

ORIGINAL ARTICLE



Young Women's Motor Competence and Sport Satisfaction: The Role of Self-Efficacy in Physical Education

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ABSTRACT

Background. Low basic movement skills Based on the results of the Indonesian Sports Development Index, one of the causes of the decline in basic movement skills is the low quality of physical education learning. **Objectives.** The purpose of this study was to test the integration of Self-efficacy (SE) in Physical Education (PE) towards increasing the mastery of motor skills and the level of student satisfaction. **Methods.** This research uses an experimental method with a two-group pretest-posttest design approach. The population in this study was female students of SMA Negeri 5 Jambi City. The sample determination in this study used two types, namely cluster random sampling and random assignment. Using cluster random sampling, second-level students were obtained from three levels and the random assignment was obtained from four classes (two classes for treatment and two classes for control) and obtained N treatment=49 and N control=50. The instruments used were Get Skilled Get Active to assess movement skills and the Basic Needs Satisfaction in Sport Scale (BNSSS) to measure satisfaction. **Results.** The results of this study are that there is a significant effect There is a significant difference in the effect of non-integrated and integrated group SE on PE learning of basic movement skills ($\bar{x}_{Exp}=80.78 (3.97) > \bar{x}_{Ctrl}=76.54 (4.39)$, value of Sig. (2-tailed)<0.005) and sports satisfaction of female students ($\bar{x}_{Exp}=108.22 (11.85) > \bar{x}_{Ctrl}=102.38 (16.30)$, value of Sig. (2-tailed)<0.005). **Conclusion.** The SE integration of the PE group was better than the non-integrated group in learning in increasing the mastery of movement skills and the level of student sports satisfaction. In integrating self-efficacy in physical education learning, cognitive, motivational, affective, and selection processes occur which can influence human function and are carried out to realize goals that are considered valuable, in this case, basic movement skills.

KEYWORDS: *Self-Efficacy, Physical Education, Motor Competence, Satisfaction.*

INTRODUCTION

Developing motor skills is crucial for human growth and development. Poor motor skills in childhood can hinder the adoption of a healthy and active lifestyle, leading to reduced cardiovascular and respiratory activity (1). The relationship between motor skills and physical activity is bidirectional and varies with child

developmental (2). Childhood physical inactivity is associated with difficulties in developing adequate motor skills, leading to adverse health outcomes (3). Actual motor ability is also a key mechanism in the synergistic and repetitive relationship with physical activity, fitness, and health-related skills in childhood and youth (4).

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In Indonesia, there has been a decline in the level of motor skills and physical fitness of students, according to research conducted by the Sports Development Index Indonesia (SDI) (5). The problem is not with sport itself which offers a complete movement system and value system, but with the low quality of teachers and the lack of instilling physical literacy in children through sport at school. Physical literacy is an important aspect of physical education that is neglected in schools. Physical education fails to provide enjoyable and valuable experiences for students without appropriate exercise, resulting in wasted opportunities for physical development in schools. Physical literacy is a set of knowledge, skills, involvement, and responsibility of a person in carrying out physical activities for a quality existence throughout life (6). Individual knowledge, attitudes, and physical abilities are the main markers of physical literacy.

Education is a learning process that is an interpersonal interaction between a student and a teacher. Learning is an activity that aims to provide or manage the environment as well as possible and connect it with students so that a process occurs. Good learning requires a good planning process, and the implementation process must involve many people, such as teachers and students, then there must be a link between one activity and another. According to (7) the teacher's task is very heavy because it is the nation's future. PE is a means to achieve the goals of all education and education is incomplete without PE and health. This is in line with (8) Some opinions emphasize that PE cannot be separated from education so PE is inseparable from the goals of education in Indonesia.

PE, sports, and health are some of the subjects taught in high school to complement existing learning. With PE learning it is hoped that students will master learning and experience changes in behavior. Likewise, what was stated by (9) PE and school sport has a designation that is used as input for a person's cognitive and affective development. Thus it was revealed by Barnett et al., 2013 that physical activity and PE have many health benefits (10). Furthermore, the results of the study by Bailey et al., 2016 show that PE in schools is a provider of social and physical activities for students which must be developed together with physical abilities (11). Exercise, sports, and health can improve core

movement and increase integrity and endurance (12).

