Physical Fitness as a Predictor of Concentration Level of Students of Public Junior High Schools in Bantul

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ABSTRACT: This study aims to determine Physical Fitness as a Predictor of Concentration Level of State Junior High School Students in Bantul. This type of research is quantitative with a correlational approach. The sample in this study were students in Bantul State Junior High School totaling 146 students. The instrument used to measure physical fitness is the TKJI test for children aged 13-15 years, while concentration is measured using the Grid Concentration Test. Data analysis techniques using Pearson Correlation Product Moment analysis. The results showed that there was a significant relationship between physical fitness and the concentration level of students in Bantul State Junior High School. The contribution of physical fitness to the concentration level of students in Bantul State Junior High School is 32.20%, while the remaining 67.80% is influenced by other factors outside this study. Seeing the tendency of students who lack movement activities so that physical fitness, we hope that schools and educational institutions will encourage students to get more movement activities by utilizing extracurricular sports activities with maximum attention. For other researchers, research can be conducted with other independent variables, so that more variables that affect physical fitness can be identified.

KEYWORDS: physical fitness, concentration

INTRODUCTION

In this era of modernization, learning is no longer a routine that students like to do. This is because there are many things that make students lazy or bored in learning. Learners prefer to play cell phones, online games, or other activities that come from the surrounding environment. Students feel very comfortable playing these games without feeling bored for a long period of time. The use of smartphones also has a negative impact on the development of learners which is characterized by lazy learners in doing movement activities and interacting (Nayak, 2018).

Students who are active in sports or in other ways, students who have high physical fitness will produce longer concentration levels than students who have low physical fitness (Edwards et al., 2017); (García-Hermoso et al., 2020). The study conducted (Nuryadi et al., 2018) also states that physical fitness has a correlation to concentration with the results of the correlation test of r = 0.4338 and the coefficient of determination of 9.18%. Physical fitness has a considerable contribution to concentration ability, that children who are active in sports in other words children who have high physical fitness will produce a longer concentration level compared to children who have low fitness.

Weak physical fitness results in reduced productivity in carrying out daily activities (Duke & Montag, 2017). A person's physical fitness level will affect their physical and mental readiness to be able to accept the workload. This also applies to students, students with good physical fitness levels will be able to carry out their learning activities smoothly (Esentürk, 2021). A good level of physical fitness will make a student able to work effectively and efficiently, not susceptible to disease, learn more passionately and enthusiastically, and can optimally and be able to face challenges in life both in the school environment and society (Casey et al., 2017); (Whittle et al., 2018).

The most basic problem of learning is that it requires high concentration. Learners are required to stay concentrated until the lesson is over. Concentration is one of the main factors that can affect learning. The higher a person's concentration, the more effective the learning activities, but on the contrary, if the concentration is low, the results obtained are not optimal (Illeris, 2018). Concentration is the ability to focus attention on a task by not being distracted and affected by external and internal stimuli, while its implementation refers to a broad dimension and focus on specific tasks (Attia et al., 2017); (Gaillard, 2018); (Stevenson et al., 2018). So important is concentration for learners, so concentration can be a prerequisite for learners in learning to successfully achieve learning goals.

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Through good physical fitness, students will be able to receive and absorb every lesson given by the teacher, so that the purpose of education can be achieved. In addition, through good physical fitness, it is expected that each learner will also have confidence in learning activities. Learners will not get tired easily or easily fall ill due to decreased endurance and certainly not easily lose concentration. This is also stated in research (Nuryadi et al., 2018) that another impact of physical fitness causes significant changes in the endocrine system. The results of the study also stated that the higher the physical fitness, the lower the cortisol response in the sense of concentration and the ability to release anxiety is also higher.

Concentration is a person's ability to focus when doing an activity until it is completed at a certain time, so that the person is able to remember well all the work that is going on. Concentration is a person's ability to maintain focus on activities contained in a rapidly changing atmosphere in his mind about the past and future (Rahiem, 2021). Having good concentration must of course have a good level of fitness, because when physical fitness is good it is likely that the person will easily feel tired and will be susceptible to disease, thus having an impact on learning concentration and academic achievement that will be achieved. The level of physical fitness is needed to support daily activities, so that someone has a good level of fitness, then will not have significant fatigue. Therefore, all human activities demand physical fitness.

Based on observations of researchers at junior high school in Bantul Regency with details of 9 men and 6 women. Based on the results of the preliminary study, the researcher found that all students surveyed owned and used smartphones. The results of the study found that 9 students were excessive smartphone users with an average use of 3-8 hours / day, 5 students were moderate users with an average use of 2-3 hours / day and the rest were light users with an intensity of use of less than 1 hour per day. Learners prefer to play online games rather than other activities such as sports or extracurricular activities.

