

The impact of physical education on students' active lifestyles

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Abstract

The curriculum in Indonesia tends to change and has not been able to contribute significantly to changes in the learning process, especially in the active lifestyle of students. The purpose of this study is to determine the effect of Physical Education learning on active lifestyles. The design of this study is ex-post facto. The study involved high school students in Central Java in 2019. The data about Physical Education was collected by using a questionnaire to measure self-perception, motivation, and PACES (enjoyment), while the physical activity variable was measured by IPAQ (International Physical Activity Questionnaire). The results of the study indicated that the level of physical activity of students was moderate. Physical education variables as a whole were significantly related. In gender, in women, the motivational factor did not affect the level of physical activity. Whereas in men all factors in the context of physical education were not related to the level of physical activity. The conclusion of this study is physical education affects the active lifestyle of students. Factors outside physical education are more dominant in influencing male students in carrying out their physical activities. Physical education teachers must translate the curriculum into classroom learning by designing models and methods that are in accordance with the conditions of students and school facilities so that Physical Education has more impact on students' physical competences.

Keywords: *physical education, physical activity, motivation, enjoyment, self-perception.*

INTRODUCTION

One of the impacts of physical education that is most recognized by the community is the physical impact which includes: physical fitness, movement skills, and active lifestyle. But the opposite happened, the level of health of students at all levels of education was not in good condition, and the higher the level of education, the less physical activity done by students, therefore the impact is on the decreased physical fitness (Sulistiono, 2014). The emphasis is placed on improving the movement skills of physical education. The aim is to master the basic motion competencies needed to be able to play sports and participate in other

physical activities adequately ([Suherman, 2013](#)).

Active lifestyle as an advantage of physical education, characterized by participation in physical activity, an important determinant of health ([Bailey et al., 2009](#)). An active lifestyle is characterized by one's involvement in various physical activities and deliberate exercise. [Singh & Purohit \(2011\)](#) mentioned that "Physical activity is defined as "any force exerted by skeletal muscles that result in energy expenditure above resting level". In general, since 1997 WHO has stated that obesity is the largest non-communicable disease in the world, and physical activity (PA) has become the main remedy for overcoming the issue, since then the campaign to engage in active lifestyles is promoted in various countries in the world. [Hallal, Andersen, Bull, Guthold, & Haskell \(2012\)](#) mentioned, "The prevalence of physical inactivity in adults is 31.1% (95% CI is calculated), ranging from 17% (95%CI being calculated) in South-East Asia to approximately 43% in the America and the Eastern Mediterranean region. Inactivity increased with age and was higher in women and in wealthier countries".

Physical activity / PA is an easy but effective way to deal with non-communicable physical diseases such as obesity, heart disease, diabetes, and non-physical diseases such as stress, depression, and others ([Lee et al., 2012](#)). Besides, good and regular physical activity accompanied by proper rest periods can improve the ability and maintain a healthy memory of the brain ([Kato et al., 2018](#)). Active lifestyles can be known from the level of physical activity, including low, medium, or high category (Low Physical Activity, Moderate Physical Activity, Vigorous Physical Activity. Since 2002 until now publications in scientific journals on the topic of physical activity and scientific disciplines related to this matter skyrocketed ([Ding & Gebel, 2012](#)).

Physical education experts abroad said that physical education meetings at schools are still lacking to provide opportunities for children of various ages to maximize their physical activity, therefore children's involvement in physical activities outside of school needed to be supported

(Bryan & Solmon, 2007). Including the role of parents and the community. Parents who actively participate in sports activities will support their children in physical activities (Neshteruk, Nezami, Nino-Tapias, Davison, & Ward, 2017).

Much research in the field of physical education, which states that physical education is very significant as a means to build the habit of doing physical activity in children, which will continue to carry over as an adult (Kirk, 2005; Bailey, 2009; Timo, 2016; Kerr, 2018). No wonder that in developed countries special programs are called PESS (Physical Education and Sports School), such as in the United States, Austria, Britain, France, Belgium, Canada, and Australia (Dudley, Okely, Pearson, & Cotton, 2011).

