

The Motivation Influence On Level of Physical Activity Among UKM Students Bachelor's Degree in Sports and Recreation Education  
(Pengaruh Motivasi Terhadap Peringkat Aktiviti Fizikal Dalam Kalangan Pelajar Ijazah Sarjana Muda Pendidikan Sukan Dan Rekreasi Fakulti Pendidikan UKM)

HAMLUDIN MARIH\*, MOHAMAD NIZAM NAZARUDIN & ZAKIAH NOORDIN

ABSTRACT

An excellent student must be balanced in various aspects such as physical aspects. This study involved 165 students from years one to four of the Bachelor's Degree in Sports and Recreation Education, Faculty of Education, Universiti Kebangsaan Malaysia who were randomly selected. The method of determining the sample of this study is to use the Krejcie and Morgan (1970) sample determination table. This study used the International Physical Activity Questionnaire (IPAQ) and Exercise Motivation Inventory (EMI-2). Data were analyzed using SPSS version 27 with descriptive analysis (percentage, mean, and standard deviation) and inferential analysis (t-test, ANOVA, and Pearson correlation). A total of 23% of students are in the fat, obese, and dangerous zone. There is no significant difference between genders in physical activity based on the year of study ( $p > .05$ ). The lowest mean participation motive in years 1 to 4 was Interpersonal Motive. The highest mean for 1st to 4th year was Health, Psychic, Psychological, and Fitness Motives. There is a significant difference in participation motives involving interpersonal and fitness based on gender ( $p < .05$ ). There is no significant difference in the motive of participation based on the year of study. There is a positive relationship between participation motive and physical activity ( $r = .823$ ,  $p = 0.001$ ). Finding fun activities, making it a habit, starting small, leveraging technology, and involving others are some suggested strategies to help the students increase their physical activity.

Keywords: physical activity, motivation, motive, IPAQ, EMI-2

ABSTRAK

Seorang pelajar yang cemerlang mestilah seimbang dalam pelbagai aspek seperti aspek fizikal. Kajian ini melibatkan 165 daripada pelajar tahun satu hingga empat Ijazah Sarjana Muda Sukan Dan Rekreasi, Fakulti Pendidikan, Universiti Kebangsaan Malaysia telah dipilih secara rawak mudah. Kaedah penentuan sampel kajian ini adalah menggunakan jadual penentuan sampel Krejcie dan Morgan (1970). Kajian ini menggunakan soal selidik Internasional Physical Activity Questionnaire (IPAQ) dan Exercise Motivation Inventory (EMI-2). Data dianalisis menggunakan SPSS versi 27 dengan analisis deskriptif (peratusan, min dan sisihan piawai) dan analisis inferensi (t-test, Anova dan korelasi Pearson). Sebanyak 23% pelajar berada dalam zon gemuk, obes dan berbahaya. Tidak terdapat perbezaan yang signifikan antara jantina dalam kekerapan aktiviti fizikal berdasarkan tahun pengajian ( $p > .05$ ). Min motif penyertaan yang paling rendah pada tahun 1 hingga 4 ialah Motif Interpersonal. Min tertinggi untuk tahun pertama hingga ke-4 ialah motif Kesihatan, Psikik, Psikologi dan Kecergasan. Terdapat perbezaan yang signifikan dalam motif penyertaan yang melibatkan interpersonal dan kecergasan berdasarkan jantina ( $p < .05$ ). Tidak terdapat perbezaan yang signifikan dalam motif penyertaan berdasarkan tahun pengajian. Terdapat hubungan positif antara motif penyertaan dan kekerapan aktiviti fizikal ( $r = .823$ ,  $p = 0.001$ ). Mencari aktiviti yang menyeronokkan, menjadikannya sebagai kebiasaan, bermula dari kecil, memanfaatkan teknologi, dan melibatkan orang lain adalah beberapa strategi yang dicadangkan untuk membantu pelajar meningkatkan aktiviti fizikal mereka.

Kata kunci: Aktiviti fizikal, motivasi, motif, IPAQ, EMI-2

## INTRODUCTION

Numerous studies have demonstrated a link between daily physical activity and physical and mental well-being (Holtermann et al. 2013, Eijkemans et al. 2012). According to Williams (2012) and Celis-Morales et al (2012), consistent exercise has many positive effects on health, but reducing mortality and disease rates is particularly noteworthy. In addition, people of all ages benefit from exercise's many positive effects on their physical, mental, social, and emotional well-being. (Michaelsson et al., 2007; Warburton et al., 2006). According to the World Health Organisation (WHO), inactivity is the fourth leading cause of death, responsible for an estimated 6% of deaths globally in 2013. Poh et al. (2010) observed that the majority of individuals in Malaysia engaged in low (35%) or moderate (62%) levels of physical exercise, despite the well-established benefits of continuous physical activity for physical and mental health. A total of 35.7% of Malaysians were sedentary in 2011, according to the National Health and Morbidity Survey (30.5% of men and 41.0% of women).

