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Assessing Perceived Benefits and Perceived Barriers to Students' Physical Activities

*Nor Zaihan Mat Hasan Mat Hussin, Annurizal Anuar, Mohamad Shahril Mohamad Besir
Faculty of Business and Management, UiTM Cawangan Selangor, Kampus Puncak Alam, Selangor, Malaysia
Email: *norzaihanmh@uitm.edu.my, annurizal@uitm.edu.my, shahrilbesir@uitm.edu.my
Corresponding Author: Nor Zaihan Mat Hasan Mat Hussin

Abstract: Physical activity is essential for maintaining individual health through indoor or outdoor activities. Whether the individual or group initiates it, the physical activity should be encouraged and included for students at the university. However, students encounter various barriers that hinder their engagement, including time limitations, a lack of motivation, and inadequate access to facilities. Nevertheless, they recognize the numerous benefits of physical activity, including improved mental and physical health, stress alleviation, and enhanced academic performance. This study investigates the relationships between perceived barriers, perceived benefits, and students' physical activity. A cross-sectional, quantitative approach was adopted, with data collected through structured online questionnaires. The sample comprised 150 students selected using convenience sampling. Data analysis was conducted using SPSS Version 23, employing descriptive and inferential statistical methods. The findings indicated a significant positive correlation between perceived benefits and physical activity, while perceived barriers did not demonstrate an important relationship. This study highlights the necessity for universities to improve access to facilities, offer flexible scheduling, and cultivate a supportive environment that promotes active lifestyles among students.

Keywords: *Students' Engagement, Motivation, Facilities*

1. Introduction and Background

Physical activity is crucial for maintaining overall health and well-being, especially in young adults. In the Malaysian context, university students face several challenges and barriers to engaging in physical activity, which are influenced by many factors. For example, a study at Universiti Kebangsaan Malaysia identified these barriers. It showed that the main barriers to sustaining an active student's lifestyle in university were often time limitations brought on by their academic obligations and a lack of parental engagement. Furthermore, it has been demonstrated that there is a significant drop in physical activity levels throughout the secondary school to university transition, which increases the hazards of sedentary behavior, including obesity and associated health problems (Othman et al., 2022). Numerous studies have found that university students frequently face obstacles when engaging in physical activity. Lack of time is among the most common obstacles, since students struggle to manage their academic obligations with extracurricular activities (Brown et al., 2012). Lack of desire frequently worsens this time constraint; students may struggle to maintain an active lifestyle without a strong sense of personal drive (Gyurcsik et al., 2006). Another major obstacle may be the scarcity of appropriate workout facilities. Off-campus options may be unavailable because of expense or distance, and university campuses may not always offer convenient or sufficient areas for students to participate in physical activity (Silva et al., 2022).

Social effects are also important in supporting and encouraging students to exercise regularly. One of the social effects is that peer pressure and a lack of social support can negatively impact students' physical activity levels. Students are discouraged or demotivated to self-exercise without being accompanied by many friends or family members (Salvy et al., 2008). Another social effect comes from environmental factors, such as bad weather, risk, and threats from the surroundings, for example, from any stranger while exercising in a location with fewer people. The weather conditions, such as heat, cold, or rain, might make it challenging or risky for them (Trost et al., 2002).

Despite these barriers, students understand that physical activity has many advantages. When students frequently exercise, there will be a reduction in the risk of obesity and diabetes, which is a common problem affecting students (Warburton, Nicol & Bredin, 2006). Moreover, physical activity has the potential to improve mental health. Evidence from Biddle & Asare (2011), who conducted a study about physical activity and mental health in children and adolescents, found that physical activity improved mood, increased cognitive performance, and lessened the symptoms of depression and anxiety (Biddle & Asare, 2011). Students may

benefit from any disease and mental health issues whenever they have the self-discipline to do physical activities and exercise to maintain health. Additionally, there is evidence linking physical activity to improved intellectual achievement. Regular exercise has been shown to enhance focus, memory, and academic performance in general (Dwyer et al., 2001). The link between academic achievement and physical exercise emphasizes encouraging students to have active lifestyles for their academic and health. Furthermore, many students say that exercising boosts their self-esteem and body image. Frequent exercise can result in physical changes like muscle growth and weight loss, improving a student's confidence and sense of self (Pronk & Kottke, 2009).

