

ASSOCIATION BETWEEN ENJOYMENT FACTOR AND PHYSICAL ACTIVITY LEVEL AMONG TERTIARY EDUCATION STUDENTS

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Abstract

Enjoyment plays an important key role in the involvement of physical activity. The purpose of the present was to determine the relationship between enjoyment factors and physical activity level among students in UiTM Alor Gajah. 437 respondents (N=437) were voluntarily involved. Physical Activity Enjoyment Scales (PACES) and International Physical Activity Questionnaire (IPAQ-SF) used to quantify enjoyment and physical activity level. Descriptive analysis (Mean ± Standard Deviation) used to describe the demographic value. However, for inferential statistics, Chi-Square Test for Independence was used. There was a significant association [$\chi^2(58, n=437) = 103.52, p = .001, \text{Cramer's } V = 0.344$] between enjoyment factor and physical activity level among students in UiTM Alor Gajah. People who have higher enjoyment in physical activity were likely to have a higher physical activity level compared to people who have lower enjoyment. The present study provides valuable and reliable knowledge for adolescents and young people as guidance for preparation programmed to encourage physical activity is necessary to help young people change unhealthful lifestyle patterns and increase physical activity to improve their health.

Keywords: Association, enjoyment, physical activity, students

INTRODUCTION

Physical activity defined as a bodily movement develops by skeletal muscle, resulting in energy expenditure, such as playing sports or recreational activities (Ndahimana & Kim, 2017). People who engage in physical activity regularly tend to have positive effects on preventing the risk of chronic illness such as heart diseases, diabetes mellitus and fatness (Melekoglu, 2015). It entrenched that physical activity is essential to wellbeing, with various examinations over numerous years demonstrating it to be both a critical defensive factor and potential treatment for numerous scope of conditions (Warburton & Bredin, 2017). Ample physical activity can deliver long haul health advantages, particularly for a moderate to a vigorous degree of power that indicates positive results in physical activity participation (Budd, et al., 2018).

Physical inactivity was listed as the fourth leading risk factor for global mortality based on the World Health Organization (WHO), with six per cent of worldwide deaths (Sampieri, n.d.). Moreover, physical inactivity has arisen among young people, especially among the adolescents' population. Insufficient physical activity level is considered a critical contributor to childhood overweight (Babey, Hastert, Yu, & Brown, 2008). The previous researcher stated that there was 81% of young adults were physically inactive and most of them does not meet the current physical activity level guidelines (Guthold, Stevens, Riley, & Bull, 2020). Health is one of the essentials human rights that comprise the condition of physical, mental and social prosperity. Despite the benefits, a decrease in physical activity involvement among adolescence can be seen; it is preferable to know that physical activity participation among adolescents will bolster the development of effective interventions that encourage to have an active lifestyle (Sirard & Barr-Anderson, 2008). Furthermore, it is important to highlight that high physical activity contributes towards adolescents attaining the physical activity requirements thus having a better and healthier lifestyle compared to those who did not (Kastrati & Georgiev, 2020). An adequate level of physical activity will enhance the full spectrum of public fitness and well-being (Haskell, et al., 2007).

To establish a successful strategy in encouraging physical activity towards young adults, the main determinants of physical activity in these groups must be identified. Enjoying physical activity is defined as a positive affective response, either cognitive or physiological, involving enjoyment and fun associated with achieving or participating in physical activity (Latorre Roman, Garcia, Navarro Martinez, & Izquierdo Rus, 2014). However, there also negative exercise experiences which lead to adverse impressions towards the involvement of physical activity, leading to a vicious cycle of sedentary behaviours. Furthermore, enjoyment was recognized as a key factor in motivating behaviour and youth sport involvement (McCarthy, Jones, & Clark-Carter, 2008). Based on previous researchers, promoting enjoyment may increase young people's retention of physical activity and sport, and may reduce the appeal of alternative sedentary behaviours such as watching television, telecommunications, or playing video games that were prevalent among teenage girls and boys, which may reduce physical activity during leisure time (Motl, et al., 2001). Sport enjoyment can be strongly connected to an increased desire for future sports participation. Moreover, the individuals who make physical activity a basic piece of their routine are happier and more productive than others (Elmagd, 2016).

