

The Relationship Between Perceived Physical Literacy And Physical Activity Level Among University Students

Nurafiqah Mohamad Salleh¹, Umami Kalthum Mohd Mokhtar², Siti Aida Lamat³

*Faculty of Sports Science and Recreation,
Universiti Teknologi MARA, Cawangan Negeri Sembilan, Kampus Seremban
<https://nsembilan.uitm.edu.my>*

ABSTRACT: *This research is investigating the relationship between perceived physical literacy and the physical activity level among university students in UiTM (Universiti Teknologi MARA) Seremban. A total of 428 students from UiTM Seremban between the ages of 18 – 25 years old took part in this study. A Perceived Physical Literacy Instrument (PPLI) and an International Physical Activity Questionnaire (IPAQ) short edition were distributed to the participant using Google Form link. To evaluate the instrument and provide a frequency distribution of demographics, descriptive analysis, mean scores with standard deviations, and a correlation of the variables, the acquired data was processed using the SPSS Statistical tool. The correlation between perceived physical literacy and the physical activity level shows significant, the chi-square statistic is 68.165 and the p-value is .007. The result shows a significantly correlated relationship between perceived physical literacy and physical activity among UiTM Seremban students. The researcher found out that the students at UiTM Seremban have a majority sense of self, self-confidence, knowledge, and understanding, and engage in vigorous physical activities.*

KEYWORDS: *physical literacy, physical activity*

I. Introduction

Physical literacy is a multifaceted concept comprised of affective, physical, cognitive, and behavioural. These four domains reflect a comprehensive approach to physical exercise that considers the social mechanisms involved with lifelong learning. Physical literacy quickly attracted global recognition, resulting in a research boom. Given the potential importance of physical literacy in transforming society from a physical activity-suppressed to a physical activity-rich community, many countries have started to encourage it in a variety of environments, including classrooms, communities, and public health institutes. The United Nations Educational, Scientific and Cultural Organization (UNESCO) stated that physical literacy is a key component of physical education and England Youth Sport Trust set physical literacy as the basis of physical education and school sport, other than that The Society of Health and Physical Educators (SHAPE) America revised the outcome of K-12 physical education to cultivate physical literacy people [1]. The World Health Organization (WHO) also stated that physical literacy should be aligned with health when developing a national action plan on physical activity [1]. Most previous studies were limited by translated physical literacy as sports literacy or physical education literacy. According to previous researcher, Physical literacy (PL) is defined as the “motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engaging in physical activity for life” [1].

Furthermore, physical activity is characterized as any movement of the body that involves the expenditure of energy. This covers any movement you make during the day, except sitting or lying down. According to previous researcher, they proposed physical activity as “an activity to keep a person's body fitness, making strong muscles, as well as psychologically strong.” To participate in structured physical exercise or

sports means to be active throughout the day and avoiding long periods of inactivity[4]. Physical activity is a series of dynamic movements that involve body functions or actions involving physical gestures, with the aim of expending the energy stored during the day's previous tasks. Furthermore, it includes everyday family tasks such as food shopping, kitchen maintenance, and garbage collection. Exercise is a part of physical activity, which is defined as a subsection of spare time related to physical activity and is structured, designed, and recurring daily or otherwise to enhance the physical condition and body fitness. Flexibility and body harmony, as well as balance, aerobic health, brawny fitness, and skill-related fitness elements associated with improved success in middle-aged and older adults, are also included [4]. This research would investigate what the concept of physical literacy and the perceived physical literacy that influences the university student physical activity level. Thus, this research will be to find out the relationship between the perceived physical literacy and physical activity level among UiTM campus Seremban students.

The concept of physical literacy remains slow and without solid conclusions. So, more studies should be done to increase physical activity through physical literacy. Exploring the relationship between physical literacy and physical activity will be the first step. As Whitehead stated, physical literacy is not equal to physical activity, nor is it a physical activity substitute [2]. The relationship between physical literacy and physical activity is one of facilitation. physical literacy does not have to be manifested in physical activity, people, including those who are not able to perform any physical activity, can demonstrate and benefit from physical literacy [1]. Other studies proved that instead of being forced to participate in physical activity, individuals will take an active part in physical activity if they understand what physical literacy. Apart from that, the knowledge and understanding of the concept of physical literacy, function of physical literacy and its benefits to the development of the individual is very low. Individuals from non-sporting backgrounds indicated a poorer familiarity or lack of familiarity with the concept of physical literacy, and they attributed their lack of knowledge and experience with physical literacy on a lack of exposure in schools [1].

