

Self-Assessment Of Physical Fitness Based On Technology

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Abstract: *Physical fitness is the capacity of your body's systems to cooperate effectively, enabling you to maintain good health and carry out regular tasks. Being effective implies carrying out everyday tasks with the least amount of effort. A healthy individual has the capacity to complete their job at school and at home while still having the stamina to participate in sports and other leisure activities. A physically healthy individual can do everyday tasks like raking leaves at home, stocking shelves at a part-time job, and marching in the school band with ease. A fit individual may react to emergencies by sprinting for assistance or helping a buddy who is in need. Usually at school or on campus to measure physical fitness levels using the TKJI instrument. The main aim of this research is to analyze students' fitness levels, analyze the use of technology for self-assessment of physical fitness. The research included a total of 54 adolescents aged 16 to 18 years. Of which 15 were boys and 39 were girls in MA Bilingual Muslimat NU sidoarjo grade 12. Participants underwent an independent physical fitness test as part of school-based physical education. The test is adopted from the "TKJI" module which is assisted using several web and smartphone based applications. some of these applications include Stopwatch, FBI Fit Test, Map runner. Based on the results of data analysis, in general, the physical fitness level of 12th grade MA Bilingual Muslimat NU students is still low with average scor is 12.46. with details of 4% "very poor", 63% "poor", 29% "medium", 4% "good", and none "very good. Based on the analysis and interpretation of the data that has been described, the following conclusions can be formulated. Firstly, the physical fitness level of MA Bilingual Muslimat NU Sidoarjo students for the 2020-2021 academic year is in the poor category. Second, using the application to measure physical fitness independently can be done with the help of tutorials in the form of videos and worksheets.*

Keywords—physical fitness, technology, hihghschool, tkji

1. INTRODUCTION

Physical fitness is the capacity of your body's systems to cooperate effectively, enabling you to maintain good health and carry out regular tasks. Being effective implies carrying out everyday tasks with the least amount of effort. A healthy individual has the capacity to complete their job at school and at home while still having the stamina to participate in sports and other leisure activities. A physically healthy individual can do everyday tasks like raking leaves at home, stocking shelves at a part-time job, and marching in the school band with ease. A fit individual may react to emergencies by sprinting for assistance or helping a buddy who is in need [1].

Adolescents who are still at school must have good physical fitness so they don't get sick easily, which can affect

their academic and other achievements. Apart from that, teenagers also have to get used to a healthy lifestyle for a better future. Adolescents who are physically unhealthy do not necessarily indicate poorer health conditions, but in the future these individuals may be exposed to various lifestyle diseases [2].

We take advantage of many technological advances to make our daily work easier, making us tend to be lazy about moving, which ultimately has an impact on our body fitness. There is a downward trend in physical fitness according to from 2007 to 2017, there have been several statistically significant changes in the fitness levels of Canadian adults. In general, the research also shows a downward trend in physical fitness for children and adolescents as well.

For this reason, Adolescents need to know their physical fitness level so they can take the necessary steps to increase or maintain their physical fitness level. This is in line with the aim of physical education in schools that students can become physically literate person (Salinan SK Kabadan tentang Perubahan SK 008 tentang Perubahan Capaian Pembelajaran).

Usually at school or on campus to measure physical fitness levels using the TKJI instrument. The Indonesian physical fitness test is a standard test used to measure the level of physical fitness of Indonesians. This test was created by looking at the condition of Indonesian people which is not the same as other countries. So, to fulfill the need to describe the level of physical fitness of Indonesian people, the Indonesian physical fitness test was created [3].

From an educational perspective, students should be given important information on health-oriented exercise while also having their level frequently assessed [3]. After entering school, students should learn why physical fitness is essential (particularly in connection to health), what its components are, and how to measure and analyze them. Instead of focusing solely on the outcomes, this would be counterproductive.

The best strategy for this is, according to Corbin [4], teaching self-evaluation of physical fitness. The main goal of self-assessment is for students to learn how to judge for themselves if they are physically well enough to determine their own health. As a result, kids are more motivated to engage in individually planned, regular physical exercise and reach the required level [3]. Even the most widely used test batteries, like the FITNESSGRAM, are primarily intended to instruct students in self-evaluation and to track their own levels of physical fitness [5].

The best self-assessment method for reaching educational goals is self-testing [4]. This method instructs kids to independently assess their degree of physical fitness, according to [6]. Students are taught to conduct testing (motor tests and somatic measures) on their peers in addition to themselves. The outcomes are subsequently analyzed through self-evaluation. Being the ultimate goal of physical education, self-assessment through self-testing is thus one of the important learning objectives for a physically educated individual. That person is one who is aware of the advantages of physical exercise and fitness and knows how to engage in physical activity to improve or maintain physical fitness over the course of a lifetime [7].

Studies on young people's self-evaluations of their physical fitness are scarce at the moment. We have not yet found any information about the outcomes of teenage self-testing. It is crucial to present scientific data on this topic from a health standpoint. The main aim of this research is to analyze students' fitness levels, analyze the use of technology for self-assessment of physical fitness.

2. MATERIAL AND METHODS

2.1 Participant

The research included a total of 54 adolescents aged 16 to 18 years. Of which 15 were boys and 39 were girls in MA Bilingual Muslimat NU sidoarjo grade 12.

