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Correlations Between Physical Fitness, Learning Motivation, Intellectual Quotient and Learning Habits Toward the Learning Outcomes of the Students of Sport Special Class in the High Schools Located in Special Region of Yogyakarta

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Abstract

This research aims to determine the corelation between; (1) physical fitness towards physical education learning outcomes; (2) learning motivation towards physical education learning outcomes; (3) intellectual quotient towards physical education learning outcomes; (4) learning habits towards Physical Education learning outcomes; (5) physical fitness, learning motivation, intellectual quotient, learning habits together towards the Physical Education learning outcomes. This research was a correlational study. The research sample was the students of a special class for sports in the high schools located in Yogyakarta, amounting to 233 students. The sampling technique was based on proportional random sampling. The data collection method used the test and measurement method. The data analysis technique used the correlation analysis. Based on the results of the analysis, it shows that 1) there is a significant correlation between physical fitness and Physical Education learning outcomes, with a sig value of 0.000 and a correlation of 0.738 > 0.128, 2) there is a significant correlation between learning motivation and Physical Education learning outcomes, with a sig value of 0.000 and a correlation of 0.746 > 0.128, 3) there is a significant correlation between intellectual quotient and Physical Education learning outcomes, with a sig value of 0.000 and a correlationof 0.440 > 0.128, 4) there is a significant correlation between learning habits and Physical Education learning outcomes, with a sig value of 0.000 and a correlation of 0.682 > 0.128, 5) there is a significant correlation between physical fitness, learning motivation, intellectual quotient, learning habits together towards Physical Education learning outcomes, with a calculated F value of 158.968> F table 2.37 and sig 0.000 <0.05.

Keywords: *Physical Fitness; Learning Motivation; Intellectual Quotient; Learning Habits; Learning Outcomes*

Introduction

Physical education is one of the subjects that performs as a conscious effort to create an environment that is able to influence the potential of students to develop in a positive direction through physical activities. Physical education has a comprehensive purpose that includes physical, cognitive, affective, emotional, social and moral aspects (Komarudin, 2016: 73). In physical education, students have the opportunity to understand their actual physical, mental, social, and movement skills as potential that can be fostered and developed to support their lives in the future. Physical education intends to develop the potential of students in cognitive, affective, and psychomotor aspects (Budi et.al., 2019: 60). Apart from being a subject, physical education in schools is expected to help improve the physical fitness of students. Physical fitness has an important role for students in participating in learning and carrying out daily activities. Irianto (2013: 475) states that physical fitness is the physical ability of a person in carrying out daily physical activities or exercises without experiencing significant fatigue and being able to complete activities efficiently.

It is important for students to have good physical fitness to help them in participating in learning with enthusiasm and high motivation in order to achieve maximum learning outcomes. In accordance with Sari's research (2020: 192) which states that students with a good degree of fitness have a correlation with good learning outcomes as well. In addition, good physical fitness will help students have motivation to learn when participating in learning process. Physical fitness is important for students, because if they are not fit, students will not have the motivation to study at school (Arabmokhtari, 2018: 192). Learning motivation is one of the factors that make student learning outcomes good.

Learning motivation can be seen from the character of the students' behavior relating to interest, sharpness of attention, concentration and persistence in achieving goals. Learning motivation is the overall driving force within students that causes learning activities, which ensure the continuity of learning activities and which provide direction to learning activities, so that the goals can be achieved (De Silva et al., 2018: 47). Learning motivation is very necessary in the learning process. Someone who has high motivation in learning will understand learning material faster than people who are low or less motivated. This is also shown from research which explains that students who have high motivation are more likely to do challenging activities, be actively involved, enjoy the process of learning activities and show increased learning outcomes, perseverance and creativity (Samir Abou El-Seoud et al., 2014). : 20).

The problems found in the observation of several students showed that students tended to have low motivation to take part in learning at school and one of which was Physical Education. This is known by interviewing the students. The students learning ability greatly determines their success in participating the Physical Education and most importantly is the students' learning motivation (Li et al., 2019: 51). It is important for students to have high learning motivation so that students can follow the lesson well and can understand the material presented by the teacher. Ideally, a student must have the motivation to learn so that students learn seriously and obtain optimal learning outcomes. This is in line with Putra's literature (2020: 65) which states that students who have high motivation to learn tend to get good learning outcomes rather than students who have low learning motivation. To achieve maximum learning outcomes, what is needed is not only physical fitness and learning motivation, but the intellectual intelligence of students also contributes greatly.

