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What is the Physical Fitness Level of Basketball Extracurricular Participants? Investigation of Bengkulu State Middle School 14 Students

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Abstract

The aim of this research was to determine the level of physical fitness in extracurricular participants, namely basketball. This type of research is a descriptive quantitative survey method. The population in the study was 55 people, the sampling technique used to determine the sample was purposive sampling, totaling 35 male students. The instrument used is the TKJI test for ages 13-15 years. The results obtained were that the physical fitness of basketball extracurricular participants was deficient (74.29%) with 26 students. These results can be a reference for teachers and trainers to be able to create measurable and targeted training programs and for parents to pay attention to children's nutritional patterns and daily activities. Given the significance of physical fitness for pupils, PJOK teachers in schools need to give this particular consideration while implementing in-class instruction. It will be simpler for teachers to deliver training materials or learning materials if they are physically fit, according to the conversation that has been described

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INTRODUCTION

The quality of resources is determined by physical and non-physical qualities, both of which are interrelated and influential, so they need to receive equal attention so that humans are in a good balance. As an effort to improve the quality of human resources, especially physical quality, an effort to improve good physical fitness is needed. We can improve physical fitness through coaching and developing community-based sports through development in the form of a basketball team which can be developed within the school environment. Many students are enthusiastic about developing sports from an early age which is carried out in a structured manner. A strong team is a team that has outstanding athletes who have extraordinary physical abilities when competing, especially in basketball. One way that can develop students' abilities, especially in the field of sports, is that the school has facilitated or provided a community which we often call extracurricular where the extracurricular itself is mandatory at school. With this extracurricular, students are free to choose the fields they are interested in

Basketball is a widely popular sport around the world that demands talent and physical fitness, both of which are critical for athletes (Yuan et al., 2021). It is a sport that youth frequently participate in, providing the offenders with numerous advantages (DiFiori et al., 2018). It is a sport that young people play frequently, providing the offenders with numerous advantages (Sukhiyaji & Patel, 2020). In basketball, player quickness is also crucial (Daulatabad et al., 2020; Singh et al., 2022). Because basketball is a sport that has a high tempo and is active (Mancha-Triguero et al., 2019; Setia & Winarno, 2021). Therefore, for both athletes and ordinary people, fitness is very necessary in order to achieve good health (Dwi Putri et al., 2021). Although not all sports are taught in extracurricular sports, usually extracurriculars held at schools adapt to existing facilities and infrastructure, as well as according to the needs of each school. Extracurricular activities are designed to develop skills and talents, as well as to improve students' physical fitness. Extra-curricular sports will certainly have an impact on the physical fitness of students follow him.

Physical fitness is an important indicator of a person's health status (Kapoor et al., 2022). Age is one of several elements that contribute to a person's declining level of physical fitness (Juliansyah et al., 2021), gender, body mass index (Ilsya et al., 2024) disease (Eichorn et al., 2018) and sleep quality (Lipert et al., 2021) as well as the environment and diet adopted. Several studies state that low physical fitness is the cause of the development of non-communicable diseases (Lavie et al., 2019; Lee et al., 2012) such as cardiovascular disease, diabetes and so on and is at risk of causing death (Anderson & Durstine, 2019; Nieman & Sakaguchi, 2022).Because increasing fitness can provide beneficial effects for physical endurance, it is crucial to recognize the level of physical fitness and the suitable needs for students who are constantly engaged in demanding activities.

Given the significance of physical fitness for pupils, PJOK teachers in schools need to give this particular consideration while implementing in-class instruction. It will be simpler for teachers to deliver training materials or learning materials if they are physically fit, according to the conversation that has been described. Testing students who participate in extracurricular basketball

activities at school is one endeavor that might be undertaken.

METHODS

This study uses survey methodologies to conduct descriptive quantitative research. Students who participated in extracurricular basketball games were measured and subjected to physical fitness tests by researchers. The population in this study were students who took part in basketball extracurricular activities at SMP N 14 Bengkulu City, totaling 55 students. The sampling technique used purposive sampling, totaling 35 male students. The instrument used is the TKJI (Aldiansyah & Asriansyah, 2020; Arifandy et al., 2021) namely the 50 & 1000 meter running test, 60 second sit-up test, pull up test and vertical jump test. Data analysis used descriptive percentages which aimed to determine the level of physical fitness of basketball extracurricular students. Data calculations using the Ms. Excel application. The categorization of TKJI norms is as follows:

