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The Effect of Sprint Training on Physical Fitness Tests of Elementary School Students

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Abstract

Numerous bacteriophages can infect humans; thus, it is essential to bolster immunity to sustain health and bodily resistance effectively. This research aims to assess their fitness following the Indonesian physical fitness test (TKJI) utilizing the designated tools. This study employs a mixed-method quantitative research strategy. This approach is employed to gather data via multiple minor assessments and interviews with pupils from Bororejo public elementary school. This data include (1) small run test data, (2) data from interviews with children and teachers, and (3) the author's data interpretation. The test sequences employed are: (1) 20-meter run test, (2) elbow hang, (3) sit-up, (4) vertical jump, and (5) 100-meter run. This study comprises 25 students, including 15 females and 10 males. The findings of this study suggest that the results for TKJI in the "very good" and "good" categories are 1 (37.5%) and 15 (47.5%), respectively. Additionally, the physical education teacher's interview revealed that the students lacked seriousness during the test, leading to subpar outcomes.

Keywords: Sprint, Training, Physical Fitness, Student, Elementary School

INTRODUCTION

Physical fitness as the capability and capacity to engage in activities or labor, hence augmenting work capacity without incurring undue weariness Mukhlolid (2016). The fitness assessment involving a brief run for elementary school students is a widely utilized approach to evaluate children's physical fitness, particularly for cardiorespiratory endurance and muscular strength. This workout program frequently integrates into the physical education curriculum of primary schools. Several factors must be analyzed to comprehend the current conditions regarding the implementation of this fitness test among elementary school students (Suhartoyo et al., 2019). This assessment aims to evaluate a child's capacity to sprint short distances, often ranging from 400 to 800 meters, hence

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assessing overall endurance and physical fitness. This test enables teachers to evaluate students' cardiovascular health and offer suggestions for fitness enhancement.

Siswanto (2009) Every age cohort possesses distinct advantages. Each age group possesses varying degrees of physical fitness that can be enhanced at nearly any stage of life. Advantages: Enhances children's recognition of the significance of physical activity and bodily fitness. Identifying youngsters requiring further support in physical fitness. Enhancing motivation to sustain a healthy lifestyle from a young age. All physical activities necessitate a degree of physical fitness underpinned by a healthy body (Bourne et al., 2018; Ferriz-Valero, Østerlie, García-Martínez, & Baena-Morales, 2022).

Sharkey, as cited in Kusuma (2010), asserts that three components must be satisfied to attain "quality of life": the regulation of nutrition, the regulation of rest, and the regulation of physical activities (exercise). Elementary school children undergo an era of rapid physical growth, resulting in significant variability in their physical aptitude and stamina. Certain students may exhibit greater readiness for fitness assessments due to increased physical activity outside of school, whilst others may lack familiarity with rigorous exercise. A majority of youngsters today allocate more time to electronic gadgets and exhibit reduced physical activity (Ezzat, Schneeberg, Koehoorn, & Emery, 2016; Haapala et al., 2017).

This phenomena may influence fitness test outcomes, as numerous children have diminished physical endurance relative to prior generations. Children lacking appropriate nutrition, particularly those who are malnourished, may encounter difficulties in executing fitness assessments, such as a brief run (Erlinda, 2017). This may impact their stamina and performance. Children with certain medical illnesses, such as asthma or cardiovascular issues, may encounter challenges or health hazards when engaging in fitness assessments. Consequently, medical oversight is important during its execution. The scarcity of sports facilities in certain schools may hinder the execution of the small running test. Not all educational institutions possess sufficient fields or access to amenities that facilitate physical activities. Arifin (2016) posits that a test is a method employed for measurement purposes, comprising various questions or a sequence of tasks that students must complete or answer to assess facets of student behavior.

The fitness assessment involving a brief run, however beneficial, solely evaluates a singular facet of children's physical fitness (Syampurma, 2018). Consequently, it would

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be advantageous for the fitness assessment to encompass other components, including muscular strength, flexibility, and motor coordination (Budi, Kusuma, Syafei, & Stephani, 2019). This will offer a more comprehensive assessment of the child's fitness. Certain youngsters may experience anxiety or worry over fitness assessments, such as a brief run, particularly if they perceive themselves as less capable than their peers. Consequently, it is essential to foster a supportive environment and minimize the emphasis on competitiveness, prioritizing personal growth and optimal effort instead. Certain educational institutions are commencing the integration of technology to oversee students' fitness progress, utilizing fitness applications or monitoring physical activity. This offers a more objective and quantifiable method to evaluate pupils' fitness. As the comprehension of holistic well-being's significance advances, numerous educational institutions are initiating programs that emphasize not only physical health but also the mental and emotional welfare of students. Mental health is crucial as it significantly influences physical fitness and students' preparedness for fitness assessments (Huang & Zhao, 2020).

