Physical Activity Journal (PAJU)
Volume 5, Number 2, April 2024
e-ISSN : 2686-5807 | p-ISSN : 2686-5793

Correlation of Sedentary Lifestyle and Interest in Physical Education Learning among Adolescents

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: https://doi.org/10.20884/1.paju.2024.5.2.10998

Abstract

This study determined the correlation between sedentary activities and interest in Physical Education learning in adolescents. Correlational analysis was utilized in this study, with a sample of 33 students obtained using an accidental sampling technique. The research instrument used an ASAQ questionnaire to acquire sedentary activity data and a learning interest questionnaire that had been tested for validity and reliability values of 0.801> 0.60. The results revealed that the sedentary activity of watching videos/DVDs was the highest, with an average duration of 95.09 minutes/day, and the sedentary activity of reading for pleasure was the lowest, with an average duration of 19.91 minutes/day. Meanwhile, the average interest in Physical Education learning is medium. The product-moment correlation test showed that the Pearson correlation value is -0.350, so it can be concluded that sedentary activities and interest in Physical Education learning have a significant negative correlation. The result stated that the highest sedentary activities had the lowest learning interest.

Keywords: Sedentary Lifestyle, Interest in Learning, Physical Education

INTRODUCTION

According to the results of researchers at Cambridge University, as quoted on the Ministry of Health website (2018), the death rate caused by lack of physical activity is quite high. Lack of exercise is the cause of death of at least 676 thousand people every year in the world. Mann et al. (2017) stated that habitual sedentary activities become death in adults and can affect cardiometabolic health. *A sedentary lifestyle* is carried out by a person whose activities tend not to be physical or only require a little energy. Puspasari et al. (2017) state that a *sedentary life* is a behavior in which a person tends to accomplish little physical activity. Sedentary activities are a habit of the person whose most activities

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spend minimal energy, such as watching television, working in front of a laptop/cellphone, or driving a car (Owen et al., 2010).

The development of technological complexity influences the way of working and learning. Internet networks and sophisticated devices supported by the development of artificial intelligence are increasingly reducing human physical activity. Various activities can be reduced to activities that require minimal activity and rely on technological assistance to complete human work. Technological advances in electronic devices, such as *smartphones*, *PlayStations*, televisions, and computers, cause children to be too lazy for physical activity (Arundhana et al., 2013). The decrease in physical activity is mostly caused by technological advances such as information technology, transportation, communication, and daily equipment (Trisnawati & Indahwati, 2021).

Mann et al. (2017) believe that sedentary activity increases at the age of children to adolescents, and this habit will stay until adulthood. It can carry over wherever they are, even at school, and may affect their interest in attending Physical Education learning. Imawati and Maulana (2021) stated that Physical Education is a subject operated as an instrument for students to develop abilities possessed through physical activity. In Physical Education, students are not merely accomplishing physical activity learning; they will be taught about character building, such as cooperation, honesty, discipline, mutual respect, and other sufficient character (Hartono et al., 2013). Physical Education is a complex learning process, so in its implementation, teachers must provide a stimulus to create enthusiasm and interest in

the students.

According to Djaali (2007), interest is a sense of attachment and enjoyment of an activity without coercion. The interest in learning Physical Education is a person's curiosity to participate in Physical Education learning without any pressure. This statement aligns with the opinion of Astuti and Hartoto (2016) that the interest in learning physical Education is an internal condition of the individual that leads to the willingness to follow all stages of Physical Education learning with a happy feeling. Sedentary activity frequently increases in adolescence (Notoadmojo, 2011). For this reason, this research focuses on determining the correlation between *a sedentary lifestyle* and students' interest in participating in Physical Education learning at school.

https://doi.org/10.20884/1.paju.2024.5.2.10998
e-ISSN : 2686-5807 | p-ISSN : 2686-5793

METHOD

The research conducted utilized correlational research that applied a non-experimental design. Correlational research is intended to examine the correlation between variables without giving a treatment to these variables (Maksum, 2018). The population is all students of all levels and classrooms at SMP Muhammadiyah 10 Sidoarjo, totaling 174 students. The sample is 33 students, consisting of 19 boys and 14 girls. The samples were taken by applying an accidental sampling technique.

