



Description of the Health Literacy and Physical Literacy Levels of Children Aged 12-15 Years

Alamsyah¹, Wahyu Indra Bayu², Herri Yusfi², Fitri Agung Nanda¹

¹Physical Education and Health Study Program, Faculty of Teacher Training and Education, Universitas Sriwijaya, Ogan Ilir, Indonesia

²Sport Education Study Program, Faculty of Teacher Training and Education, FKIP, Universitas Sriwijaya, Palembang, Indonesia

Email: alamsyah04101998@gmail.com¹, wahyu.indra@fkip.unsri.ac.id², herriyusfi@fkip.unsri.ac.id³, fitriagungnanda16@fkip.unsri.ac.id⁴

ABSTRACT

Health has become a crucial aspect of life, where health literacy and physical literacy are two interconnected concepts related to individual health in understanding wellness and learning involving one's physical activities. This research aims to determine students' level of knowledge regarding health literacy and physical literacy. The study was conducted using a descriptive quantitative approach, employing survey methods. The research was carried out at SMPN 2 Kasui in the Waykanan district of Lampung province. Data collection was conducted through questionnaires involving all students. Based on the research findings, it was revealed that most of the students have yet to fully comprehend the concepts of health literacy and physical literacy. Limited educational resources and inadequate facilities have contributed to students possessing minimal knowledge about health. The results indicated that the level of health literacy knowledge among students at SMPN 2 Kasui is problematic. The distribution of physical literacy knowledge data among all students revealed that 20% fall into the 'low' category, 77% are 'moderate,' and 3% are classified as 'good.'

Key words: Health literacy; physical literacy; 12-15 Year Old

ARTICLE INFORMATION

Article History:

Accepted : 13 September 2023

Approved : 23 April 2024

Available online June 2024

Doi: <http://dx.doi.org/10.20527/multilateral.v23i2.17437>

Correspondence Address:

Fitri Agung Nanda

Physical Education and Health Study

Program, Faculty of Teacher Training and

Education, Universitas Sriwijaya, Ogan

Iilir, Sumatra Selatan, Indonesia.

Email: fitriagungnanda16@fkip.unsri.ac.id

INTRODUCTION

Physical literacy is theorized to be the foundation of lifelong physical activity participation and is defined as the motivation, self-confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in lifelong physical activity. Health literacy and physical literacy are two important components that individuals must know to maximize the physical activity and movement abilities that individuals need to achieve maximum health and physical fitness. Physical activity carried out is always related to health benefits which include (physical, cognitive, and psychological/social) (Blanchard et al., 2020; Juvinyà-Canal et al., 2020). Nuruhidin et al. (2023) doing physical activity and movement well will influence fitness levels and productivity in carrying out daily activities. Aerobic exercise, which consists of training a large group of muscles rhythmically, repeatedly, and continuously for at least 10



minutes, used in physical activity can improve an individual's physical fitness so that they are able to have a higher level of productivity (de Bruijn et al., 2019).

Even though these two components are important factors that individuals must have, in fact currently the low literacy about health and awareness of students in carrying out physical activity influences poor health status and causes several health problems for students at school (Cairney et al., 2019). Lack of knowledge regarding physical literacy and the decline in physical activity is one component of the main causal or risk factors for global deaths that occur in several countries with major implications for the prevalence of non-communicable diseases (NCDs) and general health (Lynch & Soukup, 2016; Syafaruddin et al., 2021). Irregular physical activity or lack of physical activity can increase the risk of heart disease, stroke, and diabetes by up to 20-30%, and can shorten life by 3-5 years (WHO, 2020). Mastering physical literacy is essential for all individuals, regardless of ability, gender, age, or weight.

Talking about health literacy itself has the meaning, namely, the ability possessed by each individual to obtain, process and interpret basic information about health and understand the need for health services, in order to make the right decisions related to their health (Fleary et al., 2018). Liu and Chen, (2021) health literacy construct includes three broad things regarding knowledge about the health system, processing and using information related to health and health services and the ability to maintain health through self-management. Furthermore, the definition of physical literacy is a learning process that includes physical activity, including developing basic movement skills, increasing self-confidence, and mastering basic movement skills. Physical literacy is a construct that has emerged in efforts to promote children's health and has the potential to influence their physical activity habits throughout life (Belanger et al., 2018).

It is important to know and study physical literacy and health literacy studies to maximize physical activity and maintain individual body fitness. Alireza et al. (2020) revealed that learning about health literacy can improve an individual's quality of life because individuals are able to know what to do and what not to do to support their personal health. Priadana et al. (2021) revealed the results of research regarding physical literacy in the good category so that it influences learning activities and student achievements. Knowing or being able to analyze through a health literacy approach aims to ensure that students have the motivation and ability to live a healthy lifestyle through active physical activity, as well as having good and structured basic movement skills (Gustian, 2020).