Personal characteristics, such as self-discipline and enjoyment of physical activity, are important (Dishman, Heath, Schmidt, & Lee, 2021). Students who regard exercise as pleasurable and intrinsically fulfilling are more likely to maintain regular physical activity. Likewise, people with higher levels of self-control and self-motivation are more likely to overcome obstacles and continue leading active lives. Students' physical activity is also greatly influenced by social networks. Peer, family, and friend support can motivate adolescents to remain active. As per Giles-Corti and Donovan (2002), engaging in group exercise courses or having a workout partner can provide a source of accountability and inspiration. Another crucial element is the facilities. The facilities, such as gyms and sports complexes, could encourage physical activity among students (Haskell et al., 2007) because all equipment, machines, rooms, and facilities encourage students to do physical activity in their free time. Universities that invest in providing the facilities, designing accessible, safe areas for physical exercise may encourage students to have physical activity and may gain the outcome not only students' health but also beyond that, such as academic performance and active participation in curriculum or activities organized by universities. For instance, universities organize fitness programs, such as Zumba and running programs, which can cultivate and promote physical activity (Warburton et al., 2006). Therefore, this study aims to investigate the most significant influence of perceived barriers and benefits on students' physical activity among local universities in Selangor.

2. Literature Review

Perceived Benefits of Physical Activity

Physical activity benefits among university students abound and have a central goal to aid in improving various aspects of life. Exercise on a regular basis has numerous advantages, mainly physical and mental health and overall quality of life. A clear benefit is increased physical appearance, thus an increase in self-confidence and self-esteem. Physical activity has been known to be related to good cardiovascular fitness, moderate control of weight, and high physical fitness levels, such as strength, flexibility, and stamina. These elements come in especially handy for students who have a sedentary lifestyle due to their studies. Research done by Warburton et al. (2006) suggests that physical activity has a role in decreasing chronic diseases such as heart disease and diabetes, even in the younger generation. Being physically active further helps raise energy levels that allow students to perform their daily functions better.

In addition, regular exercise plays a critical role in supporting mental health. Many reasons and factors cause students to experience stress, anxiety, and sleep difficulties due to academic pressures, so practicing frequent physical activity provides a way to minimize these situations. For instance, daily exercise, as mentioned by Rebar et al. (2015), may release endorphins, which can improve the mood of an individual from feelings of depression and anxiety. Additionally, physical activity is beneficial to enhance sleep quality, so that an individual is able to think rationally and maintain good emotional control. According to Brant et.al (2009), with physical activity, the students can manage positive sleep patterns and regulate their emotional well-being, which ultimately leads to giving more focus and increasing academic productivity.

Physical activity also fosters social interaction and contributes to academic success. Participating in group activities or sports helps students build friendships, develop teamwork skills, and expand their social networks (Mathunjwa et al., 2024). Beyond the social benefits, exercise has cognitive benefits that directly impact academic performance. Foley, Darcy, Hergesell, Almond, McDonald, and Brett (2024) demonstrated that regular physical activity enhances brain function, improving memory, attention, and problem-solving abilities. These benefits improve students' academic outcomes and create a balanced and fulfilling university experience. Promoting accessible exercise opportunities on campuses can encourage more students to reap these

multidimensional benefits. The benefits of engaging in physical activity are crucial aspects that directly impact students' physical activity. Studies indicate that if students actually comprehend and experience exercise's rewards, chances improve that they will adhere to consistent workout schedules. For example, noticing gains in physical looks and body structure can be a highly influential factor, in particular among those who take appearance concerns seriously (Jankauskiene et al., 2022). This encouragement tends to produce consistent physical activity participation. Furthermore, exercise's stress relief component is a pivotal factor among students experiencing school stress. Recognizing that activity can help mitigate stress and strain helps prompt others to incorporate exercise into daily life (Teuber, Leyhr & Sudeck, 2024). If students become aware of these rewards, they will be prone to place a higher importance on physical activity use, improving overall rates of use (Wiseman, 2024).

