

Physical Fitness Level and Physical Education Learning Outcomes of Students of Elementary School 1 Rappocini, Makassar City

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Authors' contribution:

A. Conception and design of the study; **B.** Acquisition of data; **C.** Analysis and interpretation of data; **D.** Manuscript preparation; **E.** Obtaining funding

Received: 2024-06-15

Accepted: 2024-06-21

Published: 2024-06-28

ABSTRACT

This study aims to determine the level of physical fitness and physical education learning outcomes of students. The method used in this study is the regression method supported by a quantitative approach, following the problems studied, namely regarding ongoing events or incidents. The quantitative approach is a research approach that is carried out by measuring variable indicators so that a general description and at the same time conclusions can be obtained regarding the problem being studied. In this study, there are two variables involved, namely the independent variable is the level of physical fitness (X1) and the dependent variable is physical education learning outcomes (Y). The population in this study were all male students of Elementary School 1 Rappocini, Makassar City, grades III, VI and V with a population of 120 students, the sample used in this study were 40 male students of Elementary School 1 Rappocini, Makassar City with a sampling technique of random sampling or random system. The data collected in this study included physical fitness level tests and student learning outcomes. Based on the results of the research and discussion that have been presented, the following conclusion can be drawn: Physical fitness in students of Elementary School 1 Rappocini, Makassar City is in the Moderate category. Physical fitness has a significant contribution to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City.

Keywords : Physical Fitness Level; Learning Outcomes; Physical Education

INTRODUCTION

Today's science has developed very rapidly, thus encouraging public awareness of the importance of health and people are more aware of the importance of sports for health (Rohmawati, 2015). In reality, there are four basic goals for humans to do sports activities (Avivudin et al., 2021). First, those who do sports activities for recreational purposes (Hikmat et al., 2020). Second, those who do sports activities for education (Taqwim et al., 2020). Third, those who do sports activities achieve a certain level of physical fitness (Hadiana et al., 2020). Fourth, those who do certain sports activities to achieve optimal performance (Kusuma & Winarno, 2018). Among the various goals and objectives of sports activities above, one of them is to achieve a level of physical fitness (Prakoso & Hartoto, 2015). This

means that sports activities are not only to achieve certain achievements but also aim to maintain a person's health or physical fitness (Oktavian & Aldya, 2020).

Physical fitness is a person's ability to do heavy daily work easily without feeling tired (Yogantoro & Ferianto, 2016) and still have remaining or reserve energy to enjoy leisure time (Armen, 2017) or for needs that can be used at any time (Pahliwandari, 2016). Thus, physical fitness is a manifestation of a person's functional loyalty (Prasetio et al., 2017) to do a certain job with good or satisfactory results without significant fatigue (Masakke & Prihatno, 2017). Physical education is an educational process that utilizes systematically planned physical activities aimed at developing and improving individuals organically, neuromuscularly, perceptually, cognitively, and emotionally within the framework of the national education system (Abduh et al., 2020). Physical education is a physical activity that is organized to be a medium for educational activities (Taufan et al., 2018). Education is an activity that is a process of developing spiritual abilities and attitudes that include mental, intellectual and even spiritual aspects (Lengkana & Sofa, 2017). Physical education treats children as a whole unit, a total being, rather than just considering them as someone who is separated from their physical and mental qualities (Bangun & Yunis, 2016). Physical education is a medium to encourage the development of motor skills, physical abilities, knowledge, reasoning, appreciation of values (mental-emotional-spiritual-social attitudes) (Padillah et al., 2020) and the habituation of a healthy lifestyle that leads to stimulating balanced growth and development (Qohhar & Pazriansyah, 2019). With Physical Education, elementary school children will acquire various expressions that are closely related to pleasant personal impressions (Haris, 2018) as well as various expressions that are creative, innovative, skilled, have physical fitness, healthy living habits (Prasetyo et al., 2019) and have knowledge and understanding of human movement (Nazirun et al., 2020).