According to Azwar (2018: 65) intellectual intelligence is one of the internal factors that affect learning outcomes. The level of intelligence is used as a potential basis for students who will help students in the learning process. In the end, good physical education learning outcomes will be obtained. Having high intellectual intelligence will make it easier for students to achieve optimal learning outcomes. This is reinforced by the statement of Suyanto (2013: 647) in his research showing a positive correlation between intelligence and learning outcomes; students who have high intelligence show

excellent learning outcomes. The level of intellectual intelligence of students is not yet known and data collection related to the level of intellectual intelligence of students will be carried out in order to know the relationship with physical education learning outcomes.

Physical fitness, learning motivation, and intellectual intelligence must also be balanced with good study habits in order to achieve optimal learning outcomes. These four things must be possessed by students in order to get optimal learning outcomes. If students have good physical fitness, high motivation and high intellectual intelligence but they are not balanced with good study habits, they will face difficulties in getting optimal learning outcomes.

The current problem is that the students have low habit of studying. Based on the observations of the students, they stated that they rarely study because they prefer playing video games, hanging out with friends, and watching television rather than studying. This means that students do not have good study habits. In fact, to get good study results, good study habits are also needed. The literature from Ukpong and George (2013: 172) shows that students who have good study habits tend to have better learning outcomes than students who have poor study habits. If students want to get good physical education learning outcomes, apart from improving physical fitness, students must also have high motivation, have high intelligence and balance with good study habits as well. Learning outcomes according to Gagne & Briggs (Suprihatiningrum, 2013: 37) argue that the abilities possessed by students are the result of learning activities and can be observed through the appearance of students. In Physical Education, learning outcomes are divided into three aspects, namely psychomor, cognitive, and affective. This is in line with the opinion of Purwanto (2013: 48) which states that learning outcomes are divided into three aspects, namely psychomotor, cognitive, and affective aspects. In Physical Education, the assessment of learning outcomes focuses more on psychomotor, cognitive, then affective aspects (Nana Sudjana, 2012: 153). This means that the assessment of learning outcomes is more directed at the movement abilities of students.

Several teachers in specialist sports schools, especially in senior high schools in Yogyakarta, have taken learning outcomes that cover three aspects of physical education. The teachers often give score that are not optimal even though their skill value are good because they are not supported by good cognitive and affective values. The teacher also makes an assessment based on each lesson not only at the time of the exam. It was found that some students got scores that were less than optimal and were even helped to achieve the minimum completeness criteria. This is not without reason, the teacher explains that students who get less than optimal scores are due to the fact that at the time of learning, there are students who show poor affectiveness and the students' cognitive abilities are not too good.

Based on the results obtained during the observation and some of the literature above, it was found that the level of physical fitness, learning motivation, intellectual intelligence, and study habits are important issues to be studied in further. For this reason, it is necessary to conduct a study entitled " Correlations Between Physical Fitness, Learning Motivation, Intellectual Quotient And Learning Habits Toward The Learning Outcomes Of The Students Of Sport Special Class In The High Schools Located In Special Region Of Yogyakarta."

Research Methods

This research is a correlational study that aims to determine the relationship between two or more variables. In this study there are four independent variables, namely Physical Fitness, Learning Motivation, Intellectual Intelligence, and Study Habits; and the dependent variable is Physical Education Learning Outcomes. This study uses correlation analysis and according to Sugiyono (2018: 272) aims to explain the strength and direction of the relationship between variables. Correlation analysis generally aims to measure the strength of the linear relationship between two variables.

Subjects in this study were determined using proportional random sampling. Sugiyono (2018: 131) states that Proportional Random Sampling is a way of taking samples from members of the population by taking into account the population criteria. The subjects of this study were students of a specialist sports class who had better physical fitness than those in the non-sports class. The data collection technique used in this study was descriptive quantitative. The data is collected by carrying out tests; measuring and documentation. The instruments used in this researcg were an Indonesian physical fitness test for 16-19 years old students, a questionnaire on learning motivation and study habits and intellectual intelligence using the Intelligence Structure Test (IST). Meanwhile, the physical education learning outcomes instrument was taken using the even semester report for the 2020/2021 academic year.

The data analysis used was descriptive analysis obtained from the results of tests and measurements of students. Then, it was conducted a test, correlation, and multiple regressions.

