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Physical Fitness Analysis of The High-Grade Primary School Students in The District of Aceh Besar

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Abstract

Physical fitness is closely related to the students' daily health because it is a person's ability to perform activities or work without experiencing significant physical fatigue. Physical fitness is closely related to human activities in conducting physical activities either on purpose or unintentionally. The more the students involve the body to move, the better the level of their physical fitness is. The learners of the high-grade primary schools in the District of Aceh Besar have improved their physical fitness through the implementation of physical education at school and in daily physical activities together within the family and community. However, analysis of the impacts of such physical fitness is still minimal. This study aims to determine the physical fitness level of the high-grade students of the primary schools in the District of Aceh Besar. The method of study was a field measurement test with the Indonesia Physical Fitness Test (IPFT) instrument. The samples in this study were high-grade students of the Primary Schools in Aceh Besar District in 2015 totaling 81 students from three different areas: advanced, developing and underdeveloped. The data were analyzed using descriptive statistics to calculate the mean and percentage. The data analysis resulted in the following conclusions: The average physical fitness of the high-grade students of the primary schools in Aceh Besar District are in the poor category, while the classification is: very good category (2.46%), good category (4.93%), average category (51.85), poor category (32.09%), and very poor category (9.87%). Based on the results, physical activities packaged in physical education should be intensified both at school and outside of school hours and is assessed continually.

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INTRODUCTION

Physical fitness activity is a physical activity that is inseparable from people's daily life because of all everyday activities such as walking, running, throwing and jumping that are a form of physical activities as the implementation of exercises that can improve physical fitness. Physical fitness will bring positive impact on a person's performance at work. Essentially, physical fitness is a condition that reflects a person's performance of productive tasks without experiencing significant physical fatigue. Physical fitness includes not only the physical aspects but also the mental, social and emotional ones in order to achieve overall or total fitness. Physical fitness is a person's ability to carry out daily tasks without experiencing meaningful fatigue; he/she still has reserve power to implement activities, supervision, and development of physical activities as a process of learning through physical activities designed to enhance their physical fitness, develop their motor skills, knowledge, health and active behavior, and good sportsmanship. Besides, physical education, sports, and health is an attempt to influence the growth and development of the students towards a healthy life in the physical and mental form. Such effort is an activity that is scientifically, directly, and systematically programmed and is compiled by a competent educational institution.

Physical education is taught to the students aiming to help them and understand why humans move and how to move safely, effectively, and efficiently to achieve physical fitness. Physical fitness is the ability to conduct work or activities without experiencing significant or excessive fatigue. Physical fitness is very closely related to human activities in doing the job well and moving. Mutohir and Gusril (2007: 51) state, "physical fitness is the ability of the body to conduct activities without experiencing significant fatigue". From this statement, it is clear that physical fitness is one of the necessities of human life that should be available and is pursued for its real existence. In addition, physical fitness is also capable of describing how frequently a person is engaged in or conducts physical activities (Cale & Harris, 2009).

Learning activities require high level of physical fitness. Without physical fitness, a person will be weak, lack of spirit, or even becomes lethargic and limp. In attending teaching and learning activities the students should be prepared to have sufficient energy because during learning they have to continually engage the brain more to coordinate the sensory involvement while learning. A situation like this would be faster and spend a lot of energy. A person who has a better level of physical fitness will have the ability to work more to take part in learning activities throughout the day. As we know, every school has the physical education, sports, and health subject and the students are required to attend such a subject as one of the efforts to maintain health and improve the level of physical fitness because the degree of health and physical fitness determines whether or not they are ready to meet the needs of conducting motion. Such needs can be fulfilled by a variety of daily activities including physical education, sports, and health activities.

In 2016 the District of Aceh Besar is a District in the province of Aceh that has 205 primary schools spread out in 23 sub-districts with 2,608 students in the high-grade classes. The Forum Group Discussion of the physical education teachers focused how the existence of the physical fitness of the primary school students is and what instrument is appropriate and efficient to treat the learners aged 9 to 12 years who are in high-grade classes.

