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## The Effect of Motive Participations towards Physical Activity Levels in Education Students

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### Abstract

The level of physical activity is usually affected by many motive and factor. Individual motivation would normally be affected internally or externally based on the individual's interest, strength, weaknesses, and backgrounds. This study was conducted to determine and investigate the motive participation that influence young adults' participation in sport and physical activity level. The survey questionnaire based on the source of "Exercise Motivation Inventory" (EMI-2) and the "International Physical Activity Questionnaire" (IPAQ), which was later edited to meet the needs of the study. Data were collected using questionnaires and counted manually. The results were arranged and organized into the SPSS system. The study looked at the effect of motive participations towards level of physical activity among physical and health education students at faculty of education, Selangor. Knowledge gained from this study help strengthen the current ideas on the topic while helping to informed future teaching and modification (instructions, equipment, playing area) to improve teaching and learning.

**Keywords:** Motive, Physical Activity (Pa), Physical and Health Education, Motivation, Participation

### Introduction

Presently, people realized physical activities are important in everyday life. They are more aware of the many benefits they can get from consistent physical activities. Physical activities are also always associated to illnesses and chronic diseases. Similar to dose-response relationship, if we're doing more physical activities, the lower likelihood of us getting illnesses and diseases. Diabetes, obesity and cancer are the example of illnesses commonly related with the lack of physical activity. They also suggested physical activity can be associated with improved physical and mental health among children (Ploeg, Maximova, McGavock, and Davis 2014). This proved that, physical activity can provide the solutions towards improvement in the individual's well-beings.

University students participate in physical activity for many reasons. They have their own motive whether intrinsic or extrinsic motive to participate in activity. Motivation represents the most important causes in sport participation. People involved in sports agreed the motivation is the main

key that will bring them to achieve their best sport performance and also provide them with positive experience in physical activity.

Physical activities have always associated with illnesses and diseases. There are several illnesses that being commonly related with the lack of physical activity which is the diseases are obesity, cancer and diabetes. Physically active children and adolescents have lower blood pressure levels, more favorable lipoprotein levels, higher bone density and decreased adiposity compared to their sedentary counterparts (Riner and Sellhorst 2012).

Physical activities have important roles to preventive and therapeutics effect such as reducing the risk to get bone fractures, improving the strength of muscle and enhanced mental and physical to get the quality life (Elena , Georgeta, Cecilia, and Elena 2011). This proved physical activity have many benefits for people who engaged with it. It can help people to increase their health, decrease the level of stress, and can encouraged happy living surrounding.

One of the main things that can make people to participate in physical activity is motivation. Everyone have their own motive. This include intrinsic and extrinsic motive. Motivation is the causes they acting or behaving in some situation. Motivation refers to reasons that underlie behavior that is characterized by willingness and volition (Lai 2011). This study suggested everyone have their own reason to do something. So, motivation could play an important role in encouraging people to participate in physical activity.

Intrinsic motivation refers to participate in an activity for their own satisfaction from the activity. Based on McCullagh (2005), intrinsic motivation can be defined as the need to feel and pride in something for individuals. Weinberg & Gould have been listed three types of intrinsic motivation, which is knowledge (the motive is to learn something), accomplishment (participate in the activity because of the pleasure and satisfaction to get mastering in various skills) and stimulation (participate to get the pleasant sensations or enjoyment) (Weinberg and Gould 2003). When you intrinsically motivated, you will enjoy the activity and also can develop various skills that can increase the excitement of the activity.

Extrinsic motivation refers to actions to get the rewards and it comes from surrounding outside of the individual. Based on Ryan and Deci (2000), extrinsic motivation can be defined as an actions of the activity to obtain some reward from others. There are four types of extrinsic motivation, which are integrated regulation, identified regulation, interjected regulation and external regulation (Weinberg and Gould 2003).

In Malaysia, in the year of 2003, there are ten principal causes of death in hospital. A circulatory system disease is the 1<sup>st</sup> rank and diseases of the respiratory system in second rank. The percentages diseases of the circulatory system are 24.38% and diseases of the respiratory system are 22.73% (Ministry of Health Virtual Library 2014). These statistics revealed by Ministry of Health were expected to give more awareness about the important of doing physical activity to avoid the diseases.

According to Kilpatrick, Hebert, and Batholomew (2005), evidence clearly shows that doing regular physical activity can help to improves physiological and psychological health. It clearly shows that physical activity is the important part of our life since it may help us to avoid many illnesses.