Based on the literature review, it is revealed that it is important to know and study the extent of children's knowledge regarding health literacy and physical literacy to help children maximize physical activity which will support learning success. This research aims to provide an overview of children's

knowledge about their physical literacy and health. Based on the literature review above, it only reveals the results separately, this research has a sufficient level of novelty because it combines the components of both simultaneously and has never been carried out on the sample to be studied. The results are expected to be able to provide a reference for teachers and children themselves in the future when teaching or learning is included in the curriculum regarding matters related to physical literacy and health knowledge so that children can identify the basic things from physical activity that influence or hinder learning, especially in health physical education.

METHOD

Cross sectional research was conducted on 241 students at the junior high school level (109 girls, average age 13.5±1.11) using the HLS-EU-SQ10-IDN instrument to obtain data on health literacy levels. This instrument was developed from the HLS-EU-47Q questionnaire which consists of 10 optional questions, selected from a total of 47 questions (Rachmani et al., 2019). Meanwhile, to determine the level of physical literacy, the Physical Literacy Knowledge Questionnaire (PLKQ) was used in research (Blanchard et al., 2020). The PLKQ instrument consists of 12 question items, each question item has a different maximum score, namely item 1 (10 points), item 2 (10 points), item 3 (11 points), item 4 (1 point), item 5 (8 points) , item 6 (1 point), item 7 (1 point), item 8 (1 point), item 9 (1 point), item 10 (9 points), item 11 (1 point), and item 12 (1 point), for a total the maximum score is 55 (Priadana et al., 2021). In this research, data analysis techniques were used in the form of quantitative descriptive analysis using percentage data. This technique is used to test variables in research that discusses health literacy and physical literacy.

RESULT AND DISCUSSION

Result

Health literacy

The research results show that the health literacy level of children aged 12-15 in Kasui District, Way Kanan, Lampung is good. This can be seen from how children can identify factors that influence their health. The research results showed that 35.60% of students answered that it was difficult to understand the factors that political changes, new health examination methods, changes in government, and restructuring of health services could affect their health. Additionally, 47.77% of children answered that they hardly understand health advice from family members or friends.

Meanwhile, the research results also show that children can easily find information related to their health (93.56%), know what medical actions to take if an emergency occurs (91.08%), and are aware of health threats to

themselves. (85.55%). In addition, these children are aware of the importance of the environment on their health (92.88%) and make decisions to improve their health (82.86%).

Table 1. Data on the results of filling out the HLS-SQ10-IDN questionnaire

No.	Very Difficult	Fairly Difficult	Fairly Easy	Very Easy
1.	2.13%	3.11%	70.36%	24.41%
2.	2.65%	6.78%	67.48%	23.10%
3.	2.19%	14.56%	66.03%	17.22%
4.	2.29%	18.98%	63.74%	14.99%
5.	2.62%	5.63%	72.21%	19.54%
6.	3.31%	16.40%	60.60%	20.29%
7.	1.83%	33.57%	59.49%	5.10%
8.	6.74%	41.03%	46.07%	6.15%
9.	2.66%	3.80%	60.90%	33.25%
10.	2.65%	16.59%	63.48%	17.28%

Physical Literacy

Table 2. Results of data analysis of physical literacy knowledge values

Physical Literacy	
Mean	36.456
Standard Error	0.184
Median	36
Mode	38
Standard Deviation	2.855
Sample Variance	8.149
Kurtosis	-0.226
Std. Error of Kurtosis	0.457
Skewness	-0.081
Std. Error of Skewness	0.230
Range	14
Minimum	29
Maximum	43
Sum	8786
Count	241

Table 2 describes the statistical description and normality test of data on physical literacy knowledge scores for children aged 12 to 15 years. The average physical literacy knowledge value is known to be 36.456, the standard deviation is 2.855. The range is known to be 14 from a maximum value of 43 and a minimum value of 29. The Skewness value is known to be -0.081, with Std. Error of Skewness is 0.230 and Z-Kurtosis value is -0.224 with Std. Error of Kurtosis 0.457. The data normality test can be determined from the skewness and kurtosis values divided by their respective standard error values. Thus, we get a Z-skewness value of -0.35 and Z-kurtosis of -0.49, which is between the

limits of +1.96 and -1.96. This means that the physical literacy knowledge value data is normally distributed.