Research Results and Discussion

Correlation Test

Correlation analysis is used to find the relationship between two variables, namely the independent variable and the dependent variable. The results of the correlation test can be seen in the table below:

Table 1. Correlation Test Results

Variable	Physical education learning outcomes	Sig Value of XY
Physical fitness	0,745	0,000
Learning Motivation	0,764	0,000
Intellectual intelligence	0,752	0,000
Study Habits	0,738	0,000

Table 2. Correlation Coefficient

Correlation Coefficient	
0,00-0,25	Very Weak
0,26-0,50	Enough
0,51-0,75	Strong
0,76-0,99	Very Strong
1,00	Perfect

Based on the results of the correlation test above, it was found that there was a relationship between Physical Fitness and Physical Education Learning Outcomes. The results of the analysis show that the R value was 0.745 with a sig value of 0.000 <0.05, so it can be stated that there was a strong and significant positive relationship between physical fitness and physical education learning outcomes.

The table also shows the relationship between Learning Motivation and Physical Education Learning Outcomes. The results of the analysis show that the R value was 0.764 with a sig value of 0.000 <0.05, so it can be stated that there was a very strong and significant positive relationship between learning motivation and physical education learning outcomes. From the relationship between Intellectual Intelligence and Physical Education Learning Outcomes, the results of the analysis show that the R value was 0.752 with a sig value of 0.000 <0.05. Therefore, it can be stated that there was a strong and

significant positive relationship between intellectual intelligence and physical education learning outcomes.

From the relationship between Study Habits and Physical Education Learning Outcomes, the results of the analysis show that the R value was 0.738 with a sig value of 0.000 <0.05. Consequently, it can be stated that there was a strong and significant positive relationship between study habits and physical education learning outcomes.

Multiple Regression Test

The next hypothesis test is to look for the relationship between physical fitness, learning motivation, intellectual intelligence, and study habits together with physical education learning outcomes. Hypothesis testing was carried out using F test analysis. The calculated F value was 228.753 and F table was 2.37 (with df1 = 4, df2 = 229). The results of the F test analysis are presented in the following table:

Table 3. Multiple Regression Test Results

Variable Relationship	F count	F table	R	Sig
X1.X2.X3.X4 with Y	228,753	2,37	0,895	0,000

The results of the F test analysis show the relationship between physical fitness, learning motivation, intellectual intelligence, and learning abilities together on physical education learning outcomes. Thus it can be concluded that there is a very strong and significant relationship between physical fitness, learning motivation, intellectual intelligence, and learning abilities together on physical education learning outcomes.

Effective Contribution and Relative Contribution

Effective Contribution is used to find out how much the contribution of each predictor in supporting the effectiveness of the regression line for predictor procurement purposes. Relative Contribution is used to find out how much each predictor contributes to the criterion value. The requirement to calculate the effective contribution and relative contribution is to have the results of correlation and regression analysis. The amount of the contribution of each independent variable to the dependent variable is as follows:

Table 4. Effective Contribution and Relative Contribution

Variable	Relative Contribution (SR) %	Effective Contribution (SE)%
X1	31,7	25,4
X2	22,1	17,7
X3	29,7	23,8
X4	16,5	13,2
Total	100	80,1

Based on the results of the above calculations, it can be seen that the Effective Contribution (SE) of the physical fitness variable (X1) to the learning outcomes of physical education (Y) was 25.4%, the Effective Contribution (SE) of the learning motivation variable (X2) to the learning outcomes of physical education (Y) was 17.7%, Effective Contribution (SE) of intellectual intelligence variable (X3) to learning outcomes of physical education (Y) was 23.8%, Effective Contribution (SE) variable was study habits (X4) to learning outcomes physical education (Y) of 13.2%. Thus, it can be concluded that the physical fitness variable (X1) has a more dominant contribution than the variables of learning motivation,

intellectual intelligence, and study habits. The total amount of effective contribution was equal to the result of R Square which was 80.1%. From the results of the effective contribution, it can be explained that 80.1% of students whose physical education learning outcomes are influenced by the variables of physical fitness, learning motivation, intellectual intelligence and study habits. Based on the results of the data above, it is concluded that the relative contribution of the physical fitness variable to the learning outcomes of physical education was 31.7%.

The relative contribution of learning motivation variables to physical education learning outcomes was 22.1%. The relative contribution of intellectual intelligence variables to physical education learning outcomes was 29.7%. The relative contribution of study habits to physical education learning outcomes was 16.5%. The total of the relative contribution was 100%.