Public health professional organisations have released recommendations and guidelines for physical exercise to help people increase their activity levels to meet current requirements while they are adults (WHO, 2013). It is critical to have an understanding of the elements that are linked with adult physical activity behaviour in order to guide future research and maybe facilitate the implementation of programmes intended to promote physical activity behaviour across the lifespan. It is crucial to determine and support the causes of sustained physical activity over time.

The Affective-Reflective Theory (ART) connects our understanding of people's immediate emotional responses to exercise with the possibility that these experiences will shape future behaviour related to physical activity (9). Research by Rhodes and Kates (2015) and Rhodes et al. (2009). Those who are untrained and/or overweight, for example, are more likely to have negative sentiments during exercise, which can have a major impact on their willingness to continue exercising. According to the ART, inactivity and exercise aversion are both learned behaviours that stem from an intrinsically negative affective assessment of exercise that acts as a significant barrier. Since positive instinctive emotional valuations can be developed through exercise, therapies should centre on minimising negative experiences and increasing positive ones.

The Theory of Energetic Cost Minimization (TECM; Cheval et al., 2018) proposes, on the basis

of evolutionary behavioural biology, that people consistently exhibit a tendency (a constraint force) toward efficiency before and after potentially costly physical exercise. In light of this viewpoint, people need to be aware of this tendency and think about possible intervention measures. Enhancing self-control and other forms of executive function is generally recommended. The inhibiting effect of cues linked with physical activity may also be mitigated through psychological training (Sheeran et al., 2013). Evaluative conditioning, attention bias reduction, and approach-avoidance training are all examples of this type of instruction.

The concept of athlete motivation is examined through the lens of self-determination theory (SDT). According to Ryan and Deci (2017), SDT provides an explanation for the concept of human motivation as it relates to the formation and maintenance of a persona in a social setting. Success, according to this philosophy, depends largely on the individual's own honesty and determination.

Numerous studies on exercise motivation among college students have been conducted (Eglet al., 2011; Furiaet al., 2009; Ryan et al., 1997), and studies on gender differences in exercise motivation have also been conducted (Kilpatrick et al., 2005). Both students and faculty have emphasised the need of incorporating extracurricular activities into a healthy lifestyle. There are several resources available to college and university students that could help them lead healthier lives. Some examples of such efforts are health awareness campaigns, club sports, intramural sports programmes, and wellness and outdoor activities (Cho & Price, 2016).

50,054 students between the ages of 18 and 35 took part in Norway's national health survey for higher education (Grasdalsmoen et al., 2020). Exercising was found to have an inverse connection with every measure of mental health distress and suicidality. The effect sizes were the biggest for the exercise frequency variable. Women who did not exercise frequently were approximately three times as likely to report feeling depressed and to have high HSCL-25 scores as women who did exercise frequently. It was shown that the impact sizes of men are much larger than those of women. Problems with mental health were also substantially associated with levels and durations of physical activity. Examining the link between self-harm and suicide attempts revealed gradual associations.

Snedden et al. (2019) analyse the correlation between self-reported sports and physical activity participation and health-related quality of life among college freshmen, including athletes and non-athletes. Disparities in physical and mental health were

investigated using a cross-sectional survey that relied on participants' own reports of their sport and physical exercise participation. A data set consisting of 1,322 total undergraduates and 842 Division I collegiate athletes. There were substantial disparities in mental component scores across sport and physical activity levels, but no such differences were observed in physical component scores. After controlling for sexual orientation, the researchers found that higher levels of sport and physical exercise were associated with higher scores on the mental components.

In their investigation of the effects of exercise and sleep on the mental health of Indian college students, Ghrouz et al. (2019) find a positive correlation between the two. Sociodemographic characteristics and body mass index were collected from a convenience sample of 617 college students, including both sexes and ages 18-30 (314 men, or 51% of the overall sample). About half of respondents also reported having trouble sleeping and doing little physical activity. By calculating odds ratios, researchers found a statistically significant inverse connection between moderate and vigorous exercise and participants' reports of anxiety and depression. Poor sleep quality was found to be highly linked to anxiety and depression.

Larsen et al. (2021) surveyed 333 Norwegians aged 14-80 and found that the majority of respondents' motivations were to increase fitness, followed by having more fun, being more productive, and increasing their attractiveness. The lowest points go to social considerations. As men mature, they become less interested in having fun and contributing to society. Motivating women to take care of their health becomes more critical as they become older. The level of social affiliation declines with age up until the 41-50 age range when it begins to climb again. This study's findings highlight the need of considering individual differences when attempting to generalise findings about the desire for physical activity across demographics. The study also discovered that people's motivation to exercise changes as they become older. Kamal (2016) did research to identify and investigate the factors that influence the extent to which individuals engage in sports and other forms of physical exercise.

The survey instrument was based on the "Exercise Motivation Inventory-2" (EMI-2) and the "International Physical Activity Questionnaire" (IPAQ), both of which were modified to meet the aims of the study. Employees at universities are more likely to participate in daily moderate-intensity physical activity as a result of these findings. People are motivated to exercise more by factors related to appearance and social interaction. An indirect investigation found no connection between

employees' level of physical exercise and their weight. While there was a significant positive correlation between employees' weight and their level of physical activity, no correlation was found between employees' motivations for participating and their level of activity.