Physical activity is a complex behaviour affected by many internal and external factors inclusively enjoyment as part of it. The explanation regarding the influence of these factors on behaviour changes is crucial in designing interventions, strategies and educational projects that contribute to increasing the level of physical activity participation in young adults (Sallis, Prochaska, & Taylor, 2000). Presently, it is recommended that all young adults should engage in at least a moderate intensity (60-80% of VO_2max) of physical activity for 60-minutes per day. However, there was a noticeable 81% decline in physical activity during adolescence (Guthold, Stevens, Riley, & Bull, 2020). Adolescence was not physically active because most of their point of view notice exercise as not enjoyable, they were in a less positive mode and they felt more exertion rather than positive effects (Werle, Wansink, & Payne, 2015). Therefore, they were reluctant to embark on any serious physical activity. Several studies indicated that a decrease in physical activity with a further drop in early adulthood increases the risk of harmful health (World Health Organization, 2011).

Due to these occurrences, it was imperative to develop effective plans or strategies to enhance the physical activity of this population. To do this, the factor inhibiting participation in physical activity need to be high lightened. In addition, these issues have been used globally in various studies with diverse geographical environments, but in Asian countries, this issue was less discussed because multicultural differences lead to a different perspective. Nevertheless, did the result can be wearable towards Asian countries, which was the reason the present study is conducted. The factors used to study on population among Asian countries and to prove either the result was significant within the Asian population. Due to this present study was conducted to investigate any association present between enjoyment factor and physical activity level among tertiary education students.

PROCEDURES

Sampling

The present study utilized non-probability sampling, a convenience sampling method where the respondents were selected based on a volunteerism basis. Besides, this method was conducted by selecting participants based on their accessibility and convenience to the researcher. To collect the data, approaching and convincing the respondent was needed as part of the procedure and samples were taken at UiTM Alor Gajah, Melaka. According to the data provided by the Students Affairs Department, there were 7612 people as the total campus population (KAG,2020). Based on the Sample Size Estimation Table (Krejcie & Morgan, 1970), 364 respondents needed from the total 7612 population of people. Inclusion of a further 20% from the sample added to avoid a non-return rate of dropout (Suresh & Chandrashekhara, 2015). A total of 437 respondents (N = 437) was needed.

Instrumentation

Instrumentation is the tool used for quantifying the data information. A questionnaire used to identify the demographics factors, physical activity participation and factors that are associated with physical activity participation. The questionnaire divided into three sections which consist of:

Demographic

Based on this study, demographic backgrounds are measured to record respondent's age, gender and education level. This to gain details of the respondents to identify the status of a person.

Enjoyment Factor

Enjoyment factors in this study were measure by using self-reported questionnaires. The enjoyment of physical activity was assessed by using the modified Physical Activity Enjoyment Scales (PACES). The items of the PACES questionnaires have been modified to 16 items (Moore, et al., 2009). PACES internal reliability (Cronbach alpha = 0.906) and item-total correlation = 0.38-0.76. The PACES test-retest reliability demonstrates a strong temporal concordance. This questionnaire has been translated into many versions such as Spanish (Latorre Roman, Garcia, Navarro Martinez, & Izquierdo Rus, 2014). A 5-point Likert-type scale used to replaced the 7-item bipolar continuum in the original PACES and a score is computed by calculating the average of the 16 items.

Physical Activity Level

Physical activity level quantified using the short form of the International Physical Activity Questionnaire (IPAQ-SF). The short form (SF) was developed for use in surveillance studies in which time is limited and consists of seven items to measure the time spent performing physical activities, mild to intense, and time spent sitting inactivity. There are four domains in this questionnaire which is leisure-time physical activity, household and planting activities, job-related physical activity and carriage-related physical activity. Previous journals have reported that IPAQ-SF has consistently been shown to have high reliability ranging from 0.66 to 0.88 (Deng, et al., 2006). It is recommended that no modifications be made to the order or wording of the questionnaire, as this will affect the psychometric properties of the items. Translation from English is provided to promote the worldwide use of IPAQ.