Discussion

Based on the results of testing the hypothesis above, it was obtained that the independent variables had a positive and significant relationship to the dependent variable, either individually or together. The discussion of the results of hypothesis testing is as follows:

1. The Relationship between Physical Fitness and Physical Education Learning Outcomes

Good physical fitness will support a person's success in learning, both learning motion and theory. Students who have physical fitness in the good category must have a good lifestyle, do regular physical activity or exercise, maintain a healthy diet by eating healthy and nutritious foods, and have good energy sufficiency. Good physical fitness will support the students' mindset to be good and will help students obtain good physical education learning outcomes. This is in line with research from Castelli., et al (2015: 15) which states that students who have good physical fitness will find it easier to do the tasks assigned by the teacher and be useful in improving student learning outcomes. In order to improve optimal learning outcomes, it is necessary to have promotions that explain the importance of physical fitness in schools. Physical fitness must be integrated into physical education subjects in order to increase the knowledge of students. This opinion is supported by world research bodies where physical fitness has an influence on students' academic and cognitive outcomes (Kyan, Takakura, & Miyagi, 2018: 1901). This needs to be done by providing examples, knowledge and skills in physical education (Bertills, Granlund, Dahlström, & Augustine, 2018: 387). Many facts in the field provide examples of the impact of physical fitness on student learning outcomes. This gives the assumption that physical fitness is correlated in improving student learning outcomes (Wadsworth., et al, 2014: 34). Physical fitness facts in the field can be packaged in hysical education and physical education will have an impact on increasing student learning outcomes. (Sallis et al., 2012: 125).

2. The Relationship between Learning Motivation and Physical Education Learning Outcomes

Motivation in learning physical education is needed so that students can follow appropriate learning and learning objectives can be achieved, so student learning outcomes become optimal. Learning motivation in physical education learning can not only be generated by the students themselves, but is also the role of a teacher to foster students' learning motivation (Gallegos et al., 2014: 132).

Research conducted by (Sevil et al., 2017: 448) on Spanish secondary school students shows that motivation contributes to learning outcomes of physical education students was 35%. Students' learning motivation is shown as a relevant variable because motivation is related to students' learning goals, which in turn causes different mental situations in students, so that they have positive or negative attitudes towards learning.

The existence of good motivation in learning will show good learning outcomes. In other words, with a diligent effort and mainly based on motivation, someone who learns will be able to produce good learning outcomes. Motivation can function as a driver of effort and achievement of learning outcomes, the existence of good motivation in learning will show good learning outcomes as well (Trenshaw K. F et al., 2016: 1194).

Research conducted by Park, H. S. (2016: 147) shows that learning motivation has a positive relationship with learning outcomes. This means that the higher the learning motivation, the higher the physical education learning outcomes obtained by students. In the learning process, learning motivation is one of the most important dynamic aspects.

3. The Relationship between Intellectual Intelligence and Physical Education Learning Outcomes

Intellectual intelligence also has a role in physical education learning outcomes. The higher the level of intellectual intelligence of students, the chances of getting optimal learning outcomes are higher. On the other hand, the lower the level of intellectual intelligence, the students will find it difficult to get optimal learning outcomes. Many things have contributed to the optimal learning outcomes of students' physical education. In addition to good physical fitness and good motivation, the intellectual intelligence of students also plays a role. (Rowe et al., 2012: 144) states that the intellectual intelligence of students has a role in their learning outcomes. The higher the level of intellectual intelligence of students, the higher the learning outcomes. Learning outcomes cannot be separated from the role of one's cognitive abilities. Experts believe that someone who is smart and successful is someone who has high intellectual intelligence, so he is able to solve problems logically and academically. Gunasekaran, S. S et al (2016: 154) states that intellectual intelligence is a fundamental factor for predicting the learning achievement of students. Intellectual intelligence is the intelligence of thinking that can help humans in dealing with and adapting to the environment as well as solving problems logically by using abstract concepts in order to form an effective thinking structure (Gottfredson, 2016: 116). Intellectual intelligence has the potential to shape attitudes or actions in the form of speed, convenience and accuracy so that someone who has high quality of intellectual intelligence will be able to solve problems easily, quickly and accurately. The level of intellectual intelligence is a factor that determines the success or failure of students in school. Knowledge of the level of intellectual intelligence of students will assist teachers in determining whether students are able to follow the learning process and predict the success or failure of the students concerned after following the learning process. Intellectual intelligence will also determine the success of students in developing the potential that exists within each student (Sears, D. A et al., 2013: 1153).

