



Friendship, joy, and physical fitness of elementary school students: outcome-based macro evaluation of physical education in Madura Island

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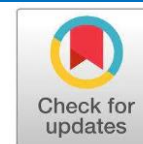
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Abstract: The lack of information regarding the benefits of physical education in primary education (SD/MI) in Madura Island resulted in its potential value not being fully realized. In addition, the existence of physical education is often seen as a peripheral or unimportant subject in the school curriculum. Meanwhile, outcomes, which are evaluations at the social or community level, often need to be thoroughly explored. The benefits of physical education ideally are based on the criteria of friends, fun, and fitness. This study seeks information about interpersonal peacefulness, physical activity enjoyment, and physical fitness. The research method used is quantitative and correlational descriptive with a testing design using the discrepancy evaluation model. The respondents involved in this study are 523 students. The results show that the mean of interpersonal peacefulness among students and physical activity enjoyment has met the established criteria, while the mean of physical fitness of students has not met the established criteria. The three variables have a functional relationship with a significant value <0.05 . Recommendations that can be given to physical education teachers are to pay more attention to the element of physical activity enjoyment in children. According to hedonism theory, behavioral learning theory, and perceptual theory, humans always seek and repeat any action that gives pleasure. So, if exercising brings joy, they will repeat the activity. The more joy, the more active they will be in exercising.

Keywords: evaluation; physical education; friendship, joy, and physical fitness.

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INTRODUCTION

An interesting quote is presented by Fernandez & Audétat (2019), evaluation development programs are a significant step in maintaining relevance and efficiency. According to him, the representatives of the people want to know what will work when they pass laws and appropriations; parents want to know how well their children have been educated; educational foundations wish to see the impact of their support on education and social programs staff want to know how effective their programs are. Therefore, increasing the ability to assess the success of an institution and program in achieving agreed results is the main reform strategy that must be implemented.

In the educational context, assessment can be done through quality education. Quality education is education that provides both benefits and profits to both individual graduates and society. At a macro level, the focus of education quality is not on the education system but on the contribution of the education system to the supra-system of national development.



Physical education is an educational programme that reflects the function of national education, which aims to develop physical fitness, motor skills, critical thinking, social skills, reasoning, emotional stability, moral behaviour, aspects of a healthy lifestyle, and the introduction of a clean environment through physical exercise ([Permendiknas No. 22 of 2006](#)). Physical education offered in schools has a key role to play, enabling pupils to have direct experience of different learning experiences through the process of identifying and carrying out suitable sports activities systematically. Especially for elementary school children, physical education is the basis for helping the child's growth and development stages, so if physical education is carried out and can be received correctly, it will have a positive impact on physical and mental growth and development as well as social skills and other positive values.

The importance of physical education is different from conditions in the field, which consider physical education unimportant in the school curriculum. This assumption is justified when there are still many physical education (PE) teachers who are only oriented toward assignments and mastery of movement skills but ignore other essential elements and aspects. PE teachers must fully understand appropriate learning methods in the learning process. The PAKEM learning approach (Active, Creative, Effective, and Fun Learning), which should be featured in physical education learning, is not implemented so that the outcomes that are the goal of physical education are not visible.

Another phenomenon is the presence of sedentary behavior among students (sedentary behavior). This also causes the outcome to be invisible. Students spend more time with their gadgets after the pandemic. Sedentary behavior has many adverse effects on the human body, including increased all-cause mortality, cardiovascular mortality, cancer risk, and risk of metabolic disorders such as diabetes, hypertension, and dyslipidemia; musculoskeletal disorders such as joint pain and osteoporosis; depression; and cognitive disorders ([Park et al, 2020](#)).

Several studies have been conducted regarding the evaluation of the implementation of physical education, friendship, joy, and fitness of elementary education students; 1) Physical Fitness Level of Elementary School Students During the Covid 19 Pandemic ([Ma'arif & Prasetyo, 2021](#)). As a result, the physical fitness level of Jatibancar Primary School 2 students during the Covid-19 pandemic was at an average level, as shown by the results of the 5 items of the physical fitness test. The difference with the author's research is the physical test equipment used; 2) Evaluation of Physical Education, Sports & Health Learning at Public Middle Schools in Mukomuko Regency using the Context, Input, Process & Product (CIPP) Model Approach ([Raibowo et al, 2020](#)). As a result, the quality of the PJOK learning program at State Middle Schools in Mukomuko Regency is included in the "Poorly Good" category, as seen from the effects of all CIPP model evaluation components. The difference with the research conducted by the author is that the sample used was junior high school students. In contrast, the author used elementary school students; the evaluation used in previous research used CIPP. In contrast, the author used an outcome-based model evaluation, and finally, during the last study, different tests were carried out. There was no correlation

between variables, while the author used a difference test and correlated the variables; 3) School-based physical activity interventions and physical activity enjoyment: a meta-analysis (Burns et al, 2017). As a result, physical activity interventions carried out in schools can significantly increase the level of enjoyment of physical activity in children, and this increase appears to be associated with greater increases in physical activity in children. The difference in research is that previous researchers used literature studies while the author conducted research by testing the variables used.

