

Improving Youth Fitness

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Abstract

Fitness is an important component for humans in carrying out daily activities such as working productively and efficiently, walking, studying more enthusiastically, not being susceptible to disease, and being able to excel academically. The fitness level of teenagers is still experiencing a decline due to the impact of the pandemic. This PkM activity aims to increase teenagers' knowledge in improving fitness. The PkM method consists of situation analysis, implementation, using the lecture method, and PkM evaluation. The results of this PkM show an increase in students' knowledge about fitness by 93.84%. Meanwhile, based on the knowledge aspect of teenagers, there was the highest increase in the aspect of how to measure fitness levels with an increase of 113.80%, while based on the personal aspect of the questionnaire, the highest increase was found in question no. 8 regarding how to measure fitness levels with an average increase in score of 314.33%. Based on the results of this PkM, teenagers are advised to carry out regular exercise to improve fitness.

Keywords: Fitness, Sports, Youth

INTRODUCTION

Fitness is an important component for humans in carrying out daily activities such as working productively and efficiently, walking, studying more enthusiastically, not being susceptible to disease, and being able to excel academically. Fitness consists of physical fitness and spiritual fitness, which cannot be separated. Fitness and health are very important aspects for a student to pay attention to because many student activities require physical endurance in carrying out their duties as a student..

According to Hairy in Dinata & Afrian, (2015), Physical fitness is the ability to carry out daily tasks diligently and with full alertness, without experiencing significant fatigue and still being able to enjoy free time and face unexpected things. Fitness is classified into two categories, namely: fitness related to health and fitness related to skills (Hoeger, 1996 (Sukamti et al., 2016)). Fitness related to health includes body fat composition, flexibility, muscle strength and endurance, and cardiopulmonary endurance, while fitness is related to physical fitness skills that a group of athletes generally must have. The fitness index categories using the Harvard Step Test are as follows: Very poor, poor, sufficient, good, and very good (Yusuf, 2018).

Physical fitness for a student is very important in efforts to increase intelligence and intelligence. With a body that has good fitness, a student can study well, because studying requires good body fitness. Students can improve their competence and achieve the best conditions in the teaching and learning process if their fitness level is good so that they can improve academic achievement (Hidayat & Hartati, 2015). The factors that influence physical

fitness are as follows: (1) age, (2) heredity, (3) gender, (4) food, (5) lifestyle, and (6) exercise. Physical fitness can be improved through regular, measurable physical exercise or exercise according to the dosage.

According to the Big Indonesian Dictionary, 2018 "Student academic achievement is the result that has been achieved (from what has been done, done, etc.), a process carried out by students to obtain and achieve the desired goals or in this case namely academic grades, which followed by students during the lecture period. Learning achievement or often called academic achievement and non-academic achievement. Learning achievement is a form of evaluation of learning in higher education, in the form of assessment results in the areas of knowledge, skills, and attitudes expressed in the form of grades (Rakhman et al., 2014).

Muhammadiyah 3 Bandung Private High School is a private school under the Muhammadiyah Bandung City charity and has been accredited A, located at Jl. Bull In No. 6, Turangga, District. Lengkong, Bandung City, West Java Province. SMA Muhammadiyah 3 Bandung City has 6 classes with a total of 111 students, and 16 teachers. The student age range is 16 to 19 years which is adolescence.

Based on a preliminary study at SMA Muhammadiyah 3 Bandung City, it was stated that the impact of PPKM Covid-19 on activities both at home and at school was still felt, which caused a decrease in activity capacity compared to before the Covid-19 pandemic, therefore assistance was needed to increase fitness.

