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Analysis of Clean and Healthy Living Behavior in Improving the Ecological Intelligence of Elementary School Students

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Abstract: This study aims to determine clean and healthy living behavior in improving the ecological intelligence of Sukamerta 2 public elementary school students. The method used in this research is descriptive qualitative research. Data collection in this study used observation, interviews, questionnaires and documentation. Data analysis techniques used are data reduction, data presentation and conclusion drawing. The results of this study indicate that teachers have an important role in creating clean and healthy living behavior at school. Teachers are one of the figures modeled by students, so the driving factor in increasing students' ecological intelligence is the teacher. Based on the questionnaire results, it can be concluded that Sukamerta 2 State Elementary School students who practice clean and healthy living behavior are 45 students (64.29%), while those who do not practice clean and healthy living behavior are 25 students (35.71%). So it can be concluded that it is necessary to implement clean and healthy living behavior for all students and is in the good category so that the value of ecological intelligence of students on clean and healthy living behavior is normal or good and in order to create a better school environment in maintaining cleanliness and comfort in learning and teaching activities.

Keywords: Ecological intelligence; Elementary school student; Living behaviors

Introduction

The World Health Organization (WHO) revealed that the increasing ability of people to maintain and improve their health status, both physically, mentally, and socially so that they are economically and socially productive (Notoatmodjo, 2018). While the Vision of Health Promotion in Indonesia is "Clean and Healthy Living Behavior (PHBS) 2010", which indicates the realization of a new Indonesian society with a healthy culture (Kholid, 2015).

Clean and healthy living behavior in schools is a set of behaviors practiced by students (A'yun et al., 2021; Bajri et al., 2022; Hayati & Fatmalia, 2022), teachers and the community in the school environment on the basis of awareness as a result of learning, so that they are independently able to prevent disease, improve health, and play an active role in realizing a healthy environment (Kemenkes RI, 2019).

According to Nasiatin et al. (2019) clean and healthy living behavior is a set of behaviors carried out based on individual awareness to prevent health problems. Clean and healthy living behavior is practiced consciously as a result of learning when a person or family can help themselves in the health sector and be active in realizing the health of their community. Clean and healthy living behavior policies are an important part of regional efforts to demonstrate regional success in reducing the incidence of disease due to unhealthy behavior (Zarnuzi, 2020).

Based on several expert opinions about clean and healthy living behavior, it can be concluded that Clean

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and healthy living behavior is a set of behaviors that are carried out consciously as a result of human or family learning that can help themselves in the health sector and play an active role in the introduction of health in the community (Barker et al., 2020).

Ecological intelligence is also often called ecological literacy or ecoliteracy (Joy et al., 2024; Nugraha et al., 2022). According to Kurniawan et al. (2019), considers that there is another growing intelligence known as "ecological intelligence". Ecological intelligence is the ability to adapt to the ecological aspects of where we are. Ecological means understanding of organisms and their ecosystems. While intelligence is the capacity to learn from experience and effectively deal with the environment. Gardner (2013) calls ecological intelligence naturalistic intelligence. According to him, naturalist intelligence is the human ability to understand natural phenomena, show ecological awareness and show sensitivity to natural forms (Bridle, 2022). Ecological intelligence combines cognitive skills with empathy for all forms of life. Ecological intelligence allows humans to understand systems with their complexity, as well as the mutual influence between the natural and human-created world (Solomon & Baio, 2020; Musniati et al., 2021).

Ecological competence is directed at how humans can have ecological intelligence. Basically, humans use knowledge, attitudes, and skills on how to think and act intelligently towards the environment (Muhaimin et al., 2015). Ecological intelligence can also be defined as the ability of individuals to make decisions by prioritizing and paying attention to environmental sustainability starting from the personal level to the global level (Alam, 2010). This explanation leads to the assumption that there is a link between ecological intelligence and the activity of sorting organic and inorganic waste (Rosalina, 2019). Developing ecological intelligence is one way that is thought to increase the activity of sorting organic and inorganic waste among adolescents (Karlina et al., 2022).