Based on the expression of a Roman poet Decimus Iunius Juvenalis, namely "Mens Sana In Corpore Sano", healthy students should be active in the learning process of movement and should foster the spirit of the soul and a clear mind, so as to support concentration in learning. Based on the explanation of the results of these observations, this study intends to find out more about "Physical Fitness as a Predictor of the Concentration Level of State Junior High School Students in Bantul Regency".

METHOD

This type of research is correlational research. Correlational research is research conducted to determine whether there is a relationship between two or more variables. The method used in this research is the survey method, while the techniques and data collection use questionnaires and learning outcomes. The survey method is an investigation held to obtain facts from existing symptoms and look for deficiencies factually. The sample in the study were students in Bantul State Junior High School totaling 146 students. The sampling technique used random sampling. The instrument or tool used to measure physical fitness is the TKJI test for children aged 13-15 years, while concentration is measured using the Grid Concentration Test. The data analysis technique used is a prerequisite test consisting of normality test, linearity test, multicollinearity test, while the hypothesis test uses partial and simultaneous tests. The analysis was conducted using SPSS 23.

RESULTS

The results of descriptive analysis aimed to determine the physical fitness and concentration of public junior high school students in Bantul. The complete results are in Table 1.

Table 1. Descriptive Statistics of Physical Fitness

Statistics	
N	146
Mean	13,23
Median	13,00
Mode	13,00
Std. Deviation	2,01
Minimum	10,00
Maximum	19,00

When displayed in the form of Norms of Assessment, the physical fitness of students in Bantul state junior high school is presented in Table 2.

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Table 2. Physical Fitness Assessment Norms

No	Interval	Category	Frequency	Percentage
1	22 - 25	Excelent	0	0,00%
2	18 - 21	Good	7	4,80%
3	14 - 17	Medium	53	36,30%
4	10 - 13	Less	86	58,90%
5	5 - 9	Very poor	0	0,00%
Total			146	100%

Based on table 2 above, it shows that the level of physical fitness of students at Bantul state junior high school is in the category of "very poor" by 0.00% (0 students), "less" by 58.90% (86 students), "moderate" by 36.30% (53 students), "good" by 4.80% (7 students), and "very good" by 0.00% (0 students).

Descriptive statistics of students' concentration data at Bantul state junior high school are shown in Table 3.

Table 3. Descriptive Statistics of Concentration

Statistics	
N	146
Mean	12,84
Median	12,50
Mode	12,00
Std. Deviation	2,97
Minimum	6,00
Maximum	22,00

When displayed in the form of Norms of Assessment, the concentration of students in Bantul state junior high schools is presented in Table 4.

Table 4. Concentration Assessment Norms

No	Interval	Category	Frequency	Percentage
1	21 ≤	Good	2	1,37%
2	11-20	Medium	117	80,14%
3	0-10	Less	27	18,49%
Total			146	100%

Based on table 4 above, it shows that the concentration level of students at Bantul state junior high school is in the "less" category of 18.49% (27 students), "enough" of 80.14% (117 students), and "good" of 1.37% (2 students).

The data normality test in this study used the Kolmogorov-Smirnov method. The results of the data normality test conducted on each group were analyzed with the SPSS version 20.0 for windows software program with a significance level of 5% or 0.05. The data summary is presented in Table 5.

Table 5. Normality Test Results

No	Variable	p	Sig	Description
1	Physical Fitness (X)	0,111	0,05	Normal
2	Concentration (Y)	0,116	0,05	Normal

Based on the statistical analysis of the normality test that has been carried out using the Kolmogorov-Smirnov test in Table 6, the physical fitness and concentration variables of students obtained normality test results with a significance value of p-value> 0.05, which means that the data is normally distributed.

Testing the linearity of the relationship is done through the F test. The relationship between the independent variable (X) and the dependent variable (Y) is declared linear if the sig value> 0.05. The results of the linearity test can be seen in Table 6:

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Table 6. Linearity Test Results

Functional Relationship	*p*	*Sig.*	Description
Physical Fitness (X)* Concentration (Y)	0,419	0,050	**Linier**

From Table 6 above, it can be seen that the p-value is 0.419 > 0.05. So, the relationship between the physical fitness variable and the concentration of students is declared linear.

The correlation coefficient significance test is carried out by consulting the r table. If r count is consulted with r table using an error rate of 5%. If the significance value of p < 0.05, then the hypothesis is accepted and the p-value> 0.05, then the hypothesis is rejected. If r count is greater than r table, then there is a positive and significant relationship between the variables tested. The results of the hypothesis test are presented as follows.

Table 7. Correlation Test Results

Functional Relationship	r $_{hitung}$	Significance	Description
Physical Fitness (X) Concentration (Y)	0,567	0,000	**Significan**

Based on the analysis results in table 7 above, it can be seen that the value of r count is 0.567 and the value of r table (df 146-1 = 145) is 0.162, while the p-value is 0.000 <0.05, then H0 is rejected, so Ha which reads "There is a significant relationship between physical fitness and the concentration level of students in Bantul State Junior High School", is accepted. The correlation is positive, meaning that if physical fitness is good, then the level of concentration will also be better. The coefficient of determination or R Square is 0.322 or 32.20%. This means that the contribution of physical fitness to the concentration level of students in Bantul State Junior High School is 32.20%, while the remaining 67.80% is influenced by other factors outside this study, such as intelligence factors, knowledge factors, and experience factors.