Cho et al (2020) study aimed to compare the exercise motivation of American and international college students. The Exercise Motivations Inventory-2 was filled out online by 155 students at a university in the southwestern United States using the university's active research system. In contrast to their domestic counterparts, international students were found to be driven to exercise for the purpose of rejuvenation rather than the pursuit of challenge, competition, or social recognition. In order to improve the health of international college students through exercise programs, the results imply that wellness administrators or school health specialists may need to employ a number of measures.

Stress and exercise motivation were measured among physiotherapy students in Malaysia by Jun et al. (2022). This cross-sectional study of 208 physiotherapy students in Malaysia also looked at how stress affected their drive to work out. Based on the results of this study, it appears that academic pressure is the major source of stress for Malaysian physiotherapy students. The next three most significant reasons to exercise are disease prevention, strength and endurance development, and overall health and wellness. Ihegihu et al. (2022) conducted a cross-sectional study using a convenience sample of 244 college students (122 men and 132 women) to investigate the connections between intrinsic motivation, exercise self-efficacy, and regular exercise. The vast majority of Nigerian college students engaged in some form of light to moderate exercise. Self-motivation to exercise improved with regular exercise participation.

The purpose of the Grajek et al. (2021) study was to examine the factors that influence exercise motivation in health sciences students who are either highly active or moderately active. The primary reasons for working out are to have fun, refresh one's mind, and maintain one's health. Health concerns, peer pressure, and the need to blend in are not among the most compelling arguments in favour of regular physical activity. For men, having fun is the number one factor in maintaining an active lifestyle. Women hit the gym for several reasons, but one of the most important is to keep themselves healthy.

The purpose of this research was to determine whether or not students' motivations for exercising were tracked, as well as the correlation between these factors. The findings of this study have significant implications for the academic success of University of Malaysia

(UKM) students. The study's author hopes that it will serve as a reference for the university in assessing the health of UKM students, and that more efforts will be made to promote physical exercise in order to boost students' motivation.

## METHODOLOGY

The characteristics of the respondents were identified using a descriptive study, and inferential analysis was used to compare and correlate the variables in this quantitative, non-experimental study. The sample size was 165 (Krejcie & Morgan, 1970) UKM from Sports and recreation education majors at the undergraduate level. The three parts of this survey include a physical activity questionnaire based on the International Physical Activity Questionnaire (IPAQ), the Exercise Motivation Inventory-2 (EMI-2), and a section on exercise motivation. The 51 questions that make up the second edition of the Exercise Motivation Inventory (EMI-2) are broken down into five categories: body-related, fitness goals, interpersonal, health, and psychological. The IPAQ measures physical activity levels and consists of seven questions. All of the data that was obtained was analysed and evaluated using parametric tests with the use of the Statistical Package for the Social Sciences (SPSS) version 27 software. The alpha value for the study's internal consistency test is between 0.75 and 0.85.

Sekaran (2003) states that the reliability of questionnaire items can be gauged by their alpha value; an alpha value of 0.60 or more is considered to be high and acceptable. The idea and content validity of both instruments were assessed in order to determine their validity as instruments. The data is normally

distributed with skewness and kurtosis values between -0.917 and -0.463. Therefore, the above data has a normal distribution, as both the skewness and kurtosis values are small and fall between -1.96 and 1.96. When a population's data follows a regular distribution, a parametric test can be performed to analyse it. T-test, one-way analysis of variance (ANOVA), and Pearson's correlation coefficient were used to examine the data.

## RESULT AND DISCUSSION

### Demographic

In total, 165 UKM Bachelor of Science in Recreation and Sport Education students participated in the study. There were 120 student-athletes who filled out the survey, and their demographic information is broken down by gender in Table 1. There were 49 males who participated (29.7%) and 116 females who participated (70.3%). Table 1 also displays the respondent demographics in terms of age, showing that 18 to 20 years old is 69 people (40.6%). The respondents between the ages of 21 and 23 make up the largest proportion of the total sample size of 86 (52.1%). The total number of respondents aged 24 to 26 amounted to 9 (or 5.5% of the total) individuals. The total number of respondents for the academic year in year 4 was 41 people (24.8%). Next, for years 2 and year 3, the total number of respondents was 29 (17.6%) and 28 people (17%). The highest number of respondents was in the year of study which was 67 people (40.6%). A total of 160 respondents (97%) are shown in Table 1 to have knowledge of body composition measurement using Body Mass Index (BMI), whereas only 5 respondents (3%) do not.

TABLE 1. Frequencies and percentage of respondent's demographics

Variable		n	%
Sex	Male	49	29.7
	Female	116	70.3
Age	18-20	69	41.8
	21-23	86	52.1
	24-26	9	5.5
	27 and above	1	0.6
Years of study	1	67	40.6
	2	29	17.6
	3	28	17.0
	4	41	24.8
BMI	Yes	160	97
	No	5	3



### Respondent's Body Mass Index

Table 2 displays each respondent's BMI. Twenty individuals, or 12.1%, had a low body mass index. 64.8% of respondents, or 107 persons, were at a normal level. The obese BMI of 8 persons (4.8%) comes in second place behind that of 26 people (15.8%). Finally, four responders (2.4%) had a risky BMI. In total, 23% of respondents were in dangerously fat, and obese. BMI does not account for body composition and does not differentiate between mass made up of muscle and fat.

