

**Academic Hardiness and Healthy Lifestyle Behavior on Student Athletes****Michael Wijaya¹✉, Arthur Huwae²**Faculty of Psychology, Satya Wacana Christian University, Salatiga, Indonesia¹²**Article History**

Received February 2024
Accepted June 2024
Published Vol.13 No.(2) 2024

Keywords:

Academic Hardiness;
Healthy lifestyle behavior;
Student Athletes

Abstract

This study aims to determine the relationship between academic hardiness and healthy lifestyle behavior in student athletes. The method used is quantitative with a correlational design. The data analysis method employed the Karl Pearson product-moment correlation test. The population in this study were all student athletes, in this case including high school students and university students in Indonesia. A total of 174 student athletes participated in the study using snowball sampling technique. The research measurements used the Revised Academic Hardiness Scale ($\alpha = 0.898$) and The Health-Promoting Lifestyle Profile II ($\alpha = 0.885$). The results showed a significant positive relationship between academic hardiness and healthy lifestyle behavior ($r = 0.161$ and $\text{sig.} = 0.017$). This indicates that academic hardiness is one of the factors associated with the improvement of healthy lifestyle behavior in student athletes. The implications of this research suggest that future researchers should focus on studying student athletes who reside in athletic dormitories or attend schools or universities with a sports-based curriculum and are also recipients of sports scholarships.

How to Cite

Wijaya, M., & Huwae, A. (2024). Academic Hardiness and Healthy Lifestyle Behavior on Student Athletes. *Journal of Physical Education, Sport, Health and Recreation*, 13 (2), 206-213.

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INTRODUCTION

Being a student in both secondary school and university enables an individual to explore themselves in finding their passion in the fields of academics, arts, and sports. One example is a student who can play two roles at once, as an athlete and a student. A student-athlete is an individual whose status is student as well as participate in sports activity including the sports competition and making an achievement (Indahwati, Djawa, Wijaya, & Juniarisca, 2021). A student-athlete has two requires which are A student-athlete is required to excel in both education and sports.

Training for athletes certainly requires excellent physical condition (Hidayat & Haryanto, 2022). The hectic activities of student-athletes in the sports field trigger the emergence of problems in the academic field. Prawistri and Masykur (2017) stated that as many as 52.5% of students are unable to adapt well to juggling two roles as student-athletes. The student-athletes find it challenging to understand the study material, have difficulty finding sources for their studies, and become lazy in completing assignments due to the fatigue they experience after training (Karina & Jannah, 2021). Additionally, most student-athletes often feel sleepy, cannot concentrate during classes, tend to be lazy during free time because of fatigue from training activities, and lack sufficient sleep hours due to catching up on assignments and materials. This, in turn, results in the consumption of less nutritious food, impacting their performance as both athletes and students. These issues stem from the inability of student-athletes to adopt healthy lifestyle behavior (Kurnia, Kasmiyetti, & Dwiyaniti, 2020).

Healthy lifestyle behavior is a behavior pattern that begins with self-motivation and contributes to the persistence of individual health and self-improvement (Walker & Hill, 1996). Walker and Hill (1996) mentioned that healthy lifestyle behavior is formed from six components: First, spiritual growth, which focuses on improving the inner well-being of student-athletes through connecting, surpassing, and developing. Second, interpersonal relations, which involve utilizing communication to achieve closeness and intimacy in relationships. Third, nutrition, which involves making choices regarding food consumption, significantly impacts survival performance, health, and the well-being of student-athletes. Fourth, physical activity, which encompasses light, medium, and heavy physical activities, occurring within a planned and monitored program for student-athletes' health. Fifth, health responsibility, which pertains to how student-athletes take responsibility for their own health. Sixth,

stress management, which refers to the ability of student-athletes to control or even decrease stress levels.

The behavior of student-athletes, characterized by physical activities and poor nutritional intake, can trigger several risks such as stroke, heart diseases, diabetes, cancer, and depression. However, student-athletes who choose to consume quality and healthy food tend to be more accomplished in academic environments (Plotnikoff et al., 2015). Students-athletes with healthy lifestyle behavior certainly have good physical fitness as well (Bayu, Syafaruddin, Yusfi, Syamsuramel, Solahuddin, & Victorian, 2021). Furthermore, student-athletes can reduce health complications through adopting good healthy lifestyle behavior (Yusfi, Bayu, Giartama, Fitri, Astuti, & Waldo, 2022).