To break the constraints faced by students, itmproi is necessary to think about and do some action leading to the policy of improving the students' physical activities both during and beyond school hours both in school sports clubs and in community sports clubs and centralized sports organizations. All such efforts require physical fitness tests for high-grade learners of the primary schools and think of a

physical fitness test instrument that can provide the right information quickly and easily. The goal of this study was to determine the average and classification of physical fitness of the high-grade learners in Aceh Besar District in 2016.

Physical fitness is the ability to undertake job without experiencing significant physical fatigue. Physical fitness is very closely related to human activities in doing the job as well as motion. In addition, it also serves to improve anyone's performance, so that he/she can carry out his/her duties optimally to obtain the better results. Physical fitness required by a child is different from the one needed by adults and the level of need is even very personal. The success of achieving the physical fitness is determined by the elements of physical fitness, while the components of physical fitness include strength, endurance, explosive power, flexibility, speed, agility, balance, accuracy, reactions, and coordination. The development of all the sequential elements depends on the desired goal. According to Lycholat (1987: 13), "the components of physical fitness are grouped into two categories, namely, components related to health (Health Related Fitness) including muscle endurance, muscles strength, flexibility, body composition; (2) skill components related to skills including agility, balance, coordination, speed, energy/power, and reaction time". The very important component of physical fitness is the cardio-respiratory endurance; it is this endurance that becomes the source of energy to conduct any activity in daily life.

The weaknesses of the cardio-respiratory endurance cause a person not to be capable of performing strenuous activities because it is easy to experience exhaustiveness. Every activity in everyday life should consider the cardio-respiratory endurance in advance to avoid a fatal injury. Physical activity should be programmed and conducted in accordance with the principles of exercise. Therefore, it will obtain significant benefits for the body, especially the quality of cardiorespiratory endurance. A person who is said to possess good physical fitness is a person who has the ability to carry out daily tasks easily and in a simple manner, without feeling tired excessively or in other words, do not get tired of doing the activity and after work they still have a reserve force ready for use at any time.

By comprehending the components of physical fitness coupled with exercise, it is possible for everyone to maintain or increase the quality of life which functions to develop the ability to be useful to enhance his/her power. Functions can be divided into two categories, namely, (a) general function and (b) specific function. General function is implemented to develop the strength and ability, creativity and endurance of each person that is useful for increasing the capacity to work in nation building. The special function for learners is employed for the growth and development as well as improvement of learning achievement supported by his/her physical abilities in performing everyday tasks. In addition, based on the findings supported by empirical data physical fitness really has a positive impact in improving the students learning ability regardless their cultural background (Wang, K. & Peng, W.: 2012).

Physical fitness can be maintained and improved by doing exercises such as jogging, sprinting, swimming, cycling, mountain climbing or interval training. Such activities are carried out regularly and well structured paying attention to the system of bodywork. Exercise is the most appropriate means to be used as a tool to improve physical fitness. Implanting the habit of doing regular exercise in children, adolescents, and adults are the most effective strategy in improving their physical fitness and preventing chronic diseases in the future (Ganna, I, & Zanneta, K. 2016).

Among the various sports activities, one example of a sport that can be used as a means of improving physical fitness is swimming which very good for the students because the movements in swimming require all parts of the body to move so that many people choose one type of this aquatic activity as an alternative to fulfill the needs of sufficient motion for the learners to support their growth and development as well as for their physical fitness. However, before doing exercise, we should

understand some principles of exercise. There are a number of aspects that must be considered and planned in preparing the training program for better physical fitness and health. The achievement of health includes 1. frequency of exercise, 2. intensity of exercise, 3. duration of exercise. The frequency of exercise refers to how many times a week someone is doing exercises so as to give effect to the body. Research conducted so far shows the exercise at least 3 times a week is better carried out on different days. The intensity of exercise means the height of exercise intensity performed as it is characterized by rising reactions of the heartbeat, heart rate ranging between 60-80% of the maximum heart rate. The duration of exercise means how long it will take for the exercise. Research shows, the duration of time required for exercise is between 20-30 minutes.

