Description of Health Knowledge and Healthy Lifestyle of Elementary School Students

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Article Info

ABSTRACT

Purpose of the study: The purpose of this study was to determine the health knowledge and healthy lifestyles of elementary school students.

Methodology: This study is a descriptive study using a survey method with instruments in the form of measurement tests, questionnaire instruments to measure health knowledge and healthy lifestyles. The subjects of the study were 52 students of grade V and VI of Baratan State Elementary School, Pakem District, Sleman Regency. Descriptive data analysis techniques with percentages.

Main Findings: The health knowledge of students in grades V and VI of Baratan State Elementary School, Pakem District, Sleman Regency is sufficient with a percentage of 36.5% and the students' healthy lifestyle is moderate with a percentage of 50.0%.

Novelty/Originality of this study: These findings can be the basis for developing health education programs that are more focused on establishing healthy lifestyles, especially at the elementary school level, which has not been widely discussed in the local context.

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1. INTRODUCTION

Humans are individual beings as well as social beings consisting of physical and spiritual [1]-[3]. These two aspects are interconnected in determining the quality of human life. In everyday life, maintaining a balance between physical and mental health is important to achieve well-being [4]-[6]. However, in reality, a healthy lifestyle is still a challenge, especially for groups of children who are growing and developing [7], [8].

One of the problems faced by children today is an unhealthy lifestyle, which is often caused by a lack of effective health education from an early age [9]-[11]. Children tend to choose passive activities, such as watching television, playing gadgets, and consuming fast food, rather than exercising or playing outside [12]-[14]. As a result, children become less physically active, are prone to obesity, and have poor health levels. This phenomenon shows the need for structured and sustainable health education interventions [15]-[17].

Childhood is a critical period in the formation of quality human resources [18]-[20]. Balanced nutrition and a healthy lifestyle are essential to support the growth and development process [21]-[23]. However, the reality on the ground shows that many elementary school students prefer instant food and random snacks that are low in nutrition. Foods such as fried foods, instant noodles, and preserved foods are often the choice, even though they can be harmful to health if consumed continuously [24], [25].

At Baratan State Elementary School, Pakem District, Sleman Regency, unhealthy lifestyle habits are still found among students. Physical education teachers, who should play a role in instilling health knowledge, tend to focus more on teaching sports such as soccer and baseball without providing an in-depth understanding of the importance of a healthy lifestyle. This condition indicates a gap in learning, where the aspect of health education has not been a top priority.

Previous research conducted by Hyman et al., [26] focused on testing school-based programs to improve digital health literacy and healthy lifestyle behaviors in secondary school students. This study focuses more on evaluating specific programs and interventions to improve health-related digital skills. Meanwhile, the current study focuses more on describing students' health knowledge and healthy lifestyles without involving specific programs or interventions. Thus, this study fills the gap by describing the condition of students' health-related knowledge and behaviors, which provides a basis for planning further health programs at the elementary school level.

This study attempts to fill this gap by examining the extent to which students' health knowledge influences their healthy lifestyle. This study emphasizes the importance of instilling health knowledge from an early age, both in the school and family environments. With good health education, children are expected to be able to understand the long-term impacts of their eating habits and lifestyle on their quality of life.

The novelty of this study lies in the approach that combines in-depth descriptions of health knowledge and healthy lifestyles among elementary school students, without involving specific interventions or programs. Unlike previous studies that focused on evaluating specific programs, this study provides new insights into the more natural conditions of students' knowledge and behavior, as well as the factors that influence their healthy lifestyles. This is an important basis for designing more targeted intervention programs in the future, based on the actual conditions of students' knowledge and behavior in the field.

The urgency of this study lies in its role in providing a basis for the development of health education programs at the elementary school level. In a global context that increasingly emphasizes the importance of a healthy lifestyle, the results of this study can be a reference for schools, teachers, and parents to work together to create an environment that supports a healthy lifestyle for children. Based on the background, the purpose of this study was to determine the level of health knowledge and healthy lifestyle of grade V and VI students at Baratan State Elementary School, Pakem District, Sleman Regency. This study is expected to contribute to improving the quality of health education, so that it can form a generation that is more aware of the importance of a healthy lifestyle.