According to research, engagement in physical activity has a plethora of health benefits that greatly promote students to lead active lifestyles. Such rewards include weight loss, improved cardiovascular function, and the avoidance of numerous diseases (Curtin, 2024). If students become aware that regular exercise can improve their overall wellness and prevent chronic diseases, then they become more likely to seek out physical activity daily. Expanding beyond a physical state of wellness, exercise has great cognitive benefits too that include mood booster effects and a reduction in depression and anxious features (Wanjau et al., 2023). Students who receive these mental wellness benefits tend to be more committed to a regular workout schedule since it has a positive effect on overall wellness. By placing importance on these wellness effects and a friendly environment for physical activity, higher education institutions can inspire students to adopt a schedule of regular exercise. Such a tactic not only progresses wellness but also elevates the overall quality of life among students. Expanding on this research-based knowledge, a hypothesis was developed to further examine how these aspects affect student motivation and physical activity participation.
Hypothesis 1: Perceived benefits are significantly related to students' physical activities.

Perceived Barriers to Physical Activity
A physical activity, particularly in a university environment, is flexible for students to do by themselves or actively participate in any program organized by the university. However, there are many perceived barriers for students to do the physical activity, such as time limitations and the unavailability of activity spaces (Brown et.al, 2024; Rubio et.al, 2015). Many students complain of a lack of available facilities owing to the restricted operational hours of the gymnasium and sports facilities, which the majority of students are unable to access. Furthermore, the mere distance employed to access these facilities is said to be a barrier to seamless integration of physical activity within your everyday schedule. Psychological and social aspects account for more than just the actual gaps within the physical environment. Lack of initiative on the part of the students, as well as the insufficient persuasive power from their peers and close relatives, pushes down their readiness to engage in exercise. The constant pressure of assignments and mental exhaustion further exhausts the student's energy, making exercise foreign to them. Students' psychological barriers and emotional conditions affect the way they view and take part in physical activities. Improving mental health facilities, building mental health community support networks, and educating the public on mental disorders need simultaneous implementations (Estrada, 2024; Duffey et al., 2021)

Students' opportunity to exercise is dependent on how readily available the opportunity is. The distance students have to travel to exercise, the hours, and the exercise location have a big impact on students' willingness to participate (Koh et al., 2022). The distance and the way the exercise is structured often repel students from exercising and fail to maintain a routine, regardless of intrinsic motivation and the need to exercise. Data points to the fact that the greater the imbalance that students have to work on, in terms of academic, leisure, and physical activities, the less they tend to exercise (Raza et al., 2022; Deforche et al., 2015).

Combined, these investigations show that students who do not engage in psychological activities or have psychological impediments, whom secure access to exercise facilities do have a greater level of physical activity done, do not engage in physical activity, and do more exercise than other students do not engage in more exercise than students who have other students do not do students who engage in more exercise do more exercise do not engage in more physical activity than other students do not do students who have more active do not students exercise do not engage in more active do not engage in more active do not exercise physical activity engage in more students have more active lifestyles. Meanwhile, Deforche et al. (2015) elaborate on

how students with available time to exercise and available exercise facilities available to them exercise much less than their peers, and also engage in physical activity that is much less than that of their peers. This gap in exercising and the available exercise schedules often leads students to neglect exercising altogether, since it becomes less favorable to engage in the activity. This activity, however, is something that a lot of students struggle with accomplishing on a day-to-day basis. Bridging these gaps of access to exercise facilities and setting aside time to exercise more frequently could boost physical activity in students at a university. Therefore, based on this understanding, the following hypothesis was developed:

Hypothesis 2: Perceived barriers are significantly related to students' physical activities.