Improving physical fitness in schools needs to be fostered to support the achievement of an optimal teaching and learning process because students who have good physical fitness will be able to carry out learning tasks well, and physical fitness or good physical condition for students will function to increase learning abilities and safety. Therefore, it is possible that having poor physical fitness will affect the physical appearance and mind of elementary school children who are not ready or unable to accept the workload in the form of learning activities, which are an obligation for students every day. In addition, elementary school children who have good physical fitness still have remaining energy that can be used to fill their free time. Based on the function of physical fitness for students, physical fitness will provide benefits for educational goals on campus (Nur et al., 2018), because the higher a person's level of physical fitness, the higher the passion for learning (Saleh & Malinta, 2020), so that with a great passion for learning, national education goals can be achieved considering the importance of physical fitness for students (Hidayatullah & Anwar, 2020), which of course cannot be separated from the factors that influence physical fitness, including food and nutrition, sleep and rest, exercise and sports, healthy living habits and environmental factors (Hudah et al., 2020).

Physical education has a very important role in intensifying the implementation of education as a lifelong human development process (Jayul & Irwanto, 2020). Physical education provides opportunities for students to be directly involved in various learning experiences through physical activities, playing, and exercising which are carried out systematically, directed, and planned (Bismar & Sahabuddin, 2019). The provision of learning experiences is directed to foster, as well as shape a healthy and active lifestyle throughout life (Saitya, 2022).

Elementary School 1 Rappocini, Makassar City is one of the schools that is in demand by students in the area. The surrounding environment as a place to live has a significant influence on maintaining and improving physical fitness. Elementary School 1 Rappocini, Makassar City is located in a rural area. The geographical location of the village is a winding road, in a coastal area and there are still many plantations and rice fields. The school has many students who come to study every day. The economic level of the children also varies, because the parents' jobs are farmers, traders, and employees.

METHODS

The method used in this study is the regression method supported by a quantitative approach, following the problems studied, namely regarding ongoing events or incidents. The quantitative approach is a research approach that is carried out by measuring variable indicators so that a general description and at the same time conclusions can be obtained regarding the problem being studied. In this study, there are two variables involved, namely the independent variable is the level of physical fitness (X1) and the dependent variable is physical education learning outcomes (Y). The population in this study were all male students of Elementary School 1 Rappocini, Makassar City, grades III, VI and V with a population of 120 students, the sample used in this study were 40 male students of Elementary School 1 Rappocini, Makassar City with a sampling technique of random sampling or random system. The data collected in this study included physical fitness level tests and student learning outcomes.

Table 1.
Physical fitness assessment for children aged 6 – 9 years

Grade	30 Meter Run	Hang lift body	Lie down and sit down	Vertical jump	600-meter run	Grade
5	S.d – 5,5"	40" <	17 <	38 <	s.d – 2'39"	5
4	5,6" – 6,1"	22" – 39"	13 – 16	30 – 37	2'40" – 3'00"	4
3	6,2" – 6,9"	9" – 21"	7 – 12	22 – 29	3'01" – 3'45"	3
2	7,0" – 8,6"	3" – 8"	2 – 6	13 – 21	3'46" – 4'48"	2
1	8,7"- dst	0" – 2"	0 – 1	0 – 12	4'49" - dst	1

Table 2.
Physical fitness assessment norms

No	Total value	Classification of Physical Fitness
1.	22 – 25	Very Good (VG)
2.	18 – 21	Good (G)
3.	14 – 17	Average (A)
4.	10 – 13	Poor (P)
5.	05 – 09	Very Poor (VP)

To find out about the learning outcomes of Physical Education, Sports and Health, the researcher took the daily test scores of students in grades III, IV and V in the odd semester of the 2023/2024 Academic Year. The daily test scores were obtained for 1 semester from the accumulation of all physical education, sports and health subject materials that had been studied for one semester.