METHODS

This research is classified as a descriptive study, that is, a study which focuses on solving the problems that arise in the present moment implementing test and measurement techniques. The population was all students who were in the high-grade of primary schools in the District of Aceh Besar amounting to 2,460 students spread in schools throughout the advanced, developing, and underdeveloped regions. The samples for this study consisted of a limited number of population representing the group numbering 81 students drawn from three primary schools in Aceh Besar District employing a random sampling technique. The research data were obtained by considering the assessment components of the Indonesia Physical Fitness Test (IPFT) which consists of 40-meter sprint test, pull up, 30-second sit-up, vertical jump, and 600-meter sprint (2003: 6).

The 30-meter sprint test was implemented with a kick-up starter, the participants were standing behind the starting line, then doing the motion in accordance with the instructions. At the command "Ready" the participants took a stand start up and were ready to run. On the cue "Yes" the participants ran as fast as possible towards the finish line, at a distance of 30 meters. This activity was repeated if the runners started running earlier, did not cross the finish line, were disturbed by another runner. The time measured was the span from the moment the flag raised to the moment the runners crossed the finish line. The recorded results were the time achieved by the runners to cover the distance of 60 meters in units of a second. The pull-up test in units of time for females was conducted by the students performing motion starting from the beginning of the testee's being under a single bar, both hands gripping a shoulder-width single bolt, the palm grip facing the testee's head. After that, they did repulsion movement with the help of both feet, jumped to rely on the bending elbows, the chin was above the single bar; that position was maintained as long as possible.

The the 30-second sit-up test was carried out by the testees performing lying position on their back on the floor, knees bent at 90 degrees, the fingers of both hands were alternately placed at the back of the head. The testees started to move on the cue "yes", then they moved to sitting position so that both elbows touchied the thighs and then back to the beginning position. This motion was repeated quickly without a break for 60 seconds.

The the vertical jump test was carried out by the testees firstly doing a starter position, their fingertips firstly smeared with lime powder or magnesium carbonate. The testees stood upright close to the scale board, both feet closed altogether. The scale board was on the left or right side of the testees. Then, the hand close to scale board was lifted straight up, the fingertips smeared with magnesium carbonate was placed on the scale board so as to leave a mark and show a figure. Then the testees took the square off motion by bending both knees while swinging their arms backward. After that, the testees jumped as high as possible while bending the scale board with the closest fingers to leave a mark and show figures. Repeat these steps up to three times continuously.

The implementation of the 600-meter sprint test was the testees were firstly in a start

position behind the start line. Then, at the cue "Ready" they got ready to start by standing behind the start line, ready to sprint. On the cue "Yes" the testees run as fast as possible to the finish line at a distance of 600 meters. The results of the implementation of physical fitness tests were then evaluated by converting the obtained values to the values in the assessment list of physical fitness tests and norms of Indonesia such as presented in the following tables.

Table 1. The norm assessment of the IPFT test for male students aged 6 - 11 years.

No	30-meter sprint	Pull up	30-secondSit up	Vertical jump	600-meter sprint	Score
1	Up to – 5.5	40 - above	17 = above	38 - above	Up to – 2,39	5
2	5.6 – 6.1	22 – 39	13 – 16	30 – 37	2,40 – 3,00	4
3	6.2 – 6.9	9 – 21	7 – 12	22 – 29	3,01 – 3,45	3
4	7.0 – 8.5	3 – 8	2 – 6	13 – 21	3,46 – 4,48	2
5	8.7 – and above	0 – 2	0 – 1	12 – and above	4,49 – and above	1

Source: The Center of Physical Quality Development, the National Education Department (2003:25)

Table 2. The norm assessment of the IPFT test for female students aged 6 - 11 years.

