EFFECT PHYSICAL FITNESS AND NUTRITIONAL STATUS ON STUDENT LEARNING OUTCOMES SCHOOL INTERMEDIATE FIRST

ASTUTI, Y.[1*] – ERIANTI, D.[1]

[1] *Faculty of Science Sports, Padang State University, West Sumatra, Indonesia.*

**Corresponding author*
e-mail: yuniastuti[at]fik.unp.ac.id

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Abstract. Problem in this study is the low learning outcomes PJOK SMP Negeri 34 Padang. This study aims to determine the effect of physical fitness, nutritional status, and self-confidence on learning outcomes of PJOK at SMP Negeri 34 Padang. This research method is a quantitative method using a Path Analysis approach. The population in this study was all students of class VII at SMP Negeri 34 Padang 218 people consisting of class VII. The sampling technique is carried out by non- probability sampling by using the method quota random sampling, with a sample of 30 people. The data was collected using a questionnaire to measure self-confidence and nutritional status using a body mass index, the TKJI test to get data on the physical fitness of students, seeing learning outcomes obtained in the even semester of the 2020/2021. The results show that: (1) Physical fitness has a direct effect on learning outcomes because the value of sig=0.026 is smaller than the probability value of 0.05, having an effect of 9.80%; (2) Confidence has a direct effect on learning outcomes, the value of sig.=0.015 is smaller than the significant value of 0.05, the effect is equal to 12.30%; (3) Nutritional status has a direct effect on learning outcomes because the value of sig = 0.007 is smaller than the probability value of 0.05, the effect is 16.73%; (4) Physical fitness has an indirect effect on learning outcomes through Nutritional Status with a contribution of 20.30%; (5) Confidence has an indirect effect on learning outcomes through Nutritional Status with a contribution of 13.50%; and (6) Physical fitness, self-confidence and nutritional status have a simultaneous effect on PJOK learning outcomes with a value of R square = 0.306 and from the Annova table it is obtained F=5.573 with probability (sig.)=0.003. As a conclusion, physical fitness, confidence, nutritional status, are considering having effect to the students either direct or indirectly, and this may become the major concern in determination on the students learning outcomes.
Keywords: *physical fitness, nutritional status, self-confident, learning outcome*

Introduction

Education is one of the efforts made in order to improve the quality and quantity of human resources. Through the educational process, it is expected to be able to create intelligent, strong, skilled and moral human beings and is expected to be able to be achieved by students actively so as to develop their potential to gain knowledge that suits their needs, based on Cognitive, Affective and Psychometric aspects. In the learning process that occurs in schools, which the researchers experienced themselves when teaching Physical Education in Junior High Schools (SMP), many students seemed easy to experience fatigue during the PJOK learning process and based on observations the researchers also conducted at SMP Negeri 34 Padang to students in class VII almost the same thing happened when the teacher explained about the activities to be carried out in the field , in learning in the classroom the researcher saw 4 students busy talking to each other not focusing on the ongoing discussion, 1 person playing cellphone, 2 people sitting idly by in class in the learning discussion method, so that there is a lack of interest in understanding the learning that will be carried out in the field. Not many students pay attention to the explanation given by the teacher in front of

the class, this may be due to the saturation of students who study in class from morning to evening, so that students experience boredom which is indicated by a lethargic face, sleepy, not concentrating, and so on or this could be an influence In addition to physical fitness, nutritional factors can also affect the condition of a student. Students who will do physical education lessons at school need to consume nutritious food before going to school. The best health for children is to eat foods that contain lots of nutrients such as carbohydrates, fats, proteins, vitamins, minerals, water and the most important thing to note is the balance of these nutrients, if they are not balanced it can cause malnutrition.

Nutrition is one of the most important factors in improving learning outcomes in children. Nutritional conditions are said to be good or normal if there is a balance between the needs of life for nutrients and the food they consume (Khan et al., 2012). The human body also really needs nutrients to obtain energy to carry out daily physical activities, restore body processes and for growth and development, especially for those who are still growing. Many factors affect nutritional status, including: behavioral factors (such as the way of thinking expressed in the form of choosing food), social environmental factors (such as in terms of population with its composition and characteristics), economic environmental factors (such as people's purchasing power), ecological environmental factors (such as soil conditions), factors of food availability (such as living facilities and infrastructure) (Fiori et al., 2020). Based on the description above, there are many factors that influence the nutritional status of a child in order to have good nutrition, one of which is poor food patterns, for example, such as frequent consumption of food such as ciki-ciki, buying food that is sold on the side of the road that is contaminated by dust or dirt, vehicle pollution (Sirait et al., 2021). Environmental factors where the child lives can affect the child's life, for example an unhealthy environment, lack of maintaining the cleanliness of the environment around the place of residence.

