

# PERCEIVED BARRIERS IN PHYSICAL ACTIVITIES AMONG UNIVERSITY STUDENTS

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## ABSTRACT

*Participating in physical activities is essential for maintaining health and prevention of illness. However, university students tend to spend more time on studying rather than participating in physical activities. The purpose of this study was to identify the constraints of university students engaging in physical activities. A survey was conducted with a total of 600 undergraduate students (n=600) from the Technical University of Malaysia Malacca (UTeM). The sample of students were from three faculties, namely the Faculty of Electrical Engineering (FKE) (n = 200), Faculty of Electronics and Computer Engineering (FKEKK) (n = 100) and the Faculty of Engineering Technology (FTK) (n = 200). An adapted questionnaires on the "Perceived barriers to physical activity among university students" were used for data collection. In comparison to the internal factors, it was found that the external factors are perceived as the main reasons for the barriers of participation in physical activities.*

**KEYWORDS:** constraints, physical activity, motivation, support

## 1.0 INTRODUCTION

Participating in physical activities on a continuous basis is very important to maintain health and prevent musculoskeletal diseases, such as spinal pain, neck pain, and shoulder pain. Physical activities can also reduce the risk of coronary heart disease, high blood pressure, diabetes, osteoporosis, obesity and colon cancer (Jones *et al.*, 1998).

Systematic exercise which involves physical activities is usually introduced to adolescences when they are at schools. It has become part of the curriculum implemented in schools as well as universities. Adolescence is a period of transition from childhood to adulthood.

Unfortunately, studies show that the rate of participation in physical activity decreased consistently among adolescence (Kann *et al.*, 2000; Trost *et al.*, 2002).

There are many factors that influence participation in physical activity. These include demographic variables, knowledge, attitudes and beliefs of the benefits of physical activity (Dishma, 1994). There are two cognitive variables that influence the degree of participation which are the benefits of physical activity and the resistance factors that inhibit their participation in activities. In recent years, research shows that there are barriers contribute to the lack of participation of adolescence in physical activity (Brown, 2005; Cheng *et al.*, 2003; Grubbs and Carter, 2002). Due to the various reasons that influence the adolescence participation in physical activity, this study aimed to identify the factors that constrain the participation in physical activity among students of the Technical University of Malaysia Malacca.

## **2.0 METHODOLOGY**

This study is a descriptive study. The study aims to examine factors that influence students' participation in physical activity. Questionnaires on the Perceived Barriers to Physical Activity in University Students" were used for data collection purposes.

### **2.1 Respondents**

Respondents in this study consisted of students from the Technical University of Malaysia Malacca. The study involved three faculties, namely the Faculty of Engineering Manufacture (n= 200), Faculty of Engineering Technology (n = 200) and the Faculty of Electrical Engineering (n = 200). 600 students agreed to participate in this study. There were 346 (57.7%) male and 254 (42.3%) female, aged between 18 and 25 years. Written informed consents were obtained from all the participants.

Participants who perform physical activity three or more sessions per week at moderate to vigorous intensity for 30 minutes or above were classified as very active and the remaining participants were classified as moderate. The participants' perceived barriers to physical activity were evaluated based on their responses to the distributed questionnaire. The questionnaire consisted of 12 items. The content of the item were based on previous studies among university student (Daskapan *et al.*,

2006). The perceived barriers were divided into 2 categories: internal barriers and external barriers. The internal barriers were grouped into 3 categories: lack of energy, lack of motivation and lack of self-efficacy. External barrier were also grouped into 3 categories: lack of resources, lack of social supports and lack of time. Each category consisted of two items and the rate of questions was summed up to determine the score of the category. The sums of the categories scores were used to calculate the total of the internal and external barriers.

A pilot study was conducted with 30 students attending the undergraduate program of other faculties. These students did not participate in the main study. The purpose of the pilot study is to determine the construct validity of the questionnaires and the relevance of the items. After the pilot study, some of the questions which were not understood by the students were rectified and some which appeared repetitive were deleted.

## 2.2 Data Analysis

The data were analyzed using SPSS version 20.0. The results of the perceived barriers to the physical activity were presented using descriptive statistics.

## 3.0 RESULTS

For this study, 600 sets of questionnaires were distributed to students at UTeM. The raw data collected from the demographic questionnaire were analyzed using the total number and percentage. Table 1 summarizes the characteristics of the respondents.

Table 1: Demographic characteristics of the samples

Gender	Male	346	57.7%
	Female	254	42.3%
Race	Malay	399	66.5
	Chinese	120	20%
	Indian	72	12%
	Others	9	1.5%
Program	Diploma	140	23.3%
	Degree	460	76.7%
Involvement	Active	364	60.7%
	Moderate	236	39.3%
Mean Age (Years)		20.7	

Table 1 shows the demographic data of the samples. Out of 600 respondents, 346(57.7%) respondents were male and 254(42.3%)

females. A total of 399(66%) were Malays, 120(20%) were Chinese, 72(12%) were Indian and 9(1.5%) were categorized as other races. For university programs 140(23.3%) respondents were enrolled in diploma and 460(76.7%) were in degree program. The mean score of age of the students was 20.7 years. A total of 364 (60.7%) of the respondents who answered the questionnaires were active in physical activity, while a total of 236 (39.3%) respondents identified as moderate participation in physical activity.