DISCUSSION

Based on the results of the study, it shows that there is a significant relationship between physical fitness and the level of concentration of students in Bantul State Junior High School. The contribution of physical fitness to the concentration level of students in Bantul State Junior High School is 32.20%, while the remaining 67.80% is influenced by other factors outside this study. The results of this study are supported by research conducted (Krissanthy et al., 2020) which shows that there is a significant relationship between the level of physical fitness and the concentration level of class X students of State Senior High School 9 Bekasi City. The coefficient of determination obtained was 33.4% and the rest of the calculation of 66.6% of the concentration level was determined by other factors. The study (Putra, 2019) concluded that there is a relationship between physical fitness and the concentration level of students at State Junior High School 1 Gondang, Mojokerto, with a significance value of 0.01. Furthermore, the study (Hermawan et al., 2022) showed that there was a relationship between physical fitness and concentration level. In the study (Nuryadi et al., 2018) also stated that physical fitness has a relationship to concentration with the results of the correlation test of r = 0.4338 and the coefficient of determination of 9.18%.

Based on descriptive analysis, it shows that most of the physical fitness levels of students in Bantul Regency State Junior High School are in the less category, which is 58.90% or 86 students. This lack of physical fitness is because students are excessive smartphone users with an average use of 3-8 hours / day, 5 students are moderate users with an average use of 2-3 hours / day and the rest are light users with an intensity of use of less than 1 hour per day. Learners prefer to play online games rather than other activities such as sports or extracurricular activities. High intensity in playing online games can make learners addicted, so that it has an impact on the laziness of learners to do activities. Students even very rarely do sports activities, especially during the Covid-19 pandemic.

Based on descriptive analysis, it shows that most of the concentration levels of students in Bantul Regency State Junior High School are in the sufficient category, which is 80.14% or 117 students. These results are in accordance with observations made by researchers, showing that of the 15 students 12 of them stated that it was difficult to concentrate and were often sleepy when participating in online learning. Students also often lose concentration if they are doing assignments.

Physical fitness has a positive correlation with academic achievement and learning outcomes. Physical fitness can improve concentration and focus at least in a short time so that it can contribute positively to the academic achievement of students at school (De Greeff et al., 2018); (Fidan & Tuncel, 2019); (Watson et al., 2017), so that physical fitness is closely related to physical condition or physical endurance, so with good physical fitness, it is hoped that students will be able to absorb more knowledge from each subject at school.

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Concentration is needed in daily activities. Concentration is a skill that is learned not to react or be distracted by irrelevant stimuli, where our minds must be directed to a point in a job. Concentration is how a person focuses on doing something, so that the work can be done within the specified time. A person's ability to concentrate is also different, according to his age (Huang et al., 2020). Concentration is one aspect that supports students to achieve good achievement and if this concentration is reduced, then following lessons in class and learning personally will be disrupted.

Learners with good concentration must have a good fitness level because when someone does not have a good level of physical fitness, it is likely that the person will easily feel tired and will be susceptible to disease, so that their health level will have an impact on learning concentration and academic achievement. The level of physical fitness is needed to support daily activities, so that someone has a good level of fitness, then will not have significant fatigue. Therefore, all human activities demand physical fitness (Chen et al., 2020).

Physical fitness can be improved through exercise. Sport is a physical training activity, namely physical activity to enrich and improve the ability and skills of basic movement and movement skills (sports). This activity is a form of approach to the aspect of physical well-being or physical health, which also means dynamic health, which is healthy accompanied by the ability to move to meet all the demands of daily life. This means that everyone who does physical education through sports activities and has an adequate level of physical fitness. The more exercise increases, the concentration will also increase. This is in accordance with the theory that says that someone who often exercises has a better metabolic function than someone who rarely exercises or does not exercise at all. Exercise can facilitate the circulation system, so that nutritional and energy needs for the brain are fulfilled and make the brain work optimally (Woods et al., 2020).

CONCLUSIONS

The conclusion of this study is that there is a significant relationship between physical fitness and the level of concentration of students in State Junior High School in Bantul. The contribution of physical fitness to the concentration level of students in Bantul State Junior High School is 32.20%, while the remaining 67.80% is influenced by other factors outside this study. Seeing the tendency of students who lack movement activities so that physical fitness, we hope that schools and educational institutions will encourage students to get more movement activities by utilizing extracurricular sports activities with maximum attention. For other researchers, research can be conducted with other independent variables, so that more variables that affect physical fitness can be identified.

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