Since muscles are thicker and heavier than fat, bodybuilders and other professional athletes, such as football players, are sometimes categorised as obese or overweight based solely on their BMI. Your risk for diseases that can arise from having a higher body fat percentage can be accurately determined by your BMI. Diseases including type 2 diabetes, high blood pressure, respiratory issues heart disease, gallstones, and various malignancies are all linked to a person's body mass index. It is advised that people get their health checked.

TABLE 2. The BMI of respondents

BMI	N	%
Low	20	12.1
Normal	107	64.8
Fat	26	15.8
Obesity	8	4.8
Dangerous	4	2.4
Total	165	100

### Respondent's Physical Activity

In Table 3, we see that 55 people (33.3% of the total) report doing some form of high-intensity exercise once per week. Then, 52 people (32.1% of the total) go to the gym twice or thrice a week. Ten participants (6.1%) exercise four to five times per week, whereas only three (1.8% do so six to seven times each week). However, there are 44 sedentary people (26.7%) in the population. 51 persons, or 30.9%, of the total respondents, participate in moderately active physical activities such as lifting light objects, cycling at a moderate speed, or playing doubles tennis without walking, according to the collected data. Twenty-seven percent, or up to 46

people, engage in these activities twice or thrice weekly.

Then, 22 people (3.6% of the total) said they used it four to five times per week, and 6 people (3.6%) said they used it six to seven times per week. Forty people (24.2% of the total) said they never or rarely engage in moderate physical activity. The results showed that 17 people (10.3%) indicated a weekly frequency of walking for at least 10 minutes at a time throughout the previous 7 days. The next highest percentage is found in the group of people who walk between four and five times per week: 47 individuals (28.5%). Finally, just 5% of respondents did not walk for 10 minutes, whereas 33% of respondents walked 6-7 times per week.

TABLE 3. Frequency of active physical activity.

A week	Active		Moderate		Low	
	N	%	N	%	N	%
1	55	33.3	51	30.9	17	10.3
2-3	53	32.1	46	27.9	41	24.8
4-5	10	6.1	22	13.3	47	28.5
6-7	3	1.8	6	3.6	55	33.3
No Activity	44	26.7	40	24.2	5	3.0
Total	165	100	165	100	165	100

Frequency of Active, Moderate, and Low Physical Activity Based on Gender

Table 4 shows that when comparing male and female students at UKM majoring in Sports and Recreation Education, there is no statistically significant difference between the frequencies at which they engage in active, moderate, and low levels of physical activity ( $p > 0.05$ ). This study's findings run counter to those of others (Tesch-Römer et al., 2008; Hosseinpoor et al., 2012; Vöörmann & Helemaee, 2013), suggesting that females are less confident in their level of physical fitness. Female students were found to be less physically active

than male students, as reported by Ansari et al. (2014).

Twenty-five percent and change of respondents in research by Bergier et al. (2012) did not get much exercise. Males made up 48.7 percent of individuals who participated in vigorous physical activity, while females made up only 31 percent. Physical activity among youth can be improved and introduced into daily life with the help of intervention. Women who did not exercise frequently were nearly three times as likely to report feeling depressed and to have high symptom scores on a checklist (Grasdalsmoen et al, 2020). Men were shown to have significantly bigger impact sizes.

TABLE 4. Comparison between gender physical activity

Physical Activity	t-value	df	Sig
Active	-0.278	163	0.782
Moderate	-0.201	163	0.554
Low	-0.245	163	0.634

N=165,  $p < 0.05$

Frequency of Active Physical Activity Based on Years of Study

Table 5 shows that there was no statistically significant difference in the amount of time spent in various levels of physical activity based on the year of the study (active =  $F(3) = 1.604$ ,  $p = 0.191$ ; moderate =  $F(3) =$

$1.604$ ,  $p = 0.914$ ; low =  $F(3) = 1.604$ ,  $p = 0.409$ ). The study, which is based on years of research, shows that both groups engage in active physical activity at a similar frequency. There has been a shortage of research about the length of time that students spend in higher education. There needs to be more active physical activity.

TABLE 5. Comparison of years of study among respondents

Physical Activity	Sum of Square	df	F	Sig
Active	12.203	3	1.604	0.191
	408.379	161		
Moderate	1.263	3	0.173	0.914
	391.44	161		
Low	3.252	3	0.969	0.409
	180.142	161		

N=165,  $p < 0.05$

Motives For Participation in Physical Activity

The table below shows how motivated freshmen through seniors are to work out. The results showed that the Health Motive had the highest mean (mean= 3.74, SP= 0.87), followed by the Fitness Motive (mean= 3.65, df=0.92), among students in Year 1. The

following two groups, psychological and physical, have similar means but different degrees of freedom (0.92 and 1.1, respectively). The data from first-year students who exercise shows that the lowest mean is for the Interpersonal reason (mean=2.67, df=1.07). Students in their first year at college, who are still adjusting

to campus life, place a higher value on interpersonal motivation than students in later years.