An unhealthy lifestyle, the imbalance between food intake and energy expenditure can cause obesity. Obese people are more likely to suffer from cardiovascular disease, which is related to the heart and blood vessels (13). Such conditions are certainly very detrimental to the country in the long run. The most obvious effect related to this issue is the swelling of the government health insurance budget far above normal. The membership fees received by government health insurance do not cover the budget for sick people's salaries, so they tend to continue to lose money. At 2019, the government health insurance budget deficit is estimated at Rp. 32 trillion (14). Most of the budget is spent on non-communicable diseases such as heart, kidney, diabetes, and stroke. A one-year evaluation of the implementation of the national health insurance shows that the number of Indonesians affected reaches 65%, much higher than the usual 10-15% of the general population (15). Therefore, one of the efforts that can be made to reach children and youth broadly is to improve the quality of PE through curricular innovations that include socio-cognitive variables so that the noble goals of PE can be fulfilled.

Socio-cognitive variables include individual beliefs that are sensitive to the history of social reinforcement and influence. However, theoretical research on which social cognitive factors most influence adolescent physical activity is still limited (16). SE one of the variables of social cognitive theory (SCT), is a belief in one's ability to succeed at a particular task, course, or field (17) and is an aspect of motivation (18). In particular, SE can have significant long-term effects because it can push students into a feedback loop that can positively or negatively affect SE and student learning outcomes (18). Based on value theory, motivational beliefs are expected to mediate the relationship between SE and academic achievement; for example, academic achievement and student satisfaction (19). In this regard, there is research showing that student satisfaction can reduce student delinquency, so it is advisable to develop values (such as social and emotional skills, cognitive skills, behavioral and ethical skills, recognition of positive behavior, beliefs about the future and social norms) (20).

Varela et al. (2018 and 2003) explored the association between happiness with exercise and a certain domain of life satisfaction in an exercise-oriented population and more generally (21). According to Rojas (2006) generally, there is a consensus between one's satisfaction with life and satisfaction with various areas of life (22). Life satisfaction has a strong relationship with exercise satisfaction (23). This is due to the consensus about the relationship between life satisfaction and job satisfaction in various areas of life (22). The purpose of this study was to examine the effect of increasing motor skills and satisfaction of female students with an intervention integrating SE into face-to-face PE. Subjects who were more active in sports reported higher life satisfaction than those who were inactive (24).

Whether we realize it or not, PE often fulfills basic psychological needs. Satisfaction of basic psychological needs, such as autonomy or competence, positively predicts satisfaction with exercise classes (25) (Morales-Sánchez et al., 2021). Furthermore, Kalajas-Tilga et al., 2020 examine the importance of motivational processes in PE classes and note how the enjoyment of PE classes is an important part of students' intrinsic motivation processes and benefits students' participation in PE (26). Integrating SE into PE can stimulate students' perceptions of competence and self-skills related to students' basic movement skills. This has a positive effect on students' enjoyment and satisfaction in PE activities. This shows that self-perception of competence and ability can also affect enjoyment and satisfaction in sports lessons (26). Therefore, the purpose of this study was to analyze the profile of movement skills of young women and sports satisfaction according to movement development, integrate SE into quality PE, and compare the two study groups, namely integrated and non-integrated SE in PE. To the author's knowledge, there has been no research that has compared the levels of SE and SE of young women through integrated PE interventions, as well as comparisons between the two research groups, namely the integrated and non-integrated research groups. The SE group in learning PE. The research questions are 1) Are there differences in the effect of integration of SE of learning and integration of SE outside of PE learning on students' movement skills? And 2) are there differences in the effect of the integration of SE in learning? Learning with the integration of

SE outside of PE learning on student sports satisfaction?