Materials and Methods

According to Sugiyono (2010), “Research variables are everything in the form of whatever the researcher determines to study so that information is obtained about it”; in this study includes data on four variables consisting of three exogenous (independent) variables and one endogenous variable (bound). Exogenous variables consist of physical fitness, self-confidence, and nutritional status. Endogenous variables consist of Learning Outcomes. Approach path analysis according to Saefurrohman and Istikharoh (2012), “path analysis model is used for analyze pattern connection Among variable with destination for knowing influence direct nor no direct set variable free (exogenous) against variable bound (endogenous)", which using this use approach is a quantitative perspective. According to Budiastra (2020), “approach study of quantitative based on philosophy positivism that emphasizes phenomena objective and reviewed by quantitative”, is referring to the method use of survey and technique are more on correlational analysis, variable tied-up are the learning outcomes and open-variables is the fitness physical (X1), self-believe (X2) and nutritional status (X3); while bounded-variable is results study are refer as Y. While retrieval technique sample in this study uses technique of non-probability sampling with Quota random sampling method. In non-probability sampling, the data collection is not taken by random, but the samples previously are already planned by the researcher to be applying in this study (Bulanda and Majumdar, 2009). Path analysis requires testing (path analysis) in the relationship

between variables in linear model, so that the requirements apply in path analysis by itself also meet the requirements of regression analysis. The tests carried out are normality tests for each data variable. In the first analysis requirements test, the normality test was carried out using the Shapiro-Wilk approach to determine whether the data collected were normally distributed or not. With the test criteria using the provisions: if the probability >0.05 then Ho is accepted and the data is normally distributed, and vice versa; if the probability<0.05 means Ho is rejected and the data is not normally distributed. With these criteria for linearity requirements, if Fcount Ftable means the regression equation is not linear and vice versa; if Fcount>Ftable means the regression equation is linear. As for the significant requirements of the regression coefficient, if Fcount>Ftable (0.05) it means that the regression equation is significant at 0.05 level and vice versa; if Fcount<Ftable means the regression equation is not significant at 0.05. The value of the correlation coefficient is a calculation number that states the level of strength of the relationship. The strength of the correlation has an acceptable level of significance if t-count>t-table.

Results and Discussion

Physical fitness

On variable fitness physical, obtained through test fitness physical with using TKJI test items conducted by participants selected students_becomes sample, that is as much 30 people. Based on data processing is carried out, it looks score the highest that can achieved by participants educate after to do TKJI test is 20 points and scores lowest achieved_participant educate the is 15 points. Overall average score achieved participant educate is 18 which includes to-in "Good" classification. Then, the result obtained deviation raw as big as 1.41. Next, the result indicates distribution of data on the measurement of physical fitness variable. Based on *Table 1*, the result shows frequency fitness physical from 30 participants. The report shows there are no students who are in the class interval 22.00-25.00 with classification "Excellent (BS)". In class interval 18.00-21.00, there are 34 people or 80.95 % participants students who are in the "Good (B)" classification. Then, the class interval 14.00-17.00 has 8 people or 19.05% participant students who are in the "Medium (S)" classification. Lastly, in the class interval 10.00-13.00 and 6.00-9.00, there are no students in the class interval.

Table 1. *Physical fitness result.*

No	Interval class	$_{absolute}$ F (N)	$_{relative}$ F (%)	Information
1	22.00-25.00	0	0.00	Very good (BS)
2	18.00-21.00	34	80.95	Good (B)
3	14.00-17.00	8	19.05	Medium (S)
4	10.00-13.00	0	0.00	Less (K)
5	6.00-9.00	0	0.00	Less once (KS)

Self-confident

In self-confidence variable, it was obtained through the distribution of research questionnaires which were filled-in directly by the students who were selected as samples as many as 30 people. Based on the analyzing data process that carried out, it can be seen that the highest score that can be achieved by students in answering the questionnaire related to their confidence is 159 points and the lowest score achieved by

these students is 125 points. The overall average score achieved by students is 144.36 which are included in the "Medium" classification. Then, the standard deviation obtained is 5.98. Here, the researchers present the distribution of data from the measurement of physical fitness variables. Based on the confidence frequency distribution *Table 2*, among 30 students were only 2 or 4.76% of students who were in the interval class >153 with the classification "Very Good". In the interval class of 147-152, about 13 students or 30.95% who are in "Good" classification. Then, in the interval class 141-146, there are 17 or 40.48% students who are in the "Medium" classification. Furthermore, in the interval class 135-140, there are as many as 8 people or 19.05% of students who are in the "Less" classification. Lastly, in the interval class <135, there are as many as 2 people or 4.76% of students with the "Less Once" classification.