2. RESEARCH METHOD
2.1. Research Design
This research is a descriptive research, with the research method used is the survey method. Descriptive research is a non-hypothetical research but only describes a variable, symptom or condition [27]. The study aims to determine the health knowledge and healthy lifestyle of students in grades V and VI of the Baratan State Elementary School, Pakem District, Sleman Regency.

2.2. Research Population
The population in this study were 52 students in grades V and VI of the Baratan State Elementary School, Pakem District, Sleman Regency. Seeing the small population, the entire population was used as the subject of the study, so it can be said to be a population study.

2.3. Data Collection Instrument
The instrument for measuring health knowledge and healthy lifestyles used a questionnaire in the form of questions given to students in grades V and VI at Beratan Elementary School. The instruments and data collection techniques in this study used a questionnaire. The questionnaire outline in this study is as follows. In the health knowledge research questionnaire, it is presented in question items, positive items (correct answer score: 1, and incorrect answer score: 0), if negative items (correct answer score: 0, and incorrect answer score: 1).

Table 1. Health Knowledge Instrument Grid

Variable	Factor	Item
Health Knowledge of Grade V and VI Students of Baratan State Elementary School, Pakem District, Sleman Regency	Knowledge about Healthy Food and Drinks	1,2,3,4,5,6,7,8,9,10
	Knowledge of Hygiene	11,12,13,14
	Knowledge about Rest	15,16,17
	Knowledge about sports activities	18,19
	Knowledge about illness and disease	20,21,22,23,24,25
Amount		25

In the research questionnaire on healthy lifestyle of grade V and VI students of Baratan State Elementary School, Pakem District, Sleman Regency, the questionnaire was presented with four alternative answers: "always", "often", "sometimes", and "never" (always score: 4, often score: 3, sometimes score: 2 and never score: 1). The healthy lifestyle questionnaire outline is as follows:

Table 2. Grid of healthy lifestyle questionnaire for grade V and VI students at Baratan Elementary School, Pakem District

Variable	Factor	Total Item
Healthy lifestyle of students in grades V and VI of Baratan State Elementary School, Pakem District, Sleman Regency	Food and drink	9
	Body hygiene	9
	Patterns towards environmental hygiene	9
	Patterns towards illness and disease	9
	Bad habits	9
Amount		45

From the results of the trial of 25 health knowledge questionnaire statements, a total validity of 0.905 was obtained, while the trial of 45 healthy lifestyle questionnaire statements obtained a total validity of 0.870. The results of the reliability test obtained a reliability coefficient for health knowledge of 0.908, while the reliability coefficient for healthy lifestyles was 0.940.

2.4. Data Collection Techniques

The data collection technique used in this study was to provide a questionnaire to respondents to be filled in for each question or statement according to the instructions listed in the questionnaire. The questionnaire in this study was a closed questionnaire with answer choices, respondents only had to answer the ones provided [28], [29].

This research is a quantitative study, because this research is quantitative, to answer the problem, the data analysis technique used is a quantitative descriptive analysis technique. Furthermore, to calculate the percentage included in the category in each aspect using the formula:

$$p = \frac{F}{N} \times 100\% \qquad \text{...(1)}$$

Description:
p = Percentage number
F = Frequency whose percentage is being sought
N = Number of Cases (Total frequency of individuals)

The categorization is arranged into 5 categories, the formula used in arranging the categories can be seen in the following table:

Table 3. Categorization of Teacher Perceptions

No	Categorization	Category
1	> M + 1.5 SD	Very high
2	M + 0.5 SD s/d M + 1.5 SD	High
3	M − 0.5 SD s/d M + 0.5 SD	Fair
4	M − 1.5 SD s/d M − 0.5 SD	Less
5	< M − 1.5 SD	Very less

