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THE INFLUENCE OF LEARNING MOTIVATION, SOCIOECONOMIC STATUS, AND PHYSICAL FITNESS ON PJOK LEARNING OUTCOMES

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Abstract. The problem of the research is the low learning outcomes of Physical Education, Sports and Health (PJOK) at SMA Negeri 16 Batam. The low learning outcomes of students can be caused by several determinant factors, including learning motivation, socioeconomic status, and physical fitness. The purpose of the study is to analyze the influence of learning motivation, socioeconomic status, and physical fitness on the learning outcomes of physical education, sports, and student health. This type of research is using a quantitative method with a path analysis approach. The population of this study is 247 grade XII students at SMAN 16 Batam. The sample withdrawal in this study used the Total Sampling Technique as many as 247 respondents. Data is collected using instruments. PJOK learning outcomes from the second semester (even) grades of PJOK subjects, learning motivation and socioeconomic status through questionnaires, then physical fitness through the archipelago student fitness test (TKPN) which has been standardized by the Ministry of Youth and Sports in 2022 which consists of 5 tests, namely: a, Body Mass Index (BMI), b, V Sit and Reach, c, Sit Up 60 seconds, d, Squat Thrust 30 seconds, e, Pacer Test. The results of the study showed that 1) there was a direct influence of learning motivation on PJOK learning outcomes, 2) there is a direct influence of socioeconomic status on PJOK learning outcomes, 3) there is a direct influence of physical fitness on PJOK learning outcomes, 4) there is an indirect influence between learning motivation, socioeconomic status, and physical fitness simultaneously on PJOK learning outcomes. This can be interpreted that students' PJOK learning outcomes can increase by increasing learning motivation, socioeconomic status, and maximizing students' physical fitness.

Keywords: PJOK Learning Outcomes, Learning Motivation, Socioeconomic Status, Physical Fitness

I. INTRODUCTION

Physical Education, Sports, and Health (PJOK) is an important part of the education curriculum in Indonesia, especially at the secondary school level. This subject not only aims to develop physical skills, but also to shape character and improve students' health (Zul et al., 2022). However, at SMAN 16 Batam, PJOK learning outcomes are still relatively low, which indicates that there are factors that affect student achievement in this subject. This study examines these factors to provide a clearer picture of what

can improve PJOK learning outcomes (Herlambang, 2017; Suhaidin, 2015).

Factors that affect learning outcomes, especially in PJOK subjects, can be internal or external. Learning motivation, as an internal factor, plays an important role in encouraging students to be active and enthusiastic in participating in learning (Nurchahyo, 2013; Wardhana et al., 2017). Meanwhile, socioeconomic status and physical fitness are external factors that also contribute to student learning outcomes. Socioeconomic status often affects students' access to adequate learning facilities and facilities, while physical fitness is related to students' physical ability to

participate in PJOK learning that requires physical activity (Kanca, 2018; P S Mustafa, 2021).

This study aims to analyze in depth how learning motivation, socioeconomic status, and physical fitness affect the learning outcomes of PJOK students at SMAN 16 Batam. Using quantitative methods and path analysis approaches, this study seeks to find patterns of relationships between these variables, either directly or indirectly, on PJOK learning outcomes (Argantos, 2022). It is hoped that the results of this study can provide input for schools in an effort to improve the quality of PJOK learning and help students achieve their maximum potential in academic and physical fitness aspects (Sarmila et al., 2023).

Research on factors that affect the learning outcomes of Physical Education, Sports, and Health (PJOK) has been conducted in various contexts and shows a variety of findings. Learning motivation is one of the main focuses because it has been proven to have a significant influence on student academic achievement. High motivation encourages students to be more active, focused, and committed in following the learning process, which has a positive impact on learning outcomes (Ranti et al., 2020). In the context of PJOK, this motivation is very important because learning is not only cognitive but also requires physical activity, so motivation is a key element that affects student success. Previous studies have shown that learning motivation is not only influenced by the school environment, but also by internal factors such as students' interest and perception of the importance of PJOK for their health and life.

