The Relationship Between Physical Activity and Physical Fitness of Elementary School Students Aged 10-12 Years

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ABSTRACT

All forms of physical activity or daily human movement activities always require physical support and fitness, so that there are problemsthat occur when physical abilities or fitness is not in good condition will be something to note because physique and fitness are the basic factors for any human activity. This study aims to determine the relationship between physical activity and physical fitness of students aged 10-12 years in Sekolah Dasar Negeri Bakalan Kecamatan Gondang Kabupaten Mojokerto. This type of research is a type of correlational research that aims to find the presence or absence of a relationship, the results of the study show that the value of physical fitness and physical activity obtained is in the moderate category, while for the correlation test obtained significant = 0.038 with a degree of significance p = 0.05. Based on the calculation results, it shows that there is a significant relationship between physical activity and students' physical fitness, with a proven significance value of 0.038 < 0.05. The conclusion ofthe h asil is that between physical activity and physical fitness affect each other or there can be a relationship.

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INTRODUCTION

An important element in human life is health, carrying out daily activities normally can maintain the condition of the body physically and spiritually so that it routinely requires health maintenance by doing physical activities. Doing regular physical activity can be useful for regulating weight conditions and can also strengthen the vascular system so that through it can be said that through health maintenance efforts by doing physical activity. Health Research and Development Agency (2013). The problem now is that activities are increasingly practical with the existence of Science and Technology (IPTEK)

which can facilitate activities that previously had to require energy are now carried out easily without spending energy. Physical activity is a movement of the body by requiring energy in doing it Physical activity is defined as any physical movement produced by the skelet muscle that requires energy expenditure.

Physical activity is defined as any form of body movement produced by the skeletal muscles and produces a meaningful expenditure of energy and is divided into light, medium, and heavy groups. Each activity that is carried out requires different energy depending on the intensity and work of the muscles. aphysical activity is very important for the child because it can improve fitness Growth is focused on a measure of maturation that focuses on the development of achieving size (Jürimäe, 2002). In children of primary school age should show that always doing physical activity with sports-related activities becomes one of the indicators of the level of physical activity until adulthood. (Tammelin, et al,. 2003). Fitness is a basic need in carrying out daily activities. Having an impact on people with a fit condition means being dynamically healthy by supporting physical activity The fitness that a person has will have a positive influence on a person's performance. Physical fitness is a state of a person that can be defined as a condition that people have or achieve that is related to the ability to perform physical activity.

Children who are active in doing physical and healthy movement activities are more likely to be active people compared to friends who are less skilled in doing motion activities (Stodden, et al,. 2009). The importance of Kebugaran for humans is very supportive of the results of activities that must be maintained, in maintaining conditions with good fitness is required to regulate the pattern of movement activities regularly so that it has a good and maximum impact on daily activities. According to WHO (2010) that the physical activity of children and adolescents is related to cardiorespiratory fitness. Physical activity is a repetitive sports activity that requires energy in every movement of the body with the aim of improving physical fitness (Khomarun, et al 2013). The risk when obesity occurs due to low and lack of physical activity and also the impact of other diseases such as heart diabetes (Ogilvie, et al, 2011).

A World Health Organization WHO provides a recommendation on the time to do physical activity for children 5 – 17 years old, which is 60 minutes with moderate intensity to strong. The impact of doing activities with 60 minutes provides good benefits for health and these activities can strengthen muscles and bones and are also beneficial for all age groups (Amtarina, 2017). According to Irdyandiwa & Maksum (2019) various physical activities can be done during work, sleep, and at leisure. Everyone needs physical activity and each individual has a different physical activity depending on gender, age and lifestyle. Physical activity is the physical movement produced by the skelet muscles that requires energy expenditure. varies in intensity, frequency, duration to improve health throughout the day.