By participating in sport or physical activities; it can bring a positive contribution toward the person's wellbeing. Early participation in sports is widely believed to be a mechanism for building character, promoting healthy lifestyle and social development (LeUnes and Nation 2002). Therefore, everybody is encouraged to participate in any physical activity because sport and exercise are good

for our body. In the other word, physical activity plays an important role to individual to get optimum healthy in their life.

Following the modern technology trends, many people prefer to spend their time with gadgets for many hours than to do activity that can make them energetic and healthier. By engaging with the gadgets, it can make our body feel lazy and prefer to not do any kind of work such as housekeeping. Without movements, the chances to get obesity are high. Extra weight and obesity occur when someone did not use their energy intake with doing the activity. A change in body fat depends to the imbalanced between energy intake and output (Basari, 2011).

Nowadays, sport played an important role of physical activities because everyone can apply in their live. People can choose type of sports that they want to join. It can come from leisure activity to extreme activity. There are many benefits that can individual get while doing the physical activity. Physical activity can prevent illness and can give a fun environment especially in sport team activity. This is because; they can mix or integrate with other people other than playing alone. There are three levels of physical activity, which are low, moderate and vigorous physical activity.

According to McCullagh (2005), motivation can be defined as the intensity and direction of the effort. Direction refers to what do you want to achieve, and intensity refers to the amount of the efforts the need to use. She also said that 'enhanced our motivation can encourage learning, performance, pleasure and perseverance in sport among other benefits' (McCullagh 2005).

## Methods

The primary tool for this research was the questionnaires. Researchers use this type of instrument to collect the information and data desired for this study. We took a sample questionnaire that was approved and validated from previous studies. This questionnaire is the International Physical Activity Questionnaire (IPAQ) were used in the study in November 2005 in Canada.

The set of questionnaires were edited by researchers and make it specific to the topic of the study. The questionnaire is provided in the appendices section. Questionnaire will be distributed to the samples at the Faculty of Education particularly the Physical and Health Education students. The questions were construct in dual language and consists of three parts, which are part A, B, and C. Part A includes the demographic factors, Part B more to motive participation and Part C focus on students' level of physical activity.

Part A contains information relating to personal details such as gender, age, status, weight and height of the respondents, office, employment, income. Part B includes 42 questions on motive participation that make respondent want to involve in physical activities. The answers of the questions were structured based on strongly disagree until strongly agree. Respondents will read the statement and answers whether **Strongly Disagree, Disagree, mixed feeling, Agree or Strongly Agree.**

Part C consists of seven questions. All these questions require respondents to think about the physical activities that have been carried out within seven days ago. First, with regards to the number of the days of high or heavy physical activity performed by the respondent. For example, heavy lifting, digging, aerobics, sports or cycling speed. Second, followed by the amount of time used for that purpose. Third, with regard to the number of days of moderate physical activity undertaken. For example, lifting lightweight goods, wiping the floor, cycling, car wash or play badminton in doubles. Fourth, followed by the number of hours done. Fifth, walks in the workplace or activities aimed at

recreation. Sixth, the number of hours it takes to perform activities within a day. The seventh question, the time spent by respondents relax or sit in the workplace including the time spent by reading or lying down to watch television. While questions 8 and 9, questioned about cycling and how many hours of time spent on cycling.

Part C, the questionnaire contains seven questions. Question one to seven will be analyzed based on the IPAQ Scoring Protocol through the method of calculation of the amount of Metabolic Equivalent Task (MET) -min / week: Stage MET x minutes of activity / day x days a week. MET values were determined that the current (low) is 3.3 METs; moderate activity is 4.0 METs and 8.0 METs high activity. The overall number of METs will determine hypothetical physical activity or administrative professionals whether at low, medium or high. Seventh questions will determine the amount of time off without any activity undertaken by respondents within a week.

MET values are chosen by the researchers is derived from the work carried out during the IPAQ Reliability study conducted in 2000-2013. Using Ainsworth et al. Compendium (Med Sci Sports Med 2000) obtained average MET scores for each type of activity. For example; all of the included and the average MET value for walking was invented. The same procedure was carried out to moderate intensity activity and intensity of extreme activities.

The questions were constructed using a Likert scale format to measure the strengths and weaknesses of the level of physical activity that respondents participated. All three levels will be count based on MET formula that adapted from IPAQ.