In addition, socioeconomic status and physical fitness are also important factors in student learning success, especially in physical subjects such as PJOK. High socioeconomic status can provide better access to facilities and equipment that support learning and a healthy lifestyle, which has the potential to improve students' physical fitness (Junaedi & Wisnu, 2015; Wiguno & Cahyo, 2021). Various studies also show that students with good physical fitness tend to be more able to actively participate in PJOK activities and experience lower fatigue, thus having an impact on achieving more optimal learning outcomes. Thus, socioeconomic status and physical fitness play an important role as the main determinants in supporting students' PJOK learning outcomes, because both affect students' physical capacity and mental condition in facing learning demands in the field of sports and health (Iwan & Simanjuntak, 2013; Mustafa, 2020).

This study offers a new contribution by integrating the influence of three main factors—learning motivation, socioeconomic status, and physical fitness—on PJOK learning outcomes in a comprehensive pathway analysis model. Although previous research has highlighted each of these factors separately, studies examining the simultaneous influence of these three factors are limited, particularly in the context of physical education. The uniqueness of this study lies in its holistic approach, which not only looks at the direct influence of each variable on learning outcomes but also its indirect relationships. Thus, this study provides a new in-depth insight into the interaction between internal

and external factors in influencing student achievement in PJOK subjects.

The main contribution of this research is to assist stakeholders in the field of education, especially teachers and school management, in formulating more effective learning strategies to improve PJOK learning outcomes. Through a deep understanding of the influence of motivation, socioeconomic status, and physical fitness, schools can take concrete steps, such as motivational programs, improved physical facilities, and support for students from low economic backgrounds. The evaluation of this study is sharply directed to determine how much impact the combination of these factors has on student learning outcomes, so that it can provide a solid basis for strategic interventions based on accurate and relevant empirical data.

The learning outcomes of Physical Education, Sports, and Health (PJOK) are one of the important indicators in assessing the success of the learning process at school, especially in the aspects of student health and physical fitness. However, at SMA Negeri 16 Batam, student learning outcomes in PJOK subjects are still relatively low. This low achievement may be caused by suboptimal internal and external factors, such as low motivation to learn, unsupportive socioeconomic status, and inadequate physical fitness levels. This is a significant problem, because the low learning outcomes of PJOK can have an impact on the lack of physical skills, resilience, and healthy living habits that students should have to support their lives in the future.

Previous studies have proven that learning motivation, socioeconomic status, and physical fitness have an influence on learning outcomes, but research that examines these three factors simultaneously in the context of PJOK learning is still limited. Learning motivation, for example, plays a key role in encouraging students to be active and interested in participating in learning activities, while socioeconomic status determines students' access to adequate learning facilities. On the other hand, physical fitness affects students' physical readiness to participate in physical learning and requires stamina. Thus, research is needed that can identify the extent to which these three factors contribute, either directly or indirectly, to the learning outcomes of PJOK at SMAN 16 Batam.

II. METHODS

This study uses a quantitative method with a path analysis approach to evaluate the influence of learning motivation, socioeconomic status, and physical fitness on the learning outcomes of PJOK students at SMA Negeri 16 Batam. This approach was chosen because it is able to analyze the direct and indirect relationships between variables in a comprehensive model, so that it can provide a deeper understanding of the factors that affect learning outcomes. The population of this study is all grade XII students at SMA Negeri 16 Batam which totals 247 students, and the sample is drawn using the total sampling technique, namely by using the entire population as respondents. This technique was chosen so that the research results reflect real conditions in the field and produce more accurate and representative data.