3. RESULTS AND DISCUSSION

The results of the study on health knowledge and healthy lifestyles of grade V and VI students of Baratan State Elementary School, Pakem District, Sleman Regency are described in detail as follows:

Based on the results of the study from 52 people, the description of the research results for health knowledge data is obtained, namely; minimum score = 8; maximum score = 24; mean = 16.48; median = 17; mode = 14 and standard deviation = 3.53. The results of the study on health knowledge can be described based on the following formula:

Table 4. Description of Health Knowledge

Formula	Interval	Category	F	%
> M + 1.5 SD	> 21.77	Very high	5	9.6
M + 0.5 SD s/d M + 1.5 SD	18.24 - 21.76	High	13	25.0
M – 0.5 SD s/d M + 0.5 SD	14.71 – 18.23	Fair	19	36.5
M – 1.5 SD s/d M – 0.5 SD	11.18 – 14.70	Less	11	21.2
< M – 1.5 SD	< 11.18	Very less	4	7.7
Amount			52	100

Based on the table above, it is known that the health knowledge of students in grades V and VI of Baratan State Elementary School, Pakem District, Sleman Regency is mostly in the sufficient category of 36.5%, followed by the high category of 25.0%, the less category of 21.2%, the very high category of 9.6% and the very less category of 7.7%.

Based on the results of the study from 52 people, a description of the research results for a healthy lifestyle was obtained, namely; minimum score = 98; maximum score = 162; mean = 131.25; median = 132; mode = 132 and standard deviation = 16.15. The description of the results of the healthy lifestyle study can be seen as follows:

Table 5. Description of the Results of the Healthy Lifestyle Study

Formula	Interval	Category	F	%
> M + 1.5 SD	> 155.47	Very high	6	11.5
M + 0.5 SD s/d M + 1.5 SD	139.32 – 155.46	High	6	11.5
M – 0.5 SD s/d M + 0.5 SD	123.17 – 139.31	Fair	26	50.0
M – 1.5 SD s/d M – 0.5 SD	107.02 – 123.17	Less	7	13.5
< M – 1.5 SD	< 107.01	Very less	7	13.5
Amount			52	100

Based on the table above, it is known that the healthy lifestyle of students in grades V and VI of Baratan State Elementary School, Pakem District, Sleman Regency is mostly in the moderate category of 50.0%, followed by the low category of 13.5%, the very poor category of 13.5%, the high category of 11.5% and the very high category of 11.5%.

A healthy lifestyle is a person's activity or action in maintaining and improving their health in everyday life. A healthy lifestyle must be supported by various factors including eating and drinking, personal hygiene, environmental hygiene, disease patterns, and daily habits. To achieve a good healthy lifestyle, of course, a person must know and understand how to live a good and healthy life. In relation to this, a person needs good knowledge of health. Knowledge about health is quite important because a person will be able to control good living habits.

Based on the results of the study above, it is known that the health knowledge of students in grades V and VI of the Baratan State Elementary School, Pakem District, Sleman Regency is mostly in the sufficient category of 36.5%. While the healthy lifestyle of students in grades V and VI of the Baratan State Elementary School, Pakem District, Sleman Regency is mostly in the moderate category of 50.0%. With good health knowledge, students understand more about the factors that influence daily healthy lifestyles, including diet, hygiene patterns, sports activities, and rest patterns. So psychologically, children who have health knowledge will be better able to control their lifestyle habits, because children know what is healthy and what is not, this will physically have an impact on daily healthy lifestyles.

These results mean that students still have an unhealthy lifestyle towards food. This is due to the habit of eating unhealthy and nutritious food, such as; there are still many students who buy food from street vendors/hawkers whose health is not guaranteed. In this case, the function of food for the body can reduce and prevent hunger, replace damaged body cells, for body growth, as a source of energy, and help cure diseases. Thus, the food needed to support a healthy life is nutritious food, in addition, a variety of foods are needed so that the substances consumed by the body also vary and complement each other [30], [31].