MATERIALS AND METHODS

This study used a two-group pretest-posttest design (27) and was conducted in 18 meeting sessions consisting of one meeting for the initial test, 16 meetings for the treatment, where the material was PE, and 1 meeting for the final test.

Participants. The sampling technique uses two methods, namely random selection is a random sample selection technique carried out to select each individual to be sampled, while random assignment random sample selection is carried out to select groups (groups) to be used as samples. The results of the draw resulted in four classes, these four categories were rearranged to determine the integration group in PE learning and integration outside of PE learning. From the results of this draw, it was obtained two classes for the experiment (integrated group) totaling 49 students, and two classes for the control group (non-integrated) in PE learning totaling 50 (age: 16.3 ± 1.83 years and body weight ranging from 45.8 ± 3.51).

Instrument. Research data was obtained using the Basic Needs Satisfaction in Sport Scale (BNSSS) satisfaction level instrument to measure the satisfaction of basic needs of sports (28). The BNSSS that will be used consists of the Autonomy component which consists of Choice, IPLOC, and Volition (10 statements), competence (5 statements), and Relatedness (5 statements) so that the total consists of 20 statements. Each statement was scored using a Response-type scale given on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The validity test results obtained range $r=0.402-0.884 > r_{table}=0.361$ and the reliability test results obtained Cronbach's Alpha value=0.942.

Get Skilled Get Active is used to assess skills that include 12 skills (catch, overhand throw, kick, forehand attack, sprint, jump, dodge, vertical jump, jump, sideways gallop, jump, and static balance (29) For catches, kicks, overhead throws and vertical jumps, skills are performed five times (30) with features considered present if students perform them consistently during trials. For the hop and side gallop movements, skills were observed when students traveled once back and forth between two points with a distance of 15 m. The validity test results obtained range

$r=0.401-0.705 > r_{\text{table}}=0.361$ and the reliability test results obtained Cronbach's Alpha value=0.796. The research assistant assessed each feature of the skill it exists or does not exist without verbal feedback to students. Experimental class treatment with integration of SE in PE learning in this study uses four principles adopted from Kendellen et al (2017) as a guide created to help instructors integrate SE into PE: (a) focus on SE indicators, (b) introduce SE at the beginning of lessons, (c) apply strategies to integrate SE throughout the lessons, and (d) provide explanations about SE in end of the lesson. Furthermore, SE integration classes in learning and SE integration outside of PE learning, it is carried out according to the program compiled and contained in the Learning Implementation Plan (31).

Data analysis. The independent sample t-test is a two-mean difference test, which is used to determine the difference in the mean of the experimental group and the control group. In this study, the calculation for the two-mean difference test. A two-mean difference test was also carried out to find out the average difference between the integration SE groups within and outside PE learning integration.

RESULTS

The information related to basic movement skills for the non-integrated class pre-test and the non-integrated class post-test data groups is shown in Table 1. In the non-integrated class pre-test data group, the range, maximum,

minimum, average score and standard deviation were 16.55, 52.1, 68.65, 60.67, and 3.49. In the non-integrated class post-test data group, the range, maximum, minimum, average score and standard deviation values were 18.62, 68.25, 86.87, 76.54, and 4.39. Additionally, more information was obtained with respect to the integrated class, where the pre-test data had range, maximum, minimum, average score and standard deviation values of 15.47, 52.82, 68.29, 61.45, and 3.58. For the integrated class post-test data group, had range, maximum, minimum, average score and standard deviation values of 16.75, 71.23, 87.98, 80.78, and 3.97.

The following information is related to the level of satisfaction in sports for the various groups. The non-integrated class in the pre-test data group, had range, maximum, minimum, average score and standard deviation values of 57, 60, 117, 89.98, and 12.62. Furthermore, in the non-integrated class in the post-test data group, had range, maximum, minimum, average score and standard deviation values of 68, 63, 131, 102.38, 16.3, respectively. In the integrated class, the pre-test data, had range, maximum, minimum, average score and standard deviation values of 40, 66, 106, 91.06, and 9.64. Lastly, for the integrated class post-test data group, had range, maximum, minimum, average score and standard deviation values of 55, 77, 132, 108.22, and 11.85.