The instruments used in this study include several measuring tools for each variable. Learning motivation was measured using a questionnaire compiled based on the Likert scale to assess the level of student motivation in PJOK lessons. Socioeconomic status is measured by questionnaires that include information such as parents' jobs and incomes as well as students' access to learning facilities. Physical fitness is measured through the Nusantara Student Fitness Test (TKPN) which was approved by the Ministry of Youth and Sports (KEMENPORA) in 2022 and includes five subtests, namely Body Mass Index (BMI), V Sit and Reach, Sit Up 60 seconds, Squat Thrust 30 seconds, and Pacer Test. Meanwhile, PJOK learning outcomes were obtained from the second semester grades of PJOK subjects recorded in the school assessment system.

The data collection process is carried out in two stages, namely through filling out questionnaires by students to measure learning motivation and socioeconomic status, as well as the implementation of physical fitness tests in the field to obtain physical data of students. Data collection is carried out with the approval and supervision of the school to ensure the validity and validity of the process. The collected data is then analyzed using path analysis techniques with the help of statistical software. The analysis begins with classical assumption tests, including normality,

multicollinearity, and heteroscedasticity tests, to ensure the feasibility of the model. Furthermore, the test is carried out on the path coefficient to determine the magnitude of the influence of each variable and the significance test to test the research hypothesis. The direct and indirect effects of learning motivation, socioeconomic status, and physical fitness on PJOK learning outcomes are then interpreted according to the developed pathway model. The results of this analysis are reported systematically to provide a comprehensive understanding of the influence of these three variables on PJOK learning outcomes at SMAN 16 Batam.

III. RESULTS AND DISCUSSION

In this section, the author will describe the data obtained after collecting research data at SMAN 16 Batam. The data in this study consisted of: data on students' PJOK learning outcomes as endogenous variables in the research, then learning motivation and socioeconomic status which are exogenous variables then physical fitness as intervening variables (linkages) in the research conducted by the researcher. The data processing of the research results is presented in order in the following table:

Table 1. Summary of Description of Research Data

	Learning Motivation	Socioeconomic Status	PJOK Learning Outcomes	Physical Fitness
N	247	247	247	247
Std. Deviation	18.005	8.087	4.435	16.632
Minimum	82	19	74	59
Maximum	144	53	91	134

In order to make the picture of each data in this study clearer, the following researcher describes them one by one according to the variables that the researcher researched.

Data Analytics Requirements Testing

1. Data Normality Test

The normality test is carried out to determine whether to use parametric statistics or non-parametric statistics. If the

data is normally distributed, then the next test is carried out using parametric statistics, in this case the Independent Sample T-Test. Meanwhile, if the data is not normally distributed, then the next test is carried out using non-parametric statistics, in this case Mann Whitney. The following are the results of the normality test with Kolmogorov Smirnov using SPSS 23 software:

Table 2. Normality Test Results

No	Variable	Value Sig	Information
1	PJOK Results	0.482	Normally distributed
2	Learning Motivation	0.097	Normally distributed
3	Socioeconomic Status	0.088	Normally distributed
4	Fitness	0.128	Normally distributed

Based on the Kolmogorov Smirnov test in Table 4.11, it can be seen that the sig value (2-tailed) in the PJOK outcome variable ($0.106 > 0.05$), the learning motivation variable ($0.108 > 0.05$), the socioeconomic status variable ($0.096 > 0.05$) and the fitness variable ($0.103 > 0.05$). Thus, it can be known that the data is normally distributed.

Thus, based on the results of hypothesis testing with the SPSS application, the empirical causal model of the variables of learning motivation (X1), Socioeconomic Status (X2), Physical Fitness (X3), affects the learning outcomes of PJOK (Y), Based on Figure 4 which is explained that the

value of $R_{square} = 0.966$ is obtained and from the Anova table it is obtained $F = 487.843$ with probability (sig) = 0.000, because the value of the sig $< \alpha = 0.05$ then the decision is that H_0 is rejected and H_a is accepted, so learning motivation, socioeconomic status and physical fitness have a simultaneous effect on the PJOK learning outcomes of students at SMAN 16 Batam. Path equations of learning motivation variables, socioeconomic status and physical fitness to PJOK learning outcomes (X1, X2 and X3 to Y).