How is physical education in Indonesia? The curriculum in Indonesia, which tends to change, has not been able to contribute to changes in the learning process significantly. Not to mention the results of the survey Widiyatmoko & Hudah (2017) toward 100 Physical Education teachers in the city of Semarang, revealed that the implementation of the learning plan made by some Physical Education teachers was only limited to administration, thus raising a large doubt from researchers whether there was an impact of physical education on the level of physical activity of students. Therefore, this research was conducted.

METHOD

The method used in this study is a causal-comparative method, which is to see the impact of Physical Education on students' active lifestyles. Data were collected with a questionnaire filled out by students in schools during Physical Education learning in early 2019. The population of this study was equivalent to high school students, both private and public, totaling 152 (28 male and 117 female) students taken random events from a school in Central Java.

An active lifestyle is characterized by the level of physical activity (WHO, 2008), then for physical education it is characterized by self-perception about the body/ physical, motivation to exercise, and comfort in

physical activity (Timo, Sami, Anthony, & Jarmo, 2016). So, in this study, the data were collected with four kind of questionnaires. First, the IPAQ (International Physical Activity Questionnaire) is used to measure the level or level of physical activity (Bull, Maslin, & Armstrong, 2009). IPAQ contains questions about the duration and frequency of physical activity in the past week. Students will report in a questionnaire regarding sports, play, and leisure time. The physical education context is seen from three aspects, namely students' self-perception about their bodies, comfort in physical activity during physical education, and motivation in sports. Self-perception questionnaire (Physical Self-Perception Profile) (Bryan & Solmon, 2007), to measure students' self-perceptions of their abilities in terms of physical activity in Physical Education classes. This questionnaire uses a Likert scale with five options. The Sports Motivation Scale /SMS (Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013), to measure the motivation of student involvement in the form of physical activity in sports outside of Physical Education learning to consist of 16 question items. Physical Activity Enjoyment Scale / PACES (Mullen et al., 2011), This questionnaire measures the level of motivation and a sense of excitement of students in physical activity in the physical education class.

IBM SPSS Statistics for Windows version 20 was used for analysis. First, data normality and descriptive statistics. Secondly, multiple regression analysis is carried out to test the perception of physical competence, autonomous motivation, and comfort in the education of PA.

RESULTS

The following is the level of student physical activity measured using the IPAQ questionnaire. Students fill in accordance to their conditions by looking at the activity in the past week (self-report). The following will be presenting the results of measurements of overall student physical activity.

Table 1. The Value of Student *Physical Activity* to IPAQ

IPAQ	Male (n=57)		Female (n=71)		Total Mean	Sig (p)
	Mean	Std.Dev	Mean	Std.Dev		
Walking MET (min/week)	2933,64	2049,41	989,59	1215,32	912,89	0,000
Moderate MET (min/week)	476,14	381,12	572,26	888,15	546,30	0.541
Vigorous MET (min/week)	1782,86	1733,96	1052,89	1494,13	1173,07	0,025
Total Physical activity MET	2933,64	2049,42	2614,79	2418,30	2632,31	0,520

Table 2. Summary of Correlation Test Results

Variable	Beta	t	Sig (all)	Male	Female
MET total			,003		
Enjoyment	-,187	-2,361	,020	,978	,007
SMS	,021	,246	,806	,934	,350
Perception	,197	2,268	,025	,111	,043
Male			,357 ^b		
Female			,003 ^b		

From table 1, it can be seen that the average level of physical activity in units of minutes per week is that there are differences in the level of physical activity between men and women are significant in the category of low activity levels (walking) and in the category of high activity levels (vigorous). The difference in the level of activity in the two levels may be a study for further research.

