

Contribution of Teacher Performance, Socio-Economic Status, and Physical Activity to the Body Mass Index of Student in Semarang Tengah

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Abstract

Pandemic, it affects the learning process, especially in physical education (PE) class. This study aims to find the contribution of PE teacher performance, family socioeconomic status and physical activity during the pandemic to the body mass index of elementary school students. Respondents consisted of 436 students and 16 teachers of civil servants, non-civil servants, and foundations spread across 12 public and private schools in the district of Central Semarang. The data were analyzed using multiple regression method with the help of SPSS 25 to find the value of the correlation coefficient and the coefficient of determination. With the results 1) Significant relationship between the performance of PE teachers and physical activity on the body mass index of students with a low contribution of 31%. 2) A significant relationship between the performance of PE teachers and socioeconomic status on the body mass index of students with a moderate contribution of 47% . 3) There is a significant relationship between physical activity and socioeconomic status on the body mass index of students with a moderate contribution of 42.2%. 4) There is a significant relationship between the performance of PE teachers, physical activity and socioeconomic status on the body mass index of students with a moderate contribution of 47.4%. The conclusion is that simultaneously the performance of PE teachers, children's physical activity during the pandemic and the socioeconomic status of the family have a significant relationship with a moderate contribution.

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INTRODUCTION

Competitive human resources as a result of good education, one of which comes from formal education. In the basic education curriculum various sub-disciplines are listed in order to achieve this goal. One of the sub-disciplines listed in the curriculum is physical education, sports and health. It should be understood together that the subjects of physical education, sports and health at the elementary school education unit level are an integral part of the overall education that aims to develop aspects of physical fitness, movement skills, critical thinking skills, social skills, reasoning, emotional stability, moral action, aspects of a healthy lifestyle and introduction of a clean environment through selected physical activities, sports and health that are planned systematically in order to achieve national education goals.

Through physical education is fostered as well as important aspects of education. According to Dauwer and Pangrazy, three important things can be a unique contribution from physical education, namely:

- 1) Improving students' physical fitness and health.
- 2) Increase the mastery of rich physical skills.
- 3) Improve students' understanding of the principles of motion and how to apply them in practice. (Dauwer and Pangrazy, 1992).

While learning is a manifestation of teacher performance, all learning activities carried out by teachers must be integrated, animate, and live up to the tasks that are relevant to the level of needs, interests, talents and abilities of students and the ability of teachers to organize learning materials by using a variety of technologies. adequate learning. The purpose of physical education itself is to provide opportunities for children to learn various activities that foster as well as develop children's potential, both in physical, mental, social, emotional and moral aspects, physical activity that is appropriate and in

accordance with the period is expected to have an impact on optimal physical growth and emotional development. (Burhaein, 2017). The performance of sports and health physical education teachers is proven to have a contribution to improving children's motor skills (Sahabuddin, Hakim, & Binsar, 2020).

In addition to improving children's motor skills, physical education also encourages students to move or have physical activity which is expected to be able to assist in the development of children as seen from the body mass index of students. The habit of passive (sedentary) behavior patterns to carry out physical activities, especially in children, makes the opportunity for increasing body mass index even greater, especially during the pandemic when activity restrictions are imposed. BMI and physical activity itself are two interrelated variables, there is a fairly strong relationship between physical activity and BMI. because the higher the intensity of physical activity, the better the BMI. On the other hand, the lower the physical activity, the worse the body mass index will be (Ariani & AF, 2017) However, the ideal body mass index is also influenced by how the family fulfills their basic needs for a balanced nutritional intake.

If we draw from the perspective of basic human food needs which require at least 2000 kcal a day, the poverty threshold will look irrelevant, it certainly indicates that the economy also plays a role in meeting basic daily needs. (Kemenkes RI, 2016). Seeing the current conditions that are being hit by a pandemic, of course, economic conditions also play a role in today's life, especially there is a significant relationship between socioeconomic status and children's physical activity during the COVID-19 pandemic, which of course will affect children's growth and development. (Wicaksono Abdul Rahman Syam; Indahwati, Nanik, 2021) The results of other studies show that the family's economic resilience during the Covid-19

pandemic has decreased, especially in terms of income and ability to meet family needs. (Shahreza & Lindiawatie, 2021).

METHOD

This type of research is non-experimental correlation research, where the researcher examines the facts that have occurred. This research was conducted to examine the events that have occurred and then trace back through the data regarding the possible causes for the things studied (Sugiyono, 2009). In this study, the researchers formulated the population of the study as primary school students in the Central Semarang sub-district, with a total of 16,312 students (Data Pokok Kementrian Pendidikan dan Kebudayaan, 2021/2022). The study took a sample of 16 PJOK teachers with the status of civil servant, non civil servant, and private teachers, students in grades 4-5 and their parents spread across 13 elementary schools.

Measurement of physical activity using a data collection instrument in the form of a questionnaire obtained from the adaptation of an article in the international journal The

Physical Activity Questionnaire for Older Children (PAQ-C) and Adolescents (PAQ-A) Manual with some modifications because it is adapted to the conditions and habits of doing activities physical in Indonesia. For the socio-economic status of the family using an instrument based on the 2018-2019 BPS SUSENAS questionnaire adapted to the conditions of the city of Semarang and the pandemic period which has been tested with valid and reliable results. Regarding the BMI of students, the measurement is carried out simultaneously with the taking of the National Child Immunization Month (BIAS) and teacher performance is assessed by the principal of each PE teacher using the teacher performance assessment instrument from the Semarang City Education Office.