Table 3. Model Summary

Variable	R	R Square
PJOK Results	0.938	0.881

The magnitude of the Rsquare number is 0.966. This figure shows that the influence of learning motivation, socioeconomic status and physical fitness on the learning outcomes of students at SMAN 16 Batam.

The influence of learning motivation, socioeconomic status and physical fitness on the learning outcomes of students at SMAN 16 Batam was 93.31%. While the remaining 6.69% was influenced by other factors.

Table 17. Summary of Hypothesis Testing Results with SPSS

Direct influence between Variables	Path Coefficient (p _q)	Standard Error (s _{bt})	t _{count}	p-value	Conclusion
X1 (Learning motivation) to Y (PJOK Result) (py1)	0,031	0,014	2,169	0,035	Sig
X2 (Socioeconomic Status) to Y (PJOK Result) (py2)	0,179	0,032	5,621	0,000	Sig
X3 (Fitness) to Y (PJOK Result) (py3)	0,154	0,020	7,595	0,000	Sig
X1 (Learning Motivation) vs. X3 (Fitness) (p31)	0,427	0,075	5,718	0,000	Sig
X2 (Socioeconomic Status) vs. X3 (PJOK Results) (p31)	1,028	0,166	6,178	0,000	Sig

Discussion

1. Direct influence of learning motivation on PJOK learning outcomes of students at SMAN 16 Batam

Based on the research that researchers have carried out in the field, it was found that the direct influence of learning motivation (X1) on the learning outcomes of PJOK (Y) students at SMAN 16 Batam from 247 respondents. This influence can be seen from the result of the path coefficient of $py_{x1} = 0.435$ and the significance value of p-value = 0.035 which is smaller than the probability value (α) = 0.05. Moreover, It was also shown that the relationship between learning motivation and PJOK learning outcomes of students at SMAN 16 Batam had an influence of 43.5%. So it can be concluded that there is a direct influence of learning motivation on PJOK learning outcomes for students at SMAN 16 Batam. This is in line with research conducted by Damrah (2022) which found that there was a direct influence between learning motivation and learning outcomes of 7.2%.

Meanwhile Risman, (2022), stated motivation is "an internal factor that excites, directs and integrates controlled behavior according to conditions, and the tendency to maintain until a goal is achieved." According to Jeong & So, (2020) Basically, motivation is a conscious effort to move, direct and maintain a person's behavior so that he is encouraged to act to do something so as to achieve a certain result or goal. Learning motivation is one of the factors that affect the achievement of students in carrying out their learning activities. The higher the motivation in students, of course, has an impact on the effectiveness and efficiency of their learning. According to Mahardika, (2018) Stating learning motivation is a person's encouragement, consciously or unconsciously, to do an activity to achieve

their goals. Motivation can also come from within yourself and from others, be it teachers, family and friends. Students who have motivation to learn will be serious and interested in learning so that students get satisfactory learning results, but students who do not have motivation to learn will always feel bored in learning.

From the above opinion, it can be concluded that learning motivation is one of the most important factors to encourage students' enthusiasm for learning. In motivation there are also high desires and ideals. So that students who have the motivation to learn will understand what is the goal of learning, besides that the student's good condition in learning will cause the student to be enthusiastic in learning and be able to complete tasks well so that they can get good learning results.

2. Direct influence of socioeconomic status on PJOK learning outcomes of students at SMAN 16 Batam

Based on the research that researchers have carried out in the field, it was found that the direct influence of socioeconomic status (X2) on the learning outcomes of PJOK (Y) students at SMAN 16 Batam from 247 respondents. This influence can be seen from the result of the path coefficient of $py_{x1} = 0.179$ and the significance value of p-value = 0.000 which is smaller than the probability value (α) = 0.05. In addition, it was also shown that the relationship between socioeconomic status and PJOK learning outcomes of students at SMAN 16 Batam had an influence of 3.20%. So it can be concluded that there is a direct influence of socioeconomic status on PJOK learning outcomes for students at SMAN 16 Batam. This is in accordance with research conducted by Darni & Welis, (2018) found that the interest of the elderly in the mid-age

age group to exercise in Air Hangat District, Kerinci Regency was in the sufficient category. This is due to the lack of knowledge and family roles, so their interest needs to be increased again with the hope that in the future this age group will be healthier.