The purpose of personal hygiene is so that someone knows the benefits of personal hygiene and is able to clean body parts, and is able to apply personal hygiene care in an effort to improve healthy living. In addition, personal hygiene is not only physical cleanliness, but also spiritual cleanliness.

Students are still less able to maintain environmental cleanliness properly. Maintaining the environment is proven by not throwing garbage anywhere, this is because strict sanctions from the school make students always maintain environmental cleanliness, especially school cleanliness. The environment is a place for humans to live, with a good, clean and healthy environment humans will feel comfortable and support the healthy life they want. To be able to live healthily, clean and healthy environmental conditions are needed. Therefore, environmental conditions need to be really considered so as not to damage health. Students are not yet able to

respond and act on various diseases around them. This response is shown by protecting the body from various diseases, and a quick response if attacked by disease, namely by treating it.

The results of this study have important implications in the global and regional context, especially in efforts to raise awareness of the importance of a healthy lifestyle from an early age. Globally, this study is in line with the Sustainable Development Goals (SDGs) agenda, especially the third goal, which is to ensure healthy lives and support well-being for all ages. At the regional level, especially in Indonesia, these findings can be the basis for the development of a more integrated health education curriculum in elementary schools. By instilling adequate health knowledge, it is hoped that the younger generation can be better prepared to face the challenges of a modern lifestyle that is often unhealthy, so that it can contribute to improving the quality of life of society as a whole.

This study has several limitations, including the limited number of samples involving only fifth and sixth grade students in one elementary school, so the results cannot be generalized to a wider population. In addition, this study only used a survey approach and descriptive analysis, so it did not explore in depth other factors that influence students' healthy lifestyles. For future research, it is recommended to involve more schools and participants from various backgrounds, and use a mixed approach that combines qualitative and quantitative methods. Further research also needs to explore technology-based health education interventions and contextual approaches that are relevant to the needs of children in the modern era.

4. CONCLUSION

This study can be concluded that the health knowledge of students in grades V and VI of Baratan Elementary School, Pakem District, Sleman Regency is sufficient with a percentage of 36.5% and the healthy lifestyle of students is moderate with a percentage of 50.0%. Based on these results, it is recommended that schools increase health education efforts through programs that are more integrated into the curriculum, such as routine counseling on the importance of a healthy lifestyle, giving health-based assignments, and stricter supervision of food sold in the school environment. In addition, parents are also advised to support their children's healthy lifestyle by providing nutritious food supplies and encouraging adequate physical activity at home. Support from various parties is expected to improve students' knowledge and healthy lifestyles as a whole.

REFERENCES

[1] I. Coppola, N. Rania, R. Parisi, and F. Lagomarsino, "Spiritual Well-Being and Mental Health During the COVID-19 Pandemic in Italy," *Front. Psychiatry*, vol. 12, no. April, pp. 1–15, 2021, doi: 10.3389/fpsyt.2021.626944.

[2] J. Simon, T. M. Helter, R. G. White, C. van der Boor, and A. Łaszewska, "Capability impacts of the Covid-19 lockdown in association with mental well-being, social connections and existing vulnerabilities: An Austrian survey study," *BMC Public Health*, vol. 21, no. 314, pp. 1–12, 2020.

[3] A. Otu, C. H. Charles, and S. Yaya, "Mental health and psychosocial well-being during the COVID-19 pandemic: The invisible elephant in the room," *Int. J. Ment. Health Syst.*, vol. 14, no. 1, pp. 1–5, 2020, doi: 10.1186/s13033-020-00371-w.

[4] A. Mahindru, P. Patil, and V. Agrawal, "Role of Physical Activity on Mental Health and Well-Being: A Review," *Cureus*, vol. 15, no. 1, pp. 1–7, 2023, doi: 10.7759/cureus.33475.

[5] C. Birimoglu Okuyan and M. A. Begen, "Working from home during the COVID-19 pandemic, its effects on health, and recommendations: The pandemic and beyond," *Perspect. Psychiatr. Care*, vol. 58, no. 1, pp. 173–179, 2022, doi: 10.1111/ppc.12847.