They continue to explore the campus and make new friends through the many opportunities it provides. Incentives for participation improved undergraduate females' communication skills and GPAs (Chang et al., 2020). Club participation also moderated the effects of academic performance and friendship quality. Participation in clubs at the university level can further enhance students' social and intellectual development. Health reason was shown to be the most prevalent participation incentive among first-year students. Health improvement is the most compelling reason to exercise, followed by disease avoidance, strength training, and endurance sports (Jun et al., 2022).

Results indicate that year 2 students' physical reasons had the greatest mean (mean= 3.59, SP= 1.05). Health Motive (min=3.5, SP=1.0) will come next. Because both the psychological and fitness motives have the same mean (mean = 3.36, SP = 1.26), they are correlated. Interpersonal Motive, which measures motivation for students in their second year to engage in physical activity, likewise exhibits a somewhat low mean (mean=2.75; SP=1.43). Even in their second year, the vast majority of students in this programme are still

active athletes who put their own athletic and physical aspirations ahead of their social relationships.

One of the best things you can do for your health is to exercise regularly. Exercising regularly can improve your mental and physical well-being, as well as your ability to manage your weight and do everyday tasks. Third-year students' mean scores on psychological motivation, physical activity motivation, and health motivation all ranged from 3.71 to 3.67 to 0.95 to 3.55 to 0.89. As can be observed, the mean for the Fitness Motive is quite high (mean=3.41, SP=1.18).

However, the mean for Interpersonal Motivation among third-year students remains dismal (mean=2.67). Despite the fact that the vast majority of students are active and well-educated in sports, interpersonal motivation is still not a top concern for third-year students in this programme. In addition to the physiological and cognitive benefits already stated, exercise also provides benefits for the mind and body. Mood, self-esteem, body image, stress, anxiety, and sadness are just a few of the mental health advantages that can be gained.

Students in the fourth year gave the fitness motive the highest mean (mean= 3.99, standard deviation = 0.99), with the psychological motive coming

TABLE 6. Motives for participation in physical activity

Years of Study	Participation Motives				
	Physical	Health	Interpersonal	Fitness	Psychological
Year 1					
Mean	3.56	3.74	2.67	3.65	3.56
df	1.1	0.87	1.07	0.92	0.92
N	67	67	67	67	67
Year 2					
Min	3.59	3.5	2.75	3.36	3.36
df	1.05	1	1.43	1.26	1.26
N	29	29	29	29	29
Year 3					
Min	3.67	3.55	2.67	3.41	3.71
df	0.95	0.89	1.18	1.03	0.85
N	28	28	28	28	28
Year 4					
Min	3.75	3.89	3.24	3.99	3.96
df	1.14	0.99	1.17	0.99	0.93
N	41	41	41	41	41

in second (mean= 3.96, standard deviation = 0.93). The next two with high means are Health and Physical (mean= 3.89, SP= 0.99, and 1.14, respectively). The lowest performing students from the first to fourth year consistently show the highest levels of interpersonal motivation (mean= 3.24, SP= 1.17). The mean for Interpersonal Motivation is low among fourth-year students, whereas the mean for Fitness Motivation remains high. Exercising regularly can improve your mental and physical well-being, as well as your ability to manage your weight and do everyday tasks. The health benefits of moderate to strenuous exercise and reducing sitting time are not dose-dependent.

Table 7 shows that the t-test shows significant values of  $t=-0.505$ ,  $df=163$ , and  $p>0.05$  for the physical motive ( $p=0.614$ ), the health motive ( $p=0.078$ ), and the psychological motive ( $p=1.775$ ). Therefore, there was no significant difference between the sexes in terms of the drivers of engagement in activities promoting physical, mental, and emotional well-being. The social motivation is significant at  $p= 0.000$  ( $t= 3.911$ ,  $df = 163$ ,  $p.05$ ), and the health and wellness motivation

are significant at  $p= 0.026$  ( $t= 2.241$ ,  $df = 163$ ,  $p.05$ ). Therefore, men had significantly higher mean values than women did for both interpersonal and fitness motivations to participate.

Craft, Carroll, and Lustyk (2014) found that men were more likely to exercise for enjoyment than women, whereas women cited weight loss and muscle toning as their primary motivations for working out. Besides exercise, additional factors predicted women's quality of life. The test was the most accurate indicator of men's well-being available. A woman's quality of life may not always be enhanced by exercise. There emerged throughout time clear gender distinctions in exercise-related physical activity, personality qualities, and social repercussions (Taymoori, Berry, & Lubans, 2012). At both points in time, females were less active than males. Female confidence in their own abilities, as well as their ability to overcome obstacles and get rewards from physical activity, declined over time. For females, interpersonal influences on activity remained more consistent over time than they did for males.