**Table 1.** Calculation of MET

Category	Calculation MET	Examples
Vigorous	<ul style="list-style-type: none"> <li>(days/week) x (times/day) in minutes x (8)</li> <li>( 4 x 30 x 8 ) = 960</li> </ul>	Competitive sports, moving large objects and hiking on step land
Moderate	<ul style="list-style-type: none"> <li>(days/week) x (times/day) in minutes x (4)</li> <li>( 2 x 60 x 4 ) = 480</li> </ul>	Water aerobic, mopping the floor, hiking and table tennis.
Low	<ul style="list-style-type: none"> <li>(days/week) x (times/day) in minutes x (3.3)</li> <li>( 1 x 60 x 3.3 ) = 198</li> </ul>	Strolling in parks, potted plants, hanging up and folding clothes
Total MET	<ul style="list-style-type: none"> <li>( vigorous MET + Moderate MET + Low MET )</li> <li>( 960 + 480 + 198 ) = 1638 ( Moderate )</li> </ul>	

This is the examples of the answers of the questions based on the daily physical activity that the students participated in their life. It consists on the data of how many days per week that students participated in those three levels of physical activity and how much time they spend to do the activity. Level of physical activity will be stated by using the physical activity norm adapted from IPAQ.

**Table 2.** Level of physical activity norms

Level of Physical Activity	Norms for MET
Vigorous	>3000
Moderate	>600 <3000
Low	<600

**Result & Discussion**

There are several items that been included in demographic data and being studied. It includes gender, race, religion, status, age and BMI range.

**Table 3. Demographic profile students**

Valid	Frequency	Percent	
Gender	male	46	46.0
	female	54	54.0
	<b>N</b>	<b>100</b>	<b>100.0</b>
Age	20 years and below	4	4.0
	21 years to 25 years	96	96.0
	<b>N</b>	<b>100</b>	<b>100.0</b>
weight	Below 40 KG	4	4.0
	41kg - 50 Kg	24	24.0
	51kg - 60 Kg	31	31.0
	61 Kg- 70 Kg	28	28.0
	71 KG and above	13	13.0
	<b>N</b>	<b>100</b>	<b>100.0</b>
Height	Below 150 CM	10	10.0
	151 Cm - 160 Cm	29	29.0
	161 Cm - 170 Cm	38	38.0
	171 Cm And Above	23	23.0
	<b>N</b>	<b>100</b>	<b>100.0</b>
Marital status	Single	97	97.0
	married	3	3.0
	<b>N</b>	<b>100</b>	<b>100.0</b>
Semester	Semester 1	20	20.0
	Semester 2	20	20.0
	Semester 3	20	20.0
	Semester 4	20	20.0
	Semester 5	20	20.0
	<b>N</b>	<b>100</b>	<b>100.0</b>

## Analysis 1

What is the motive participation in physical activity among students in Faculty of Education?

**Table 4.** Motive participation in physical activity

COMPONENT	APPERANCE	SOCIAL	CHALLENGE	FITNESS	HEALTH
Mean	4.34	4.19	4.01	4.20	4.45
Std. deviation	.511	.480	.525	.528	.425
Minimum	3	2	3	3	2
Maximum	5	5	5	5	5

Table 4 shows the motive participation in physical activity among physical and health education students in Faculty of Education. There are 42 items as stated before and it is divided into 5 components which are appearance, social, challenge, fitness and health. Based on the table, the health component show the highest mean with 4.45 and standard deviation of SD = .425. The table also show that challenge component have the least mean with 4.01 and standard deviation of SD = .525. Overall, the data show that motive participation among students is high and balance for all the components.

#### Analysis 2

What is the level of physical activity among physical and health education students?

**Table 5.** Level of physical activity

Level	Frequency	Percent
Vigorous ( > 3000 METS)	42	42.0
Moderate (>600 METS <3000 METS)	51	51.0
Low ( <600 METS)	7	7.0
<b>Total</b>	100	100.0

From table 5, it shows the level of physical activity among the respondents. Based on the figure, it shows that majority of 51 respondents (51.0%) doing moderate physical activity level, followed by 42 respondents (42.0%) doing vigorous-intensity physical activity and 7 respondents (7.0%) doing a low physical activity. The mean for the physical activity level is 1.65 and the standard deviation is SD = .609.

#### Analysis 3

Is there significant different between body mass index (BMI) and level of physical activity among students?

**Table 6.** ANOVA test for BMI and level of physical activity**ANOVA**

BMI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.232	2	8.616	.554	.577
Within Groups	1509.649	97	15.563		
Total	1526.881	99			

The ANOVA table is shown in table 6. ANOVA test was conducted to see whether the different scores of the body mass index (BMI) was statistically significant. For the BMI for all the respondents, the result shows that ( $F=.554$ ,  $df= 2.97$  and  $sig=.577$ ). This indicates that there was no significant difference among the BMI in their level of participation in physical activity.