A person should be able to illustrate the relationship between the physical nature of movement and their experiences and knowledge in other settings. In summary, a physically literate person is one who is motivated, skilled, and self-assured enough to engage in physical exercise throughout his or her life. Laziness and inactivity have been identified as risk factors for illness. In China, the threats associated with primary NCD (chronic noncommunicable disease) have risen [4]. In addition, lack of confidence is also one of the reasons why a person does not do physical activity. Men just require motivation to engage in physical activity, but women require motivation, confidence, and physical competence to become more engaged in physical activity. This is due in part to the fact that characteristics such as physical condition have little impact on men's participation in physical activity. Women are more prone than males to be affected by their interests, self-confidence, and physical condition. More important variables resulted in female students being more likely to abandon physical activity when they did not get encouragement in the relevant dimensions. Without enforced attendance in physical education (PE) classes, women are more likely to decide not to exercise, stifling the development of physical literacy [1].

II. Method

1.1 Design

According to Grey (2014), research design is specifies the technique for gathering the necessary data, the methods to be used to collect and evaluate the data, and how all of this will be used to answer the research question [4]. This study's research design was non-experimental quantitative research. The process of gathering and evaluating numerical data is known as quantitative research. It may be used to identify patterns and averages, make predictions, evaluate causal relationships, and generalize results to larger groups. This study was both descriptive and correlational. When the goal of the study is to discover characteristics, frequencies, trends, and classifications, descriptive research is an excellent choice. The descriptive method was employed to examine the respondent's demographic profile to find the percent and frequency. The correlational method was utilized to investigate the relationship between perceived physical literacy and physical activity level among UiTM Seremban students.

1.2 Participants

This research's respondents are students at UiTM Seremban, male and female and include the Student for Faculty of Administrative Science & Policy Studies (FSPPP), Faculty of Sport Science and Recreation (FSR), and Faculty of Mathematical & Computer Science (FSKM) from 18–25 years old. The sample was derived from the population of the students in UiTM Seremban according to the Table of Krejcie Morgan (1970). The researcher picked both male and female students for this study, and the overall population of this student at UiTM Seremban was estimated to be around 5651 students. The population was chosen because responders might be found in big numbers at universities.

The researcher collected the entire population of UiTM Seremban students by taking a sample size from each faculty. This information was collected from the Academic Affairs Division of UiTM Seremban and estimates a total population of 5651 students, both male, and female, at UiTM Seremban. The optimal sample size for a population of 5000 would be 357, which would be sufficient to represent the population and generalize the research results [5]. However, in order to avoid an unreturned questionnaire, the researcher increased the sample size by 20%, bringing the overall sample size for this study to 428.

1.3 Measures

The PPLI is measure on the physical literacy understanding among individual. The version of the PPLI was constructed based upon the “Perceived Physical Literacy Instrument” (PPLI) consists of 9 items scored on a 5-point Likert scale (1 strongly disagree and 5 strongly agree). The 9 items of the PPLI are equally divided into three sub-scales including: “knowledge and understanding” (3 items), “self-expression and communication with others” (3 items), and “sense of self and self-confidence” (3 items). Confirmatory factor analysis (CFA) showed that the construct demonstrated a good fit to the model. Because the questioning tone in the original version of PPLI was generic and not developed for a designated population or profession, no modification was made to the vocabulary in the PPLI in this study. A Cronbach's alpha score ranged from 0.79 to 0.83. Suggests some item redundancy or surplus in the original PPLI scale of 9 items [6]. The IPAQ short edition, consisting of seven questions, tested the participant's level of physical activity over the previous seven days. Correlation assessments exposed that the “IPAQ” short edition has a Cronbach's alpha (α) was 0.83. The responded were asked about the time spent on physical activity and were categorized into three ranges as minimum physical activity, moderate physical activity, or vigorous physical activity requirements. Furthermore, physical activity levels are classified into two categories according to time and activity types, which is vigorous and moderate. The responded will fill specified the number of days they joined for each type of physical activity and, for each day, how long (time) they participated and then categorized in which physical activity level it belonged. The number of days multiplied by the quantity of time spent on each physical activity supplied us with the total quantity of time engaged in physical activity for all levels. Here, the means of the initial data are used in the statistical assessment of individual physical activity levels [4].