TABLE 7. Differences in motives of involvement based on gender

Motives	F	Sig	t	df	Sig. (2 tailed)
Physical	0.300	0.584	0.505	163	0.614
			0.488	84.078	0.627
Health	0.002	0.963	1.772	163	0.078
			1.750	87.911	0.084
Inter personal	0.005	0.946	3.911	163	0.000
			3.938	91.789	0.000
Fitness	0.113	0.737	2.241	163	0.026
			2.198	86.598	0.031
Psycho	0.001	0.979	1.775	163	0.078
			1.787	91.718	0.077

Table 8 of ANOVA test the shows Physical Motives with  $p = 0.834$ ,  $F$  ( $df = 3,161$ ,  $p > 0.05$ ), Health Motives with  $p = 0.279$   $F$  ( $df = 3,161$ ,  $p > 0.05$ ), Interpersonal Motive with  $p= 0.089$   $F$  ( $df = 3,161$ ,  $p > 0.05$ ) and Fitness Motives with  $p = 0.058$   $F$  ( $df = 3,161$ ,  $p > 0.05$ ), Psychological Motive with  $p= 0.071$   $F$  ( $df = 3,161$ ,  $p > 0.05$ ). Accordingly, the results showed that the fitness, health, interpersonal ties, and psychological motivations for participating were not significantly different throughout the research years.

The Relationship Between the Motives of Participation and Physical Activity.

According to Table 9, the individual's correlation value between participation motives and frequency of physical activity is significant based on the findings of the study ( $r=.823$ ,  $p>0.001$ ). Therefore, there is a positive relationship between participation motivations and the frequency of physical exercise among UKM students majoring in sports and recreation education. The reasons people exercise are among the most important factors in increasing exercise frequency and intensity (Abdullah et al., 2019). Abdullah et al.'s (2019)



TABLE 8. Differences in motives of involvement-based years of study

Motives	Year of studies	Sum of Squares	df	F	Sig.
Physical	Between Groups	1.012	3	0.288	0.834
	Within Groups	188.482	161		
	Total	189.494	164		
Health	Between Groups	3.375	3	1.293	0.279
	Within Groups	140.062	161		
	Total	143.436	164		
Interpersonal	Between Groups	9.363	3	2.211	0.089
	Within Groups	227.241	161		
	Total	236.604	164		
Fitness	Between Groups	7.912	3	2.552	0.058
	Within Groups	166.420	161		
	Total	174.333	164		
Psychological	Between Groups	6.967	3	2.390	0.071
	Within Groups	156.458	161		
	Total	163.425	164		

study finds similar results. We used correlations to find out how much exercise is related to people's motivations for getting active. Seven out of the ten reasons for

exercising were found to have a favourable correlation with activity levels.

TABLE 9. Correlation of variables among respondents

Participation Motives	Pearson correlation	Frequency of physical activity
	Significant (2-way)	.823**
		.001

\*\* . Correlation is significant at the 0.01 level (2-way).

## CONCLUSION

As is well known, a university student's schedule is typically so packed with assignments from many lectures that they often put off taking care of their physical well-being. Physical activity, in addition to a good diet, can boost health because it enhances cardiovascular endurance and strengthens muscles and bones. Despite some assignments' limitations, students often engage in physical activities ranging in intensity from light to vigorous for their own health and well-being. Today's youth, especially university students, have too much on their plates between classes, extracurricular activities, and part-time jobs or internships. Under these conditions, students have no

time for extracurricular physical activities like sports, games, and recreation. Some students, however, take their health seriously and go to the gym at least once per week.

If you're a student who is unable to participate in high or medium intensity physical activities, you may always choose low-intensity activities like sweeping the floor and vacuuming the carpet. Understanding the motivations of UKM Bachelor of Sports and Recreation Education students to participate in sports is useful for increasing their physical activity levels. The university has the resources to both create brand-new structures and update existing sports arenas. Access to locations for physical activity, student programmes, campaigns, social support, individual help, reminders to encourage

physical activity, equitable and inclusive access, and so on are all recommended ways to increase physical activity.

#### APPRECIATION

Appreciation to the UKM Bachelor's Degree in Sports and Recreation Education students, who volunteered to be respondents in this study.