To obtain sedentary activity data, researchers used a research instrument operated by an *Adolescent Sedentary Activity Questionnaire* (ASAQ) questionnaire developed by Hardy et al. (2007) with a reliability level of 0.57-0.76 and suitable validity. Sedentary activities are divided into 3 categories based on the time carried out in a day, specifically: Low Category if the respondent's physical activity is ≤ 2 hours/day, Medium Category if the respondent's physical activity is 3-4 hours/day, and High Category if the respondent's physical activity is ≥ 5 hours/day (Young et al., 2014). Meanwhile, researchers adopted a questionnaire from Wahyudi and Yulianti (2021) consisting of 24 questions to obtain data on learning interests. Researchers conducted a repeat trial of 30 students to find identical characteristics by testing the validity and reliability of the instruments. Of the 24 statement items, there are 6 invalid questions. The reliability test results show *an α value* of 0.801 > 0.60, so the instrument is reliable (Ghozali, 2011).

Data obtained from ASAQ questionnaires and learning interests is processed using the *product-moment* correlation test with the IBM SPSS *statistics version* 23 application. This instrument is used to obtain the correlation's direction and level of strength between the two variables.

RESULT

The result of ASAQ questionnaire analysis and learning interests is presented in Table 1.

Table 1. Data Description

Variable	*N*	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Sedentary Activities	33	230	665	469.36	102.86
Learning Interest	33	35	70	53.76	7.33

https://doi.org/10.20884/1.paju.2024.5.2.10998
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The data collected from 33 students displayed that the average student carried out sedentary activities for 469.36 minutes/day. In comparison, students' minimum and maximum scores in sedentary activities are 230 minutes/day and 469.36 minutes/day. The variable of learning interest shows that the average score obtained by students is 53.76.

The aspects of student sedentary activities consist of watching TV, Watching Videos/DVDs, Using a computer to play games, Using a computer to do homework, Doing homework without using a computer, Reading for pleasure, Doing lessons/tutoring, Driving, Creating a Craft, Relaxing, and Play/practice musical instruments. The result of examining the sedentary activity aspects of SMP Muhamadiyah 10 Sidoarjo students is presented in Table 2.

Table 2. Student Sedentary Activities

No	Sedentary Activity	Mean
1	Watching TV	18.79
2	Watching Videos/DVDs	95.09
3	Using a computer to play games	33.76
4	Using a computer to do homework	57.85
5	Do homework without using a computer	48.91
6	Reading for pleasure	19.91
7	Doing lessons/tutoring	49.64
8	Driving	34.21
9	Creating a Craft	20.70
10	Relaxing	70.21
11	Play/practice musical instruments	20.30

Table 2 shows the duration of SMP Muhammadiyah 10 Sidoarjo students carried out sedentary activities. Watching videos/DVDs is the highest sedentary activity, averaging 95.09 minutes/day. Furthermore, reading for pleasure was the lowest sedentary activity, with an average of 19.91 minutes/day duration. Table 3 presents the percentage calculation of sedentary activities and Physical Education learning interests.

https://doi.org/10.20884/1.paju.2024.5.2.10998
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Table 3. Percentage of Sedentary Activities and Physical Activity Learning Interest Categories

No	Variable	Interval	Category	Sum	Percentage
1	Sedentary Activities	≤ 2 hours/day	Low	0	0%
		3-4 hours/day	Medium	3	9%
		≥ 5 hours/day	High	30	91%
2	Learning Interest	X < 36	Low	1	3%
		36 ≤ X < 54	Medium	14	42%
		54 ≤ X	High	18	55%
Total				**33**	**100%**

Sedentary activities are divided into 3 categories based on the duration performed. Based on Table 3, it is known that out of 33 students, none of the students belonged to the Low Category (0%), 9% of the Medium Category, and 91% of the High Category. The data shows that most SMP Muhammadiyah 10 Sidoarjo students are sedentary in the High Category. The results of the categorization of student interest in Physical Education learning mostly included the High Category (55%), 14 students (42%) in the Medium Category, and 1 student (3%) in the Low Category. Data on learning interest obtained a total average score of 53.76, meaning that the interest in Physical Education learning among SMP Muhammadiyah 10 Sidoarjo students is in the Medium Category.