Categorization calculations are carried out by changing the raw score into a physical literacy value (0-100). These values are then categorized based on the knowledge categories from Arikunto (2010) in Table 3. Table 3 explains that if you answer correctly between 76-100% or the physical literacy knowledge value obtained ≥ 75 is in the good category, if you answer correctly between 56-75% or the physical literacy score obtained is between 56 and 75, which is in the sufficient category, if the correct answer is less than 56% or the physical literacy score obtained is ≤ 55 , then it is in the insufficient category.

Table 3. Criteria for categorizing physical literacy scores

Term	Category
Correct answer between 76-100%	Good
Correct answer between 56-75%	Enough
Correct answer is less than 56%	Fairly

Based on the average obtained of 36.456, it shows an average value of 58. If you look at Table 4, the average physical literacy knowledge of children aged Kasui District, Way Kanan, Lampung is in the sufficient category.

Discussion

Health literacy can be defined as an individual's ability to obtain, process, and understand health information and necessary health services, thereby enabling them to make appropriate decisions regarding their personal health conditions. If students have good reading skills, then students will have a direct view of other health information. Starting from recognizing various diseases and their symptoms, how to maintain a healthy lifestyle, preventing and maintaining health. From these results, it can be concluded that many students do not have an adequate understanding of the health issues that affect them, and there is still a need to improve their health literacy to make better decisions regarding personal health.

Physical literacy refers to an individual's ability to use the physical skills needed to maintain physical activity and a healthy lifestyle. Physical literacy includes knowledge about the importance of physical activity, basic motor skills, such as walking, running, jumping, and the ability to participate in sports or other physical activities well. This refers to theory (Longmuir et al., 2018). Knowledge of physical literacy refers to an understanding of various aspects of physical activity, including the concept of Movement (how to move), Performance evaluation (assessment of movement), as well as understanding related to Health and Fitness (assessment of physical activity, need for relaxation, and so on).

Knowledge and understanding of the importance of good physical activity, it is hoped that students will be motivated to carry out physical activity routines. The knowledge in question includes an understanding of the benefits of physical activity, methods of implementing it, and the right time to do it. By doing regular physical activity, students can improve their physical fitness gradually and sustainably. The reason is because physical fitness greatly influences a person's body and mental condition in facing daily tasks (Zainudin et al., 2019). Regular physical activity also has a positive impact on children's physical, mental and social well-being (Mashud, 2019).

CONCLUSION

Based on the results of the discussion, it can be concluded that the level of health literacy knowledge of children aged 12-15 years is classified as good, while for the level of physical literacy it can be concluded that children aged 12-15 in Kasui District, Way Kanan, Lampung are classified as sufficient and tend to be poor. This shows that children aged 12-15 years now have a cognitive understanding of the importance of health but are not yet physically aware that they also need to move. So that the combination of knowledge and understanding provided by teachers in the physical education learning process at school is expected to be able to provide motivation to students to live a healthy lifestyle.

REFERENCE

- Alireza, D. I., Endang, S. W., Milufa, S., & Wahjuni, E. S. (2020). Hubungan Literasi Kesehatan dengan Kualitas Hidup Mahasiswa Fakultas Ilmu Olahraga Universitas Negeri Surabaya. *Jurnal Pendidikan Olahraga dan Kesehatan*, 8(1), 37–42. <https://ejournal.unesa.ac.id/index.php/jurnal-pendidikan-jasmani/article/view/36932>
- Belanger, K., Barnes, J. D., Longmuir, P. E., Anderson, K. D., Bruner, B., Copeland, J. L., Gregg, M. J., Hall, N., Kolen, A. M., Lane, K. N., Law, B., MacDonald, D. J., Martin, L. J., Saunders, T. J., Sheehan, D., Stone, M., Woodruff, S. J., & Tremblay, M. S. (2018). The Relationship between Physical Literacy Scores and Adherence to Canadian Physical Activity and Sedentary Behaviour Guidelines. *BMC Public Health*, 18. <https://doi.org/10.1186/s12889-018-5897-4>
- Blanchard, J., Van Wyk, N., Ertel, E., Alpous, A., & Longmuir, P. E. (2020). Canadian Assessment of Physical Literacy in Grades 7-9 (12-16 Years): Preliminary Validity and Descriptive Results. *Journal of Sports Sciences*, 38(2), 177–186. <https://doi.org/10.1080/02640414.2019.1689076>