[6] H. M. LaMonica, T. A. Davenport, A. E. Roberts, and I. B. Hickie, "Understanding technology preferences and requirements for health information technologies designed to improve and maintain the mental health and well-being of older adults: Participatory design study," *JMIR Aging*, vol. 4, no. 1, pp. 1–17, 2021, doi: 10.2196/21461.

[7] L. A. de Araújo, C. F. Veloso, M. de C. Souza, J. M. C. de Azevedo, and G. Tarro, "The potential impact of the COVID-19 pandemic on child growth and development: a systematic review," *J. Pediatr. (Rio. J).*, vol. 97, no. 4, pp. 369–377, 2021, doi: 10.1016/j.jped.2020.08.008.

[8] N. M. Lowe, "The global challenge of hidden hunger: Perspectives from the field," *Proc. Nutr. Soc.*, vol. 80, no. 3, pp. 283–289, 2021, doi: 10.1017/S0029665121000902.

[9] R. B. Khatri and Y. Assefa, "Access to health services among culturally and linguistically diverse populations in the Australian universal health care system: issues and challenges," *BMC Public Health*, vol. 22, no. 1, pp. 1–14, 2022, doi: 10.1186/s12889-022-13256-z.

[10] K. Åsberg, A. C. Eldh, M. Löf, and M. Bendtsen, "A balancing act-finding one's way to health and well-being: A qualitative analysis of interviews with Swedish university students on lifestyle and behavior change," *PLoS One*, vol. 17, no. 10 October, pp. 1–14, 2022, doi: 10.1371/journal.pone.0275848.

[11] A. N. Daly, E. J. O'Sullivan, and J. M. Kearney, "Considerations for health and food choice in adolescents," *Proc. Nutr. Soc.*, vol. 81, no. 1, pp. 75–86, 2022, doi: 10.1017/S0029665121003827.

[12] S. J. Sejuti and B. K. Banik, "Parents views on children ' s physical vulnerability to Covid-19 pandemic," *Indones. J. Soc. Sci.*, vol. 16, no. 2, pp. 102–115, 2024, doi: 10.20473/ijss.v16i2.52380.

[13] R. Lekše, D. Godec, and M. Prosen, "Determining the Impact of Lifestyle on the Health of Primary School Children in Slovenia Through Mixed Membership Focus Groups," *J. Community Health*, vol. 48, no. 5, pp. 857–869, 2023, doi: 10.1007/s10900-023-01231-7.

[14] I. Bezrati *et al.*, "Poor Eating Habits and Low Physical Activity Contribute to Weight Excess and Increase Cardiometabolic Risk in Adolescents Practicing Soccer as a Recreational Sport," *Children*, vol. 11, no. 7, 2024, doi: 10.3390/children11070857.

[15] A. Trecroci, P. L. Invernizzi, D. Monacis, and D. Colella, "Physical Illiteracy and Obesity Barrier: How Physical Education Can Overpass Potential Adverse Effects? A Narrative Review," *Sustain.*, vol. 14, no. 1, 2022, doi: 10.3390/su14010419.

[16] F. De la Fuente *et al.*, "Green space exposure association with type 2 diabetes mellitus, physical activity, and obesity: A systematic review," *Int. J. Environ. Res. Public Health*, vol. 18, no. 1, pp. 1–18, 2021, doi: 10.3390/ijerph18010097.

[17] K. Wang, Y. Li, H. Liu, T. Zhang, and J. Luo, "Can physical activity counteract the negative effects of sedentary behavior on the physical and mental health of children and adolescents? A narrative review," *Front. Public Heal.*, vol. 12, no. 3, 2024, doi: 10.3389/fpubh.2024.1412389.

[18] N. N. Sukawati, I. Gunawan, E. Ubaidillah, S. Maulina, and F. B. Santoso, "Human Resources Management in Basic Education Schools," in *Proceedings of the 2nd Early Childhood and Primary Childhood Education (ECPE 2020) Human*, 2020, pp. 292–299. doi: 10.2991/assehr.k.201112.052.

