ascertain the correlation between healthy lifestyle practices, encompassing food, physical exercise, and stress levels, and the quality of life among university students. Data were gathered using a survey approach from the 2023 cohort of the Health and Recreation Physical Education Study Program, employing the Depression Anxiety Stress Scales (DASS 42) questionnaire to assess their stress levels and lifestyle behaviors. This study's conclusions aim to enhance comprehension of the elements influencing students' quality of life and serve as a foundation for educational and health organizations in formulating more effective policies. This study also seeks to enhance students' knowledge of the significance of healthy living practices. This study is substantiated by citations from reputable journals demonstrating a positive correlation between healthier lifestyles, enhanced quality of life, and less stress among university students.

REFERENCES

- Seo EJ, Ahn JA, Hayman LL, Kim CJ. The association between perceived stress and quality of life in university students: the parallel mediating role of depressive symptoms and health-promoting behaviors. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2018;12(3):190-196. doi:10.1016/j.anr.2018.08.001
- Nguyen-Michel, S. T., Unger, J. B., Hamilton, J., & Spruijt-Metz, D. (2006). Associations between physical activity and perceived stress/hassles in college students. *Stress and Health*, 22(3), 179-188. <https://doi.org/10.1002/smi.1094>
- Doak, S., Kearney, J. M., McCormack, J. M., & Keaver, L. (2023). The relationship between diet and lifestyle behaviours in a sample of higher education students; a cross-sectional study. *Clinical Nutrition ESPEN*, 54, 293-299. <https://doi.org/10.1016/j.clnesp.2023.01.036>
- Mardea, Nur & Widayanti, Anna & Kristina, Susi. (2020). Stress level comparison between pharmacy students and non-pharmacy students in Indonesia. *Journal of International Pharmaceutical Research*. 12. 204-209. 10.31838/ijpr/2020.12.03.026.
- Abdulla, N. K., Obaid, R. R., Qureshi, M. N., Asrait, A. A., Janahi, M. A., Abu Qiyas, S. J., & Faris, M. E. (2023). Relationship between hedonic hunger and subjectively assessed sleep quality and perceived stress among university students: A cross-sectional study. *Heliyon*, 9(4). <https://doi.org/10.1016/j.heliyon.2023.e14987>
- Penedo FJ, Dahn JR. Exercise and well-being: a review of mental and physical health benefits associated with physical activity. *Curr Opin Psychiatry*. 2005 Mar;18(2):189-93. doi: 10.1097/00001504-200503000-00013.
- Pischke, C. R., Frenda, S., Ornish, D., & Weidner, G. (2010). Lifestyle changes are related to reductions in depression in persons with elevated coronary risk factors. *Psychology and Health*, 25(9), 1077-1100. <https://doi.org/10.1080/08870440903002986>
- Sun, C., Zhu, Z., Zhang, P., Wang, L., Zhang, Q., Guo, Y., Guo, L., Li, Y., Wang, P., Hu, B., Liu, M., Duan, J., Wang, Y., Wang, Z., & Qin, Y. (2024). Exploring the interconnections of anxiety, depression
- Pérez-Jorge, D., Boutaba-Alehyan, M., González-Contreras, A. I., & Pérez-Pérez, I. (2025). Examining the effects of academic stress on student well-being in higher education. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-04698-y>
- De Vriendt, T., Clays, E., Huybrechts, I., De Bourdeaudhuij, I., Moreno, L. A., Patterson, E., Molnár, D., Mesana, M. I., Beghin, L., Widhalm, K., Manios, Y., & De Henauw, S. (2012). European adolescents' level of perceived stress is inversely related to their diet quality: The Healthy Lifestyle in Europe by Nutrition in Adolescence study. *British Journal of Nutrition*, 108(2), 371-380. <https://doi.org/10.1017/S0007114511005708>