- Cairney, J., Dudley, D., Kwan, M., Bulten, R., & Kriellaars, D. (2019). Physical Literacy, Physical Activity and Health: Toward an Evidence-Informed Conceptual Model. *Sports Medicine*, 49(3), 371–383. <https://doi.org/10.1007/s40279-019-01063-3>
- de Bruijn, A. G. M., Kostons, D. D. N. M., van der Fels, I. M. J., Visscher, C., Oosterlaan, J., Hartman, E., & Bosker, R. J. (2019). Importance of Aerobic Fitness and Fundamental Motor Skills for Academic Achievement. *Psychology of Sport and Exercise*, 43(July 2018), 200–209. <https://doi.org/10.1016/j.psychsport.2019.02.011>
- Fleary, S. A., Joseph, P., & Pappagianopoulos, J. E. (2018). Adolescent Health Literacy and Health Behaviors: A Systematic Review. *Journal of Adolescence*, 62(1), 116–127. <https://doi.org/10.1016/j.adolescence.2017.11.010>
- Gustian, U. (2020). Permainan Tradisional: Suatu Pendekatan dalam mengembangkan Physical Literacy Siswa Sekolah Dasar. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 6(1), 199–215. https://doi.org/10.29407/js_unpgri.v6i1.14252
- Juvinyà-Canal, D., Suñer-Soler, R., Porquet, A. B., Vernay, M., Blanchard, H., & Bertran-Noguer, C. (2020). Health Literacy among Health and Social Care University Students. *International Journal of Environmental Research and Public Health*, 17(7). <https://doi.org/10.3390/ijerph17072273>
- Liu, Y., & Chen, S. (2021). Physical Literacy in Children and Adolescents: Definitions, Assessments, and Interventions. *European Physical Education Review*, 27(1), 96–112. <https://doi.org/10.1177/1356336X20925502>
- Longmuir, P. E., Woodruff, S. J., Boyer, C., Lloyd, M., & Tremblay, M. S. (2018). Physical Literacy Knowledge Questionnaire: feasibility, validity, and reliability for Canadian children aged 8 to 12 years. *BMC Public Health*, 18(2), 1–11. <https://doi.org/10.1186/s12889-018-5890-y>
- Lynch, T., & Soukup, G. J. (2016). Physical Education, “Health and Physical Education”, “Physical Literacy” and “Health Literacy”: Global Nomenclature Confusion. *Cogent Education*, 3(1), 1217820. <https://doi.org/10.1080/2331186X.2016.1217820>
- Mashud, M. (2019). Analisis Masalah Guru PJOK dalam Mewujudkan Tujuan Kebugaran Jasmani. *Analisis Masalah Guru PJOK dalam mewujudkan Tujuan Kebugaran Jasmani*. <https://repositori.ulm.ac.id/handle/123456789/12669>
- Nuruhidin, A., Prasetyo, A., Sari, F., & Pratama, R. Y. (2023). Tingkat Kebugaran Jasmani Terhadap Aktivitas Fisik Siswa Kelas VIII SMPN 2 Sukoharjo

Kabupaten Pringsewu. *Sport Science & Education Journal*, 4(1), 43–51.
<https://ejurnal.teknokrat.ac.id/index.php/sport/issue/archive%0APENDAHULUAN>

- Priadana, B. W., Saifuddin, H., & Prakoso, B. B. (2021). Kelayakan Pengukuran Aspek Pengetahuan pada Instrumen Physical Literacy untuk Siswa Usia 8-12 Tahun. *Multilateral: Jurnal Pendidikan Jasmani Dan Olahraga*, 20(1), 21. <https://doi.org/10.20527/multilateral.v20i1.9675>
- Rachmani, E., Hsu, C. Y., Nurjanah, N., Chang, P. W., Shidik, G. F., Noersasongko, E., Jumanto, J., Fuad, A., Ningrum, D. N. A., Kurniadi, A., & Lin, M. C. (2019). Developing an Indonesia's Health Literacy Short-Form Survey Questionnaire (HLS-EU-SQ10-IDN) using the Feature Selection and Genetic Algorithm. *Computer Methods and Programs in Biomedicine*, 182(172), 105047. <https://doi.org/10.1016/j.cmpb.2019.105047>
- Syafaruddin, Bayu, W. I., Syamsuramel, Solahuddin, S., & Fitri, A. D. (2021). Health Literacy Overview of Sriwijaya University Students. *Journal of Physical Education, Sport, Health and Recreation*, 10(3), 136–139. <https://doi.org/10.15294/active.v10i3.50047>
- WHO. (2020). *Health topics: Physical activity*. https://www.who.int/health-topics/physical-activity#tab=tab_1
- Zainudin, N. I., Athar, A., & Kahri, M. (2019). Analisis Komponen Kebugaran Jasmani Peserta Didik Sekolah Dasar Negeri di Lihat dari Sarana dan Prasarana Pendidikan Jasmani Kelas V Usia 10–12 Tahun Kota Banjarbaru. *Multilateral: Jurnal Pendidikan Jasmani dan Olahraga*, 18(1). <http://dx.doi.org/10.20527/multilateral.v18i1.6570>