Table 1. Table of TKJI Values (13-15 Years)

Run 50 M	Pull Up	Sit-Up	Vertical Jump	Run 1000 M	Score
6,7" below	16 – above	38 – above	66 above	3',04" below	5
6,8" – 7,6"	11 – 15	28-37	53 – 65	3',05" – 3',53"	4
7,7" – 8,7"	6 – 10	19-27	42-52	3'54" – 4'46"	3
8,8" – 10,3"	2 -5	8 -18	31 – 41	4'47" – 6'04"	2
10,4" – etc	0 -1	0-7	0-30	6'05" – etc	1

Rough results are the outcomes for each test item that the participant has completed. This is because multiple units of measurement, such as time, movement repetitions, and height measurements, are utilized for each test item. It must be replaced in the same units, VALUE, to obtain the final result. After the rough results of each test are converted into a unit value, it is continued by adding up the values of the five TKJI items. The summation results are used as a basis for determining physical fitness classification (Adam & Resita, 2019).

Table 2. TKJI Norms

Total	Physical Fitness Classification Scores
22-25	Very good
18-21	Good
14-17	Medium
10-13	Deficient
5-9	Very Deficient

Data analysis techniques used Is a quantitative descriptive statistical technique. Data analysis techniques in this research using the percentage formula (Sutrisno et al., 2020)

$$P = \frac{f}{n} x\ 100\%$$

RESULT

Based on the tests carried out, the average for each test item can be found as follows:

Table 3. Frequency Distribution

Interval Class	Category	Frequency	%
22-25	Very Good	0	0
18-21	Good	0	0
14-17	Medium	5	14,29%
10-13	Deficient	26	74,29%
5-9	Very Deficient	4	11.42%
Total		35	100%

Students who participate in extracurricular basketball have poor physical health, according to the analysis of the entire set of data.

DISCUSSION

Students who take part in basketball extracurricular activities are on average 13-15 years old, which is the age at puberty. Changes in physical fitness and bone mass (Zribi et al., 2014) will occur when a person reaches puberty (Nazari et al., 2022). The characteristics of the sport played can also influence a person's physical fitness, basketball is played at a fast tempo and high intensity (Bazanov & Rannama, 2015), so to do sports with high intensity and quickly, good physical fitness is needed. From the results of the researcher's observations, it was found that the training schedule was only carried out 2 times a week and the physical and technical training program that was carried out lasted no more than 30 minutes, the remainder was a play simulation, exercising for at least 45 minutes a day is an effort to maintain a person's physical fitness (Herbert et al., 2020). Physical fitness of basketball athletes can be improved through plyometric training for 7 weeks (Sáez de Villarreal et al., 2021) and other sports (Kapoor et al., 2022b; Nieman & Sakaguchi, 2022)

The intensity of training carried out at the school is only once a week, and this will have an impact on the athlete's physical fitness. Providing exercise 3-5 times per week with an intensity of 70-80% has a positive impact on a person's physical fitness (Wajib et al., 2022; Yang, 2019). The main limitations of this research lie in whether the activities carried out by students before taking the test are difficult or not, as well as differences in educational systems. Because studies on physical fitness interventions are rarely implemented in some schools, further research should promote regular exercise. Despite the limitations mentioned, this study should be an important contribution to physical fitness and useful for explaining the negative factors of not engaging in physical activity

CONCLUSION

From the results of the research above, it can be concluded that the physical fitness of basketball extracurricular participants is in the poor category. These results can be a reference for teachers and trainers to be able to create measurable and targeted training programs as well as for parents to pay attention to children's nutritional patterns and daily activities.

REFERENCES

Adam, G., & Resita, C. (2019). The Influence Of Rhythmic Gymnastics To Physical Fitness Level In State Vocational School. IJECA (International Journal Of Education And Curriculum Application), 2(3), 10. Https://Doi.Org/10.31764/Ijeca.V2i3.2037

Aldiansyah, R., & Asriansyah, A. (2020). Pengaruh Permainan Tradisional Terhadap Peningkatan Kebugaran Jasmani Siswa Kelas VII SMP Negeri 51 Palembang. Halaman Olahraga Nusantara (Jurnal Ilmu Keolahragaan), 3(1), 73–81. Https://Doi.Org/10.31851/Hon.V3i1.3738