3. Research Methodology

The purpose of the study is causal research and hypothesis testing, which is to determine the reasons for the relationship between the variables. The research identifies 150 students from selected local universities in Selangor to complete the survey for data collection on students' physical activity and its perceived barriers and benefits. A sample is a specific group of individuals or units selected from a larger population to collect data. The sample size is always less than the total size of the population (Bhandari, 2020). Using G*Power, the researcher set the effect size at 0.15 (medium effect), α at 0.05, and power at 0.80; thus, the sample size is 68. Some investigators power their studies for 90% instead of 80%, and some set the threshold for significance at 0.01 rather than 0.05 (Andrade, 2020). Figure 2 shows the sample size calculation using G*Power software. The questionnaire included modified and unique items based on earlier research by Dinc et al. (2019) and Alkhawaldeh et al. (2024), as shown in Table 1.

Table 1: Items Measurement

Variables	No of Items	Sources
Perceived Benefits		Alkhawaldeh et al. (2024)
Social Interaction	3	
Life Improvement	4	
Preventive Health	4	
Physical Performance	8	
Perceived Barriers		
Exercise Milieu	5	
Time Expenditure	3	
Physical Exertion	4	
Family Discouragement	13	

According to Table 2, the demographic data shows that women represent 89.0% of the total respondents, while men make up just 11.0%. This implies that women heavily dominate the sample. Regarding faculty representation, the Faculty of Business and Management accounts for almost half of the participants (47.3%), with the Faculty of Health Science coming in second with 36.3%. Smaller percentages are contributed by other faculties like education (3.3%), accounting (5.5%), architecture, planning, and surveying (5.5%), and hotel management and tourism (2.2%). A significant concentration of participants with backgrounds in business and health sciences is evident from this distribution. Most respondents (60.4%) said they exercised 1-2 times per week, while 24.2% said they exercised 3-4 times per week. With 2.2% exercising five to six times a week and another 2.2% exercising daily, only a small percentage of the sample reported higher activity levels. Remarkably, 11.0% said they never work out. Just 9.9% of people do high-intensity aerobic workouts, whereas the vast majority (59.3%) do low-intensity aerobic exercises. According to this pattern, most people engage in some physical activity, but it is typically low to moderate in frequency and intensity. Although there is potential for improvement in consistency and intensity, the data show that the population is generally health-conscious and somewhat aware of the value of physical activity. Strong representation from the faculties of business and health may impact these trends, as business students may be more sedentary due to their academic workload. In contrast, health science students may be more conscious of physical wellness. The data indicate potential areas for encouraging more frequent and vigorous physical activity, particularly among less active groups, and reveal a gender-skewed, moderately active population that prefers low-intensity exercise.

Table 2: Demographic Factor Analysis

Classification		Frequency	Percentage (%)
Gender	Male	10	11.0
	Female	81	89.0
Faculty	Faculty of Business and Management	43	47.3
	Faculty of Health Science	33	36.3
	Faculty of Education	3	3.3
	Faculty of Accountancy	5	5.5
	Faculty of Architecture, Planning and Surveying	5	5.5
	Faculty of Hotel Management and Tourism	2	2.2
How many times have you exercised in a week?	Never	10	11.0
	1-2 times a week	55	60.4
	3-4 times a week	22	24.2
	5-6	2	2.2
	Everyday	2	2.2
Types of physical activity	Aerobic exercise (Low intensity)	54	59.3
	Aerobic exercise (High intensity)	9	9.9
	Strength training	8	8.8
	Flexibility exercise	11	12.1
	Balance exercise	9	9.9
How much time do you spend on each session?	Less than 10 minutes	22	24.2
	10-20 minutes	24	26.4
	20-40 minutes	24	26.4
	40-60 minutes	14	15.4
	More than 60 minutes	7	7.7