No	30-meter sprint	Pull up	30-secondSit up	Vertical jump	600-meter sprint	Score
1	Up to – 5.8	33 and above	15 and above	38 and above	Up to – 2,53	5
2	5.9 – 6.6	18 – 32	11 – 14	29 – 37	2,54 – 3,23	4
3	6.7 – 7.8	9 – 17	4 – 10	22 – 28	3,24 – 4,08	3
4	7.9 – 9.2	3 – 8	2 – 3	13 – 21	4,00 – 5,03	2
5	9.3– and above	0 – 2	0 – 1	1 – 12	5,04– and above	1

Source: The Center of Physical Quality Development, the National Education Department (2003:25)

Table 3. The norm classification of the Indonesia Physical Fitness Test for male and female students.

No	Total Score	Category
1	22-25	Very Good (BS)
2	18-21	Good (B)
3	14-47	Average (S)
4	10-13	Poor (K)
5	5-9	Very Poor (KS)

Source: The Center of Physical Quality Development, the National Education Department (2003)

RESULTS AND DISCUSSION

The results of the research that have been conducted evolving the high-grade learners of the primary school in the District of Aceh Besar in 2016 were subsequently tabulated and analyzed by calculating the average value as follows. The calculation of the average for the high-grade students in the Lamreng public primary school in Aceh Besar District is as follows.

$$M = \frac{\sum x}{n}$$
$$= \frac{363}{31}$$
$$= 11.71$$

The average of the high-grade students' physical fitness in SD Negeri Indrapuri in the District of Aceh Besar is as follows.

$$M = \frac{\sum x}{n}$$
$$= \frac{239}{18}$$
$$= 13.28$$

The average of the physical fitness among the high-grade students in SD Negeri Pekan Bada in the District of Aceh Besar is as follows.

$$M = \frac{\sum x}{n}$$
$$= \frac{468}{32}$$
$$= 14.63$$

Based on the calculation above, it can be stated that the average value of the physical fitness of the high-grade students in each primary school as shown the table below.

Table 4. The average scores and categories of the fitness among the high-grade students of primary schools in the District of Aceh Besar in 2016.

No	School name	Result	Average	Category
1	SD Negeri Lamreng	363	11.71	Poor
2	SD Negeri 1 Indrapuri	239	13.28	Poor
3	SD Negeri Pekan Bada	468	14.63	Average
Total		1070	13.20	Poor

The above table shows that the average value of physical fitness of the high-grade students of the primary schools located in advanced areas is 11.71, the value is in the category of poor and the value in the developing area is in the category of poor with the total amount of 13.28, with the poor category. In the underdeveloped area, the value was 14.63 with the average category. These values show that the learners who are in advanced or urban areas and in the developing areas possess a poorer fitness compared to those who are in the underdeveloped areas. The main difference in the physical fitness values of the students in the advanced, developing, and underdeveloped areas are that in advanced and developing areas the learners do not get involved physical activities and sports.

The learners only do physical activities once a week during the physical education, sports, and health school hours. This is clearly an insufficient dose of exercise that must be done within one week. Should someone has to do physical activities or exercises 3 to 5 times a week for health and physical fitness goals. This is in accordance with the opinion of Allana G LeBlanc (2010) that "physical activities performed must be dominant in aerobic activities and are intended to increase muscle and bone quality. Aerobic Activities carried out at least three times a week is intended to strengthen the muscles and bones". The Primary School Pekan Bada is an primary school in the countryside with a background of traditional life, both as farmers and fishermen because they live in the coastal and mountainous areas. The average value and percentage classification level of physical fitness of the high-grade students in the primary schools in Aceh Besar District as follows.

$$M = \frac{\sum x}{n}$$
$$= \frac{1070}{81}$$
$$= 13.20$$

The categorical percentage of the physical fitness level of the high-grade students in each of

the primary school in the District of Aceh Besar is presented in the following table.