The absence of oversight or training for educators in administering fitness assessments can impede progress in certain institutions. To guarantee the seamless execution of assessments and the safety of students, proficient abilities and understanding from physical education instructors are essential. Children experiencing anxiety or mental health challenges may experience significant stress during fitness assessments. Consequently, it is essential to cultivate a supportive environment that evaluates physical capabilities while simultaneously fostering the positive personal growth of kids. Given the disparities in physical capabilities across children, fitness evaluations should encompass not only short-distance runs but also assessments that reflect individual growth and effort. Each child have distinct potential and capabilities; therefore, it is essential to tailor assessments to their unique circumstances. An enhancement in the quality of physical education in schools is essential to guarantee that fitness assessments are executed efficiently and thoroughly, underscoring the significance of both physical and mental health.

The government and school authorities need to pay more attention to adequate sports facilities to support fitness activities, including safe sports fields and other supporting facilities. The state of the art of this research is that the fitness test with a brief run for elementary school students is still useful as a measure of basic physical fitness, but it is crucial to recognize that fitness is not limited to physical capacity. The growth of fitness

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must be balanced with attention to a healthy lifestyle, diet, mental health, and the availability of adequate facilities. With a more holistic approach and assistance from multiple stakeholders, this fitness test can become a more successful instrument for developing a healthier and more active generation.

METHOD

This study used a mixed-methods methodology. This study's data include (1) small run test data, (2) data from interviews with children and teachers, and (3) the author's data interpretation. The participants in this study are the students and teachers of SDN Bororejo, totaling 25 students, which includes 15 females and 10 males. The sample was intentionally selected. The TKJI (Indonesian Physical Fitness Test) employed in the study demonstrates a degree of validity and reliability. The test sequences employed are: (1) 20-meter run test, (2) elbow hang, (3) sit-up, (4) vertical jump, and (5) 100-meter run. The outcomes of the physical fitness assessment are subsequently displayed as tables and histograms derived from the TKJI table. The validity of the data in this study is established using factor analysis. Data were evaluated using descriptive statistical analysis.

RESULT

The findings from the research conducted using the Indonesian Physical Fitness Test SOP produced data displayed in tables and histograms as follows:

Table 1 Description of Students' Explicit Expressions and Implicit Perceptions on Learning Method Criteria

Category	Tes Kebugaran Jasmani Indonesia	
	N	%
Very good	1	37.5
Good	15	47.5
Not good	9	15
Very Bad	0	0
Total	25	100
Average	3.23	

According to Table 1, the classifications "very good" and "good" for TKJI are 1

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(37.5%) and 15 (47.5%), respectively. Consequently, a notable disparity exists between pupils with superior fitness and those with inferior fitness.

DISCUSSION

Interviews with physical education instructors indicate that the fitness exam cannot be optimized due to students' tendency to be disingenuous in administering the Indonesian Physical Fitness exam. The research is not inherently at fault; rather, it may be attributed to suboptimal student behaviors in the physical education learning process. The students do not recognize the significance of physical fitness. Students participate in extracurricular physical activities, receive adequate nutrition, have appropriate relaxation, and uphold consistent healthy lifestyles and school environmental conditions (Zakki et al., 2023).

A student's fitness is an indication used to evaluate their physical condition. Physical fitness reflects a student's capacity to engage in physical activities both within and beyond the school environment (Jiménez-Pavón, Carbonell-Baeza, & Lavie, 2020). Physical fitness has become an integral aspect of students' life. Physical education aims to enhance a student's physical fitness; however, additional factors also influence the overall quality of that fitness. The findings of the aforementioned study reveal that the physical fitness level of the upper-grade pupils at SDN Bororejo is modest. This is significantly divergent from the anticipated objectives of physical education. Furthermore, contemporary students have predominantly sedentary lifestyles. Physical activity is categorized into two types: quantifiable physical activity and unmeasurable physical activity, with sports being a subset of the latter (Permatasari, Adi, & Dewi, 2018).

Furthermore, contemporary students have predominantly sedentary lifestyles. Technological advancement significantly impacts physical fitness, resulting in its deterioration (Agustiningsih, 2018). The commuting patterns of students, which form the basis of the research, do not necessarily influence their physical fitness. Moreover, the upper-grade students of SDN Bororejo exhibited diminished excitement during physical education classes

CONCLUSION

Following the research procedure, data presentation, and discussion conducted by the researcher, it can be stated that the students of SDN Bororejo exhibit a modest

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degree of physical fitness. The research findings indicate that the students' physical fitness is suboptimal due to extraneous factors beyond the study's parameters.