[19] S. Sutarman, N. Nurhayati, R. D. Utami, I. Idarianty, and I. Akzam, "Implementation of character based integrated holistic education in early childhood education," *Int. J. Health Sci. (Qassim).*, vol. 6, no. S4, pp. 5405–5419, 2022, doi: 10.53730/ijhs.v6ns4.10923.

[20] A. Suryanto, S. Saliman, and S. Sudrajat, "The weakness of character education in indonesian teenager," *J. Penelit. Pendidik. IPA*, vol. 9, no. 5, pp. 3869–3874, 2023.

[21] M. Alagawany *et al.*, "Nutritional significance of amino acids, vitamins and minerals as nutraceuticals in poultry production and health–a comprehensive review," *Vet. Q.*, vol. 41, no. 1, pp. 1–29, 2020, doi: 10.1080/01652176.2020.1857887.

[22] A. Zavitsanou and A. Drigas, "Nutrition in mental and physical health," *Tech. Soc. Sci. J.*, vol. 23, no. September, pp. 67–77, 2021, doi: 10.47577/tssj.v23i1.4126.

[23] B. Mamurov, A. Mamanazarov, K. Abdullaev, I. Davronov, N. Davronov, and K. Kobiljonov, "Acmeological Approach to the Formation of Healthy Lifestyle Among University Students," in *III International Scientific Congress Society of Ambient Intelligence 2020 (ISC-SAI 2020) Acmeological*, 2020, pp. 347–353. doi: 10.2991/aebmr.k.200318.043.

[24] O. H. Adejuwon, A. I. O. Jideani, and K. O. Falade, "Quality and Public Health Concerns of Instant Noodles as Influenced by Raw Materials and Processing Technology," *Food Rev. Int.*, vol. 36, no. 3, pp. 276–317, 2020, doi: 10.1080/87559129.2019.1642348.

[25] M. Obadi, Y. Li, and B. Xu, "Recent advances in extending the shelf life of fresh wet noodles: Influencing factors and preservation technologies," *J. Food Sci.*, vol. 88, no. 9, pp. 3626–3648, 2023, doi: 10.1111/1750-3841.16719.

[26] A. Hyman *et al.*, "Testing a school-based program to promote digital health literacy and healthy lifestyle behaviours in intermediate elementary students: The Learning for Life program," *Prev. Med. Reports*, vol. 19, no. January, p. 101149, 2020, doi: 10.1016/j.pmedr.2020.101149.

[27] A. I. Sanjuán-López and H. Resano-Ezcaray, "Labels for a Local Food Speciality Product: The Case of Saffron," *J. Agric. Econ.*, vol. 71, no. 3, pp. 778–797, 2020, doi: 10.1111/1477-9552.12376.

[28] H. Taherdoost, "Designing a Questionnaire for a Research Paper: A Comprehensive Guide to Design and Develop an Effective Questionnaire," *Asian J. Manag. Sci.*, vol. 11, no. 1, pp. 8–16, 2022, doi: 10.51983/ajms-2022.11.1.3087.

[29] I. Andreadis and E. Kartsounidou, "The impact of splitting a long online questionnaire on data quality," *Surv. Res. Methods*, vol. 14, no. 1, pp. 31–42, 2020, doi: 10.18148/srm/2020.v14i1.7294.

[30] S. Sambu, U. Hemaram, R. Murugan, and A. A. Alsofi, "Toxicological and Teratogenic Effect of Various Food Additives: An Updated Review," *Biomed Res. Int.*, vol. 2024, 2022, doi: 10.1155/2022/6829409.

[31] N. E. Marshall *et al.*, "The importance of nutrition in pregnancy and lactation: lifelong consequences," *Am. J. Obstet. Gynecol.*, vol. 226, no. 5, pp. 607–632, 2022, doi: 10.1016/j.ajog.2021.12.035.