The coefficient shows that the perception of physical competence, motivation, and comfort in physical education is correlating positively and significantly correlated with PA (physical activity) as a whole. In general female students have a significant relationship, but not so for male students. In male students, all variables (in Physical Education) nothing related to PA (physical activity). Motivational variables did not have a significant relationship with both male and female students in PA (physical activity). In female students, physical perception and comfort or enjoyment and in physical education were positively related significantly to PA (physical activity).

DISCUSSION

The purpose of this study is to investigate the extent of the

relationship between perception of physical competence, motivation, and comfort of moving in the physical education class of high school students to PA (physical activity). The results of this study are almost similar to the results of previous cross-sectional studies conducted in various countries (Carroll, & Loumidis, 2001; McDavid, Cox, & McDonough, 2014; Seabra, et al., 2013) which examines the relationship between student motivation and level of physical activity.

Overall, the average physical activity of students is in the moderate category. The results of this study are slightly different from the results of the study (Widiyatmoko & Hadi, 2018) in the survey revealed something similar in Semarang City, namely the level of physical activity of students on average is still low, totaling only 1234.36 MET per week, and also (Danari, Mayulu, & Onibala, 2013) revealed a number of the level of physical activity of elementary school-age children in Manado city classified as low/mild, and correlated with obesity by 85.3%. It is also different from research carried out by Apriantono (2020) which stated that the level of physical activity of West Java high school students is high.

The high physical activity of students is generally influenced by factors of perception, motivation, and enjoyment (Timo et al., 2016). So, teenagers with high physical competency perceptions tend to be involved in organized sports and recreational sports and are more likely to have high physical activity. In terms of enjoyment, male feel more interested and their perceived competence in more positive ways than girls, and intrinsic motivation and goal orientation are not related to MVPA (Marmeleira, Aldeias, & Medeira da Graça, 2012). Reinforced by Agbuga, Xiang, & McBride (2018) which revealed that students have a positive attitude towards physical activities outside of school mainly because of fun, which is playing various games, and benefits from participation in physical activities.

This is in line with Perlman (2009) who applied the SEM model in the physical education class can increase student physical activity than conventional learning models in high school students. This means that the

physical education design in the form of games such as SEM and the like is more beneficial than the non-game learning design for the aspect of student activity. Different from SEM, [Dudley et al., \(2011\)](#) revealed that the most effective strategy for increasing the level of physical activity and increasing movement skills in physical education was the method of teaching direct instruction. Thus, the enjoyment factor that affects the level of physical activity of students can be maximized by the physical education teacher by designing models and learning methods so that students are challenged to move actively.

[Kerr et al. \(2018\)](#) stated that physical education is able to increase the physical activity of students with high intensity, compared to days without learning physical education. When reviewed in the national physical education curriculum, the comparison of *learning outcomes* as stated in the competency only 35% physical dimensions and 65% non-physical, although, in reality, the physical dimension remains dominant when learning ([Apriantono, 2020](#)). Coupled with the latest 2013 curriculum with a scientific approach, even though there have been no empirical results, there is an assumption that physical competency has not changed much.

[Neshteruk et al \(2010\)](#) reviewed 667 research results from 2009-2015 related to parent relationships and the level of physical activity of children, and stated that 52% there was a significant relationship of parents, especially fathers, to the level of physical activity of their children. The results of these studies can explain a little as to why in male the level of physical activity is not influenced by physical education at school. Besides, social environmental factors also affect exercise habits and physical activity levels ([Mötteli & Dohle, 2017](#)).

CONCLUSION

This research shows that physical education in general does have a positive impact on students' active lifestyles. Physical education teachers need to translate the curriculum into learning in the classroom by designing models and methods that are appropriate to the conditions of

students and school facilities. This study still has limitations, namely, the number of samples is too small and the need for longitudinal research or qualitative data collection to make it more clear about the important role of physical education in promoting the active lifestyle of students.

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