Table 4. Normality Test

No	Variable	Significance Calculation Results (2-tailed)	Significance Value
1	Sedentary activity	0.200	0.05
2	Interest in learning	0.200	0.05

The results of the normality test calculation obtained significance (2-tailed) on the variables of sedentary activity and Physical Education learning interest of 0.200 > 0.05. The distribution of data from both variables can be normal.

Table 5. Linearity Test

Variable	Sig. Deviation from Linearity	Nilai Sig. Deviation from Linearity
Sedentary activities and learning interest	0.157	0.05

https://doi.org/10.20884/1.paju.2024.5.2.10998
e-ISSN : 2686-5807 | p-ISSN : 2686-5793

Table 5 shows the results of the linearity test, which show that the *deviation from the linearity significance value* is 0.157 > 0.05, so it can be interpreted as a linear correlation between the variables of sedentary activity and Physical Education learning interest.

Table 6. Product Moment Correlation *Test*

Variable	Pearson Correlation	Sig (2-tailed)	N
Sedentary activities and learning interest	0.350	0.046	33

Table 6 shows a sig (2-tailed) value of 0.046 < 0.5, indicating a correlation between sedentary activity variables and Physical Education learning interest.

DISCUSSION

Based on the research results, 91% of SMP Muhammadiyah 10 Sidoarjo students carry out sedentary activities in the high category or more than 5 hours/day. These results follow the research result of Ekelund et al. (2012), which summarizes from 14 pieces of literature that sedentary behavior occurs between children and adolescents, with an average duration of 5.9 hours/day. It certainly must be the attention of Physical Education teachers to educate students regarding the adverse effects of sedentary activities. The results of the study by Park et al. (2020), it is suggested that sedentary behavior has various adverse effects on health, including an increased risk of cardiovascular disease, the risk of metabolic diseases such as diabetes, hypertension, dyslipidemia, and musculoskeletal diseases such as osteoporosis, knee pain to *cancer*. The analysis results reveal that the highest duration of sedentary activity is watching videos / DVDs, with an average of 95.09 minutes/day. This data is lower than the study results of Sari and Nurhayati (2019), which showed video/DVD-watching activities with an average duration of 132 minutes/day.

The role of Physical Education is required to address the problem of high sedentary activity in adolescents. Physical Education greatly fosters students' interest in learning about the significance of maintaining health through physical activity, especially when participating in physical learning. Interest in learning is a condition of a person's interest in study activity. Interest in learning is crucial to participating in physical Education and achieving learning goals. Internal and external factors are determinants of a person's

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e-ISSN : 2686-5807 | p-ISSN : 2686-5793

interest in learning. Syakur & Nurhayati's (2023) research results show that internal factors of student involvement and external factors of teachers are the most influential on student learning interest.

Based on the research results between sedentary activity and interest in learning, it is understandable that there is a negative relationship between the two variables. If students' sedentary activities increase, their interest in learning will decrease, and vice versa. Both variables showed having low or weak relationship strength. Although most students carry out sedentary activities, their interest in learning is still in the High Category. Interest in individual students participating in Physical Education learning is the primary factor because if students have an interest in learning in a learning process that is followed, then students will experience interest in the lesson (Nurhasanah & Sobandi, 2016). Teachers' ability is decisive in increasing learning and interest in learning during the learning process (Sumyadi & Syukur, 2020). In the study, Safitri et al. (2022) showed that the increase in student interest in the Physical Education learning process was due to the contribution of the teacher's role.

CONCLUSION

Based on the study's results, it can be concluded that students carry out sedentary activities in the High Category or more than 3 hours/day and the average student is interested in learning the medium category in Physical Education learning. There is a correlation between sedentary activity and interest in Physical Education learning in SMP Muhammadiyah 10 Sidoarjo students. The highest of the sedentary activity, the Lower interest in Physical Education learning. Student learning interest in Physical Education learning needs to be increased by providing a variety of interesting physical activities and sports programs so that students can reduce various sedentary activities that are detrimental to students' cognitive, affective, physical, and motor development.

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e-ISSN : 2686-5807 | p-ISSN : 2686-5793