METHOD

This community service was carried out on June 14 2023 at SMA Kota Muhammadiyah 3 Bandung. This PkM was implemented in three stages, namely the first stage carried out a situation analysis regarding adolescent problems especially teenagers at SMA Muhammadiyah 3 Bandung City, the second stage implemented health education, and the third stage was an evaluation carried out by giving questionnaires before and after the implementation of health education. The pre-test and post-test results are then processed to see the differences in results between the pre-test and post-test so that the results of this PkM can be concluded. The tools used in carrying out activities are Laptop, LCD, Computer, external Mic, external Webcam, Microphone, Camera, Amplifier, Background, Banner, Flyer, Bacdrop, and questionnaire.

RESULTS

The targets for this activity were 38 SMA Muhammadiyah 3 Bandung grade 11 students. This activity was carried out on June 14 2023 with 38 participants who had filled out pre-test and post-test questionnaires. The implementation of PkM with the theme of improving fitness in teenagers begins with participants filling out the attendance list, then participants filling out a pre-test questionnaire, then health education is carried out and at the end of the activity participants fill out the post-test questionnaire..

The average score of the pre-test and post-test results can be seen in the following table

Table 1. Personal pre-test and post-test results

Question No	Average		%
	Prates	Posttest	
1	68,42	89,47	30,77
2	36,84	89,47	142,86

Question No	Average		%
	Prates	Posttest	
3	63,16	89,47	41,66
4	81,58	86,84	6,45
5	34,21	84,21	146,16
6	36,84	89,47	142,86
7	55,26	84,21	52,39
8	18,42	76,32	314,33
9	65,79	78,95	20,00
10	57,89	81,58	40,92
Average	51,84	85,00	93,84

Based on Table 1 above, students' knowledge about improving adolescent fitness in the pre-test with an average pre-test score of 51.84, while the average post-test score reached 85.00. Meanwhile, the average increase in pre-test and post-test scores was 93.83%.

This PkM questionnaire consists of a definition of fitness consisting of 3 questions, how to measure fitness consisting of 3 questions, and how to improve fitness consisting of 4 questions. The average pre-test score for the definition of fitness was 56.14, while the post-test score was 89.47 with an average score increase of 71.76%. The average score for the fitness measurement method consists of questions 5, 6, and 7 in the pre-test with an average score of 42.10, while the post-test was 85.96 with an average score increase of 113.80%. Meanwhile, the average score on the material on how to increase pre-test fitness was 55.92 and the post-test was 80.92 with an average score increase of 98.49%.

The highest increase in the average score based on each question was question number 8 regarding the correct way to measure exercise heart rate to improve fitness, with a pre-test score of 18.42 and a post-test of 76.32, increasing the average score of 314.33. %. Meanwhile, the lowest average score increase was in question number 4 regarding recreational sports with a pre-test average score of 81.58 and a post-test average score of 86.84 with an average score increase of 6.45%.

Table 2. Pre-test and Post-test Results per Respondent

No	Average		%
	Prates	Posttest	
1	51,84	85,00	93,84%

Based on Table II above, the average pre-test score per respondent was 51.84, increasing to 85.00, an increase of 93.84%.

DISCUSSION

Based on Table 1, community service activities in the form of health education regarding improving adolescent fitness for class The average knowledge value of activity participants before the health education was carried out was 51.84 points, while after the health education was carried out it increased to 85.00 points. The increase in the average score was because the

participants in health education activities were very enthusiastic and the material presented was easy to understand and suited the participants' needs.

PkM activities are considered good as can be seen from the increase in the average score of PkM participants, where there was an increase in the average score of 93.84%. Meanwhile, the average increase per sub-question increased by 89.43%. An increase in the average score both per sub-question and the average score per participant as well as the distribution of participants means that this PkM is successful and useful in being able to implement methods of increasing fitness in teenagers through sports for participants and their students. This is in line with community service activities carried out by Chen et al., (2020) regarding a program to increase knowledge about cycling which resulted in an increase in knowledge, attitudes, and actions in cycling at the Gowes Puri Bolon Indah club (Wahyuni, 2021).