4. Results

All three variables shown in Table 3, perceived barriers, perceived benefits, and students' physical activity, were within acceptable ranges of skewness and kurtosis, according to the descriptive statistics, indicating that the data are roughly normally distributed. The skewness for the 29 items in the perceived benefits scale, which ranges from -1.354 to -0.224, indicates a slight to moderate negative skew, indicating that responses tended to lean toward higher agreement or positive perception of benefits. Within acceptable bounds for normalcy, the kurtosis values range from -0.043 to 4.318, representing distributions primarily mesokurtic (normal) to slightly leptokurtic (peaked). The 14-item Perceived Barriers scale has skewness values ranging from 0.113 to 2.187, indicating a mild to moderate positive skew. This suggests that although responses to some items may have been more variable, participants generally expressed less agreement with perceived barriers. This variable's kurtosis ranges from -0.948 to 4.404, which is within the acceptable range for normal data in behavioral research, even though it contains values above 3 (indicating some peaked distributions). Lastly, the 13-item Students' Physical Activity survey has skewness values ranging from -1.009 to -0.136 and kurtosis values between -0.774 and 0.872. This shows a symmetrical distribution with comparatively flat curves, suggesting that responses to various physical activity-related items follow consistent patterns. All three variables' normality suggests that parametric statistical analyses can be used effectively. The patterns show that students generally recognize the benefits of physical activity, perceive relatively few barriers, and report moderate engagement in physical activities. These findings and the skewness and kurtosis results indicate that the data are well-suited for additional inferential testing. These findings are important for developing successful health promotion strategies in educational settings.

Table 3: Normality Assessment

Variable	No. of Items	Skewness	Kurtosis	Strength Association
Perceived Benefits	29	-1.354 to -0.224	-0.043 to 4.318	Normal
Perceived Barriers	14	0.113 to 2.187	-0.948 to 4.404	Normal
Students' Physical Activity	13	-1.009 to -0.136	-0.774 to 0.872	Normal

According to Cronbach's alpha values, as shown in Table 4, the reliability analysis of the three primary variables, consisting of perceived benefits, perceived barriers, and students' physical activity, shows that all constructs have high internal consistency. For perceived benefits, 29 items showed the result reliability as Cronbach's alpha of 0.946, indicating all items were highly reliable. For perceived barriers, there were 14 items, and the Cronbach's alpha was 0.917, indicating a high level of reliability. Similar to Students' Physical Activity, the Cronbach's alpha of 0.942 indicates an outstanding internal consistency. These high reliability coefficients, which are all significantly higher than the generally recognized cutoff of 0.70, imply that the survey instrument is reliable and that the items in each construct are closely related. Overall, the findings support the reliability of the items and variables of students' perceived benefits, perceived barriers, and physical activity behavior, which is methodologically sound and dependable.

Table 4: Reliability Analysis

Variable	No. of Items	Cronbach's alpha	Remarks
Perceived Benefits	29	0.946	Reliable
Perceived Barriers	14	0.917	Reliable
Students' Physical Activity	13	0.942	Reliable

Table 5 shows the results of descriptive statistics that show interesting trends in the attitudes and actions of the students. Perceived benefits have a mean score of 4.207 and a comparatively low standard deviation of 0.469. Given the low variability of responses, it can be inferred that students generally have a moderately high perception of the advantages of physical activity. The idea that students understand the value of physical activity is supported by the fact that most seem to agree strongly with its perceived benefits. With a mean score of 2.217 and a standard deviation of 0.779, perceived barriers, on the other hand, indicate a lower degree of agreement with physical activity barriers. This implies that students generally report fewer barriers to physical activity, but the higher standard deviation shows that responses vary widely. While some students may perceive fewer difficulties, others may encounter substantial obstacles. Lastly, students participate in physical activity at a moderate frequency, as indicated by the mean score of 3.913 for students' physical activity and a standard deviation of 0.684. The lower standard deviation indicates that respondents' activity levels follow a fairly consistent pattern, with most students probably participating in regular but moderate physical activity. Overall, the findings show that students maintain moderate physical activity levels while acknowledging the advantages of physical activity and perceiving fewer obstacles. These results point to possible areas for intervention, including encouraging more frequent physical activity by addressing individual barriers and highlighting the advantages for those who might be less active.