Characteristics of Children Aged 10-12 Years Primary school age is a period of time that largely determines how in the possibility of achieving excellent growth and development in its future. The role of physical education as an educational tool to achieve goals of an all-round nature. It is called thorough, because what is to be achieved through the provision of motion experiences for the students, is not just physical development

(physical fitness and basic motion skills). The characteristics of children of primary school age are seen from physical development, namely the physical state of the child becomes more stable and stronger, the strength of the body and hands in boys increases rapidly, in general there is a fixed relationship in the development of bones and tissues, until the age of 12 years the child will increase in length by 1-6 cm each year, at the age of 10 years boys are somewhat larger than girls, After that, girls are superior in length, but after about 15 years boys chase them and will still be superior to girls. In childhood aged 10-12 years growth tends to be relatively slow. Although growth is slow, it has a fast learning time and this situation can also be considered as a consolidation of growth characterized by perfection and stability to existing skills and abilities compared to those that just learned.

MATERIALS AND METHODS

This type of research is a type of correlational research. According to Arikunto (2010), correlational research aims to find whether or not there is a relationship and if there is, how close the relationship is and whether or not the relationship means. The research location is at SDN Bakalan, Gondang district, Mojokerto regency. The total population of 100 students using the sampling technique used is purposive sampling with the main criteria for students still aged 10 – 12 years and including elementary school students. Data Collection Techniques Questionnaire or Questionnaire Questionnaire is a data collection technique carried out by giving a set of questions or written statements to respondents to be answered.

In measuring physical activity using the Physical Activity Questionnaire for Children (PAQ-C) questionnaire. The physical activity of primary school children was assessed using the Physical Activity Questionaire For Children (PAQ-C) tailored for primary school-aged children aged 6-14 years This questionnaire was created by (Kowalski, et al,. 2004). Physical fitness To be able to find out the level or degree of a person's physical fitness, it is necessary to have a tool to measure the level of physical fitness, researchers use a test in the form of the Indonesian Physical Freshness Test (TKJI). Physical fitness test from the physical fitness and recreation center in 2010 for children aged 10-12 years. using a series of TKJI tests consisting of five tests, namely: 40-meter run. Hanging test of bent elbows. Lay down for 30 seconds. Jump upright. 600-meter dash.

The data analysis technique in this study using descriptive data analysis used is the mean (average) and percentage, the mean is a number obtained by dividing the number of values by the number of individuals. To perform bivariate analysis using a simple correlation test with the aim of knowing the presence or absence of relationships and the degree of closeness of the relationships between each variable. To calculate the correlation coefficient by using the Pearson Product Moment correlation. It says there is a relationship if the p-value of $< \alpha$ (0.05). Then if there is a relationship, an interpretation of the correlation coefficient is carried out to provide an interpretation of the correlation coefficient. To be able to give an interpretation of the correlation coefficients found include large or small.

RESULTS AND DISCUSSION

Based on the purpose of the study, namely to determine the relationship between physical activity and physical fitness of students, the data from this study consisted of physical activity and physical fitness of elementary school students aged 10-12 years at SDN Bakalan, Gondang district, Mojokerto regency with a total of 100 students. Results of Descriptive Calculation of statistical physical activity research data of students aged 10 – 12 years in SDN Bakalan, Gondang sub-district, Mojokerto regency, obtained a score that obtained the lowest score (minimum) 1.40, the highest score (maximum) 4.90, the average (mean) 2.48, the standard deviation (SD) 0.67. The full results can be seen in the table as follows:

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Physical	100	1.40	4.90	2.4710	.67259
Valid N (listwise)	100				

When displayed in the form of frequency distribution, the physical activity of students aged 10-12 at SDN Bakalan, Gondang district, Mojokerto regency, is presented in the following table:

Table 2. Distribution of Physical Activity Frequency of students aged 10 – 12 years

No	Category	Frequency	Percentage
1	Very Good	0	0
2	Good	13	13 %
3	medium	49	49 %
4	Less	29	29 %
5	Less Than Once	9	9 %
	Sum	100	100 %