According to Madeanto, (2017); Sultan et al., (2022) stated that Status is defined as a place or position of a person in a social group in relation to other people in that group or a place where a group is related to other groups in a larger group. Meanwhile, social status is a person's place in general in his society in relation to other people in the sense of his social environment, achievements, rights and obligations. Meanwhile, economics comes from the Greek word oikos which means household and nomos means rule. So economics is a rule or guideline that governs the household.

According to Sebtika et al., (2017) stated that "social status factors that affect a person's characteristics include wealth, power and prestige. The socio-economic status of the family includes the level of education of the parents, the employment and income of the parents, special facilities and valuables in the house such as radios, televisions, washing machines, ice almaries, furniture and so on".

From this understanding, it can be concluded that the socioeconomic status of parents is the status/position in a community group. The condition of socioeconomic status by the type of job and the type of position of the parents in society based on the amount of income, education, and ownership of valuables by the parents.

3. Direct influence of physical fitness on the learning outcomes of PJOK students at SMAN 16 Batam

Based on the research that researchers have carried out in the field, it was found that the direct influence of physical fitness (X3) on the learning outcomes of PJOK (Y) students at SMAN 16 Batam from 247 respondents. This influence can be seen from the result of the path coefficient of $\rho_{yx1} = 0.154$ and the significance value of $p\text{-value} = 0.000$ which is smaller than the probability value (α) = 0.05. In addition, it was also shown that the relationship between physical fitness and PJOK learning outcomes of students at SMAN 16 Batam had an influence of 2.37%. So it can be concluded that there is a direct influence of physical fitness on PJOK learning outcomes for students at SMAN 16 Batam. This research is in line with the research conducted by Pinton Setya Mustafa & Dwiyoogo, (2020) found that there was an interaction between learning strategies and BMI levels on the mastery of basic motor skills, especially the level of ability of control objects. Furthermore, there was a difference in the ability of basic movement skills of children, especially the control objects of children in Padang Panjang City, between a group of children who had a thin/obese BMI who were given a series of game strategy treatment and children who were given conventional learning strategies. This shows that the level of children's control object ability will increase significantly when given treatment and approach with a series of games compared to conventional.

Physical fitness is one of the important factors that determine the success of students' learning. Physical fitness

is the ability of a person to carry out activities for a relatively long time without experiencing excessive fatigue and still have energy reserves for the next activity, whether it is sudden in nature.

High physical fitness will improve the learning outcomes of PJOK achieved by students. Meanwhile, low physical fitness will cause students to experience learning failure. Students who have high physical fitness. It is suspected that they will have good PJOK learning results and vice versa, Students who have low physical fitness are suspected of having poor PJOK learning results or do not achieve learning completeness.

4. The effect of learning motivation on PJOK learning outcomes through the physical fitness of students at SMAN 16 Batam

Based on the research that researchers have carried out in the field, it was found that the indirect influence of learning motivation (X1) on the learning outcomes of PJOK (Y) through physical fitness (X3) of students at SMAN 16 Batam from 247 respondents. In this case, it shows an influence of 141.3%. H_0 was rejected and H_a was accepted, where there was an indirect influence of learning motivation on PJOK learning outcomes through the physical fitness of students at SMAN 16 Batam. This is in line with research conducted by Hasibuan et al., (2024) found that (1) There was a direct influence between physical freshness and learning outcomes of 7.2%, (2) There was a direct effect of nutritional status on learning outcomes of 9.7%, (3) There was a direct effect of learning motivation on learning outcomes of 7.2%, (4) There was no direct effect of physical freshness on nutritional status, (5) There was an indirect effect of physical freshness on learning outcomes through learning motivation of 5.4%, (6) There is an indirect influence between nutritional status and learning outcomes through learning motivation of 2.9%.