Anderson, E., & Durstine, J. L. (2019). Physical Activity, Exercise, And Chronic Diseases: A Brief Review. Journal Sports Medicine And Health Science, 1(1), 3–10. Https://Doi.Org/10.1016/J.Smhs.2019.08.006

Arifandy, A., Hariyanto, E., & Wahyudi, U. (2021). Survei Tingkat Kebugaran Jasmani Siswa SMP. Sport Science And Health, 3(5),

218–234. Https://Doi.Org/10.17977/Um062v3i52021p218-234

Bazanov, B., & Rannama, I. (2015). Analysis Of The Offensive Teamwork Intensity In Elite Female Basketball. Journal Of Human Sport And Exercise, 10(1), 47–51. Https://Doi.Org/10.14198/Jhse.2015.101.05

Daulatabad, V., Kamble, P., & Berad, A. (2020). Comparative Study Of Physical Fitness Parameters Between Basketball Players And Sprinters. National Journal Of Physiology, Pharmacy And Pharmacology, 10(10), 829–833. Https://Doi.Org/10.5455/Njppp.2020.10.05117202018062020

Difiori, J. P., Güllich, A., Brenner, J. S., Côté, J., Hainline, B., Ryan, E., & Malina, R. M. (2018). The NBA And Youth Basketball: Recommendations For Promoting A Healthy And Positive Experience. Sports Medicine, 48(9), 2053–2065. Https://Doi.Org/10.1007/S40279-018-0950-0

Dwi Putri, A. Y., Raibowo, S., & Nopiyanto, Y. E. (2021). Pengaruh Imagery Training Terhadap Kemampuan Renang Gaya Bebas Atlet Perempuan Klub Tirta Cempaka Kota Bengkulu. SPORT GYMNASTICS : Jurnal Ilmiah Pendidikan Jasmani, 2(2), 249–259. Https://Doi.Org/10.33369/Gymnastics.V2i2.15861

Eichorn, L., Bruner, K., Short, T., & Abraham, S. P. (2018). Factors That Affect Exercise Habits Of College Students. Journal Of Education And Development, 2(1), 20. Https://Doi.Org/10.20849/Jed.V2i1.327

Herbert, C., Meixner, F., Wiebking, C., & Gilg, V. (2020). Regular Physical Activity, Short-Term Exercise, Mental Health, And Well-Being Among University Students: The Results Of An Online And A Laboratory Study. Frontiers In Psychology, 11, 509. Https://Doi.Org/10.3389/Fpsyg.2020.00509

Ilsya, M. N. F., Resmana, D., Hasan, M. F., Ramania, N. S., & Safei, I. (2024). Body Mass Index, Physical Activity Status, And Sleep Duration Of Elderly. Halaman Olahraga Nusantara (Jurnal Ilmu Keolahragaan), 7(1), 41–53. Https://Doi.Org/10.31851/Hon.V7i1.11980

Juliansyah, M. A., Sugiyanto, F., & Hita, I. P. A. D. (2021). The Fitness Of Middle Age To The Elderly Based On Body Mass Index And Age In The New Normal Era. Journal Sport Area, 6(2), 254–262. Https://Doi.Org/10.25299/Sportarea.2021.Vol6(2).6362

Kapoor, G., Chauhan, P., Singh, G., Malhotra, N., & Chahal, A. (2022a). Physical Activity For Health And Fitness: Past, Present And Future. Journal Of Lifestyle Medicine, 12(1), Article 1. Https://Doi.Org/10.15280/Jlm.2022.12.1.9

Kapoor, G., Chauhan, P., Singh, G., Malhotra, N., & Chahal, A. (2022b). Physical Activity For Health And Fitness: Past, Present And Future. Journal Of Lifestyle Medicine, 12(1), 9–14. Https://Doi.Org/10.15280/Jlm.2022.12.1.9

Lavie, C. J., Ozemek, C., Carbone, S., Katzmarzyk, P. T., & Blair, S. N. (2019). Sedentary Behavior,

Exercise, And Cardiovascular Health. In Circulation Research (P. 125(5) 799-815). Https://Doi.Org/10.1161/CIRCRESAHA.118.312669

Lee, I.-M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Impact Of Physical Inactivity On The World's Major Non Communicable Diseases. The Lancet, 380(9838), 219–229. Https://Doi.Org/10.1016/S0140-6736(12)61031-9