Playing a role as student-athletes should involve a balanced healthy lifestyle behavior. This cannot be separated from factors that impact it, which include personal factors and demographics (Shaheen, Nassar, Amre, & Hamdan-Mansour, 2015). The personal factor is a common characteristic of student-athletes that influences healthy lifestyle behavior, such as individual traits. The demographic factor is a characteristic of student-athletes that affects healthy lifestyle behavior both directly and indirectly through cognition and specific behaviors, such as age, race, ethnicity, and socioeconomic status (Shaheen et al., 2015). In the personal factor, there is a characteristic, implying that these characteristics impact the healthy lifestyle behavior of student-athletes. One essential characteristic is hardiness, which is necessary for student-athletes to achieve good healthy lifestyle behavior. According to Hosseini, Hesam, and Hosseini, (2022), hardiness has a significant relationship with healthy lifestyle behavior. As hardiness increases, healthy lifestyle behavior improves, leading to a decrease in disease symptoms. Hardiness can transform a stressful situation into positive reconsideration and reduce negative emotions, resulting in improved self-health. Individuals with high hardiness tend to have good health and well-being, making hardiness one of the factors that influence healthy lifestyle behavior (Carlucci & Edge, 2022).

Hardiness is an individual's characteristic that enables them to become strong, stable, resilient, and optimistic in facing upcoming stressors, reducing the negative impact they may encounter (Kobasa, 1979). In the academic context, academic hardiness refers to a characteristic that makes individuals stronger, stable, resilient, and optimistic in dealing with stressors in academic activities. It involves navigating academic activities with the goal of achieving academic suc-

cess, viewing stressors as challenges that cannot be avoided, such as completing assignments or catching up on lagging materials (Benishek, Feldman, Shipon, Mecham, & Lopez, 2005). Benishek et al. (2005) stated that academic hardiness itself consists of four components that formed it which cover, first, commitment which refers to student-athletes having a willingness to be involved, set goals, and find meaning in every activity or academic environment, including their sports. Second, challenges in which change is considered a part of life that must exist and are necessary for the self-development of student-athletes. Third, control of effort which is reflecting the student-athletes' ability to recognize and activate themselves to overcome academic difficulties. Fourth, control of affect which is the student-athletes' ability to manage their emotion in facing the academic challenges.

Student-athletes with low academic hardiness often experience an increase in signs of depression, anxiety, and psychological pressure, and they do not find academic activities as exciting and interesting (Wardani, 2020). On the other hand, student-athletes with high academic hardiness enjoy several benefits. They assist student-athletes in the process of adaptation and develop tolerance to stress in academic matters. This, in turn, reduces the negative consequences of stress, such as the possibility of burnout, and makes individuals less susceptible to falling ill (Prasetyo, Fathoni, & Malik, 2018).

Student-athletes with high academic hardiness levels can have an impact on a better level of health, are more interested, actively involved, and firmer in undergoing healthy lifestyle behavior (Hosseini et al., 2022). Academic Hardiness and healthy lifestyle behavior have a connection, so student-athletes who have good academic hardiness are most likely to be able to apply healthy life behavior in their daily lives. Conversely, student-athletes with low academic hardiness report more use of alcohol and drugs than student-athletes with good academic hardiness, thus making their health bad (Carlucci & Edge, 2022).

Previous research conducted by Silva et al. (2014) shows that Academic Hardiness has a significant positive relationship with Healthy lifestyle behavior in nursing students in three nursing universities, which states that academic hardiness is a characteristic that improves health and reduces disease ($p = 0.033$). Alfred, Good, and Hammer (2014) state that academic hardiness is significant positive with healthy lifestyle behavior in final-year students, where academic hardiness provides motivation and courage to change difficult situations to be an opportunity to grow and the ability to stay healthy even in stress pressure

high ($p = 0.001$).

Although the results of previous studies showed a positive relationship, the problems undertaken by student-athletes are very complex, where student-athletes have an unhealthy sleep and eating patterns, this is caused by the density of activities carried out, which affects the focus while in class and carrying out activities as athlete. Therefore, resilience is needed in student-athletes to be able to overcome the problems encountered, so that student-athletes can achieve a balance between academic achievements and sports. Syaukani and Fatoni (2020) stated that student-athletes had difficulty in achieving achievements in the academic and sports fields, this was due to poor personal health. The purpose of this study is to determine the relationship between academic hardiness and healthy lifestyle behavior in student-athletes. Then, the proposed hypothesis is that there is a positive relationship between academic hardiness and healthy lifestyle behavior in student-athletes.