Table 1. Descriptive Basic Movement Skills Data

Motor Competence	SE in PE		PE	
	Pre	Post	Pre	Post
n	49		50	
Min	51.82	71.23	52.10	
Max	68.29	87.98	68.65	
x	61.45	80.78	60.67	
SD	0.349	0.192	03.49	
Satisfaction				
n	49		50	
Min	66	77	60	68
Max	106	132	117	131
x	91.06	108.22	89.98	102.38
SD	0.419	0.517	0.543	16.30

SE in PE=SE integration class in PE learning; PE=Class PE learning non-integration; n=Number of samples; Min=minimum score; Max=Maximum score; x=average; SD=standard deviation.

The results of two separate statistical tests indicating significant differences are shown in Table 2. First, the Paired Samples t-test showed a significant difference between the pre-test and post-test, where the value of Sig.

(2-tailed) < 0.005 (0.000 < 0.05). Furthermore, the Independent Samples t-test from the table shows that there is a significant difference where the Sig. (2-tailed) < 0.005 (0.000 < 0.05).

The outcomes of two significant statistical tests are shown in Table 3. First, the Paired Samples t-test showed a significant difference between the pre-test and post-test results, where the value of Sig. (2-tailed) < 0.005 (0.000 < 0.05).

Additionally, the Independent Samples t-test from the table showed a significant difference, where the Sig. (2-tailed) < 0.005 (0.004 < 0.05). The results suggest strong evidence for significant differences in the respective comparisons.

Table 2. Comparative analysis with groups and between groups' motor competence

	SE in PE	PE	t	p**
Motor Competence				
Pre	61.45 (3.58)	60.67 (0.349)		
Post	80.78 (3.97)	76.54 (4.39)	5.035	0.000
t	-30.78	-22.03	5.041	0.000
p*	0.000	0.000		

Mean (standard deviation); SE in PE=SE integration class in PE learning; PE=Class PE learning non-integration; t=score t-test; p*=Paired t-test; p**=Independent t-test.

Table 3. Comparative analysis of groups and between groups' satisfaction

	SE in PE	PE	t	P**
Satisfaction				
Pre	91.06 (9.64)	89.98 (12.62)		
Post	108.22 (11.85)	102.38 (16.3)	2.036	0.044
t	16.93	8.1	2.042	0.044
P*	0.000	0.000		

Mean (standard deviation); SE in PE=SE integration class in PE learning; PE=Class PE learning non-integration; t=score t-test; p*=Paired t-test; p**=Independent t-test.

DISCUSSION

Differences in the effect of integration of SE in learning with integration of SE outside of PE learning on students' movement skills. During PE learning, students get a significant impact directly from physical activity, the influence experienced during learning activities, and training with social support on SE. From the results of the group data analysis, SE integration classes both in learning and outside PE learning influence improving students' movement skills. It's important to note that movement skills are not acquired naturally and must be taught (32). Differences in various factors, such as teachers, learning environment, and exposure to free play can also affect the level of development of motor skills (33).

Based on the output of the Paired Samples t-test statistical test, it shows that there is a significant difference in the results of the pre-test and post-test where the value of Sig. (2-tailed) < 0.005 (0.000 < 0.05). Furthermore, the output of the Independent Samples t-test statistical test from the table shows that there is a significant difference where the Sig. (2-tailed) < 0.005 (0.000 < 0.05). In PE classes, the process of learning motor skills focuses on exploring and practicing actions and movement

patterns. One important factor that can influence the learning of motor skills is feedback. Feedback has been defined as actions taken by agents (e.g. Teachers and students) to convey information about one or more aspects of student performance (34), and has different impacts on the two groups' integration of SE in learning PE. Cognitive Social Theory is one of the most commonly used theories in the promotion of physical activity among this group (35). Cognitive social theory suggests a reciprocal relationship between personal and environmental factors; in other words, behavior influences and is influenced by personal factors and environmental factors. SE, which refers to one's belief (self-confidence) in one's ability to engage in a behavior (36), is a key construct of Social Cognitive Theory SE has been consistently found to predict behavior in various populations and health behaviors (37-39).