Lipert, A., Kozłowski, R., Rasmus, P., Marczak, M., Timler, M., Timler, D., Kaniecka, E., Nasser, A., Ghaddar, M., & Ghaddar, A. (2021). Sleep Quality And Performance In Professional Athletes Fasting During The Month Of Ramadan. International Journal Of Environmental Research And Public Health, 18(13), 6890. Https://Doi.Org/10.3390/Ijerph18136890

Mancha-Triguero, D., García-Rubio, J., Calleja-González, J., & Ibáñez, S. J. (2019). Physical Fitness In Basketball Players: A Systematic Review. The Journal Of Sports Medicine And Physical Fitness, 59(9). Https://Doi.Org/10.23736/S0022-4707.19.09180-1

Nazari, M., Azarbayjani, M. A., Rahmati-Ahmadabad, S., Guerra Balic, M., & Bellovary, B. N. (2022). A Review Of The Effects Of Physical Activity (PA) On Bone Density: Relying On Iranian Studies. Thrita, 11(1). Https://Doi.Org/10.5812/Thrita-128483

Nieman, D. C., & Sakaguchi, C. A. (2022). Physical Activity Lowers The Risk For Acute Respiratory Infections: Time For Recognition. Journal Of Sport And Health Science, 11(6), 648–655. Https://Doi.Org/10.1016/J.Jshs.2022.08.002

Sáez De Villarreal, E., Molina, J. G., De Castro-Maqueda, G., & Gutiérrez-Manzanedo, J. V. (2021). Effects Of Plyometric, Strength And Change Of Direction Training On High-School Basketball Player's Physical Fitness. Journal Of Human Kinetics, 78(1), 175–186. Https://Doi.Org/10.2478/Hukin-2021-0036

Sánchez-Díaz, S., Yanci, J., Raya-González, J., Scanlan, A. T., & Castillo, D. (2021). A Comparison In Physical Fitness Attributes, Physical Activity Behaviors, Nutritional Habits, And Nutritional Knowledge Between Elite Male And Female Youth Basketball Players. Frontiers In Psychology, 12, 685203. Https://Doi.Org/10.3389/Fpsyg.2021.685203

Setia, D. Y., & Winarno, M. E. (2021). Survei Tingkat Kebugaran Jasmani Tim Bola Basket. Sport Science And Health, 3(3), 107–116. Https://Doi.Org/10.17977/Um062v3i32021p107-116

Singh, V. K., Kumar, B., & Kumari, S. (2022). To Compare Basketball Players' And Sprinters' Physical Fitness Measures Such As Body Composition, Strength And Endurance. International Journal Of Pharmaceutical And Clinical Research, 14(1), 261–266.

Sukhiyaji, R. B., & Patel, Z. (2020). To Compare The Skilled Based Physical Fitness Such As Agility, Power And Speed Between The Young College Male Basketball And Football Players. Indian

Journal Of Physiotherapy And Occupational Therapy - An International Journal, 14(1), P190-195. Https://Doi.Org/10.37506/Ijpot.V14i1.3424

Sutrisno, N., Ashadi, W., Tanjung, H. F., & Tyas, A. K. (2020). Descriptive Analysis Using A Frequency Distribution To Determine The Highest Number Of Publication In Focus Area Of Defense And Security. IOP Conference Series: Earth And Environmental Science, 448(1), 012078. Https://Doi.Org/10.1088/1755-1315/448/1/012078

Wajib, M., Ruman, Aditya, R., Sihombing, H., S, I., & Hingis, M. E. S. (2022). The Effect Of High Interval Training On Vo2Max Increase Of Long Distance Running Athletees. Jurnal Ilmiah STOK Bina Guna Medan, 10(2), 44–49.

Yang, Y. J. (2019). An Overview Of Current Physical Activity Recommendations In Primary Care. Korean Journal Of Family Medicine, 40(3), 135–142. Https://Doi.Org/10.4082/Kjfm.19.0038

Yuan, B., Kamruzzaman, M. M., & Shan, S. (2021). Application Of Motion Sensor Based On Neural Network In Basketball Technology And Physical Fitness Evaluation System. Wireless Communications And Mobile Computing, Article ID 5562954, 11 Pages. Https://Doi.Org/10.1155/2021/5562954

Zribi, A., Zouch, M., Chaari, H., Bouajina, E., Zaouali, M., Nebigh, A., & Tabka, Z. (2014). Enhanced Bone Mass And Physical Fitness In Prepubescent Basketball Players. In Journal Of Clinical Densitometry (P. 17(1),156-162). Https://Doi.Org/10.1016/J.Jocd.2013.04.001