#### REFERENCES

- Abdullah N, Kueh YC, Hanafi MH, Morris T, Kuan G. 2019. Motives for Participation and Amount of Physical Activity among Kelantan Chinese Adolescents. *Malays J Med Sci.* 26(6):101-110. doi: 10.21315/mjms2019.26.6.10.
- Biddle, S. J. H., Hagger, M. S., Chatzisarantis, N. L. D., and Lippke, S. 2007. Theoretical frameworks in exercise psychology, in *Handbook of Sport Psychology, 3rd Edn*, eds G. Tenenbaum and R. Eklund (Hoboken, NJ: Wiley), 537–559.
- Bergier, J., Kapka-Skrzypczak, L., Biliński, P., Paprzycki, P., & Wojtyła, A. 2012. Physical activity of Polish adolescents and young adults according to IPAQ: a population-based study. *Ann Agric Environ Med.* 19(1):109-115.
- Celis-Morales, C.A, Perez-Bravo, F, Ibañez, L, Salas, C, Bailey, M.E.S, Gill, J.M.R. 2012. Objective vs. Self-reported physical activity and sedentary time: effects of measurement method on relationships with Risk biomarkers. *PLoS One.* 7(5): e36345.
- Cheval, B., Orsholits, D., Sieber, S., Courvoisier, D., Cullati, S., and Boisgontier, M. P. 2018. Cognitive resources explain engagement in physical activity and its age-related decline: a longitudinal study of 105,206 participants. *SportRxiv.* doi: 10.31236/osf.io/pagx6
- Chang CM, Chou YH, Hsieh HH, Huange CK. 2020. The Effect of Participation Motivations on Interpersonal Relationships and Learning Achievement of Female College Students in Sports Club: Moderating Role of Club Involvement. *Int J Environ Res Public Health.* 17(18):6514. doi: 10.3390/ijerph17186514.
- Cho, D., Beck, S., & Kim, S. K. 2020. Exercise motivations: Differentiation of international and domestic college students. *Journal of International Students, 10(3),* 688-702.
- Cho & Price 2016. Examining the leisure constraints affecting international colleges students' participation in intramural sports programs. *International Journal of Sport Management, Recreation, and Tourism, 24,22–41*
- Commission E. 2010. Sport and physical activity. Special Eurobarometer 334. TNS Opinion & Social: Brüssel;
- Craft, B. B., Carroll, H.A, Lustyk, M.K. 2014. Gender Differences in Exercise Habits and Quality of Life Reports: Assessing the Moderating Effects of Reasons for Exercise. *Int J Lib Arts Soc Sci.* 2(5):65-76. PMID: 27668243; PMCID: PMC5033515.
- Egli, T., Bland, H.W., Melton, B.F., & Czech, D.R. 2011. Influence of age, sex, and race on college students' exercise motivation of physical activity. *Journal of American College Health, 59(5),* 399–406.
- Eijkemans M, Mommers M, Draaisma JMT, Thijs C, Prins MH. 2012. Physical activity and asthma: a systematic review and meta-analysis. *PLoS One.* 7(12): e50775.
- Ekkekakis, P., Hargreaves, E. A., and Parfitt, G. 2013. Introduction to special section on affective responses to exercise. *Sport Exer.* 14, 749–750. doi: 10.1016/j.psychsport.2013.04.007
- El Ansari, W., Khalil, K., Crone, D., & Stock, C. 2014. Physical activity and gender differences: correlates of compliance with recommended levels of five forms of physical activity among students at nine universities in Libya. *Central European Journal of Public Health, 22(2),* 98-105.
- Furia, A.C., Lee, R.E., Strother, M.L., & Huang, T.T. 2009. College students' motivation to achieve and maintain a healthy weight. *American Journal of Health Behavior, 33(3),* 256–263.
- Ghrouz, A. K., Noohu, M. M., Dilshad Manzar, M., Warren Spence, D., BaHammam, A. S., & Pandi-Perumal, S. R. 2019. Physical activity and sleep quality in relation to mental health among college students. *Sleep and breathing, 23,* 627-634.
- Grajek, M., Sas-Nowosielski, K., Sobczyk, K., Działach, E., Białek-Dratwa, A., Górski, M., & Kobza, J. 2021. Motivation to engage in physical activity among health sciences students. *Journal of Physical Education and Sport, 21(1),* 140-144.
- Grasdalsmoen, M., Eriksen, H.R., Lønning, K.J. et al. 2020. Physical exercise, mental health problems, and suicide attempts in university students. *BMC Psychiatry* 20, 175. <https://doi.org/10.1186/s12888-020-02583-3>
- Haskell, W.L, Lee, I-M, Pate, R.R, Powell, K.E, Blair, S.N, Franklin, B.A, et al. 2007. Physical activity and public health: updated recommendation for adults from the American College of sports medicine and the American heart association. *Circulation.* 116(9):1081.
- Herbert, C., Meixner, F., Wiebking, C., & Gilg, V. 2020. Regular physical activity, short-term exercise, mental health, and well-being among university students: the results of an online and a laboratory study. *Frontiers in Psychology, 11,* 509.
- Holtermann A, Marott J L, Gyntelberg F, Søgaard K, Suadcani P, Mortensen OS, et al. 2013. Does the benefit on survival from leisure time physical activity depend on physical activity at work? a prospective cohort study. *PLoS One.* 8(1): e54548.
- Hosseinpoor, A.R., et al. 2012. Social determinants of self-reported health in women and men: understanding the role of gender in population health. *PLoSOne.* 7(4):e34799
- Ihegihu, E. Y., Anyaeche, K., Ihegihu, C., Mbada, C.,

