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Physical Literacy Skills of Junior High and Senior High School Students in Greater Malaysia

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ABSTRACT

This study aims to determine and describe the Physical Literacy of junior and senior high school students at Malaysia in doing sports / physical activities. The method used in this study uses a quantitative descriptive approach. This study was designed to determine students' physical activity. Data collection in this study used a questionnaire. The instrument used in this study was a questionnaire. The population and sample of this study were 370 junior and senior high school students throughout Malaysia. The results of the study seen from the level of physical literacy of junior and senior high school students, the highest level of sports/physical activity every week is Once with 143 respondents or 38.6%. The highest percentage of time spent by students every time they exercise is 30 minutes with 48.1% or 178 respondents. The current level of physical activity among junior and senior high school students in Malaysia is still often done every week. This can be a reference for Sport Education teachers to motivate students to continue to do sports / physical activity every week because by doing physical activity, students can maintain their own health and take advantage of free time to do sports activities.

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1. INTRODUCTION

Health is something that is very valuable for human life and activities. Healthy can be interpreted as where the human body does not experience any disorders such as illness, injury and others that can make a person carry out their daily activities comfortably and optimally. The importance of health also requires humans to maintain it, one way that can be done to maintain health is by doing physical activity. Physical activity needs to be done by all ages, both children, young, adults to old in order to obtain health. Physical activity that needs to be done to maintain health is by doing sports (Rohmah and Muhammad 2021). Law Number 3 of 2005 Article 1 concerning the National Sports System states that there are several sports objectives to be achieved in carrying out sports activities, one of which is educational sports. Educational sports are activities carried out in schools as a form of physical activity carried out regularly and continuously with the aim of obtaining health, skills, personality, knowledge and physical fitness.

Educational sports are sports that are carried out in the scope of education or with educational goals (Ortega et al., 2007). The goal of educational sports is a sports activity that aims to help develop educational goals. Educational sports are usually carried out in educational institutions such as schools. Almost all schools, be it elementary school, junior high school, or high school, have educational sports. This is because there is an obligation for educational institutions to include Physical Education, Sports and Health (PJOK) subjects (Fox et al., 2010). In the 2013 curriculum, the level of educational units from elementary school to high school, there are fields of study that include various subjects of Pancasila and citizenship education, mathematics, Indonesian, natural sciences, social sciences including subjects (Prihantoro, 2014).

Physical Education lessons. In addition to being one of the subjects in educational institutions, Physical Education is implemented so that students can maintain their health in accordance with the objectives of educational sports as stated in the Law. Physical activity is any body movement produced by skeletal muscles that requires energy expenditure. Lack of physical activity is an independent risk factor for chronic disease and is estimated to cause death globally (Iswahyuni 2017) . The process of learning physical education in high schools has obstacles in reducing the level of physical activity. Physical activity is part of physical education learning, because physical activity requires a person to move, and physical education is one of the subjects that uses more movement activities in its learning process. However, why physical education cannot be a place for students to achieve physical activity, this is related to the physical education program designed by the teacher does not increase students' motivation to be physically active (Ginanjar et al. 2020) .

Referring to the Global Physical Activity Questionnaire (2014), moderate intensity activities are activities that require moderate physical effort and cause a slight increase in breathing or heart rate. These physical activities are done for a minimum of 10 minutes. Examples of light activities such as cycling, walking and the like. While high intensity activities (vigorous intensity) are activities that require hard physical effort and cause an increase in breathing or a rapid heart rate. These physical activities are done for a minimum of 10 minutes. Examples of high intensity activities are weight training, jogging, aerobics, and fast cycling (Widiyatmoko and Hadi 2018) . Physical activity is a factor that has been found to be closely related to the risk of various diseases. Lack of physical activity increases the risk of someone experiencing ischemic heart disease, type 2 diabetes, colon cancer, depression or breast cancer. Even increasing physical activity is said to reduce the risk of premature death (Anggunadi and Sutarina 2017) .

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Related to the problem of physical activity that has become a global issue, coupled with the existence of a curriculum that cannot meet the achievement of physical activity. Therefore, a learning strategy or tool is needed that can be used as a curriculum model or learning model. One of the tools that functions as a dual curriculum model or learning model is Sport Education (SE). SE is a model that has strong implications for curriculum and teaching so that it represents a dual-function model (Michael W Metzler 2011). This study aims to determine and describe the Physical literacy of junior high and senior high school students throughout Malaysia in doing sports/physical activities. This study was conducted in 12 schools in Malaysia.

2. METHODS

The method used in this study is a quantitative descriptive approach. This approach was chosen to obtain a clear and measurable picture of the level of physical activity of junior high and high school students in Malaysia. This study was specifically designed to identify and analyze students' exercise habits and involvement in physical activity. Data collection was carried out through the distribution of questionnaires designed to obtain information related to the frequency, duration, and type of physical activity carried out by students.