The results of research from Al-Kalbani et al (2015: 575) show that intellectual intelligence affects the high and low learning outcomes of students. In line with the research of Ava Guez et al (2018: 40) showed significant results on the relationship between intellectual intelligence and physical education learning outcomes. The higher the intellectual intelligence of students, the higher the learning outcomes achieved will be. This is supported by research from Roth et al (2015: 118) which explains that students who have a high IQ have better learning outcomes than students who have a low IQ.

4. The Relationship between Study Habits and Physical Education Learning Outcomes

The success of students in learning is also determined by factors that come from within and outside the students themselves. Internal factors, besides learning motivation, which is a good indicator of student learning outcomes is the student's own study habits. A student is seen to have good study habits if he/she is able to choose good ways of learning so that a learning atmosphere that really supports him/her to learn is achieved (Goda, Y et al., 2013: 867). With a pleasant learning atmosphere, students will more easily understand what is being learned so that mastery of the subject matter will also increase.

Study habits are one of the keys to achieve good study results. The study habits of students will determine how they will learn (Göğüş, A et al., 2011: 586). If students have a good learning style, good habits will be formed as well and this can improve student learning outcomes. Good study habits which are conducive to students will make them easier to master the subject matter, so that students can get the best learning outcomes.

5. Relationship between Physical Fitness, Learning Motivation, Intellectual Intelligence and Study Habits with Physical Education Learning Outcomes

The results of multiple regression analysis with the F test obtained a calculated F value of 228.753 and an F table of 2.37 (with df1 = 4, df2 = 229), with a significance value of 0.000. While the correlation value was 0.895. It can be concluded that physical fitness (X1), learning motivation (X2), intellectual intelligence (X3), and study habits together had a positive and significant relationship to learning outcomes (Y). The amount of contribution given by each independent variable to the dependent variable was that the physical fitness variable had an effective contribution of 25.4%, the learning motivation variable had an effective contribution of 17.7%, the intellectual intelligence variable had an effective contribution of 23.8% and the learning habits of 13.2% while the remaining 19.9% was caused by other factors not examined in this study.

Conclusion

Based on the result of data analysis, it can be drawn the following conclusions:

1. Based on the results of the analysis, the sig value of physical fitness with physical education learning outcomes was 0.000 <0.05 so it can be stated that there was a significant relationship between the physical fitness variable and the physical education learning outcome variable. The correlation value between physical fitness and physical education learning outcomes was 0.745, which means that the relationship between the two variables was strong and had a positive relationship. Physical fitness provided an effective contribution of 25.4% to the learning outcomes of physical education.

2. Based on the analysis, the sig value of learning motivation with physical education learning outcomes was 0.000 <0.05 so it can be stated that there was a significant relationship between learning motivation variables and physical education learning outcomes variables. The correlation value between learning motivation and physical education learning outcomes was 0.764, which means that the relationship between the two variables was strong and had a positive relationship. Learning motivation provides an effective contribution of 17.7% to the learning outcomes of physical education.

3. Based on the analysis, the sig value of intellectual intelligence with physical education learning outcomes was 0.000 <0.05 so it can be stated that there was a significant relationship between intellectual intelligence variables and physical education learning outcomes variables. The correlation value between intellectual intelligence and physical education learning outcomes was 0.752, which means that the relationship between the two variables was strong and had a positive relationship. Intellectual Intelligence provides an effective contribution of 23.8% to the learning outcomes of physical education.

4. Based on the analysis, it is obtained that the sig value of study habits with physical education learning outcomes was 0.000 <0.05 so it can be stated that there is a significant relationship between the study habits variable and the physical education learning outcomes variable. The correlation value between study habits and physical education learning outcomes was 0.738,

which means that the relationship between the two variables was strong and had a positive relationship. Study habits make an effective contribution of 13.2% to physical education learning outcomes

5. There was a positive and significant relationship between physical fitness, learning motivation, intellectual intelligence, study habits with physical education learning outcomes for students in specialist sports classes in senior high schools throughout the Special Region of Yogyakarta, this is indicated by the value of F count > F table (228.753 > 2.37) and sig value 0.000 < 0.05. While the correlation value was 0.895. This relationship could be interpreted as the better physical fitness, learning motivation, intellectual intelligence, study habits possessed by students, the higher the chances of students getting optimal physical education learning outcame.

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