Based on the frequency distribution above, the physical activity of students aged 10-12 years in Bakalan State Elementary School , Gondang district, Mojokerto regency, can be presented in the following picture:
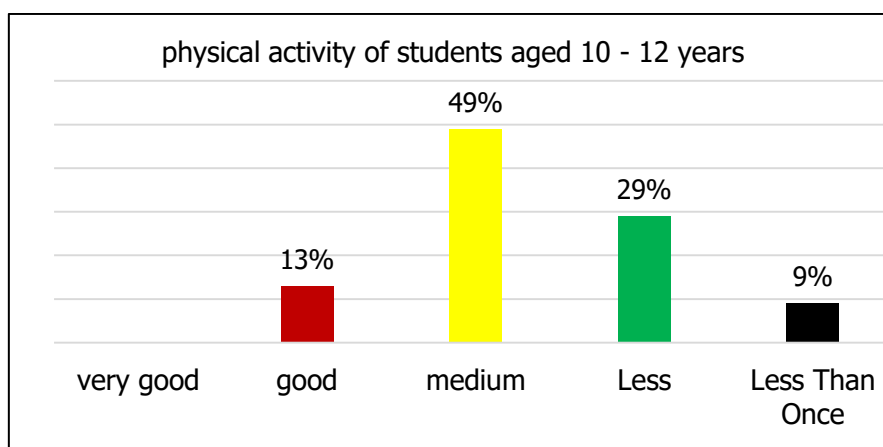

Figure 1. physical activity bar chart

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Based on the picture above, it shows that the physical activity of students aged 10-12 years in Bakalan State Elementary School , Gondang district, Mojokerto regency is in the categories of "very less" by (9%), "less" by (29 (%), "moderate" by (49%), "good" by (13%), and "good" by (13) and " good." once" by (0.00%). Based on the results obtained physical activity of students fall into the category "Moderate".

Descriptive statistical data from the study of physical fitness students in can be a minimum score of 7.00, a maximum score of 21.00, an average (mean) of 13.93, a standard deviation (SD) of 3.32. The full results can be seen in the table as follows:

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Fitness	100	7.00	21.00	13.9300	3.32500
Valid N (listwise)	100				

When displayed in the form of frequency distribution, the physical fitness of students aged 10 – 12 years can be presented as follows :

Table 4. Physical Fitness Frequency Distribution

No	Category	Frequency	Percentage
1	Very Good	0	0%
2	Good	16	16%
3	Medium	44	44%
4	Less	30	30%
5	Less Than Once	10	10%
	Sum	100	100%

Based on the frequency distribution on the aforementionedtabe l, the physical fitness of students aged 10 – 12 years can be presented in the following figure:
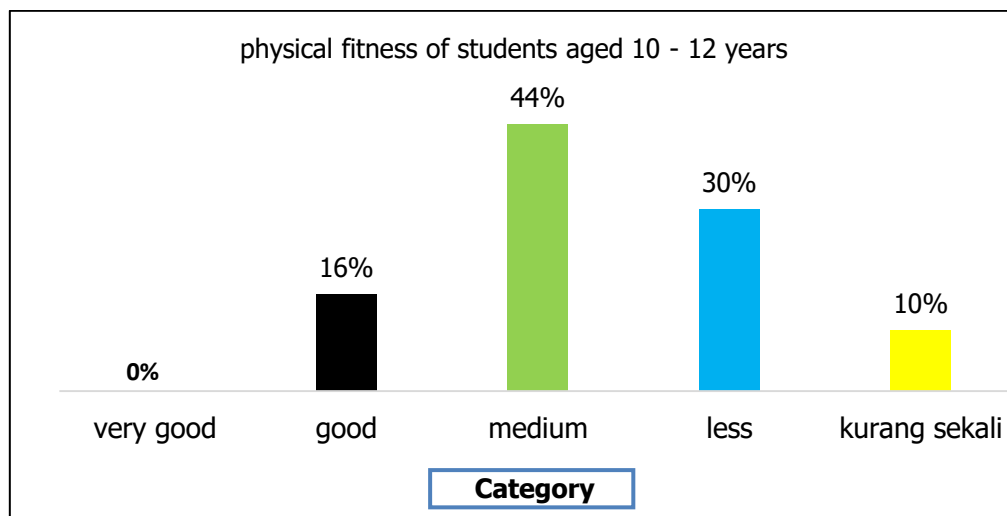