From several existing previous studies and the background of the problems described in the last paragraph, people still need to research the evaluation of the benefits of physical education at the basic education level (SD/MI). Hence, the benefits/outcomes still need to be fully visible in implementing physical education. Therefore, the author was interested in evaluating the benefits of the Physical Education, Sports, and Health (PJOK) program. From this research, the physical education program can help students understand the importance of regular physical activity and provide skills in maintaining body health through physical activity.

METHOD

This type of research is included in the outcome evaluation and correlational research. This research is also secondary research using data from the Center for the Study of Physical Literacy and Sports Education IKIP Budi Utomo Malang. The research approach is through internet-mediated research (IMR), a data collection technique through internet media in a Google form. The evaluation model used in this study is the discrepancy evaluation model developed by Malcolm Provus. However, in its application, the researcher uses the gap evaluation model (one cycle), which Sakban Rosidi has modified to get a more applicable presentation. This gap evaluation model was carried out to determine the discrepancy between the outcomes of the PJOK (physical education) program and the standards (criteria) that should have been achieved. The results of this evaluation can be used for decision-making by providing recommendations on implementing the PJOK (physical education) program for elementary school level (SD/MI) in Madura Island. The following is the design of the gap evaluation model (one cycle) used in this study.

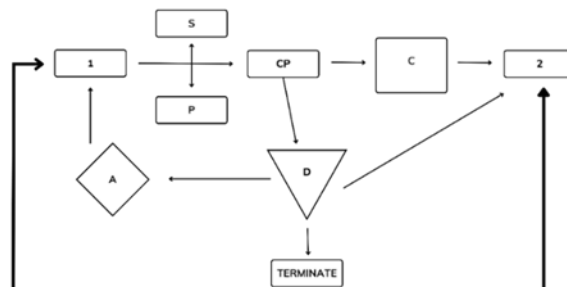


Figure1. Tension Evaluation Model

The procedure for this discrepancy model evaluation research consists of:

1. We are determining what should be (setting performance benchmarks).

2. We are collecting and presenting data on the PJOK program at the elementary school level based on friend, fun, and fit criteria.
3. Comparing performance benchmarks with analysis results.
4. I am explaining whether or not there is (or how big there is) a gap between performance benchmarks and actual performance that can be achieved.

Furthermore, decision-making by providing recommendations regarding the gaps in implementing the PJOK (physical education) program is based on the criteria of friend, fun, and fit at the elementary school level in Madura Island.

The sampling technique in this study used the snowball sampling technique. Snowball sampling is a well-known non-probability survey sample selection method commonly used to find hidden populations. The sample used was 523 students consisting of SD and MI grades IV, V and VI students on Madura Island. The research was conducted from November 2022 to January 2023.

In this study, the researcher adopted instruments that have previously been tested for validity and reliability by Sakban Rosidi. This instrument is feasible to be used as a measuring tool for three variables (interpersonal peace, joy of exercising, and physical fitness). The instrument for measuring interpersonal peace uses the Interpersonal Peacefulness Scales developed by Linden L. Nelson. The instrument used to measure the joy of exercising is the Physical Activity Enjoyment Scale (PACES) developed by Justin B. Moore et al. Meanwhile, to measure perceptions of physical fitness using the Perceived Physical Fitness Scale instrument developed by Ben R. Abadie. Furthermore, the indicators of each instrument were first adapted and adjusted to the culture and terms often used in Indonesia to facilitate the respondents' understanding in filling out the provided questionnaire. Next, determine the value of the eligibility criteria for each variable by calculating the highest and lowest score values, determining the number of categories, calculating class intervals, determining the value in the category, and giving meaning or interpretation to the variable scores obtained. Later it will be known whether the mean (mean) for each variable meets or does not meet the eligibility criteria set.