***Table 2**. Self-confident result.*

No	Interval class	$_{absolute}$ F (N)	$_{relative}$ F (%)	Information
1	>153	2	4.76	Very good (BS)
2	147-152	13	30.95	Good (B)
3	141-146	17	40.48	Medium (S)
4	135-140	8	19.05	Less (K)
5	<135	2	4.76	Less once (KS)

Nutritional status

In Nutritional Status variable, it can be found through the distribution of questionnaire that is filled directly by participants who are being selected to become as sample, which is as much as 30 people. Based on data processing carried out, it shows the score of the highest can achieved by participants educate in answer provided sheet related questionnaire with Nutritional Status is 145 points and scores lowest achieved participant is 196 points. Overall, the average score achieved participant educate is 174.86 which includes "Medium" classification. Then, result obtained deviation raw as big as 9.45. Next, the result indicates distribution of data on the measurement of Nutritional Status variable. Based on the frequency distribution in Table 3, among 30 students there were only 2 people or 4.76% of students who were in the interval class >189 with the classification "very good". In the interval class of 179-188, there are 10 people or 23.81% of students who are in the "Good" classification. Then, in the interval class for 170-178, there were 23 or 54.76% students who were in "Medium" classification. Furthermore, in the interval class of 160-169, there are 5 people or 11.90% of students who are in the "Less" classification. Lastly, in the interval class <160, there is only 2 people or 4.76% of students with the "Less Once" classification.

***Table 3**. Nutritional status result.*

No	Interval class	$_{absolute}$ F (N)	$_{relative}$ F (%)	Information
1	>189	2	4.76	Very good (BS)
2	179-188	10	23.81	Good (B)
3	170-178	23	54.76	Medium (S)
4	160-169	5	11.90	Less (K)
5	<160	2	4.76	Less once (KS)

Learning outcomes of physical education in sports and health (PJOK)

Based on previous result, the next evaluation for the outcome on physical education in sports and health (PJOK) are used to be as variable with the sample of 30 people. Based on data processing, the highest score that can achieve by educate participants in answer related questionnaire with Nutritional Status is 89.00 and the lowest value is 75.00. In overall, the average score achieved is 2.12 which includes in "Medium" classification. Then, it is deviation raw are as big as 3.82. Next, the result indicates distribution of data on the measurement of previous result study as variable. Based on the frequency distribution in *Table 4*, there are 4 students or 9.52% in the interval class >87 with the classification for "Very Good". Next, in the interval class for 84-86, there are 15 or 35.71% of students who are in the "Good" classification. In the 80-83 interval class, there are 10 or 23.81% of students who are in the "Medium" classification, while in the 76-79 interval class with "Less" classification have the same result in medium classification. Furthermore, there are 3 people or 7.14% of students who are in the interval class <76 with the classification "Less Once".

***Table 4**. Learning outcomes result.*

No	Interval class	$_{absolute}$ F (N)	$_{relative}$ F (%)	Information
1	>187	4	9.52	Very good (BS)
2	84-86	15	35.71	Good (B)
3	80-83	10	23.81	Medium (S)
4	76-79	10	23.81	Less (K)
5	<76	3	7.14	Less once (KS)

Conclusion

Based on results data analysis and discussion so found conclusion namely: (1) there is influence direct and significant fitness physical to results learn from participants studied at SMP Negeri 34 Padang, the result of path coefficient YX1=-0.313 is obtained based on the results of calculations using the SPSS 20 program, the value of sig.=0.026 is smaller than the probability value of = 0.05 PYX1 by 9.80%. (2) There is a direct influence believe self to results learn from participants studied at SMP Negeri 34 Padang. Obtained results path coefficient YX2=0.366. Based on the results of calculations using the SPSS.20 program, the value of sig.=0.015 is smaller than the probability value of 0.05 YX2 by 12.30%. (3) There is influence Live Nutrition Status to results learn from participants studied at SMP Negeri 34 Padang. Obtained results path coefficient YX3=-0.409 Based on the results of calculations using the SPSS 20 program, the value of sig.=0.007 is smaller than the probability value of 0.05 PYX3 by 16.73%. (4) There is an indirect effect of physical fitness on learning outcomes through the Nutritional Status of students at SMP Negeri 34 Padang. The magnitude of the influence is 20.3%. (5) There is an indirect effect of self-confidence on learning outcomes through the Nutritional Status of students at SMP Negeri 34 Padang. The magnitude of the influence is 13.5%. (6) There is significant influence: among fitness physical, believe self and Nutritional Status by simultaneous to results study participant studied at SMP Negeri 34 Padang. Obtained score Rsquare=0, 306 and from table Annova obtained F=5.573 with probability (sig)=0.003, because sig value <α=0.05 then it can be concluded that the three variables affect student learning outcomes at SMP Negeri 34 Padang. As a conclusion, physical fitness, confidence, nutritional status, are

considering having effect to the students either direct or indirectly, and this may become the major concern in determination on the students learning outcomes.

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Conflict of interest

The authors declare that the research was conducted in absence of any conflict of interest.

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