Table 5: Descriptive Analysis

Variables	Mean	Std. Deviation
Perceived Benefits	4.207	0.469
Perceived Barriers	2.217	0.779
Students' Physical Activity	3.913	0.684

Pearson Correlation: Correlation analysis results are shown in Table 6, which shows the presence and strength of a connection between two or more measurable variables. This study uses correlation analysis to determine whether there are relationships between the independent variables (perceived benefits and perceived barriers) and the dependent variable (students' physical activity level). Hair et al (2010) suggested that the coefficient values less than 0.3 are considered low, 0.3 to 0.66 are moderate, and more than 0.61 are strong. With a p-value of 0.001 and a coefficient of 0.676, the findings demonstrate that Perceived Benefits have a positive and statistically significant** effect. Higher perceived benefits are linked to a higher likelihood or

intensity of the measured outcome, indicating a strong and consistent positive relationship. Conversely, Perceived Barriers have a p-value of 0.223, which is not statistically significant, but a negative coefficient (-0.129). This is untrue, even though the table indicates that it is positive and significant. This study cannot conclude that perceived barriers significantly impact this model because the p-value is higher than the typical significance level of 0.05. Therefore, perceived barriers have no discernible effect on the outcome, whereas perceived benefits have a strong positive influence. Hence, hypothesis 1 was supported, and hypothesis 2 was not supported for this study.

Table 6: Pearson Correlation

Variables	Coefficient	P Value	Result
Perceived Benefits	0.676	0.001	Positive and significant
Perceived Barriers	-0.129	0.223	Positive and significant

Regression Analysis: Perceived benefits have a strong, positive, and statistically significant impact on the outcome, according to the regression results. A significant and dependable effect is indicated by the unstandardized coefficient (Beta) of 1.002, the standardized Beta of 0.687, and the t-value of 8.484 ($p < .001$). Therefore, Hypothesis 1 was supported. However, the standardized beta is 0.041, the unstandardized coefficient is 0.036, the t-value is 0.512, and the p-value is 0.610. Because of the weak and non-significant relationship between these values, Hypothesis 2 (H2) is not supported. The overall model is significant ($F = 37.342$, $p < .001$), suggesting that the predictors account for a sizable portion of the variation in the result. With an R2 of 0.459 and an Adjusted R2 of 0.447, the model appears to account for roughly 45% of the variance in the dependent variable, which is a significant amount for social science research. As a result, perceived advantages greatly influence the result, whereas perceived obstacles have little bearing. All things considered, the model is robust and statistically sound.

Table 7: Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Results
	Beta value	Std. Error	Beta			
Perceived Benefits	1.002	.118	.687	8.484	<.001	H1 Supported
Perceived Barriers	.036	.071	.041	.512	.610	H2: Not Supported
F value	37.342					
Significant	<.001					
Adjusted R^2	.447					
R^2	.459					

Discussion

The findings indicate a significant positive relationship between perceived benefits and students' physical activity levels. This suggests that the advantages of engaging in physical activity are essential and directly affect students' involvement in exercise. When students recognize and experience these benefits, they are more motivated to maintain consistent exercise routines. For example, the desire to improve physical appearance and body shape can strongly motivate students concerned about their looks (Jankauskiene et al., 2022). This aspiration to enhance their appearance can drive them to engage in regular physical activities. The results of these studies illustrate that students' perceptions of the benefits associated with physical activity can significantly influence their overall engagement in exercise. Additionally, many respondents agree that the greater the perceived benefits, the more likely students are to partake in physical activities. Psychological factors such as body image, stress, and self-efficacy, defined as one's belief in their ability to exercise, also motivate students to engage in physical activities (Brown, Henderson, & Stern, 2024). By promoting these benefits and fostering an environment that supports physical activity, universities can encourage students to exercise regularly, ultimately leading to improved health and well-being.