Data were analyzed using three analytical techniques, namely descriptive statistics, single mean test, and correlational techniques. Descriptive statistics are useful for describing research variables obtained through measurement results, such as measuring the average (mean), standard deviation, and variance, as well as describing data in tabular form, which can later describe the three variables. Meanwhile, the analysis of the mean test (t-test) in this study is to find out whether there is a gap between the actual performance (performance) and the benchmark (standard). This research was also conducted to determine the functional relationship between interpersonal peace among students, the joy of exercising, and physical fitness at the elementary education level on Madura Island.

RESULTS AND DISCUSSION

The results of the descriptive analysis of the research variables (Table 1) show that the average interpersonal peace (69.86) is included in the high category, the average joy of exercising (58.5602) is included in the very high category and the average physical fitness (40.0210) is included in the medium category.

Table 1. Summary of One Sample Test Analysis Results

Variable	Eligibility Criteria	Mean	t-count	df	t-table	Mark Significance	Level Significance
Interpersonal Peacefulness	$X \geq 61$	69,86	19.763	522	1,96	0,000	0,05
Physical Activity Enjoyment	$X \geq 44,9$	58,56	41,667	522	1,96	0,000	0,05
Physical Fitness	$X \geq 40,9$	40,02	-2.656	522	1,96	0,008	0,05

The interpersonal peace variable (Interpersonal Peacefulness) obtains an average value of 69.8623 higher than the eligibility criteria of 61 with a significance value of 0.000 meaning that there is a significant difference between standards and performance with a positive difference of 8.8623. This means that the average peace between students at the elementary education level on Madura Island has met the eligibility criteria set. The exercise enjoyment variable (Physical Activity Enjoyment) obtained a mean value of 58.5602 higher than the eligibility criteria of 44.9 with a significance value of 0.000 meaning that there is a significant difference between standard and performance with a positive difference of 13.66023. This means that the average enjoyment of sports for students at the elementary education level in Madura Island has met the eligibility criteria set.

The variable physical fitness (Physical Fitness) obtained an average value of 40.0210 lower than the eligibility criteria of 40.9 with a significance value of 0.008 meaning that there is a significant difference between standard and performance, but the difference is negative with a negative difference of -0.879. This means that the average physical fitness of students at the elementary education level in Madura Island does not meet the eligibility criteria set. Meanwhile, the functional relationship between interpersonal peace, the joy of exercising and physical fitness among students at the elementary education level in Madura Island can be seen in Table 2.

Table 2. Correlation Analysis Results

		Physical Fitness	Physical Activity Enjoyment	Interpersonal Peacefulness
Physical Fitness	Pearson Correlation	1	0.132**	0.151**
	Sig. (2-tailed)		0.002	0.001
	N	523	523	523
Physical Activity Enjoyment	Pearson Correlation	0.132**	1	0.437**
	Sig. (2-tailed)	0.002		0.000
	N	523	523	523
Interpersonal Peacefulness	Pearson Correlation	0.151**	0.437**	1
	Sig. (2-tailed)	0.001	0.000	
	N	523	523	523

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the results of the analysis that has been carried out, the relationship between interpersonal peace and the joy of exercising is obtained by $r = 0.437$ with a significance value of $0.000 < 0.05$, it is stated to be correlated. Furthermore, the relationship between interpersonal peace and physical fitness results obtained $r = 0.151$ with a significance value of $0.001 < 0.05$, then it is stated to be correlated. And finally, the relationship between the joy of exercising and physical fitness is the result of $r = 0.132$ with a significance value of $0.002 < 0.05$, so it is correlated.

In the analysis of the interpersonal peace variable, the average result is higher than the eligibility criteria set with a positive difference of 8.8623. In general, the peace between students at the elementary education level on Madura Island has a high level of friendship. These results will affect the social life of children with their peers. Research conducted by [Freitas, et al. \(2019\)](#) higher friendship quality was associated with lower risk of peer victimization for more anxious-withdrawn girls, but with a higher risk for more anxious withdrawn boys. The quality of friendship is thought to have a direct effect on many aspects of children's social development, including their self-esteem and social adjustment.

In the analysis of the variable joy of exercising, the average result is higher than the eligibility criteria set with a positive difference of 13.66023. There is a significant positive difference between standards and performance. These results prove that so far physical education classes have fulfilled the elements of fun for students. Of course, this must be maintained by a teacher to be able to present interesting learning that can help children get joy in learning. In line with the results of a study conducted by [Li, Huang, Si, & Shao \(2022\)](#) A total of 24 articles were eventually included representing 3907 participants from 14 different countries. Overall, the effect of physical activity interventions on positive emotions was significant.