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REFERENCE

Alfiyanti, N.E., Setyawan, D., Kusuma, M.A.B. 2014. Pengaruh Relaksasi Otot Progresif Terhadap Tingkat Depresi Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis Di Unit Hemodialisa Rs Telogorejo Semarang. Jurnal, Universitas Diponegoro Semarang. Semarang : Universitas Diponegoro.Tersedia dalam : ejournal.stikestelogorejo.ac.id/index.php/ilmukeperawatan/article/viewFile/278/303.

Arifin, Zainal.2016. Evaluasi Pembelajaran. Bandung: Remaja Rosdakarya [5] Sugiyono, (2016). Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, Dan R&D. Bandung:alfabeta

Bourne, J. E., Sauchelli, S., Perry, R., Page, A., Leary, S., England, C., & Cooper, A. R. (2018). Health benefits of electrically-assisted cycling: A systematic review 11 Medical and Health Sciences 1117 Public Health and Health Services. *International Journal of Behavioral Nutrition and Physical Activity*, *15*(1), 1–15. https://doi.org/https://doi.org/10.1186/s12966-018-0751-8

Budi, D. R., Kusuma, M. N. H., Syafei, M., & Stephani, M. R. (2019). *The Analysis of Fundamental Movement Skill in Primary School Student in Mountain Range*. *11*(Icsshpe 2018), 195–198. https://doi.org/10.2991/icsshpe-18.2019.56

Erlinda, E. (2017). Hubungan Status Gizi Dengan Hasil Belajar Pendidikan Jasmani Olahraga Kesehatan Siswa Sekolah Dasar 52 Kuranji Kota Padang. *Sport Science*, *17*(2), 84–91.

Ezzat, A. M., Schneeberg, A., Koehoorn, M., & Emery, C. A. (2016). Association between body composition and sport injury in Canadian adolescents. *Physiotherapy Canada*, *68*(3), 275–281. https://doi.org/10.3138/ptc.2015-59

Ferriz-Valero, A., Østerlie, O., García-Martínez, S., & Baena-Morales, S. (2022). Flipped Classroom: A Good Way for Lower Secondary Physical Education Students to Learn

https://doi.org/10.20884/1.paju.2025.7.2.16469
e-ISSN : 2686-5807 | p-ISSN : 2686-5793

Volleyball. *Education Sciences*, *12*(1). https://doi.org/10.3390/educsci12010026

Haapala, E. A., Väistö, J., Lintu, N., Westgate, K., Ekelund, U., Poikkeus, A. M., … Lakka, T. A. (2017). Physical activity and sedentary time in relation to academic achievement in children. *Journal of Science and Medicine in Sport*, *20*(6), 583–589. https://doi.org/10.1016/j.jsams.2016.11.003

Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*. https://doi.org/10.1016/j.psychres.2020.112954

Jiménez-Pavón, D., Carbonell-Baeza, A., & Lavie, C. J. (2020). Physical exercise as therapy to fight against the mental and physical consequences of COVID-19 quarantine: Special focus in older people. *Progress in Cardiovascular Diseases*, *63*(3), 386–388. https://doi.org/10.1016/j.pcad.2020.03.009

Mukholid, Agus. 2016. Pendidikan Jasmani. Bogor: Yudistira Jakarta: PT Raja Grafindo Indonesia.

Permatasari, F. D., Adi, A. C., & Dewi, R. C. (2018). Hubungan Status Gizi dan Level Aktivitas Fisik dengan Tingkat Kebugaran pada Pemain Bola Basket di UKM Basket Correlation Between Nutrition Status, Physical Activity and Fitness Level among basketball Players in Student's Basketball Club. https://doi.org/10.20473/amnt.v2.i4.2018.332-339

Siswanto, H. B(2009), Pengantar Manajemen, Bumi Aksara, Jakarta.

Suhartoyo, T., Budi, D. R., Kusuma, M. N. H., Syafei, M., Listiandi, A. D., & Hidayat, R. (2019). Identifikasi Kebugaran Jasmani Siswa SMP Di Daerah Dataran Tinggi Kabupaten Banyumas. *Physical Activity Journal*. https://doi.org/10.20884/1.paju.2019.1.1.1995

Syampurma, H. (2018). Hubungan Aktivitas Fisik dengan Kesegaran Jasmani pada Siswa Sekolah Menengah Pertama Bertaraf Internasional Kota Padang. *Sport Science*, *18*(1), 55–65. https://doi.org/10.24036/jss.v18i1.43

Zakki, O. D. Z., Sepriani, R., Sepriadi, S., & Resmana, R. (2023). Tinjauan Kebugaran Jasmani Siswa kelas XI Sekolah Menengah Atas Negeri 1 Sungai Limau Kabupaten Padang Pariaman. Jurnal JPDO, 6(12), 17–25.

https://doi.org/10.20884/1.paju.2025.7.2.16469
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