Table 2: Perceived barriers in physical activity score

	Items	Male		Female		All	
		Min	SD	Min	SD	Min	SD
1	I've been thinking about exercise is difficult and too tiring.	1.89	.94	2.13	.94	2.01	.94
2	I have never energy as much as to able to do exercise	2.07	.88	2.28	.99	2.17	.93
	<i>Lack of energy score</i>	3.96	1.82	4.41	1.93	4.18	1.87
3	I've been thinking about other recreational activities with my friends are more entertaining than exercise.	2.01	.99	2.39	1.12	2.20	1.05
4	I have not been thinking about exercise has positive effects on my health.	1.92	.96	2.11	1.10	2.01	1.03
	<i>Lack of motivation score</i>	3.93	1.65	4.50	2.22	4.21	2.08
5	I've been worried about my looks when I exercise	2.06	.90	2.22	1.02	2.14	.96
6	I have not been thinking about my ability to exercise.	2.16	.93	2.25	1.03	2.20	1.96
	<i>Lack of self-confidence score</i>	4.22	1.8	4.47	2.05	4.34	2.92
	<i>Sum of perceived internal barriers score</i>	12.11	5.27	13.38	6.20	12.73	6.87
7	There is no fitness center that I could get to.	2.06	.94	2.40	1.09	2.23	1.01
8	I have no exercise equipment at home that I use.	1.95	.95	2.25	1.07	2.10	1.01
	<i>Lack of resource score</i>	4.01	1.89	4.65	2.16	4.33	2.02
9	My family or friends do not encourage me to exercise.	2.07	.93	2.21	1.07	2.14	1.0
10	My parents give academic success priority over exercise.	2.34	1.0	2.26	1.04	2.30	1.02
	<i>Lack of support score</i>	4.41	1.93	4.47	2.11	4.44	2.02
11	I have no leisure time for exercise because of my busy lesson schedule	2.02	.90	2.35	.96	2.18	.93
12	I have no leisure time for exercise because of my social and family responsibilities.	2.03	.90	2.24	.99	2.14	.95
	<i>Lack of time score</i>	4.05	1.80	4.59	1.95	4.32	1.88
	<i>Sum of perceived external barriers score</i>	12.47	5.62	13.71	6.22	13.09	5.92

The perceived barriers to physical activity of the samples are shown in Table 2. Female students have higher rates on all the questions (Table 2). The total score of the external barriers (m=13.05) was significantly higher than the score of the internal barrier (m=12.73). The lack of support was the most important external barrier (m=4.44). The highest value was observed in question 10 (m=2.30) which indicated the lack of support from parents who gave priority to academic success compare to exercise. Other important items were: "There is no fitness center that I could get to. (m=2.23)"; "I have not been thinking about my ability to exercise. (m=2.20)", and "I've been thinking about other recreational activities with my friends are more entertaining than exercise (m=2.20)". Figure 1 describes the perceived barriers to physical activity among male and female students.

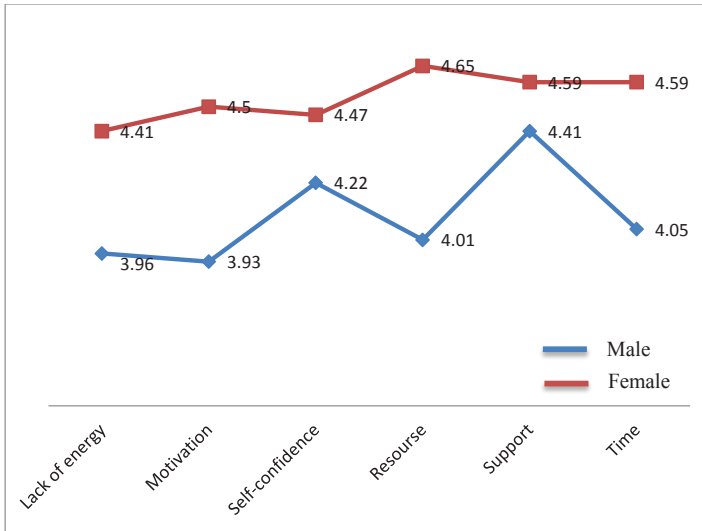


Figure 1: Perceived barriers in physical activity for male and female respondents

#### 4.0 DISCUSSION

Regular physical activity improves psychological health and cardio respiratory fitness (Sallis & Patrick, 1994). It has been shown how physical activity patterns are established in childhood, adolescence and young adulthood (Buckworth, 2001). One study indicated that Turkey, as a developing country has a high rate of cardiovascular morbidity and mortality, and physical in-activity is common for both genders (Onat, 2001).

The statement: “My parents gave priority to academic success than physical activity” is the most significant reason for not taking part in physical activity among respondents. One study reported the greatest barrier was time constraint due to school work, social and family activities on high school students (Allison *et al.*, 1999b). In two other studies, lack of time is also a factor that prevents students’ engagements in physical activity (Gyurcsik *et al.*, 2004 ).

In this study, the perceived external barriers seemed more important than internal barriers. Matters relating to the internal barriers are seen to have low rates. The findings are inconsistent with previous studies. Two internal barriers include the lack of motivation and fatigue are widely cited as obstacles in inactive adolescents and young adults (Allison, 1999a). Robbins’ investigation which was conducted with

77 adolescent girls noted that the lack of self- efficacy was the prime reason for physical activity (Robbins *et al.*, 2003). Robbins' investigation which was carried out with 77 adolescent girls identified that the lack of self-efficacy was the prime reason for physical inactivity (Robbins *et. al.*, 2003). The lack of confidence was accepted as a barrier by female adolescents in a more recent study (Allison *et al.*, 2005). Factors related to confidence are identified as the important factors in our study. These findings may provide an explanation of the method that can be used to encourage participation in physical activity among university students. Every effort shall be made by the university to encourage and develop students in physical activity.

## 5.0 CONCLUSIONS

Samples for this study were drawn from the Technical University of Malaysia Malacca; our results may not characterize the general Malaysian university students. There is a need for future research, which will be carried out with larger sample groups to develop a national standardized instrument. It will be helpful to accurately identify the perceived barriers and then recommend changes to enhance physical activity among young people.

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