- Onwuakagba, I. U., Amaechi, I. A., ... & Okonkwo, U. P. 2022. Physical Activity Participation, Exercise Self-Efficacy and Self-Motivation Among Students in A Nigerian University. *Journal of Biomedical Investigation*, 10(2), 94-102.
- Institute of Public Health. 2011. *National Health and Morbidity Survey (NHMS. Non-communicable diseases, vol II*. Kuala Lumpur: Ministry of Health. p. 2011.
- Jun, T. J., Pillai, S., Justine, M., & Labao, H. C. 2022. Relationship between Stress Severity and Motivation to Exercise among Undergraduate Physiotherapy Students in Malaysia. *Malaysian Journal of Medicine and Health Sciences* 18(SUPP15): 162-168. doi:10.47836/mjmhs18.s15.22
- Kamal, A. 2016. Motivation Influence Towards Physical Activity Level Among University Staff. *Movement Health & Exercise* 5(1). DOI:10.15282/mohe.v5i1.85
- Kilpatrick, M., Hebert, E., & Bartholomew, J. 2005. College students' motivation for physical activity: Differentiating men's and women's motives for sport participation and exercise. *Journal of American College Health*, 54(2), 87–94
- Löllgen H, Böckenhoff A, Knapp G. 2009. Physical activity and All-cause mortality: an updated meta-analysis with different intensity categories. *Int J Sports Med*. 30(3):213–24.
- Maugeri, G., Castrogiovanni, P., Battaglia, G., Pippi, R., D'Agata, V., Palma, A., ... & Musumeci, G. (2020). The impact of physical activity on psychological health during Covid-19 pandemic in Italy. *Heliyon*, 6(6), DOI 10.1016/j.heliyon.2020.e04315.
- Michaëlsson K, Olofsson H, Jensevik K, Larsson S, Mallmin H, Vessby B, et al. 2007. Leisure physical activity and the risk of fracture in Men. *PLoS Med*. 4(6): e199
- Molanorouzi, K., Khoo, S. & Morris, T. 2015. Motives for adult participation in physical activity: type of activity, age, and gender. *BMC Public Health* 15, 66. DOI 10.1186/s12889-015-1429-7
- Rhodes, R. E., and Kates, A. 2015. Can the affective response to exercise predict future motives and physical activity behavior? A systematic review of published evidence. *Ann. Behav. Med*. 49, 715–731. doi: 10.1007/s12160-015-9704-5
- Rhodes, R. E., McEwan, D., and Rebar, A. L. 2019. Theories of physical activity and behavior change: a history and synthesis of approaches. *Psychol. Sport Exer.* 42, 100–109. doi: 10.1016/j.psychsport.2018.11.010
- Ryan, R.M., Frederick, C.M., Lepes, D., Rubio, N., & Sheldon, K.M. 1997. Intrinsic motivation and exercise adherence. *International Journal of Sport Psychology*, 28(4), 335–354.
- Seebacher F, Glanville EJ. 2010. Low levels of physical activity increase metabolic responsiveness to cold in a Rat (*rattus fuscipes*). *PLoS One*. 5(9): e13022.
- Sheeran, P., Gollwitzer, P. M., and Bargh, J. A. 2013. Nonconscious processes and health. *Health Psychol.* 32:460. doi: 10.1037/a0029203
- Snedden T.R, Scerpella J, Kliethermes S.A, et al. 2019. Sport and Physical Activity Level Impacts Health-Related Quality of Life Among Collegiate Students. *American Journal of Health Promotion*. 33(5):675-682. DOI 10.1177/0890117118817715
- Taymoori, P., Berry, T. R., & Lubans, D. R. 2012. Tracking of physical activity during middle school transition in Iranian adolescents. *Health Education Journal*, 71(6), 631-641.
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., and Ryan, R. M. 2012. Exercise, physical activity, and self-determination theory: a systematic review. *Int. J. Behav. Nutr. Phys. Activity* 9:78. doi: 10.1186/1479-5868-9-78
- Tesch-Römer, C., Motel-Klingebiel, A., & Tomasik, M. J. 2008. Gender differences in subjective well-being: comparing societies with respect to gender equality. *Social Indicators Research*. 82(2): 329-34
- Vöörmann, R., & Helemaee, J. 2013. A comparative analysis of gender differences in self-rated health: is the Baltic Sea a frontier of the East–West Health Divide in Europe? *FilosoFija. sociologija*, 62-70. 9.
- Warburton DE, Nicol CW, Bredin SS. 2006. Health benefits of physical activity: the evidence. *Can Med Assoc J.* , 174(6):801–9.
- WHO. *Global strategy on diet, physical activity and health*. 2013th ed. Geneva, Switzerland: World Health Organization.
- Williams P.T. 2012. Attenuating effect of vigorous physical activity on the risk for inherited obesity: a study of 47,691 runners. *PLoS One*. 7(2): e31436.
- Young, M. D., Plotnikoff, R. C., Collins, C., Callister, R., and Morgan, P. J. 2014. Social cognitive theory and physical activity: a systematic review and meta-analysis. *Obes. Rev.* 12, 983–995. doi: 10.1111/obr.12225

Hamludin Marih & Mohamad Nizam Nazarudin\*  
Center for the Education and Community Wellbeing Study,  
Faculty of Education, Universiti Kebangsaan Malaysia,  
43500 Bangi, Selangor, Malaysia.

Zakiah Noordin  
IPG Kampus Pendidikan Islam,  
Beg Berkunci No.214, Pusat Mel Bandar Baru Bangi,  
43657 Bandar Baru Bangi Selangor, Malaysia.

\*Pengarang untuk surat menyurat; e-mel: mohdnizam@ukm.edu.my

Diserahkan: 27 April 2023  
Diterima: 06 Jun 2023