In addition, the study's findings suggest that perceived barriers to physical activity have little effect on students' engagement in physical activity. The weak correlation between these perceived barriers and physical activity levels indicates that they are not a significant factor for the students involved in the research. Specifically, local

students from the selected local university do not face substantial challenges related to these barriers. Moreover, students' awareness of the benefits of physical activity may account for the diminished significance of perceived barriers. Many students recognize the mental and physical health benefits of staying active, such as reduced stress, improved mood, and enhanced physical strength (Teuber et al., 2024). This awareness likely outweighs any minor inconveniences or barriers, motivating them to pursue an active lifestyle. It is important to note that these findings may be context-specific. Factors like accessible facilities, a supportive campus atmosphere, or cultural influences could lessen the impact of perceived barriers for this group of students. In light of these findings, universities should consider expanding their focus to address additional factors influencing students' physical activity, such as enhancing intrinsic motivation or fostering social support. By gaining a deeper understanding of the unique dynamics within this population, institutions can develop more targeted and practical strategies to promote physical activity.

5. Managerial Implications and Recommendations

The significance of the study on university students' physical activity is multifaceted, addressing critical aspects of public health, educational outcomes, and policy development. Firstly, the study highlights the prevalence of physical inactivity among university students, a growing global concern. By identifying that less than half of the students engage in regular physical activity, the study underscores the urgent need for interventions to promote healthier lifestyles. This finding is consistent with global trends, where a significant proportion of young adults fail to meet the recommended physical activity, leading to increased risks of obesity, cardiovascular diseases, and mental health issues. Secondly, the study provides valuable insights into the perceived barriers and benefits of physical activity among university students. Understanding these perceptions is crucial for designing effective health promotion programs. The study reveals that students recognize the benefits of physical activity, such as improved physical appearance and reduced stress, but also face significant barriers like a lack of accessible exercise facilities and inconvenient schedules. These insights can help universities and policymakers develop targeted strategies to overcome these barriers, such as improving infrastructure and offering flexible exercise schedules. Thirdly, the study's findings on the demographic factors influencing physical activity are significant for tailoring interventions. The research shows that younger students, those who are single, and those with a normal body weight are more likely to be physically active. Additionally, students who perceive their health as excellent are more inclined to engage in physical activities. These demographic insights can guide the development of personalized interventions that consider the specific needs and characteristics of different student groups, thereby enhancing the effectiveness of health promotion efforts.

Moreover, the study emphasizes the importance of self-perceived health status as a predictor of physical activity. Students who rate their health as excellent are significantly more likely to be physically active. This finding suggests that interventions to improve students' self-perception of their health could be an effective strategy to increase physical activity. Programs focusing on enhancing students' awareness of their health status and promoting positive health behaviors could lead to better engagement in physical activities. Additionally, the study identifies specific perceived benefits and barriers to physical activity, which have important implications for program design. Students reported that improved physical appearance and stress reduction were primary motivators for engaging in exercise, while lack of accessible locations and inconvenient schedules were noted as significant barriers. Understanding these motivations and deterrents provides a clear pathway for universities to develop more accessible and appealing physical activity programs. By aligning physical activity opportunities with students' identified benefits, universities can encourage greater participation while addressing logistical issues, which can help to reduce perceived barriers and promote a culture of health within the campus environment. Thus, according to earlier research, students who are self-conscious about their appearance may find that the advantages of physical activity, such as an improvement in body form and attractiveness, greatly motivate them (Jankauskiene et al., 2022). They may be motivated to participate in physical activities regularly to improve their appearance. Additionally, the psychological advantages, such as improved mood and fewer signs of worry and despair, also lead to increased levels of physical exercise (Wanjau et al., 2023). Because exercise improves their general well-being, students who experience these mental health benefits are more likely to keep up their exercise regimen. By emphasizing these advantages and fostering an atmosphere encouraging physical activity, academic institutions can motivate students to exercise frequently, enhancing their health and overall well-being.