From the view above, the interventions carried out in PE learning through integrating SE inside and outside learning will make a difference in students' basic movement skills. This condition is predicted to be caused by an emphasis on integrating SE classes in learning that has more of an impact on positive changes in student behavior in learning. This change will

appear in students' intrinsic motivation to follow the lesson.

Differences in the effect of integration of SE in learning with integration of SE outside of PE learning on students' sports satisfaction. Positive SE is an important resource for addressing requirements and successful learning, therefore there is a relationship between perceived competency satisfaction in the PE context and PE-related SE. SE has also been shown to predict learning performance in learning tasks (40) and relates to student engagement, learning strategies, and academic performance (41). In addition, PE teachers' perceptions of concern can be negatively and positively related to PE-related SE. This is because the teacher and his teaching style can be associated with a decisive role in supporting the satisfaction of students' needs in the classroom.

Based on the output of the Paired Samples t-test statistical test, it shows that there is a significant difference in the results of the pre-test and post-test where the value of Sig. (2-tailed) < 0.005 (0.000 < 0.05). Furthermore, the output of the Independent Samples t-test statistical test from the table shows that there is a significant difference where the Sig. (2-tailed) < 0.005 (0.004 < 0.05). In learning PE at school, students experience very exciting experiences. What's more, teacher perceptions and student interest are two factors that correlate strongly with the three aspects of learning. Our research shows that students value their instructors' expertise and their ability to help them learn. Perceptions of teachers' and students' interests are related to student satisfaction (42). Furthermore, the teacher's ability to communicate information about the teachers' content and affective learning is related to student perceptions of the teacher (43) and teacher engagement was also found to be related to student satisfaction (44). SE has been associated with student interest and student satisfaction in learning tasks, especially tasks that require student independence and initiative (45). In general, learning outcomes are the main focus of learning at school. Related research on learning outcomes focuses on cognition, influence, behavioral competence, motivation, and student satisfaction (46). Thus it will be seen the different effects of integrating SE in learning and outside PE learning.

CONCLUSION

The results of this study can be concluded that integrating SE content in PE learning is

very important in improving students' movement skills. Through PE, students can learn basic motion competencies to special techniques in sports. With the content of SE in PE learning, students are motivated and able to survive all the challenges that exist in learning. Through this, students are expected to be able to carry out physical activities both in PE and outside PE hours. Furthermore, creating a supportive environment, providing positive feedback, creating opportunities for success, and teaching strategies for meeting challenges can help increase individual effectiveness in PE classes and can increase your participation and physical activity outside of class. In addition, this positive learning atmosphere has an impact on student satisfaction in learning PE. These results have an indirect impact on student satisfaction. However, it is important to recognize the limitations of this study as this study only used adolescents and girls as a sample. In addition, this research was only conducted on high school students in the city of Jambi. Furthermore, it is necessary to research a wider sample both from various regions and samples of elementary and tertiary school students.

APPLICABLE REMARKS

- This program should be developed to increase the motor skill level and satisfaction of secondary school students.
- This research confirms that a well-designed SE integration program in PE learning improves the movement skills and satisfaction of high school students.

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AUTHORS' CONTRIBUTIONS

Study concept and design: Alek Oktadinata, Herman Subarjah, Komarudin, Yusuf Hidayat.

Acquisition of data: Alek Oktadinata. Analysis and interpretation of data: Alek Oktadinata. Drafting the manuscript: Alek Oktadinata, Herman Subarjah, Komarudin, Yusuf Hidayat. Critical revision of the manuscript for important intellectual content: Herman Subarjah, Komarudin, Yusuf Hidayat. Statistical analysis: Alek Oktadinata. Administrative, technical, and material

support: Alek Oktadinata. Study supervision: Herman Subarjah, Komarudin, Yusuf Hidayat.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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