METHODS

The research type used in this study is quantitative research with correlational design. The method of this study is aimed to find out the relationship between academic hardiness and healthy lifestyle behavior in student-athletes.

The population in this study is all student-athletes in this case including high school students and students in Indonesia. Sugiyono (2017) stated that a decent sample size in the study is between 30 to 500 people, because the number of student-athletes in Indonesia is not yet known with certainty, so researchers decided to use a minimum of 500 populations with an error rate of 10%. The minimum number of samples used in this study will be calculated using the Slovin formula.

The minimum amount that must be obtained is 83 people. The sampling technique in this study uses non-probability sampling with snowball sampling techniques, which is a sample determination technique that is initially small, and then enlarged (Sugiyono, 2017). The participant criteria in this study are male and female student-athletes from high school levels to universities with a range of 15-23 years who are currently still active as student-athletes

Information:

n = Number of Sample

N = Number of Population

e = Error Level

Based on this formula, the sample size is obtained as follows:

$$n = \frac{500}{(1 + (500 \times 10\%^2))}$$

$$n = \frac{500}{(1 + (500 \times 0,01))}$$

$$n = \frac{500}{(1 + 5)}$$

$$n = \frac{500}{6}$$

$$n = 83$$

Table 1. Demographics of Research Participants

Participant Classification	Information	N	Percentage
Gender	Male	113	64.9%
	Female	61	35.1%
Age	15 Years	2	1.1%
	16 Years	11	6.3%
	17 Years	16	9.2%
	18 Years	18	10.3%
	19 Years	22	12.7%
	20 Years	41	23.6%
	21 Years	45	25.9%
	22 Years	16	9.2%
Academic Status	23 Years	3	1.7%
	High school student	38	21.9%
Sports	University student	136	78.1%
	Basketball	99	56.9%
	Futsal	16	9.2%
	Football	11	6.3%
	Taekwondo	11	6.3%
	Kempo	2	1.1%
	Softball	6	3.4%
	Athletics	1	0.6%
	Calisthenic	1	0.6%
	Badminton	7	4%
	Karate	5	2.8%
	Volley	3	1.8%
	Boxing	3	1.8%
	Martial Arts	1	0.6%
	Fencing	1	0.6%
Swimming	4	2.3%	
Tennis	2	1.1%	
		1	0.6%

The measurement uses a psychological scale which consists of an academic hardiness scale and a healthy lifestyle behavior scale. The academic hardiness scale is measured using the Revised Academic Hardiness Scale from Benishek et al. (2005) which refers to academic hardiness aspects stated by Benishek et al. (2005), which are commitment, challenge, control of conflict, and control of effort. The academic hardiness scale consists of 29 items with two statements, which are favorable and unfavorable that use the Likert model scale with four answer choices which are Very Suitable (VS), Suitable (S), Not Suitable (NS), and Very Unsuitable (VU). The item-total correlation coefficient is in the range $r = 0.391-0.619$ and gets a Cronbach's Alpha value of 0.898.

Table 2. Blue Print Academic Hardiness Scale

Dimension	Total Item		Total
	Favorable	Unfavorable	
Commitment	3, 5, 7, 9	1	5
	2, 4	-	2
Challenge	17	18	2
	20, 21	15, 16, 19	5
Control of effort	10	14	2
	8, 11, 13	12	4
Control of affect	6, 25, 27, 29	26, 28	6
	22, 24	23	3
Total	19	10	29

The healthy lifestyle behavior scale is measured using The Health-Promoting Lifestyle Profile II from Walker and Hill (1996) which refers to healthy lifestyle behavior dimensions stated by Walker and Hill (1996), which are spiritual growth, interpersonal relations, nutrition, physical activity, health responsibility, and stress management. The healthy lifestyle behavior scale consists of 30 items with favorable statement that uses the Likert model scale with four answer choices Always, Often, Sometimes, and Never. The item-total correlation coefficient is in the range $r = 0.302-0.550$ and gets a Cronbach's Alpha value of 0.885.