Table 5. Categorical percentage of the high-grade students' physical fitness in the District of Aceh Besar in 2016.

NO	Category	SD LAMRENG %	SD INDRAPURI %	SD PEKAN BADA %
1	Very Good		-	-
2	Good	6.45	-	6.25
3	Average	29.03	55.56	68.75
4	Poor	38.71	33.33	25.00
5	Very Poor	25.81	11.11	-
Total		100.00	100.00	100.00

According to the table above, there are only 6.45% of the public primary school students in Lamreng Aceh Besar who are in the good category, 29.03% in the average category, 38.70% in the poor category, and 25.80% in the very poor category. The Lamreng Primary School is located in the most advanced area among the sampled schools. The learners' economic background is above average. Transportation, telecommunications, electronic equipment seems to cause them to limit their motion. The community and peers in social life also limit themselves to become involved in motion. Furthermore, as expressed by (Vedrana, 2016), "educational activities report overall physical activities conducted every minute by Slovenian children and youth with maximum activities. However, further research is needed to investigate influences that determine the effects of family life, the influence of peers, and the built environment on the behavior of active playing ".

The classification of physical fitness of the students in SDN Indrapuri in Aceh Besar District is as follows. 55.56% or more half of the students are categorized average, 33.33% poor, and 11.11% very poor. Meanwhile, the physical fitness of the students in Pekan Bada Primary School in Aceh Besar District is as follows. 6.25% are categorized good, 68.75% average, and only 25.00% poor. It shows that the level of physical fitness among them is better than that of the learners who are in the advanced and developing areas. This is due to the fact that children in villages are playing more frequently with other children; they develop the ability to understand the feelings, ideas, and needs of others as the foundation of social skills. Piaget also found that playing starts from him/herself then continues cooperatively with other students showing the development of social and intellectual aspects, and they are not aware of the physical fitness components they train.

The development of physical fitness at Primary School is implemented in a wide variety of physical activities. One of these efforts is through playing activity. Game activity is a form of physical activity for the formation of physical fitness at Primary School in particular in teaching physical education sport and health. This is basically the element firmly attached to the child's life because in everyday life they develop themselves based on their involvement in games and other sports activities either consciously or unconsciously. In childhood, playing is an integral part of life and is inclined as the essential basic need for almost all of their life. Furthermore, the percentage of the classification level of physical fitness of the high-grade students of the primary school in Aceh Besar District is presented in the table below.

Tabel 6. Percentage of the classification of high-grade students's physical fitness in the District of Aceh Besar in the 2016.

No	Category	Percentage (%)	Notes
1	Good	4.93	-
2	Average	51.11	-
3	Poor	32.34	-
4	Very poor	12.30	-

Based on the physical fitness analysis of the high-grade students of the primary school in the District of Aceh Besar 2016, it was shown that the levels of physical fitness are as follows. Only 4.93% are in the category of good, 51.11% in the category of average, 32.34% in the category of poor, and 12.30% in the category of very poor. The results illustrate that the students' physical activity at school and beyond is very poor because a person's physical fitness can only be improved by involving the body in motion, both physical activity in the physical education, sports, and health lesson at school during school hours and extracurricular sports or sporting activities carried out in play groups at the time in the community. In addition, the culture and habits of life that always demands people's involvement in motion activities as the fulfillment of life necessity is very influential on the quality of physical fitness. Colin Boreham & Chris Riddoch (2010: 915-929) describes "a health guideline has shown that children should spare 60 minutes time for moderate-intensity of physical activity every day, equipped with a form of activities for agility, flexibility, strength and bone strength".