Based on the theory above, what is meant by ecological intelligence is a way of human perspective to be balanced in seeing ecological impacts in the way of life (Hasanah et al., 2021). Ecological intelligence combines cognitive skills with empathy for all forms of life so that the environment is not just a place for exploitation but a place that must be protected.

According to Muhaimin et al. (2015) categorizes that ecological intelligence can be measured by 4 indicators of ecological competence, namely:

Knowledge Aspect

Ecological knowledge is directed so that students gain understanding and facts about ecological systems to serve as a basis for building awareness and concern for the environment.

Knowledge of the environment includes 4 components, namely: knowledge of environmental problems in daily life; knowledge of the impact of environmental problems, knowledge of predictions of environmental problems in the future; knowledge of solutions or alternatives to solve environmental problems; knowledge of the dependence of humans and the environment.

Attitude Aspect

Ecological attitude is a set of values and attitudes that care about the environment and motivate to actively participate in improving and protecting the environment. Attitude towards the environment includes: appreciation and concern for the environment; response and thinking about environmental issues; and tolerance and openness in various environmental problems

Skills Aspect

Ecological skills are basically a person's behavior in developing care and sensitivity to the environment. Ecological skills include: skills to use and utilize resources wisely; skills to maintain the preservation and balance of the environment; environmental problem solving skills.

Aspect of Participation

Participation in the environment is the real action of students' involvement in environmental conservation efforts. Participation in the environment includes: carrying out activities both individually and in groups to preserve the environment continuously; mobilizing people around to have concern and participation in the environment; and being actively involved in environmental movements.

Based on the results of initial observations, the phenomenon that occurred at SDN Sukamerta II, SDN Sukamerta II is one of the schools that has implemented clean and healthy living behavior by providing material on school environmental health. Clean and Healthy Living Behavior (PHBS) carried out by students at school is sought to be fully maximized. Ideally as a whole, Clean and Healthy Living Behavior (PHBS) at school is well implemented. However, there are still some students who have not implemented PHBS such as littering, long nails, dressing less neatly, students still snack carelessly and the unavailability of a healthy canteen, there is a place to wash hands but students rarely wash their hands.

Research by Kurniawan et al. (2019) with the title "The Effect of Environmental Care Behavior and Healthy Living on the Level of Ecological Intelligence of FETT

Students at Kuningan University behavior". Based on research that environmental care behavior and healthy living behavior have a significant effect on the level of ecological intelligence, which means that the more environmental care behavior and healthy living behavior increase, the level of ecological intelligence will increase.

From the description above, the researcher is interested in discussing and making the research title "Analysis of Clean and Healthy Living Behavior in Improving Ecological Intelligence of Elementary School Students".

Method

The approach taken in this research is qualitative research. A qualitative approach is defined as research that can produce descriptive data in the form of written sentences collected from sources or interviewees to be understood or examined. A qualitative approach is also a type of research that focuses on a deep understanding of a broad topic of research problems. The method used in this research is descriptive method. Descriptive method is a research method that seeks to describe or describe and intervene in an object according to what is being studied (Hermawan, 2019).

The subjects in this study were students and class teachers of SDN Sukamerta II, Subdistrict. Rawamerta, Regency. Karawang who are the main informants of class 3A and 5A teachers, and 70 students. In this study there are several techniques used by researchers in data collection. The data collection techniques by conducting field research conducted at SDN Sukamerta II through observation, interviews and documentation. After collecting data from the field using these techniques, the researcher will carry out data analysis procedures using the Miles and Huberman model which includes: data reduction; data presentation; and conclusion drawing.

Result and Discussion

The role of teachers in increasing students' ecological intelligence is certainly very influential on students' clean and healthy living behavior (Zulfikar et al., 2020). In matters such as throwing garbage in its place, there are still students who have not implemented it so that the teacher gives a warning so that students implement the activity of throwing garbage in its place properly. In terms of washing hands before or after eating, some students still do not apply it, so the teacher always reminds them to always wash their hands and explains the good benefits of washing their hands. . So based on the results of observations made by researchers on class 3a and 5a teachers at Sukamerta II State Elementary School, it can be explained that the role of teachers in increasing students' ecological intelligence through PHBS has a very large role. Starting from the role of teachers who provide advice or direction to students in maintaining personal hygiene and cleanliness of the classroom and school environment. Therefore, students become more confident when they have carried out their obligations in maintaining cleanliness. So that from this, students' ecological intelligence can become more developed (Fadjarajani & As'ari, 2021).