Table 3. Blue Print Healthy lifestyle behavior Scale

Dimension	Total Item		Total
	Favorable	Unfavorable	
Spiritual Growth	6, 18	-	2
	7, 10, 16, 19	-	4
Interpersonal Relations	11, 13, 24, 29	-	4
	1, 17, 21	-	3

Nutrition	8, 25, 30	-	3
	2, 14, 18, 22	-	4
Physical Activity	9, 15, 23	-	3
	4, 12, 19	-	3
Health Respon- sibility	3	-	1
	5	-	1
Stress Manage- ment	20	-	1
	27	-	1
Total	30	-	30

This study was conducted on April 8th, 2023. The research involved distributing a Google Form questionnaire (<https://docs.google.com/forms/d/e/1FAIpQLSedvCZJoiVoddtYDUC1DzrjKAtD2K0KWHcxy9vj4S6xX832g/view-form>) by sharing the link with student-athletes in Indonesia. The questionnaire link was shared through social media platforms, including Instagram and TikTok. Additionally, coaches were asked to share the link with their students based on specific criteria for participation.

This study employs a descriptive categorization test for the Academic Hardiness Scale and healthy lifestyle behavior. The data collected will undergo descriptive analysis and assumption tests, including a normality test using the Kolmogorov-Smirnov Test and a linearity test using One-Way ANOVA. Furthermore, a hypothesis test examining the relationship between academic hardiness and healthy lifestyle behavior will be conducted through a correlation test using the Product Moment correlation from Karl Pearson. The data analysis for this study will be carried out using IBM SPSS Statistics 25 software for Windows.

RESULTS AND DISCUSSION

The results of the correlation test using the product moment from Karl Pearson revealed a correlation coefficient of 0.161 ($p = 0.017$) between academic hardiness and healthy lifestyle behavior. This indicates a significant positive relationship between academic hardiness and healthy lifestyle behavior in student-athletes. The findings suggest that academic hardiness is one of the factors associated with the improvement of healthy lifestyle behavior in student-athletes. Furthermore, the correlation test among each aspect of academic hardiness toward healthy lifestyle behavior in Table 4 demonstrates a significant positive relationship among the challenge, control of effort, and control of affect aspects with healthy lifestyle behavior. However, in the commitment aspect,

there is no significant positive relationship with healthy lifestyle behavior.

Table 4. Correlation Test Results for Each Aspect of Academic Hardiness with Healthy lifestyle behavior

		Mean	SD	1	2	3	4	5
Commitment	Pearson Correlation	18.60	2.705	1				
	Sig. (1-tailed)							
Challenge	Pearson Correlation	17.78	2.983	0.701**	1			
	Sig. (1-tailed)			0.000				
Control of Effect	Pearson Correlation	18.42	2.733	0.684**	0.616**	1		
	Sig. (1-tailed)			0.000	0.000			
Control of Affect	Pearson Correlation	27.45	3.964	0.729**	0.714**	0.726**	1	
	Sig. (1-tailed)			0.000	0.000	0.000		
Healthy lifestyle behavior	Pearson Correlation	79.93	11.681	0.097	0.152*	0.165*	0.149*	1
	Sig. (1-tailed)			0.101	0.023	0.015	0.025	

The results show that the hypothesis of this study is accepted, indicating a significant positive relationship between academic hardiness and healthy lifestyle behavior in student-athletes. According to the results of the correlation analysis, there is a relationship between academic hardiness and healthy lifestyle behavior, with a correlation coefficient of $r=0.161$ and a significance level of 0.017 ($p<0.05$). This implies that the higher the academic hardiness, the better the healthy lifestyle behavior of student athletes. The findings of this study align with those of Yamaguchi, Kawata, Shibata, and Hirosawa (2018), who stated that academic hardiness impacts healthy lifestyle behavior in student-athletes in Japan. Academic hardiness, according to their research, has an adaptive effect that motivates student-athletes to maintain their health both physically and mentally under pressure, ultimately enhancing academic and work performance.

From this study, it is determined that the reason student-athletes can exhibit a sufficiently healthy lifestyle behavior is due to their academic hardiness. The effective contribution of academic hardiness, as obtained from this study, is 2.6%, signifying that academic hardiness is one of the factors influencing the improvement of healthy lifestyle behavior in student-athletes. These findings support a previous study conducted by Shaheen et al. (2015), which stated that characteristics impact healthy lifestyle behavior. This implies

that student-athletes require the characteristic of academic hardiness to achieve a good healthy lifestyle behavior.