RESULT AND DISCUSSION

This test is testing the normality of the data on the residuals of the regression model using the Kolmogorov-Smirnov, in this test seen from the p-value if it is greater than the a value (0.05), then the data is normally distributed. Here are the test results:

Tabel 1. Output Normality test Kolmogorov-Smirnov

	Kinerja Guru	Aktifitas Fisik	Sosial Ekonomi	IMT
N	16	16	16	16
Asymp. Sig. (2-tailed)	.137c	.200c.e	.138c	.200c.e
Monte Carlo Sig. (2-tailed)	Sig. .562d	.904d	.564d	.647d

The table above is the output of the normality test using the Kolmogorv-Smirnov method with the result of 0.200. From the results of the test shows the number 0.200 > 0.05, the research data is declared normal.

In this test, seen from the deviation from linearity value, if it is greater than a value (0.05), then the data is concluded to be normal. Here are the test results:

Tabel 2. Linearity test

Variabel	Body Mass Indes		
	Sig. Deviation From Linearity	Criteria	Data
Teacher Performance	0.483	Sig > 0.05	Normal
Physical Activity	0.895	Sig > 0.05	Normal

Socio-economic	0.567	Sig > 0.05	Normal
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In the analysis test, the researcher uses multiple regression method to find the correlation coefficient and the coefficient of

determination. The following are the results of the analysis test:

Tabel 3. Analysis Result

	R	R Square	Sig.
1. Teacher performance to BMI	.130	.017	.632
2. Physical activity to BMI	.521	.272	.038
3. Socio-economic to BMI	.649	.442	.006
4. Physical activity, teacher performance to BMI	.557	.310	.089
5. Physical activity, socio-economic to BMI	.686	.470	.016
6. Teacher performance, socio-economic to BMI	.649	.422	.028
7. Teacher performance, socio-economic, physical activity to BMI	.689	.474	0.46

From the results of the study above, it can be seen that the performance of PJOK teachers does not have a significant relationship with body mass index. This matter . In addition, physical activity is also an indicator of the implementation of a clean and healthy lifestyle (Rosidin, Sumarni, & Suhendar, 2019) which will have an impact on their health is reflected in the ideal body mass index. Individuals who are inactive or inactive in their leisure time have a much sharper decline in quality of life with age, compared to individuals who are active in their leisure time. (Feeny, David, et al, 2014).

A person who tends to consume foods rich in fat and does not do a balanced physical activity, will experience obesity (Nurcahyo, 2015) On the other hand, with an ideal body mass index, children can move better (Sunarni, Santi and Rachmawati, 2019). In addition, there is a significant relationship between the nutritional status of children affecting movement activities and child development. (Wicaksono Abdul Rahman Syam; Indahwati, Nanik, 2021) Therefore, physical activity is very important in order to keep the body in an ideal and healthy condition and avoid conditions such as being overweight or obese.

Obesity is caused by many factors/multifactorial, one of which is physical activity, there is a significant relationship between children's physical activity and the incidence of obesity (Octari, Liputo, & Edison, 2014). Another opinion says the cause of obesity itself has complex factors that cause obesity such as, but one of the factors is lack of physical activity. (Dewi, 2015). Unbalanced body composition can lead to decreased organ function or even organ damage that can cause various diseases (Fitri et al., 2016) of course this is not in accordance with the nature of physical education, namely an educational process that utilizes physical activity to produce holistic changes. in the qualities individuals, both in terms of physical, mental and emotional, can benefit from doing appropriate physical activity. (Anggita, Mega Guatiana & Rahman, Hari Amirullah. 2018). Apart from this, in this pandemic situation, inevitably the outcomes of physical education, sports and health have also decreased (Ariyadi, Jamal Imam. 2021) However, physical education learning can be carried out because in this situation we can see the potential and innovation to continue to be implemented during the Covid-19 period. Physical education learning steps can

be carried out by describing project lessons such as using applications, LMS, to videos. (Mendrofa, Faebudodo. 2021) With this, students will be more motivated to actively participate in learning, if students have the motivation it will encourage them which then creates a desire to participate or be involved in e-learning learning, especially during a pandemic like this. (Rifaldi, 2020) but the factor of parents at home also has an important role in the socioeconomic status of the family in this study has a significant relationship, this is in line with previous research where parents have an important role in the growth and development of children The need for attention from parents to help control children's food intake so that children who do not consume excessive food can affect nutritional status and encourage students to do sufficient physical activity to prevent obesity. (Ayu Afrilia & A, 2018) Moreover, the lifestyle during this pandemic allows a lot of physical activity to decrease passive behavior patterns, the greater the chance of increasing weight due to unbalanced energy intake and expenditure (June Norma Fitriah, 2007).

CONCLUSION

From the results of the analysis it can be concluded that; 1) There is no significant relationship between the performance of PJOK teachers on the body mass index of students with a very low contribution $r : 0.130$ sig : 0.632 kd : 17%. 2) There is a significant relationship between children's physical activity and students' body mass index with a low contribution of $r : 0,521$ sig : 0,38 kd : 27%. 3) Significant relationship between family socioeconomic status and body mass index of students with moderate contribution $r : 0.649$ sig : 0.006 kd : 44.2%. 4) There is a significant relationship between the performance of PJOK teachers and children's physical activity on the body mass index of

students with a low contribution of $r : 0,557$ sig : 0,089 kd : 31%. 5) There is a significant relationship between the performance of PJOK teachers and socioeconomic status on the body mass index of students with a moderate contribution of $r : 0.686$ sig : 0.016 kd : 47%. 6) There is a significant relationship between children's physical activity and family socioeconomic status on the body mass index of students with a moderate contribution of $r : 0.649$ sig : 0.028 kd : 42.2%. 7) Significant relationship between PJOK teacher performance, children's physical activity and family socioeconomic status on the body mass index of students with moderate contribution $r : 0.689$ sig : 0.046 kd : 47.4%.

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