Lastly, the study has significant implications for policy and practice in higher education institutions. By providing comprehensive data on the physical activity and associated factors among university students, the study offers a strong evidence base for developing health promotion policies. Universities can use these findings to implement policies that create supportive environments for physical activity, such as incorporating physical exercise into the curriculum, improving access to exercise facilities, and promoting a culture of health and wellness on campus. These policy changes can improve students' well-being and foster a healthier, more active university community. Based on the previous findings, students' physical activity can be significantly impacted by perceived barriers such as a lack of exercise facilities, complex timetables, and the distance to exercise places. For example, students become less motivated to be physically active when they believe that there are not enough locations to work out or that these venues are not conveniently accessible or scheduled (et al., 2022). A study also showed that students who depend on community or university resources may have fewer possibilities for physical activity due to limited access to exercise facilities like gyms or sports fields (Raza et al., 2022). Therefore, to overcome these barriers, the university may make exercise facilities more accessible by making campus fitness centers more valuable and accessible. This would encourage more students to engage in physical activity. To accommodate a variety of student schedules, this can involve extending the hours that gyms and sports facilities are open and ensuring that all students have easy access to them (Johannes et al., 2024). In addition, by establishing fitness clubs or encouraging group activities, the institution can create a friendly environment that will increase motivation by offering social support. Exercise with peers increases accountability, helps students stick to regular exercise schedules, and makes physical activity more enjoyable (Brown et al., 2024).

Conclusion

The research emphasizes that self-assessed health condition is a vital indicator of physical activity in university students. Individuals who consider their health to be excellent are substantially more inclined to participate in regular physical exercise. This discovery highlights the significance of initiatives focused on enhancing students' views of their health to promote more active living. Initiatives that enhance health awareness and encourage healthy behaviors can successfully boost involvement in physical activity. Moreover, learners recognize improved physical appearance and stress alleviation as key incentives for exercising, whereas obstacles like restricted access to nearby facilities and conflicting schedules impede their activity. Improving facility accessibility, extending operational hours, and offering social support via fitness clubs and group activities can enhance motivation and increase participation. Working out with friends promotes responsibility and enhances the enjoyment of exercise. The study's results indicate that perceived advantages greatly enhance student involvement in physical activity, while perceived obstacles such as distance to facilities and time limitations do not substantially hinder participation. This could be attributed to strong awareness of the advantages of exercise and helpful campus resources, reducing the impact of obstacles.

Consequently, universities ought to focus on programs that emphasize the mental and physical health benefits of exercising, including stress reduction and enhanced well-being. Health promotion initiatives utilizing workshops, online platforms, and peer-led activities can strengthen these messages. Adaptive scheduling, inclusive exercise initiatives, and a friendly campus atmosphere will further promote a culture of wellness and fitness. Consistent input from students can help keep these programs relevant and effective, ultimately promoting healthier, more active lifestyles that improve both student well-being and academic success. Research indicates that physical activity has a positive impact on self-esteem and mental health in university students, with moderate to intense exercise yielding more significant advantages. Men generally exhibit greater levels of physical activity and self-esteem; however, these differences diminish among students participating in intense exercise. Organized exercise plans, particularly those that include social interaction and group involvement, can enhance mental health and maintain active engagement among various student groups (PMC, 2025; Brown et al., 2024).

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