In the analysis of physical fitness variables, the average result is lower than the eligibility criteria set with a negative difference of -0.879. There is a significant negative difference between standard and performance. These results illustrate that improving students' physical fitness needs to be considered and requires the role of the teacher to help students' awareness of the importance of "physical literacy". Physical literacy or physical literacy has been defined as a goal of education.

Meanwhile, those related to the functional relationship between the three variables indicate that the three variables influence each other. When interpersonal peace is good, it will affect the joy of exercising and when pleasure arises, the child will continue to do physical activity, so that physical fitness will be more easily achieved. This is in accordance with the perceptual theory that humans tend to repeat what gives pleasure, giving psychological pleasure. These findings indicate that the moods of children and adolescents who participate in physical activity significantly improved compared with the moods of those who do not participate in physical activity ([Li et al., 2022](#)).

[Rullestad, Amalie & Meland, Eivind \(2021\)](#) stated that Health promotion efforts aimed at increasing active transportation at school, parental support, and subjective well-being appear important for maintaining physical activity and sports participation in adolescence. Attitudes can be improved by tailoring physical

education to individual needs and preferences and can be an additional motivating factor. From the above statement it can be concluded that the enjoyment of physical activity or the joy of exercising is directly proportional to the participation of physical activity. Enjoyment of exercise will encourage someone to continue doing physical activity. The more awakened the pleasure of exercising, the greater the level of physical activity. Of course, this is not an easy thing for a teacher – to be able to do, it requires understanding, creativity, and consistency in its application.

Research conducted by [Raibowo et al. \(2020\)](#) at Public Middle Schools in the Mukomuko Regency shows that in general the quality of the PJOK learning program at Public Middle Schools in the Mukomuko Regency is in the "less good" category. and research conducted by [Ryan et al. \(2017\)](#) regarding school-based physical activity interventions and enjoyment of physical activity. The purpose of this study was to examine the effectiveness of school-based physical activity interventions in increasing students' enjoyment of physical activity. The results showed that school-based physical activity interventions had a small to moderate effect on increasing enjoyment of physical activity in children and adolescents.

When students feel joy in exercising, it is not impossible with physical activity that is carried out consistently and with the right movements to achieve the desired level of fitness. The conclusion of the hasil is that between physical activity and physical fitness affect each other or there can be a relationship ([Ma'arif, & Hasmara, 2023](#)). Physical fitness is an important indicator of health. A person who is fit is healthy, but a person who is healthy is not necessarily fit. So being fit will significantly affect one's health.

From the research results, there are several things that PJOK teachers can do to make students able to participate actively and feel happy when implementing physical education; 1) variety of activities, by presenting various types of physical activities and sports can make students not bored in learning, for example by including team games, individual sports, strength training, or fitness-based activities; 2) Choose a theme or topic that is interesting to students, this can make students more motivated to participate actively; 3) Give students choices regarding the activities or games they want to take part in. This activity can make students have a sense of ownership of physical learning; and 4) Provide space for female students to be creative and try new things in physical activities so that it helps them feel more involved and enthusiastic.

CONCLUSION

Based on the results of data analysis and discussion, research on Friendship, Joy, and Physical Fitness of Elementary School Students: Outcome-Based Macro Evaluation of Physical Education in Madura Island can be interpreted as follows: Overall, the results of this study indicate that the physical education program, especially in Madura Island, has not fully provided benefits based on the criteria of friend, fun and fit. Because only the interpersonal safety variable and exercise fitness variable can meet the eligibility criteria set. Whereas the physical fitness variable is declared unsuccessful, there are three alternative possible decisions that can be made. First, continue the program by making repairs. Second, stop the program

(terminate) and third, the program is repeated by improving performance or changing the standard features of the program's success.

The results of this study are expected to have positive implications for various parties. Some of the implications of this research are as follows: (1) theoretical implications can provide a better understanding of the relationship between physical activity and social and emotional aspects; scientific evidence on the relationship between physical activity and physical fitness (2) the practical implications of this research can enhance the development of a more holistic physical education program; evaluations based on the criteria of friendship, enjoyment of exercise, and physical fitness can help identify students' individual needs and interests in a physical education context.

Suggestions or recommendations for implementing the PJOK (physical education) program, including (1) teachers or education practitioners need to periodically evaluate the benefits of the physical education program as input, study and consideration in determining whether the program needs to be repaired, discontinued or continued; (2) the researcher do hope this research can be used as a reference for other researchers who will conduct research related to the outcome evaluation of physical education programs using the discrepancy evaluation model; (3) the results of this study can be used as evaluation material for PJOK (physical education) teachers that so far the physical education program has not fully provided benefits for students and physical education classes are not fun for students.

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