2.2 Measurements

Participants underwent an independent physical fitness test as part of school-based physical education. The test is adopted from the "TKJI" module which is assisted using several web and smartphone based applications. some of these applications include Stopwatch, FBI Fit Test, Map runner. All of this can be downloaded on Playstore. And for vertical jump analysis, use the following link: <https://www.thehoopsgeek.com/mesa-surement-pp/>. This study included a total of four motor tests: 60 m run, sit up, vertical jump, 1200 m run, pull up.

The tutorial can be seen on the page by clicking the following link:

1. Run 60 m <https://youtu.be/Lx36aBD69r4>
2. Sit up https://youtu.be/u35Ur_AIacA
3. Vertical jump <https://youtu.be/blGwgmw0Wyc>
4. Run 1200 m <https://youtu.be/agSP261xuFE>
5. Pull up

Boy <https://youtu.be/N3kp92zH76M> Girl <https://youtu.be/7K9-f9pqr0>

2.3 Procedure

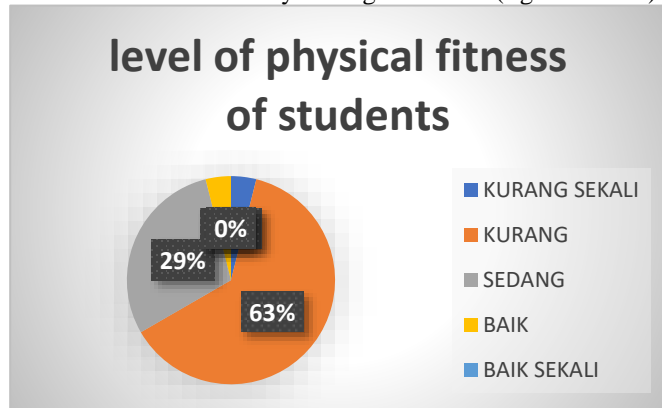
Data collection was carried out in July 2021 at MA Bilingual Muslimat NU Sidoarjo in physical education lessons. Before taking measurements students are given basic information about the research. For motivational purposes, explain the importance of physical fitness in relation to health. After that, students are given a link containing instructions for implementing the test in the form of a video tutorial for implementing each test and also an application link that must be accessed before carrying out the measurement test independently. After watching the video tutorial and downloading the required application, each student can carry out the TKJI test independently with the help of the application that has been determined. After carrying out the test items, they must be recorded on the worksheet that has been distributed (figure 1). After all the test items have been carried out and filled in on the worksheet, the worksheet is collected via e-learning.

2.4 Data Analysis

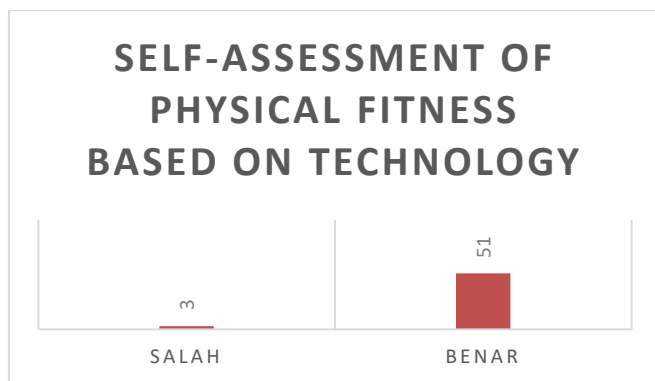
For statistical data processing we used descriptive statistics with SPSS 26. This research describes students' fitness levels and describes the use of applications for self assessment physical fitness.

3. RESULT

Based on the results of data analysis, in general, the physical fitness level of 12th grade MA Bilingual Muslimat NU students is still low with average score is 12.46. with details of 4% "very poor", 63% "poor", 29% "medium", 4% "good", and none "very good" (figure 2).



then for the use of applications to measure physical fitness independently, in general it shows that most students succeeded (51 students) and failed (3 students) figure.



4. DISCUSSION

In general, this research has proven that the physical fitness of MA Bilingual Muslimat NU Sidoarjo class 12 students for the 2020-2021 academic year is generally in the poor category. The low level of physical fitness today is a concern throughout the world. In Indonesia, nationally the level of physical fitness based on the sports development index report for 2021, 2022 is on average in the low category. In general, the involvement of the Indonesian people is still lacking and even tends to decrease from year to year in terms of active participation in physical activities/sports, this is stated in the 2021 and 2022 SDI reports of 0.328 and 0.309 respectively [8,9,10] This causes many children to be overweight at both primary and secondary school levels.

One of the way to intervene in the sedentary lifestyle that occurs nowadays, especially among teenagers due to the large amount of time spent in front of screens (cellphones and TV)

is to measure their physical fitness level periodically. Through physical education, this can be done routinely once every semester and for time efficiency, students can carry it out independently with the help of an application. This research proves that using an application to measure physical fitness independently can be done by most of the sample and only a very small number are still confused.

5. CONCLUSION

Based on the analysis and interpretation of the data that has been described, the following conclusions can be formulated. Firstly, the physical fitness level of MA Bilingual Muslimat NU Sidoarjo students for the 2020-2021 academic year is in the poor category. Second, using the application to measure physical fitness independently can be done with the help of tutorials in the form of videos and worksheets.

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