The findings of this study indicate that most student-athletes possess a high level of academic hardiness, accounting for 59.8% of all participants. This suggests that student-athletes have a strong ability to maintain consistency in self-improvement and can effectively recognize and manage their emotions. As a result, they can overcome various academic challenges. These findings align with the assertions made by Rakhmawati, Supriatna, and Wardati (2019), emphasizing that student-athletes demonstrate a willingness and consistency to fulfill academic demands, coupled with the ability to recognize, resolve, remain calm, and persevere in the face of academic challenges. This capability enables them to control and handle their emotions effectively, leading to the attainment of a healthy lifestyle. These findings also corroborate the research conducted by Mardiyah and Ramadhani (2018).

The healthy lifestyle behavior level of student-athletes participating in this study is predominantly in the sufficient category, with 116 participants, constituting 66.7% of the total participants. This indicates that student-athletes exhibit a satisfactory level of proficiency in developing their inner selves and establishing closeness with others. Furthermore, their choices in food consumption and physical activity are also deemed quite commendable. They demonstrate a responsible approach to their health by maintaining self-control and reducing stress, aiming to achieve overall well-being and good health (Kiani, Bozorgi, & Alizadeh, 2022).

In this study, student-athletes exhibit a sufficiently adept ability to reflect on and derive positive values from various academic challenges, viewing them as opportunities for self-development and learning to enhance their future selves. This aligns with the findings of Mardiana, Sofia, and Ramadhani (2023) research. Furthermore, the results of this study support the research conducted by Abdollahi, Abu Talib, Yacoob, and Ismail (2014), which indicates that student-athletes tend to address problems and pressures based on their past experiences rather than withdrawing from challenging situations. This proactive approach not only helps in problem-solving but also contributes to stress reduction, fostering a healthier outlook for student-athletes.

The findings in this study align with the observations made by Abdollahi and Noltemeyer (2018), indicating that student-athletes possess exceptional abilities to recognize, remain calm,

and control their emotions. This enables them to effectively overcome various academic challenges. Furthermore, in this study, student-athletes demonstrate an increased and more consistent sense of responsibility in adopting a healthy lifestyle, supporting the assertions made by Carlucci and Edge (2022).

Although most of the student-athletes in this study already exhibit good commitment, it appears that other factors prevent them from fully committing to achieving optimal health. In line with this, as stated by Hosseini, Hesam, and Hosseini (2022), if commitment does not affect fatigue, it implies that commitment may not necessarily lead to achieving good health. The level of commitment among student-athletes can be influenced by factors such as knowledge. Without sufficient knowledge, student-athletes lack a basis for making decisions regarding their health issues. The low knowledge level of student-athletes about healthy lifestyle behavior seems to be one of the factors hindering the expected commitment to adopting healthy behavior (Rombeallo, Tahir, & Saleh, 2022).

This study conveys an intriguing message to readers. Despite the high commitment observed among student-athletes in this study, it appears that there is still a lack of knowledge among those who are not enrolled in sports-based schools or universities or are not recipients of sports scholarships regarding health. This knowledge gap is identified as one of the factors preventing student-athletes from fully committing to achieving good health. This research has inherent limitations, with researchers encountering challenges, notably with participants who are not enrolled in specialized athletic schools or universities like PPOPM (Pendidikan Dan Pelatihan Olahraga Pelajar Dan Mahasiswa) or are not recipients of sports scholarships. Consequently, several items in the study were perceived as incompatible when distributed to participants who do not attend specialized athletic institutions or are not recipients of sports scholarships.

CONCLUSION

According to the results of this study, it can be concluded that there is a positive relationship between the academic hardiness variable and healthy lifestyle behavior in student-athletes. Specifically, the challenge aspect, control of effort, and control of affect exhibit a significant positive relationship with healthy lifestyle behavior. Meanwhile, the commitment aspect does not show a significant relationship with healthy lifestyle

behavior. The effective contribution of academic hardiness towards student-athletes' healthy lifestyle behavior is 2.6%, with the remaining impact attributed to other factors not examined in this study.

Suggestions for further research, if one wishes to examine the relationship between academic hardiness and healthy lifestyle behavior in student-athletes, include focusing the research on student-athletes living in athlete dormitories or those receiving education in schools or universities through sports scholarships.

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