## Analysis 4

Is there significant different among groups of different level of physical activity in their motive

**Table 7.** ANOVA Test level of physical activity and motive**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
APPEARANCE	Between Groups	.590	2	.295	1.132	.327
	Within Groups	25.263	97	.260		
	Total	25.853	99			
SOCIAL	Between Groups	.389	2	.195	.843	.434
	Within Groups	22.408	97	.231		
	Total	22.797	99			
CHALLENGE	Between Groups	1.107	2	.553	2.048	.134
	Within Groups	26.200	97	.270		
	Total	27.307	99			
FITNESS	Between Groups	1.080	2	.540	1.975	.144
	Within Groups	26.528	97	.273		
	Total	27.608	99			
HEALTH	Between Groups	.461	2	.230	1.282	.282
	Within Groups	17.428	97	.180		
	Total	17.889	99			

The ANOVA table is shown in table 7. ANOVA test was conducted to see whether the different scores of the five groups were statistically significant. For the appearance motive, the result shows that ( $F=1.132$ ,  $df= 2.97$ , and  $sig=.327$ ). For social motive, the result show that ( $F=.843$ ,  $df=2.97$ , and  $sig=.434$ ). For challenge motive, the result show that ( $F=2.048$ ,  $df=2.97$ ,  $sig=.134$ ). Then, for fitness motive, the result show that ( $F=1.975$ ,  $df=2.97$ ,  $sig=.144$ ). For health motive, the result show



that ( $F=1.282$ ,  $df=2.97$ ,  $sig=.282$ ). This indicates that there was no significant difference among the three groups in their five motive participation in physical activity.

## **Conclusion & Suggestion**

### *Motive Participation in Physical Activity*

Based on the data analysed, it shows that majority of the students agree that motive to involve in sports or physical activity plays an important part to increase students' interest to physical activity. Based on the table 4, it totally shows the motive participation in physical activity among physical and health education students in Faculty of Education. There are 42 items as stated before and it is divided into 5 components which are appearance, social, challenge, fitness and health. Based on the results, the health component shows the highest mean with 4.45 and standard deviation of  $SD = .425$ . The table also show that challenge component has the least mean with 4.01 and standard deviation of  $SD = .525$ . Overall, the data show that motive participation among students is high and balance for all the components. Previous study also states that, by doing the physical activity actively it can increase the cardiovascular functional capacity and can helped person to reduce the risks of cardiovascular diseases (Fletcher et al. 1992).

### *Level of Physical Activity*

Based on the results, it shows that majority of the students perform vigorous-intensity physical activity, followed by moderate-intensity physical activity and least performs low-intensity physical activity. From table 5, it shows the level of physical activity among the respondents. Figure shows that majority of 51 respondents (51.0%) doing moderate physical activity level, followed by 42 respondents (42.0%) doing vigorous-intensity physical activity and 7 respondents (7.0%) doing a low physical activity. The mean for the physical activity level is 1.65 and the standard deviation is  $SD = .609$ . These results have been agreed by previous researchers that stated, by doing regular physical activity, it can help people to increase their level of physical activity and also can help them to increasing their self-esteem, increase their performance in study or job and can help them to cope with stress (Mehmet, Cengizhan, and Mehmet 2015).

### *Significant Relationship between Motive Participation and Level of Physical Activity*

This point is the main objective of this research. Based on table 7, ANOVA test was conducted to see whether the different scores of the five groups was statistically significant. For the appearance motive, the result shows that ( $F=1.132$ ,  $df= 2,97$ , and  $sig=.327$ ). For social motive, the result show that ( $F=.843$ ,  $df=2,97$ , and  $sig=.434$ ). For challenge motive, the result show that ( $F=2.048$ ,  $df=2,97$ ,  $sig= .134$ ). Then, for fitness motive, the result show that ( $F=1.975$ ,  $df=2,97$ ,  $sig=.144$ ). For health motive, the result show that ( $F=1.282$ ,  $df=2,97$ ,  $sig=.282$ ). This indicates that there was no significant difference among the three groups in their five motive participation in physical activity. Individual personality demand can influence individuals' participation motive to engaging in health-related behaviour's and personality can usually be associated with health-related behaviour's, although the results are not always consistent (Vollrath and Torgersen 2002).

As a conclusion, this study is made in order to determine the significant relationship between motive participation and physical activity level among physical and health education students in Faculty of Education. Based on the study, it shows that there are no significant relationship between motive participation and physical activity level among students for each

semester. Besides that, this study also proves that most of the respondents which are the physical and health education students agree that individual motive can influence their level of physical activity.

This study also helped various stakeholders such as school, teachers, parents and students themselves to know their own physical activity levels and how to increase the level based on the motive participation that they have been answered in a set of questionnaires. It might help them to determine which component is the best to encourage them to become more active, either appearance, social, challenge, health or fitness.

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