The main instrument in this study was a questionnaire, which was filled out by respondents to provide accurate data on their physical activity behavior. The population that was the subject of this study consisted of junior high and senior high school students in the Malaysia, covering various school and environmental backgrounds. The population and sample in this study were 370 students, consisting of 174 male students and 196 female students with an age range between 13 and 18 years. This sample was taken proportionally to ensure a balanced representation of both gender groups and various levels of education.

In addition, the age range chosen in this study, namely 13 to 18 years, was considered because this period is an important developmental period where physical activity has a significant impact on health and physical fitness. Thus, this study not only provides an overview of students' physical activity but also presents relevant data for physical education interventions and health policies among adolescents.

3. RESULTS

This study is intended to determine the level of physical activity of junior high and high school students throughout Malaysia.

1. Descriptive Analysis

Descriptive analysis based on demographics is used to see the general picture of the research subjects. Gender, age, and education level as indicators in this demographic. The results of the descriptive demographic analysis are as follows:

Table 1. Results of descriptive demographic analysis

No	Demographics		Frequency	Presentation
1	Gander	Man	74	47,00%
		Woman	96	53,00%
2	Age	13	5	4,10%
		14	5	17,60%

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		15	1	8,40%
		16	104	28,10%
		17	146	39,50%
		18	9	2,40%
3	Education level	JHS	96	25,90%
		SHS	274	74,10%

Based on the data and graphs above, it can be seen that students who strongly disagree that exercise is an easy and cheap way to maintain health are 5 respondents or 0.9%, those who agree are 180 respondents or 48.6%, while those who choose between agree and disagree are 8 respondents or 2.8%, those who choose to disagree are 1 respondent or 0.1% and those who strongly agree that exercise is an easy and cheap way to maintain health are 176 respondents or 47.6% of junior high and high school students throughout Malaysia.

The results of the study were seen from the level of physical literacy of junior high and senior high school students throughout Malaysia, the highest doing sports/physical activities every week was once with 143 respondents or 38.6%. The highest percentage of students' time spent on each exercise was 30 minutes with 48.1% or 178 respondents. The highest percentage of students who intensely exercise every week was 57.3% or 212 respondents with moderate intensity.

The highest percentage of how much students enjoy sports/physical activities is So-so with 168 respondents or 45.4%. The highest percentage of students who like to read books/newspapers/magazines about sports is 66.5% or 246 respondents who Sometimes read books/newspapers/magazines related to sports. The highest percentage of students who like to watch sports matches or championships is Sometimes students watch sports matches or championships there are 159 students or 43%. And the highest percentage of students who consider sports to be an easy or cheap way to maintain health is Agree with 180 respondents or 47.6% of junior high and high school students who consider doing sports to be an easy and cheap way to maintain health.

4. DISCUSSION

According to (Vincent & Vincent, 2013) Not all types of physical activity require or burn the same number of calories. There are some light physical activities that burn a few additional calories, such as walking. The heavier the physical activity such as swimming or running on an uphill road, the more the calorie requirement increases. Physical activity can be classified according to its intensity. There are 3 classifications of physical activity intensity according to metabolic equivalents (METs). METs are the relative ratio of a person's energy use to the person's body mass. For example, someone who is sitting still is calculated to have spent 1 METs. The classification of physical activity according to intensity is as follows: 1. Light Intensity is physical activity with less than 3 METs. Examples include walking, washing dishes, ironing, cooking, fishing, playing musical instruments. 2. Moderate Intensity is physical activity between 3 - 5.9 METs. Examples include brisk walking, washing cars, sweeping and mopping floors, carpentry activities, or several types of sports such as: playing badminton, basketball, table tennis. 3. Heavy Intensity is physical activity above 6 METs. Examples include brisk walking on an uphill road, running, hoeing, lifting heavy weights, cycling, playing soccer, swimming, playing tennis and volleyball (Rima Novia Putri 2019). (Amtarina 2017) argues that there are several factors that influence physical activity:

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1. Macro environment, namely socio-economic factors, will affect physical activity. In groups of people with relatively low socio-economic backgrounds, they have relatively little free time when compared to people with relatively better socio-economic backgrounds.
2. The microenvironment that influences physical activity is the influence of community support. Nowadays, there has been a change in community support for physical activity, the community has shifted to showing less support for people who still walk when going to the market, to the office, or to school. The community's habit of filling their free time by playing outside the house has begun to be abandoned, replaced by the habit of watching television, playing PlayStation and computer games, and playing gadgets/internet.
3. Individual factors such as knowledge and perception of healthy living, motivation, liking to exercise, expectations about the benefits of doing physical activity will influence someone to do physical activity. People who have good knowledge and perception of healthy living will do physical activity well, because they believe in the impact of physical activity on health. Moreover, people who have motivation and hope to achieve optimal health will continue to do physical activity according to health recommendations.
4. Other factors that also influence whether someone routinely does physical activity or not are age, genetics, gender and temperature and geographical conditions.