1.4 Data Analysis

Descriptive statistics were applied to the demographic variables of gender, age, faculty, and level of education. Descriptive statistics were utilized to investigate the research objectives related, which are to determine the perceived physical literacy level and physical activity level among UiTM Seremban students. The third research objective in this study was assisted using Chi-square test, to investigate the relationship between perceived physical literacy and physical activity level among UiTM Seremban students.

III. Results

The descriptive method was employed to examine the respondent's demographic profile. For demographic data the researcher analyzed the percent (%) and frequency (f) of gender, age, faculty, and level education. The table 1 show that the UiTM Seremban student from the three faculty are majority male student 51.6% (N=221), followed by the female student 48.4% (N=207) and the total of all respondents is 428 students. The table 2 shows the respondent's ages varied and have been grouped into four groups. Most of the students are between the age of 22-23 years old which is 29.2% (N=125) and the age group for from 20-21 years old 25.7% (N=110), and 24-25 years old 24.5% (N=105) only slightly different and the last group age is 18-19 years old 20.6% (N=88). The table 3 show that the respondents from the three different faculties available at UiTM

Seremban which is the Faculty of Sport Science and Recreation (FSR) 50.5% (N=216), the Faculty of Administrative Science & Policy Studies (FSPPP) 28.5% (N=122), and the Faculty of Mathematical & Computer Science (FSKM) 21.0% (N=90). The results showed that most of the FSR students who cooperated in this research compared to the students from FSPPP and FSKM. The table 4 show that the respondent's level education. The results showed that the respondents of degree students 52.6% (N=225) and diploma students 47.4% (N=203) did not have much difference.

Table 1 *Demographic profile of gender*

	Frequency (f)	Percent (%)
Male	221	51.6
Female	207	48.4
Total	428	100

Table 2 *Demographic profile of age*

	Frequency (f)	Percent (%)
18 – 19 years old	88	20.6
20 – 21 years old	110	25.7
22 – 23 years old	125	29.2
24 – 25 years old	105	24.5
Total	428	100

Table 3 *Demographic profile of faculty*

	Frequency (f)	Percent (%)
Faculty of Sport Science and Recreation (FSR)	216	50.5
Faculty of Administrative Science & Policy Studies (FSPPP)	122	28.5
Faculty of Mathematical & Computer Science (FSKM)	90	21.0
Total	428	100

Table 4 *Demographic profile of level education*

	Frequency (f)	Percent (%)
Diploma	203	47.4
Degree	225	52.6
Total	428	100

In this study, the researcher used descriptive statistics to analysis the first and second objectives. For the first objective was to determine perceived physical literacy level among UiTM Seremban students. The second objective is to determine physical activity level among UiTM Seremban students. The table 5 showed the descriptive statistic on the perceived physical literacy among UiTM Seremban students. The highest mean score of perceived physical literacy was on ‘ *I am physically fit in accordance to my age*’ (m= 4.53, SD=.632) and ‘ *I appreciate myself or others doing sports*’ (m=4.53, SD=.617). The lowest mean score was on ‘ *I am confident in wild/natural survival*’ (m=4.11, SD=.932). The table 6 showed the descriptive statistic on the physical activity level among UiTM Seremban students. That have three level in physical activity which is vigorous level, moderate and low level. The result show that most of the students at UiTM Seremban have the vigorous level in physical activity 52.3% (N=224) and follow by the lower level 32.2% (N=138) and the last is moderate level 15.4% (N=66).