After all the research data has been collected, namely data on the level of physical fitness and physical education learning outcomes of students at Of Elementary School 1 Rappocini, Makassar City, to test the hypothesis proposed in this study, the collected data needs to be analyzed statistically, descriptively and inferentially to test the research hypothesis.

Percentage data management uses the formula:

$$NP = n/N \times 100\%$$

RESULTS AND DISCUSSION

Result

Descriptive analysis

Descriptive data analysis is intended to obtain a general description of the research data. A descriptive analysis was conducted on physical fitness towards physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City. Descriptive analysis includes; total value, average, standard deviation, range, maximum and minimum. From these statistical values, it is expected to provide a general description of the state of physical fitness and physical education learning outcomes. The results of the descriptive analysis of each research variable can be seen in Table 3.

Table 3.
 Results of descriptive analysis of each variable

	N	Sum	Mean	Stdv	Variance	Range	Min.	Max.
Physical fitness	40	616,00	15,4000	1,89195	3,579	9,00	12,00	21,00
Physical education learning outcomes	40	3400,00	85,0000	3,04665	9,282	13,00	79,00	92,00

The results of Table 3 above which are a description of physical fitness and physical education learning outcomes can be stated as follows: For physical fitness in students of Elementary School 1 Rappocini, Makassar City from 40 samples, a total value of 616.00 was obtained and an average of 15.4000 was obtained with a standard deviation of 1.89195 and a variance value of 3.579 from a data range of 9.00 between a minimum value of 12.00 and 21.00 for the maximum value. For the results of physical education learning in students of Elementary School 1 Rappocini, Makassar City from 40 samples, a total value of 3400.00 was obtained and an average of 85.0000 was obtained with a standard deviation of 3.04665 and a variance value of 9.282 from a data range of 13.00 between a minimum value of 79.00 and 92.00 for the maximum value.

Data normality testing

One of the assumptions that must be met so that parametric statistics can be used in research is that the data must follow a normal distribution. To determine the distribution of physical fitness and physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City, a data normality test was conducted using the Kolmogorov Smirnov Test (KS-Z). The results of the data normality analysis can be seen in the following Table 4 summary:

Table 4.
 Normality test results for each variable

Variable	K – SZ	P	α	Information
Physical fitness	0,126	0,113	0,05	Normal
Physical education learning outcomes	0,100	0,200	0,05	Normal

Based on table 4 above, shows that the results of the normality test of physical fitness and physical education learning outcomes using the Kolmogorov Smirnov Test show the following results: In the normality test of physical fitness in students of Elementary School

1 Rappocini, Makassar City, the Kolmogorov-Smirnov Test value was obtained 0.126 with a probability level (P) of 0.113 greater than the value of $\alpha 0.05$. Thus, the physical fitness of students of Elementary School 1 Rappocini, Makassar City that was obtained follows a normal distribution or is normally distributed. In the normality test of physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City, the Kolmogorov-Smirnov Test value was obtained 0.100 with a probability level (P) of 0.200 greater than the value of $\alpha 0.05$. Thus, the physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City that were obtained follow a normal distribution or are normally distributed.

Linearity Test

A hypothesis proposed in this study needs to be tested and proven through empirical data obtained in the field through tests and measurements of all variables studied, because the data of this study follows a normal distribution, so to test the hypothesis of this study parametric statistical analysis is used using linearity analysis. Linearity analysis aims to determine whether two variables have a significant linear or non-linear relationship significantly. One of the requirements for data to be said to be linear is if the P-value is greater than 0.05 ($Pvalue > 0.05$). The results of linearity between variables in this study can be seen in Table 5 below:

Table 5.
Linearity test results

	Definition From Linearity (F)	Sig.	Conclusion
Physical Fitness with Physical Education Learning Outcomes	0.758	0.626	Linear

Based on the linearity test data in Table 5 above: The F value (definition from linearity) between physical fitness (X1) and physical education learning outcomes (Y) is 0.758 at a significant $0.626 > \alpha 0.05$. So, physical fitness and physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City obtained have a relationship or linear.