The results of the pre-test and post-test on the material on how to increase fitness showed an increase of 113.80%, which was the highest increase in the pre-test and post-test scores, improving fitness with exercise by the dosage and FITT principles that could be understood by PkM participants (Sajodin;Yualita Perla, 2022) and (Sajodin et al., 2023). This is in line with the definition of health according to Law Number 36 of 2009 concerning health. The definition of health is a healthy condition both physically, mentally, spiritually, and socially which allows a person to live a productive life socially and economically (UU No. 36 tahun 2009).. Meanwhile, in terms of physiology, fitness is in static and dynamic conditions. Static health is a condition where the body's organs can function normally when at rest or rest. Meanwhile, dynamic health is a condition where the body's organs function normally when carrying out activities such as work or sports.

Fitness is the body's ability to carry out daily activities with full energy and after completing these activities still have the enthusiasm and reserve energy to enjoy free time and be ready to carry out other sudden or unexpected activities (P2PTM Kemenkes RI, 2020). One effort that can be made to improve fitness in both adults and children is by doing sports. Sport is a series of planned and regular physical movements to maintain and improve movement abilities, maintaining and improving a person's quality of life. This is in line with the mandate of the National Sports System Law Number 3 of 2005 which states that "Sport is any systematic activity to encourage, foster and develop physical, spiritual and social potential" (UU No 3 Tahun 2005).

Sport and fitness have a close relationship, where sport can be used as a health-promotive and rehabilitative effort to improve health status. Exercise as a preventative can prevent various diseases, for example, exercise can prevent coronary heart disease and metabolic disorders. Exercise is also a rehabilitative measure, for example, exercise for diabetes mellitus sufferers which function to control blood glucose levels. Exercise can stimulate increased function of the organs in the body, and if carried out in a programmed and measurable manner then in the long term the body's organs will become accustomed to carrying out heavy performance so that the body adapts as a result of the sporting activities carried out. Basic knowledge about what happens during physical training and how these changes occur is very important for coaches, coaches, sports teachers, athletes, and sports students to have. Exercise can improve the musculoskeletal system, cardiovascular system, and other systems to maintain body hemostasis (Lesmana et al., 2018). In the musculoskeletal system, exercise can increase muscle strength, and aerobic capacity, and increase muscle size (Hypertrophy). Exercise can increase the production of the following hormones: testosterone, Growth Hormone, testosterone, thyroxine,

epinephrine, glucagon, insulin, adrenaline, and endorphins, thus affecting the work of the endocrine system. In the musculoskeletal system, exercise can increase muscle strength, and aerobic capacity, and increase muscle size (Hypertrophy). Exercise can increase the production of the following hormones: testosterone, Growth Hormone, testosterone, thyroxine, epinephrine, glucagon, insulin, adrenaline, and endorphins, thus affecting the work of the endocrine system.

The benefits of doing sports can improve physical and spiritual fitness, with the correct training principles. With exercise, physical fitness can be achieved and can prevent various lifestyle-related diseases such as diabetes, hypertension, dyslipidemia, obesity, and metabolic syndrome (Adi, 2021). This is to the statement Firdaus, (2011) which states that sport can have a positive impact by improving a person's fitness and quality of life, but it can also have negative impacts such as injury, disability, and even death, in line with research Fitria, (2019) which states that there is The relationship between exercise habits and heart disease. To get the benefits, exercise must be done properly and correctly. However, people still don't know or don't care about sports or that sports must be done well and correctly to get health benefits.

CONCLUSIONS AND RECOMMENDATIONS

The community service activity with the theme of increasing youth fitness for students of SMA Muhammadiyah 3 Bandung went well and smoothly, attended by 38 participants. PkM activities using the lecture method can increase students' knowledge and ability to apply methods of increasing fitness through sports, so it is recommended to disseminate the results of this PkM to students, parents, and the community.

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APPENDIX



Figure 1. Coordination of preparations for implementing PkM.



Figure 2. Providing PkM materials



Figure 3. Awarding prizes to the best participants