The benefits of physical activity and exercise done regularly are known to reduce the risk of degenerative diseases such as heart disease, hypertension, diabetes, stroke, osteoporosis, metabolic syndrome, obesity and various types of cancer. Walking is a physical activity that uses the aerobic/aerobic system (Ferrari, 2007).

The aerobic system is the oxidation of food in the mitochondria to provide energy. Physical activity will cause the following: 1. Increased muscle strength 2. Muscle hypertrophy 3. Changes in muscle fibers (Istyanto and Rahmi 2023).

In the educational context, these results can be used as a basis for developing more effective and focused physical education programs. Physical Education, Sports, and Health (PJOK) teachers have a very important role in motivating and guiding students to be more involved in physical activity regularly. Innovative and inclusive teaching strategies can be implemented to ensure that all students, regardless of their physical abilities, can actively participate and enjoy the benefits of sports (Rikard & Banville, 2006).

This study also emphasizes the importance of support from the school and family environment in improving students' physical literacy. A supportive school environment with adequate sports facilities and various extracurricular activities can encourage students to be more physically active. Likewise, support from parents and family in promoting an active lifestyle at home is also a key factor in improving physical literacy (Story et al., 2009).

Moving forward, further research could focus on developing interventions designed to increase the frequency and duration of physical activity among junior and senior high school students. This could include training programs for teachers, provision of better facilities, and awareness campaigns among students and parents regarding the importance of physical literacy. Thus, it is hoped that increasing physical literacy among students will contribute to improving the long-term health and well-being of the younger generation in Malaysia.

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Overall, although the level of participation in sports among junior and senior high school students in Malaysia shows quite good results, there is still room for improvement, especially in terms of the frequency and duration of physical activity. Improving physical literacy should be a primary focus in physical education, with strong support from schools, families, and communities to create a culture of healthy and sustainable physical activity.

According to (Taylor et al., 1978), not all types of physical activity demand the same level of energy expenditure or burn the same number of calories. Some activities, such as walking, are classified as light physical activities and only burn a modest number of additional calories. However, as the intensity of the physical activity increases—such as when swimming or running on an uphill road—the calorie requirement rises significantly. Physical activities can be categorized based on their intensity levels, which are often measured using Metabolic Equivalents (METs). METs represent the relative energy expenditure of a person relative to their body mass, where one MET is equivalent to the energy cost of sitting quietly.

This study also highlights the importance of support from both the school and family environments in enhancing students' physical literacy. A supportive school environment equipped with adequate sports facilities and a variety of extracurricular activities can significantly encourage students to be more physically active. Similarly, parental and familial support in promoting an active lifestyle at home is crucial in fostering positive attitudes towards physical activity.

Looking ahead, further research could focus on developing interventions designed to increase the frequency and duration of physical activity among junior and senior high school students. Such interventions might include teacher training programs, the provision of improved facilities, and awareness campaigns aimed at students and parents to emphasize the importance of physical literacy. Enhancing physical literacy among students is expected to contribute significantly to the long-term health and well-being of the younger generation in Malaysia.

Overall, while the level of participation in sports among junior and senior high school students in Malaysia is relatively good, there is still considerable room for improvement, particularly in terms of increasing the frequency and duration of physical activity. Elevating physical literacy should be a primary focus within physical education programs, with strong support from schools, families, and communities. By doing so, we can cultivate a culture of healthy and sustainable physical activity that will benefit not only the current generation but also future generations to come.

5. CONCLUSION

From the results of the study, it was concluded that the level of physical activity among junior high and senior high school students in Malaysia is currently still often done every week. This can be a reference for PJOK teachers to motivate students to continue doing sports/physical activities every week. because by doing physical activities, students can maintain their own health and use their free time to do sports activities. These findings indicate that although students in Malaysia are still quite physically active, there is a need to increase the frequency and duration of their sports activities. Physical Education, Sports, and Health (PJOK) teachers have an important role in motivating and encouraging students to engage in physical activities that are beneficial to their health. With increased motivation and awareness of the importance of sports, it is hoped that students can be more consistent in

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doing physical activities, which will ultimately contribute positively to their overall health and well-being.

In conclusion, although the physical literacy level of junior and senior high school students in Malaysia is already at a fairly good level, there is still room for improvement in terms of increasing the frequency and duration of physical activity. Further efforts from educators and schools are needed to develop more regular and sustainable exercise habits among students.

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