Observation in this study begins with the condition of the school, then the researcher observes and conducts interviews with informants. Furthermore, researchers made direct observations in the implementation of the PHBS process (healthy and clean living behavior) starting from the process and the results.

The following are the results of data collection techniques through observation:

Table 1. Description of Ecological Intelligence Indicators

Description of Ecological Intelligence Indicators	Yes	No
Knowledge Aspect		
All students can distinguish between healthy and unhealthy snacks in the school canteen		✔
All students can recognize the types of waste (organic/non-organic)	✔	
Attitude Aspect		
All students wear a hat and tie during the flag ceremony (dress neatly).		✔
All students do not smoke in the school environment	✔	
Aspect of Skills		
All students turn off the tap water after use.	✔	
All students can wash their hands with soap at school (before eating or whenever their hands are dirty).		✔
Aspect of Participation		
All students do regular class cleaning or picket activities.		✔
All students do physical activities (sports) with the specified time and schedule.	✔	

In the inhibiting factors of students in improving ecological intelligence, of course, it comes from PHBS which is not implemented properly. Starting from the knowledge factor about sorting dry waste with wet waste and putting it in its place, which is not well implemented. Then the attitude factor regarding the flag ceremony where students are required to use a hat and tie during the flag ceremony, but there are still some students who do not apply it.

So based on the results of observations made by researchers at Sukamerta II State Elementary School, it can be explained that the inhibiting factors for students in increasing ecological intelligence come from an unsupportive environment such as unmaintained hand

washing facilities (Azizah et al., 2024; Cahyaningtyas et al., 2022), lack of parental awareness of teaching in maintaining cleanliness and health to their children, as well as lack of facilities such as cleaning tools in the classroom, namely brooms, glass cleaning tools, floor mops and infrastructure in implementing PHBS at school. Based on the results of distributing questionnaires about clean and healthy living behavior to 70 students at SDN Sukamerta II, the following research data were obtained.

Table 2. Results of Questionnaire Distribution to Students of SDN Sukamerta II

Assessment Aspect	Percentage (%)
Knowledge:	
Distinguish healthy snacks in the school canteen.	70.36
Differentiate the types of organic/non-organic waste.	71.07
Attitude:	
Wearing a hat and tie during the flag ceremony.	69.29
Know about the dangers of smoking.	71.43
Skills:	
Turning off the water tap after use.	77.50
Wash hands with clean running water and soap	79.29
Participation Aspect :	
Doing cleaning/ticketing activities at school.	76.79
Doing sports activities at school.	80.36

From the results of the questionnaire data, it is known that 70.36% of students can distinguish healthy snacks in the school canteen, then in distinguishing the types of organic/nonorganic waste get a percentage of 71.07%. So in the aspect of knowledge can be said to be quite good. From the attitude aspect, wearing a hat and tie during the ceremony gets a percentage of 69.29%. In knowing the dangers of smoking, the percentage is 71.43%. So in the aspect of attitude can be said to be quite good. Furthermore, from the aspect of skills, namely turning off the water tap after use, getting a percentage of 77.50% and in terms of washing hands with clean running water and soap getting a percentage of 79.29%. So in the aspect of skills it can be said to be good. In terms of doing cleaning / picket activities at school, getting a percentage result of 76.79% and in terms of doing sports activities at school getting a percentage result of 80.36%. So in the aspect of participation can be said to be in the good category. So it can be concluded that out of a total of 70 students at SDN Sukamerta II, the average result is 74.5% so that the category obtained is "good" in implementing clean and healthy living behavior at school.