Hypothesis testing

The hypothesis proposed in this study needs to be tested and proven through empirical data obtained in the field through tests and measurements of the variables studied, and then the data will be processed statistically. Because the research data follows a normal distribution, parameter statistical analysis is used to test the research hypothesis.

Physical fitness of students at Of Elementary School 1 Rappocini, Makassar City

Table 6.

Recapitulation of the percentage of physical fitness results for students of Elementary School 1 Rappocini, Makassar City

No.	Interval	Frequency	Percent	Classification
1	22 – 25	0	0,0%	Baik Sekali
2	18 – 21	6	15,0%	Baik
3	14 – 17	29	72,5%	Sedang
4	10 – 13	5	12,5%	Kurang
5	5 – 9	0	0,0%	Kurang Sekali
Total		40	100%	-

Based on Table 6 above, it appears that the percentage of the results of the physical fitness level data on students of Elementary School 1 Rappocini, Makassar City from 40 (100%) students, the very good category is 0 students or (0.0%), the good category is 6 students or (15.0%), the moderate category is 29 students or (72.5%), the less category is 5 students or (12.5%), and the very less category is 0 students or (0.0%). Thus, it can be concluded that the percentage of the final data results on the physical fitness level of students of Elementary School 1 Rappocini, Makassar City is in the moderate category.

Contribution of physical fitness to physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City.

Regression analysis was conducted to determine the contribution of independent variables to the dependent variable. The regression analysis used was a simple regression analysis at 95% or $\alpha 0.05$. The complete results of the regression analysis can be seen in the appendix. This is intended to determine the contribution of physical fitness to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City, obtained according to the summary of Table 7 below:

Table 7.

Results of regression analysis

Variable	N	R	R ²	F	t	P	α
Physical fitness (X) Physical education learning outcomes (Y)	40	0,832	0,692	85,366	9,239	0,000	0,05

Based on the test results as shown in Table 7, the regression equation is:

$$Y = a + bX$$

$$Y = 64,371 + 1,340 X$$

So the contents of the regression equation can be explained as follows:

1. The constant of 64.371 states that if physical fitness does not change, then the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City are 64.371.
2. The regression coefficient of the physical fitness variable of 1.340 states that every one per cent (1%) increase in the physical fitness variable will cause an increase in the learning outcomes of physical education by 1.340 students of Elementary School 1 Rappocini, Makassar City.

There is a contribution of physical fitness to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City. Based on the results of the regression analysis of physical fitness data on physical education learning outcomes in Table 7, a regression value of 0.832 was obtained with a significance level of $0.000 < \alpha 0.05$, for a determination coefficient of 0.692. This means that 69.2% of the contribution of physical fitness to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City.

Based on the results of the analysis, it can be seen that the t-value obtained is 9.239 which can be seen in the table above with a significant level of $0.000 < \alpha 0.05$. So H_0 is rejected and H_1 is accepted or the regression coefficient is significant, or physical fitness has a significant effect on physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City. Thus, there is a contribution of physical fitness to physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City of 69.2%. Testing of the regression model shows an F value of 85.366 with a significant

level of $0.000 < \alpha 0.05$. This means that physical education learning outcomes can be explained significantly by physical fitness in students of Elementary School 1 Rappocini, Makassar City.

Discussion

Physical Fitness of Students of Elementary School 1 Rappocini, Makassar City

The percentage of the results of the data on the level of physical fitness of students at Elementary School 1 Rappocini, Makassar City from 40 (100%) students, the category of very good is 0 students or (0.0%), the category of good is 6 students or (15.0%), the category of moderate is 29 students or (72.5%), the category of less is 5 students or (12.5%), and the category of very less is 0 students or (0.0%). Thus, it can be concluded that the percentage of the final data results on the level of physical fitness of students at Elementary School 1 Rappocini, Makassar City is in the moderate category.