Table 5 *The items of perceived physical literacy*

	Mean (m)	Std. deviation (SD)
<i>I am physically fit, in accordance to my age</i>	4.53	.632
<i>I have a positive attitude and interest in sports</i>	4.50	.644
<i>I appreciate myself or others doing sports</i>	4.53	.617
<i>I possess self-management skills for fitness</i>	4.30	.752
<i>I possess self-evaluation skills for health</i>	4.31	.764
<i>I have strong social skills</i>	4.36	.750
<i>I am confident in wild/natural survival</i>	4.11	.932
<i>I am capable in handling problems and difficulties</i>	4.29	.724
<i>I am aware of the benefits of sports related to health</i>	4.43	.729

Table 6 *The items of physical activity level*

	Frequency (f)	Percent (%)
Vigorous level	224	52.3
Moderate level	66	15.4
Low level	138	32.2
Total	428	100

This researched aimed to examine the relationship between perceived physical literacy and physical activity level among UiTM Seremban student. To analysis the data, researcher used Chi-square test to analyses the data. The table 7 show the relationship between perceived physical literacy and physical activity level among UiTM Seremban student. The result chi-square test show that the value of the chi-square statistic is 68.165. The p-value is .007 which is less that the significance level $\alpha=0.05$, the result is significant, and the null hypothesis rejected. Thus, there is relationship between perceive physical literacy and physical activity level among UiTM Seremban.

Table 7 *The relationship between perceived physical literacy and physical activity level among UiTM Seremban 3 student.*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	68.165 ^a	42	.007
N of Valid Cases	428		

a. 42 cells (63.6%) have expected count less than 5. The minimum expected count is .15.

IV. Conclusion

In conclusion, this study aims to investigate the relationship between perceived physical literacy and physical activity level among UiTM Seremban students. The result shows a significantly correlated relationship between perceived physical literacy and physical activity among UiTM Seremban students. The researcher found out that the students at UiTM Seremban have a majority sense of self, self-confidence, knowledge and understanding, and engage in vigorous physical activities during the last seven days. In light of this study, the researchers would like to suggest more research on physical literacy and physical activity. This is because, according to the study, individuals are more willing to engage in physical activities in their everyday lives and build the spirit to do so, as advised by the WHO. Aside from that, research suggests conducting additional physical literacy studies. As a result, it may assist people in better understanding and knowledge of physical literacy. Aside from that, it may encourage an individual's spirit to engage in greater physical activity. Furthermore, the researcher discovered that studies on physical literacy are not frequently conducted in Malaysia, so the researcher suggested that future researchers conduct research on physical literacy to provide

knowledge and exposure to society on what physical literacy is so that they can differentiate between physical literacy and physical activity.

Acknowledgements

I would like to convey my heartfelt appreciation to ethics committee and colleagues for being very understanding, guidance, and compassionate in this research project. I have been blessed to have such a dedicated colleagues to help navigate the project paper process. I also wish to thank all respondents for their cooperation and willingness given in the research project I did so that I could complete this research project. Not to mention my gratitude to my family members for their assistance.

REFERENCES

- [1] Rui-Si Ma, R. K.-W. S., Ming-Hui Li, Yan Huang and Xue-Liang Niu (2020). *Association between Physical Literacy and Physical Activity: A Multilevel Analysis Study among Chinese Undergraduates*. International Journal of Environmental Research and Public Health, 17(21), 7874.
- [2] Whitehead (2016). *The Concept of Physical Literacy*. Abingdon, Oxford: Routledge.
- [3] Zulkifli, A. F., & Danis, A. (2021). *Individual knowledge of perceptions about and barriers to physical literacy (PL) in Malaysia*. Physical Culture and Sport, 90(1), 26-38.
- [4] Rahman, M. M., Liang, C. Y., Gu, D., Ding, Y., & Akter, M. (2019). *Understanding levels and motivation of physical activity for health promotion among Chinese middle-aged and older adults: a cross-sectional investigation*. Journal of healthcare engineering, 2019.
- [5] Boru, T. (2018). *Chapter Five; Research Design And Methodology*. Research Methodology.
- [6] Ma, R.-S., Sum, R. K., Hu, Y.-N., & Gao, T.-Y. (2020). *Assessing factor structure of the simplified Chinese version of Perceived Physical Literacy Instrument for undergraduates in Mainland China*. Journal of Exercise Science & Fitness, 18(2), 68-73