People do various activities related to the sports because they want to maintain a physical fitness. Sports can be useful to improve health. For example, people who are accustomed to doing exercise regularly will have better fitness levels than those who are not used to exercising. Good physical fitness shows the person's health status because health is something very precious that must be maintained in order to continue to survive in this world. Health is important because it can not be bought with money, and health will indirectly describe the degree of one's physical fitness. Therefore, every individual must always maintain health. One way to maintain health is to exercise regularly. One aspect to maintain the health of a person's body is through physical fitness that has a positive effect on health by reducing the risk of disease and improving the quality of life (Syed, I., Abdul, H., Kaukab, A. & Hassan, M, 2013). Besides sports, a healthy lifestyle can also affect a person's health. Sport is an activity undertaken in a way that gives sufficient burden to the heart.

Physical fitness is a physical condition that affects physical activities. With good physical fitness, one can do a variety of activities without experiencing excessive fatigue. In addition, physical fitness can develop a level of ability and the ability of every human is useful in enhancing their power, thus physical fitness can function to increase productivity for adults, and for children physical fitness functions to maintain and increase their endurance. Given the importance of physical fitness in daily life, it is necessary to consider the components of physical fitness. According to Thompson in Ria Lumitarsono (2007: 54), " In addition to medical health, the elements of physical fitness include the bio-motor ability or physical condition. There are five basic elements of physical conditions, namely: speed, strength, endurance, coordination, and flexibility."

Sporting activities often require the complex needs and interrelations between one and the other. So, there is an interaction between the elements of physical conditions such as power, speed endurance, strength endurance, and other physical elements. Physical fitness also serves to improve the function of body organs, the social emotion, sportsmanship, and spirit of competition for children. In this case, Sajoto (1995: 122) states that "Both at rest and in motion, the body is highly dependent on food substances. Good and

adequate nutrition is useful for the purposes of the body's metabolism and sufficient energy". Primary school is an institution in charge of preparing the students to become people who possess the knowledge, good attitudes, and skills which are in accordance with their growth. In order to achieve these objectives, the students need to be taught both general subjects and physical education so that they have the knowledge, ability, patience, and interest for sports and health activities to enhance the growth and development of the physical, mental, emotional, and social life harmoniously and optimally to increase their healthy life as reflected in everyday life either for themselves, society, and the environment (Carlos, M, Daniel, A, & Mario, C.2012).

Physical education is a good attempt to improve physical fitness that is implemented in schools because in their daily life the students barely have a special time to do physical activities to maintain their physical fitness beyond school time. High-grade students of the primary school are learners aged between 9-12 years. This period is characterized by rapid social development. The period of primary school age is a period of late childhood lasts from age six until approximately the age of eleven or twelve years old. The main characteristic of primary school students is showing individual differences in many aspects and fields, among other things, differences in intelligence, cognition and language abilities, personality development, and physical development. According to Erikson, during the psychosocial development at age six until puberty children begin to enter the world of knowledge and work worldwide. An important event at this stage is that the children start schooling, they start to be confronted with the communal technology in addition to their learning process that not only happens at school. Primary school children are individuals who are growing. Perhaps there is no longer doubt with their courage. Every primary school child is in physical and mental changes that lead to better conditions. Their behavior in the face of the social and non-social environment increase causing them to become more aggressive in doing physical activities which will further influence their level of physical fitness.

The District of Aceh Besar which is naturally located in a mountainous area should be advantageous because of a lot of activities related to the state of nature and its oxygen content. The oxygen level in mountain areas is usually thinner than that in the lowlands. The higher the mountain areas are the thinner the level of oxygen contained in the atmosphere. As proposed by Habibudin (2009: 71), "getting to the higher places to stay and farther away from the surface of the sea, the level of oxygen in the atmosphere would be lower". In addition, the air temperature in the mountainous areas is in the normal category but the humidity level is quite high, in contrast to the lowlands that have warmer temperatures and low humidity. That condition will affect the physical activity.