Data collection procedure

The process of data collection started with obtaining ethical approval from Research Ethics Committee UiTM. This is to ensure that the research guidelines give no disagreement along with the analysis. Along with that respondent, they have been asked for their permission to gain their consent to participate in the study as well as to understand what they need to do in the study, the advantages and risks they may get from the study. After receiving their permission, the

respondent was briefly explained about the study and provide with a QR-code of the questionnaire. A self-administered questionnaire been distributed to the respondent and collected back by an online submission platform. Collected data was being analyzed accordingly.

DATA ANALYSIS

IBM SPSS 25 was used to analyse the data. The significance was set at ($p < 0.05$) with alpha = 0.05. All descriptive and inferential data were analyzed as follow:

Table 1: Data analysis procedure

Research objectives	Data analysis
To identify the enjoyment factor among students in UiTM Alor Gajah	Descriptive statistic (Mean \pm SD)
To identify the level of physical activity among students in UiTM Alor Gajah	Descriptive statistic (Mean \pm SD)
To investigate the association between enjoyment factor and physical activity level among students in UiTM Alor Gajah.	Chi-square test for independence

RESULTS

Demographic Data

In this section, demographic data referred to the characteristic of the population, it provides data regarding research respondents and necessary to determine whether the individual represents the sample of the target population for generalization purposes. Based on this study, the characteristic of the population included age, gender and education level were as followed:

Table 2: Demographic Analysis of Respondents

Variables	Frequency (n)	Percentages (%)	
Gender	Male	248	56.8
	Female	189	43.2
Age	18-20 years old	210	48.1
	21-23 years old	174	39.8
	24-26 years old	53	12.1
Education level	Diploma	254	58.1
	Degree	183	41.9
Physical activity category	Low	115	26.3
	Moderate	212	48.5
	High	110	25.2

The findings from Table 2 indicates the frequency and per cent for the gender of the participants. Female dominated with a difference of 13.6% compared to male respondents. Majority of the respondents age between 18 - 20 years old (n = 210, 48.1 %), followed by 21 – 23 years old (n =

174, 39.8%), and the least respondents in this study was age of 24 - 26 years old and above (n = 53, 12.1%). Majority of respondents' education level was diploma (n = 254, 58.1%) and degree at (n = 183, 41.9%). It shows that most of the respondent are in the moderate physical activity level (n = 212, 48.5%) followed by low physical activity level (n = 115, 26.3%) and high physical activity level (n = 110, 25.2%).

Table 3: *Descriptive analysis of total enjoyment*

Variables	Mean ± SD
Total enjoyment factor	3.06 ± 0.97

Table 3 indicated the mean value for the enjoyment factor which noted to be average (neutral). The mean was a good summary for values or used to determine the central tendency of the data. It was obtained by adding all the data points in the respondent and then dividing the sum by the number of points.

The Association between Enjoyment Factor and Physical Activity Level among Students in UiTM Alor Gajah

Table 4: *Chi-Square Test for Independence*

N = 437	value	P	df	Nominal by Nominal	
				Phi	Cramer's V
Person Chi-Square	103.520	0.001	58	0.487	0.344

Table 5: *Crosstabulation between Physical Activity Level and Total Enjoyment*

		Total enjoyment means			
		3.00	3.13	3.25	
Category of physical activity level	Low	n	26	8	3
		%	22.6	7.0	5.6
	Moderate	n	26	36	23
		%	12.3	17.0	10.8
	High	n	12	11	19
		%	10.9	10	17.3
Total	N	64	55	45	
	%	14.6	12.6	10.3	

Chi-square test for independence indicated there was a significant association between enjoyment factor and physical activity level, $\chi^2(58, n=437) = 103.52$, $p = .001$, Cramer's V = 0.344. According to Table 5.0 above, 14.6 % of the respondents were at the mean of 3.00. followed by 12.6 % of the respondents were at the mean of 3.13 and 10.3 % of the respondents were at the mean of 3.25.