The above statement is also supported by the results of interviews with class III teachers and class V teachers who said that students have begun to get used to implementing and carrying out cleanliness, although sometimes they forget and must always be reminded. This student habit is also inseparable from the role of teachers who always set an example so that when there is visible garbage, it must be immediately picked up and put into the trash can based on the type of garbage that will be put into the trash can. In addition, by holding class picket every day before and after carrying out learning can be a good habit for students to always remember their responsibility in maintaining cleanliness (Berger et al., 2021). In terms of sports activities, the students are very enthusiastic in carrying them out. In terms of turning off the water tap, students can apply it well without having to be reminded all the time and the activity of washing hands cleanly is still not well implemented so the teacher always reminds them to always maintain personal hygiene through washing hands cleanly. The following is photo documentation at SDN Sukamerta II. After giving questionnaires to students in classes 3A and 5A, the results obtained are as follows.

Table 3. Categories of Students' Ecological Intelligence

Category	Number of Students	Total (%)
Very Good	13	18.58
Good	32	45.71
Not Good	25	35.71
Not Very Good	0	0
Total	70	100

Based on the results of the questionnaire that have been processed into data, it can be seen that students' ecological intelligence in each category can be obtained by the percentage of respondents, namely in the Very Good (SB) category as many as 13 students (18.58%), respondents who are in the Good (B) category as many as 32 students (45.71%), respondents who are in the Not Good (TB) category as many as 25 students (35.17%), and respondents who are in the Very Not Good (STB) category as many as 0 students (0%).

Teachers are a very important element in schools in implementing health promotion in improving the intelligence of their students (Nash et al., 2021; Pulimeno et al., 2020). In this study, the role of teachers is proven that there is a significant relationship between Clean and Healthy Living Behavior in increasing students' ecological intelligence at SDN Sukamerta II. The results of this study are in line with research conducted by Kurniawan et al. (2019).

At school, the teacher is one of the figures exemplified by students, so the driving factor in increasing students' ecological intelligence is the teacher.

This is because teachers are an example to their students in school. In addition to providing examples, teachers also play a role in terms of supervising and controlling students in implementing good PHBS so that students' ecological intelligence remains in good condition.

So it can be concluded that the role of teachers in increasing students' ecological intelligence needs to be improved so that the value of students' ecological intelligence can develop in a normal or good condition, in order to create a better school environment in the behavior of maintaining cleanliness and comfort in learning. The results of this study support research from Kurniawan et al. (2019) based on the results of research that healthy living behavior has a positive effect on the level of ecological intelligence, which means that when healthy living behavior increases or increases, the level of ecological intelligence will increase. The following is photo documentation taken by researchers at SDN Sukamerta II.

Conclusion

The teacher is a figure who plays a very important role in the change and formation of clean and healthy living behavior in students because more or less the things done by the teacher, students will indirectly imitate it. Some students at school still do not want to maintain environmental cleanliness and personal hygiene if there is no direct warning from the teacher. In addition, the role of parents is very necessary for the implementation of clean and healthy living behavior so that it can indirectly increase children's ecological intelligence and the child can apply it well in the home and school environment. Clean and healthy living behavior (PBHS) in schools is very important to implement so that students become accustomed to and participate in creating a healthy school environment. Based on the results of data analysis of research conducted on 70 students at SDN Sukamerta II, it can be seen that an average of 77% of fourth grade students are good at implementing clean and healthy living behavior at school. The figure obtained is also inseparable from the role of the teacher in guiding students so far and still needs to be further improved. So, henceforth students are able to implement PHBS without the need to be ordered by teachers or other people. Factors that hinder the ecological intelligence of elementary school students lie in an unsupportive environment, student knowledge, lack of facilities and infrastructure that can support the application of students in terms of clean and healthy living behavior. In addition, the role of parents is very necessary for the implementation of clean and healthy living behavior so that it can indirectly increase children's ecological intelligence and the child can apply it well in the home environment and in the school environment. The ecological intelligence of SDN Sukamerta II students is considered "Good Enough" because there are still some students who are lacking in the application of PHBS in their school.

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