According to Putra et al., (2024) that motivation is influenced by internal factors and external factors, namely: Internal factors are motivation that is generated in oneself. which includes: Orientation, level of education, past experience, ideals and hopes. External factors are motivations that are generated by others or from outside themselves, which include: facilities and infrastructure, and the environment.

From the description above, it can be concluded that the motivational factors are from two differences, namely intrinsic motivation that is self-generated that qualifies one's abilities such as: being able to improve learning outcomes, and being able to produce achievements that it produces. While extrinsic motivation is generated from outside oneself or obtained from others such as: encouragement from parents to study diligently and disciplined, and motivation obtained from the surroundings of their environment.

5. The effect of socioeconomic status on PJOK learning outcomes through the physical fitness of students at SMAN 16 Batam

Based on the research that researchers have carried out in the field, it was found that the indirect influence of socioeconomic status (X2) on the learning outcomes of

PJOK (Y) through physical fitness (X3) of students at SMAN 16 Batam from 247 respondents. In this case, it shows an influence of 92.1%. Therefore, Ho was rejected and Ha was accepted, where there was an indirect influence of socioeconomic status on PJOK learning outcomes through the physical fitness of students at SMAN 16 Batam.

Socio-Economic Status has a very important role in the learning outcomes of PJOK obtained by students, especially in PJOK subjects. Students with a good level of Socio-Economic Status will usually look more active and enthusiastic in participating in the learning process. This will of course have an impact on the PJOK learning results that will be obtained. On the other hand, students who have a low socioeconomic status will usually look tired and unmotivated.

A social class is a relatively homogeneous and fixed division or group in a society, which is organized in a hierarchical manner and its members have similar values, interests, and behaviors (Bafirman et al., (2023). Social experts identified seven social classes, including.

6. The effect of learning motivation, socioeconomic status and physical fitness on the learning outcomes of PJOK students at SMAN 16 Batam

Based on the research that the researcher has carried out in the field, it was found that the influence of learning motivation, socioeconomic status and physical fitness on the learning outcomes of PJOK (Y) through learning motivation, socioeconomic status and physical fitness of students at SMAN 16 Batam from 247 respondents. In this case, it shows an influence of 93.31%. Therefore, Ho was rejected and Ha was accepted, where there was an influence of learning motivation, socioeconomic status and physical fitness on the PJOK learning outcomes of students at SMAN 16 Batam.

Socioeconomic status, learning motivation, and physical fitness are things that can affect the PJOK learning outcomes that will be received by students. If a student who gets attention from his parents tends to show high motivation in following the learning process. Likewise, students who have good motivation to learn, usually they will look more enthusiastic and enthusiastic in following the learning process.

According to Bafirman et al., (2023) Physical education in sports and health at school is the goal of teachers to make students fit, and can help students create new movements obtained in physical education learning. It is concluded that physical education, sports and health etymologically is an educational activity that uses physical activity to produce holistic changes in individual qualities, both physical, mental, and emotional aspects. From these various definitions, it can be concluded that PJOK learning outcomes are a learning achievement obtained by students in the process of teaching and learning activities with aspects of values or attitudes (affective domain) and skill aspects (psychomotor domain) inherent in each individual student. This means that through the learning outcomes of PJOK.

IV. CONCLUSION

This study shows that learning motivation, socioeconomic status, and physical fitness have a significant influence on the learning outcomes of students at SMA Negeri 16 Batam, both directly and indirectly. These findings confirm that to improve the overall learning outcomes of PJOK, a comprehensive approach is needed, involving increased student motivation, adequate socioeconomic support, and a continuous physical fitness program. By improving these three aspects, schools can effectively optimize students' achievement in PJOK subjects, which not only supports physical skills and health but also shapes students' attitudes and character in the face of academic demands and future life challenges.

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