Measurement of physical fitness level is done by using five test items, namely the 40-meter running test, hanging body lifting test/sit up, 30-second sitting test/sit up, vertical jump test/vertical jump and 600-meter run. Each result of the five test items is given a score according to the predetermined assessment classification, namely a score of 5 for very good classification, a score of 4 for good classification, a score of 3 for moderate classification, a score of 2 for less classification and a score of 1 for very less classification. Measurement of physical fitness level is done by calculating the total score of the five test items and consulting with the predetermined assessment norms. Based on the description above, the physical fitness of students of Elementary School 1 Rappocini, Makassar City needs to be improved. With these results, it will certainly affect the learning outcomes of physical education and health which also affect the ability of female students to perform sports techniques and daily activities.

From the data obtained, there were 6 students in the good category. These students have a level of physical fitness above average because these students always carry out daily work activities, namely helping their parents in doing work in the fields and also when they have finished helping their parents, these students immediately play with their friends.

While the medium category is 29 students, these students are almost the same as the activities carried out by their peers, namely always doing daily work activities, namely helping parents in doing work in the fields and also when they have finished helping their parents, the students immediately play with their friends. Even if they have free time, the students immediately do peer play activities.

Meanwhile, the less category is 5 students, because these students only do play activities and also the parents of the students always forbid their children from doing activities outside the home because of the Covid-19 pandemic. So these students only do activities in their rooms, mostly using cell phones or playing games.

The level of physical fitness is also a factor that influences students in carrying out daily activities, both in the form of learning activities, sports activities and other activities carried out by students. With a fit body, students become more motivated to carry out every activity carried out both at school and at home. Physical fitness is a body condition related to a person's ability and capability to carry out an activity using strength, creativity and endurance efficiently without causing significant fatigue. Based on the description above, the level of physical fitness in students of Elementary School 1 Rappocini, Makassar City must be carried out again to support the smooth running of Physical Education and Health learning at the elementary school. In addition, of course, increasing physical fitness will also

improve the quality of student learning, both in Physical Education and Health learning activities and in other learning activities.

Contribution of physical fitness to physical education learning outcomes in students of Elementary School 1 Rappocini, Makassar City

The results of statistical analysis show that there is a significant contribution of physical fitness to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City with a correlation value of 0.832 with a significant level of $0.000 < \alpha 0.05$. If the results of this study are associated with the theory and underlying framework, then basically the results of the study support and strengthen the theory and results of previous studies that already exist. This proves that physical fitness is very supportive in carrying out physical education learning outcomes. However, in students of Elementary School 1 Rappocini, Makassar City, physical fitness is categorized as normal to support physical education learning outcomes. Physical fitness is one of the factors that supports the achievement of physical education learning outcomes. So, the function of physical fitness on physical education learning outcomes is that if students have poor physical fitness, then the students will never do physical activities that can improve their physical fitness so the learning outcomes obtained will decrease also now, most students only do activities at home resulting in students rarely doing sports activities outside the home and also students now prefer to play gadgets than doing activities outside the home, and also students who have poor physical fitness mostly only do activities at home, rarely do activities outside the home so that it affects their physical education learning outcomes while students who have moderate physical fitness because the students do activities helping their parents work in the fields so that they usually have good physical education learning outcomes. With poor physical fitness, the physical education learning outcomes of these students will also decrease. Thus, physical fitness has a significant contribution to the physical education learning outcomes of students at Of Elementary School 1 Rappocini, Makassar City.

CONCLUSION

Based on the results of the research and discussion that have been presented, the following conclusion can be drawn: Physical fitness in students of Elementary School 1 Rappocini, Makassar City is in the Moderate category. Physical fitness has a significant contribution to the learning outcomes of physical education in students of Elementary School 1 Rappocini, Makassar City.

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