The lower oxygen level causes higher hemoglobin level so that the body can adapt to natural conditions. Habibudin (2009: 17) argues that "the production of red blood cells increases when people residing in a high area". The blood hemoglobin level is closely linked to altitude; the higher the level of hemoglobin in the blood will lead to the distribution of oxygen in the body that is more effective and efficient so that the level of a person's hemoglobin becomes higher. Research results show that students who live in the highlands have better physical fitness than those who live in the lowlands. This is because students who generally live in the highlands always use their physical activity in performing everyday tasks. This is actually supported by the background of work of the majority of people who live in the highlands namely as farmers and ranchers. Students who live in the highlands work in farming and animal husbandry to help their parents.

The research results show that students who live in the highlands have better physical fitness than those who live in the lowlands. The physical education learning performed in primary schools should encourage the students to engage in activities that can improve their physical fitness because people who have good

physical fitness will be more skilled and agile in performing a variety of jobs, especially those who are still studying. Regular physical activities can lead to the improvement of physical fitness. Physical fitness is enhanced with a variety of physical activities that are accidental or unplanned earlier and one of them is the implementation of physical education at school either as curricular, co-curricular, or extra-curricular activities.

CONCLUSIONS

From the research and data analysis on the physical fitness of the high-grade students of Primary Schools in the District of Aceh Besar in 2016, it can be concluded that the average level of the high-grade students' physical fitness in the primary schools in Aceh Besar District is in the poor category with a total value of 13.24. This was obtained from each school representing the advanced region, developing region, and underdeveloped region, while the percentage of the high-grade learners' physical fitness levels in the primary schools in the District of Aceh Besar are: 4.93% good category, 51.11% average category, 32.34% poor category, and 12.30% very poor category. The good physical fitness of the high-grade students in the District of Aceh Besar is affected by environmental factors and geographical location; some schools are located on the hills and along the seashore. In the implementation of the physical activity, the measurement of physical fitness employing the Indonesia physical fitness test is considered still facing many obstacles so that the students feel scared and bored to do so.

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REFERENCES

Arikunto, S. 2010. *Prosedur Penelitian.* Edisi Revisi. Cetakan Ke-14. Jakarta: Rineka Cipta.

Carlos, M., Daniel, A., & Mario, C. 2012. *Physical fitness in prepubescent children: an update.*JPES 12 (4), Art 66.

Colin Boreham &Chris Riddoch, 2010. The physical activity, fitness and health of children. *Journal of Sports Sciences*, pp.915-929.

Ghanna, I., Zanneta, K., Ollena, K., & Viktor, K. 2016. Impact of the combined use of health-improving fitness methods ("Pilates" and "Bodyflex") on the level of functional and psychophysiological capabilities of students.JPES.16 (1), Art 37.

Irianto, Djoko Pekik. 2007. *Panduan Gizi Lengkap Keluarga dan Olahraga.*C.V ANDI OFFSET.

Janssen, L and LeBlanc, Allana G. 2010.Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity,* 7:40.

Manual. 1990. *Daya Tahan Tubuh*. Jakarta: Bina Rupa Aksara.

Mutohir, Toho Cholik dan Gusril. 2004. *Perkembangan Motorik Pada Anak-Anak*. Padang: Dirjen Olahraga Departemen Pendidikan Nasional.

Ria Lumitarsono, L. 2007. *Teori Kepelatihan Dasar.* Jakarta: LANKOR

Syed, I., Abdul, H., Kaukab, A., & Hassan, M. 2013. The effect of physical education program on the physical fitness levels of thorientation students of King Fahd University of Petroleum and Minerals. JPES, 13 (2), Art 34.

Sajoto M. 1995. *Peningkatan Dan Pembinaan Kekuatan Kondisi Fisik Dalam Olahraga*, Semarang: Dahara Prize

Wang, K., Wang, P, S., & Huang, Y. C.2012. Physical Fitness and Academic Achievement of Elementary School

Students: a cross-sectional survey in Southern Taiwan. *JPES*, 12(3), Art 45.

Vedrana, 2016. Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health* 13(11): S189-S194 **doi:** http://dx.doi.org/10.1123/jpah.2016-0296.