DISCUSSION

Enjoyment is characterized as an optimal psychological state that leads to action primarily for its own sake and is correlated with positive states of feeling (Kimiecik & Harris, 1996). Present study findings indicate that satisfaction of adolescent's enjoyment plays an important role in their involvement in physical activity. Enjoyment acted as a mediator, suggesting that a variety of physical activity was associated with enjoyment, which, in turn, was associated with involvement in physical activity (Micheal, Coffield, Lee, & Fulton, 2016). The belief in the benefits of physical activity is also a major predictor of physical activity among respondents of both genders, as demonstrated in several studies involving adolescents (Kastrati & Georgiev, 2020). As been stated by the previous researcher, regular physical activity does beneficial for the reduction of obesity, increased cardiovascular fitness and wellbeing, and enhanced psychological well-being. A decreased in physical activity and increased sedentary time are thought to be partly responsible for the recent rise of teenage obesity. Adolescence obesity was likely leading to obesity in adulthood. Therefore, it was a public health priority to increase physical activity in adolescents (Sirard & Barr-Anderson, 2008). This study discussed how cross-sectional and longitudinal results from the previous study can be used to guide innovative methods for adolescents and thereby make progress towards increasing physical activity and healthier outcomes for young adults. The present study found that there was a significant association between enjoyment factors and physical activity level among students. The association between enjoyment factor and physical activity level among students in UiTM Alor Gajah was a medium associated with the value of Cramer's V was 0.3444.

People with higher enjoyment are more likely to participate in physical activity than people with lower enjoyment. Specifically, being female, having a restrictive disability, married and with a lower level of education and a lower level of motivation are all correlated with a lower probability of engaging in a high level of physical activity and may inhibit their participation (Eime, Harvey, Charity, & Nelson, 2018). A previous study reported students who consider exercise activities as fun and interesting could be expected to have a high level of physical activity (Gao, 2008). A significant finding notify the correlation between enjoyment and physical activity was extremely powerful and a low level of physical activity tends to be linked to physical activity barriers (Salmon, Owen, Crawford, Bauman, & Sallis, 2003). The previous study also highlighted that exercise enjoyment was strongly linked to physical activity, suggesting that those who enjoy exercise would do more (Mcauley, et al., 2007).

However, the present study was slightly different in finding as it stated the impact of enjoyment was different. If the physical activity level was weak, they proved to be no evidence for enjoyment as a mediator in interventions aimed at promoting physical activity among the respondents. Moreover, previous researchers indicating that enjoyment responses do decline with high physical activity in comparison with moderate physical activity (Teques, Calmeiro, Silva, & Borrego, 2020). Overall, present studies highlight that higher enjoyment can help people to be physically involved in both work and leisure time during daily life. Therefore, enjoyment should be considered the main factor in physical activity studies (Schwaneberg, et al., 2017).

Based on the result, it was beneficial to take into consideration creating a national strategy and programmed to encourage physical activity which able to help young people modify their unhealthful lifestyle patterns and increase physical activity, thus improving their health. Besides that, adolescents should engage in 60-minutes of physical activity per day, identify activities they enjoy and develop the skills to do them to ensure frequent participation. Previous research had shown that adolescents were less likely to be physically involved as they grow older. Interestingly, it also indicates that adolescents need to experience the things they enjoy to stay physically active over time (Micheal, Coffield, Lee, & Fulton , 2016). A preparation programmed to encourage physical activity is necessary to help young people change unhealthful lifestyle patterns and increase physical activity to improve their health.

Overall, the present study finding suggests that there was considerable support for a model of physical activity. Some variables can be added to this study to make it even clearer and increase the understanding of the active lifestyle. It is recommended for the future to include other motivation factors such as extrinsic motivation as enjoyment has emerged as an important factor in physical activity levels for young adults. One possible strategy to increase physical activity levels could be to promote fun with rewards and pleasure during the training. At present, there was still a low to moderate level of physical activity among Malaysian youth (Salamudin & Harun, 2013). With the accelerated rate of death due to a sedentary lifestyle that is slowly spreading among young people, this is a good opportunity for everyone to look back on their current lifestyle and add physical activity to it.

CONCLUSION

In conclusion, there was a significant association between enjoyment factors and physical activity level among students in UiTM Alor Gajah. People who have higher enjoyment in physical activity were having a higher physical activity level. Moreover, enjoyment of activity indicates a continued dedication to physical activity, if people do not enjoy physical activity, they will be less likely to lead an active lifestyle and recognize the health benefits associated with it.

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