Figure 2. physical fitness bar chart

Based on the picture above, it shows that the physical fitness of students aged 10 – 12 years is in the category of "less once" by 1 0%, "less" by 30%, "moderate" by 44 %,"good" by 16%, and "Very Good" by 0%. Based on the results, it is known that the fitness of jasman i aged 10-12 years in the year at Neger i Bakalan Elementary School , Gondang district, Mojokerto regency is included in the "Medium" category .

Based on this data, it is to determine the relationship between Physical Activity and physical fitness using correlation analysis. In accordance with the análisis data on the relationship of physical activity with physical fitness in students aged 10-12 years at SDN Bakalan, Gondang district, Mojokerto regency, using a correlation test, it was found that there was a relationship between physical activity and physical fitness level by showing a significant value = 0.038 with a significance level p = 0.05. From these results, there is a very significant relationship, meaning that the more physical activity the more physical fitness levels of the students increase. More fully it will be presented in the form of a table.

Table 5. Correlations

		Physical	Fitness
Physical	Pearson Correlation	1	.208[*]
	Sig. (2-tailed)		.038
	N	100	100
Fitness	Pearson Correlation	.208[*]	1
	Sig. (2-tailed)	.038	
	N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

Discussion

Based on the calculation results, it shows that there is a significant relationship between physical activity and physical fitness of students, as evidenced by the significance value of 0.038 < 0.05. These results can be interpreted to mean that between physical activity and physical fitness affect each other. It can be seen from the results of average physical activity in the moderate category and physical fitness also in the moderate category. Physical fitness is a condition that can determine a person to perform a daily movement activity consistently without the appearance of a state of fatigue and can still do activities in their spare time. As for physical activity, it is physical movement or exercise that causes muscle contractions, which are carried out daily at school and at home after school and during school holidays.

Any kind of body movement produced by skeletal muscles always needs to expend energy. So it can be said that theethics of good student physical activity will tend to have an impact on students' physical fitness. Studentswho are less physically active tend to have less physical fitness . With the lack of physical activity carried out by students aged 10-12 years at Bakalan Elementary School, Gondang district, Mojokerto regency, it indicates that their physique is inactive , which will cause a low level of physical fitness of students. This research is relevant to the research conducted by Prasetyo & Winarno (2019) which states that the low physical activity of students is due to the lack of physical

activity that students do during recess, namely by sitting, walking a little, chatting and rarely anyone doing activities such as playing chases. Students tend to actively engage in physical activity only during sports hours. Based on this research, it can be said that when physical activity is carried out irregularly, it is likely that the body's condition is unstable and will have an impact on daily activities, Physical activity carried out by humans will be closely related to the quality of life, health, and well-being (Chen, et al, 2016). Physical activity is the movement of all limbs that will result in energy expenditure which has a positive impact on physical and mental maintenance , so that the quality of life survives to stay healthy and fit throughout the day.

CONCLUSION

Based on the results of the discussion, it can be concluded that the average physical activity and physical fitness are in the moderate category, and the correlation calculation shows that there is a relationship between physical activity and physical fitness as evidenced by the significance value of 0.038 < 0.05. These results can be interpreted to mean that between physical activity and physical fitness affect each other. Although there is a relationship with each other, to be able to maintain and improve physical fitness, you must be able to be consistent in carrying out daily physical activities by regulating intensity, duration and time so that it can have a positive impact on body condition.

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