

## THE EFFECTIVENESS OF HEALTH EDUCATION USING LEAFLET MEDIA AND AUDIO VISUAL MEDIA ON KNOWLEDGE OF CLEAN AND HEALTHY LIVING IN STUDENTS IN CLASS 5 - 6 AT SD 063 INPRES BAKKA-BAKKA KEC WONOMULYO

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### Abstract

**Backgrounds;** School-age children are an age group vulnerable to health problems, so students are more susceptible to disease and this is detrimental for students because they are forced to be absent from school due to illness. PHBS in schools is an effort to empower students, teachers and the school community to know, be willing and able to practice PHBS, and play an active role in creating healthy schools. The media used to provide health promotion is very necessary. The ability of this audio visual media is considered better and more interesting, because it contains both elements, namely being heard and being seen. One other health promotion media is leaflets. Leaflets are a form of conveying information or health messages via folded sheets. The information content can be in the form of sentences or images or a combination. **Objectives;** This research aims to determine the effectiveness of health educators using leaflet media and audio-visual media on knowledge of clean and healthy living (PHBS) among students in grades 5-6 at SD 063 Inpres Bakka bakka. **Methods;** This research is quantitative research using the Pre-Experimental method with a two group Pretest-Posttest design. The sampling method was carried out using a cluster sampling technique (area sampling) with a total of 40 people. **Results;** Shapiro Wilk normality test results. Respondents' knowledge of pre-intervention video was  $p=0.117$  and pre-intervention on leaflets was  $p=0.063$ . So it shows that the data before the intervention was normally distributed ( $p>0.05$ ), while the normality test on the attitudes of respondents before the audio-visual intervention was 0.062 while before the leaflet intervention was 0.128, it shows that the pre-intervention data was normally distributed ( $p>0.05$ ) which then analyzed the data using the Paired Samples t-test with a result of  $p=0.000$ , which means there is a difference in the Effectiveness of Health Education Using Leaflet Media and Audio Visual Media on Knowledge of Clean and Healthy Living in Grades 5 - 6 Students at SD 063 Inpres Bakka -Bakka District. Wonomulyo. **Conclusions;** The influence of health promotion through audiovisual media on knowledge about prevention among students at SD 063 Inpres Bakka-bakka.

**Keywords:** Health Education, Leaflets, Audio Visual, PHBS

## **BACKGROUND**

School-age children are a vulnerable age group to health problems, making students more susceptible to illnesses, which can be detrimental as they may have to miss school due to sickness. Clean and Healthy Living Behavior (PHBS) in schools is an effort to empower students, teachers, and the school community to know, want, and be able to practice PHBS, and actively participate in creating a healthy school environment (Kemendikbud, 2021).

All Indonesian children have the right to a safe, clean, and healthy environment at school. School environmental health is a condition that supports the development of clean and healthy living behaviors and can influence both physical and mental health, while also protecting against negative influences that can harm health. The ability to live healthily in a healthy environment allows students to learn, grow, and develop harmoniously to their highest potential, becoming quality human resources (Kemendikbud, 2021).

Clean and Healthy Living Behavior (PHBS) is a set of behaviors practiced based on awareness as a result of learning, enabling individuals or families to help themselves in the health sector and actively participate in achieving community health (Depkes, 2014). PHBS is also one of the government's priority programs through community health centers (puskesmas) and serves as an external tool in implementing health development, as mentioned in the Ministry of Health's strategic plan for 2010-2014. The target is not limited to hygiene but is more comprehensive and broad. Physical changes, biological environments, and social-cultural environments of the community contribute to creating a health-oriented environment and promoting clean and healthy living behaviors (Simbolon, 2018).

Current health issues in schools are becoming complex and varied, related to student health influenced by various factors, including the school environment and clean and healthy living behaviors. Some cases of illness are contracted outside the home environment, including in schools. This demonstrates that school cleanliness is a crucial factor that must be addressed. When PHBS is not implemented in the school environment, it can lead to various impacts. From an educational perspective, a dirty school environment affects the comfort of students and teachers during the teaching and learning process, and a dirty environment can also trigger the outbreak of various diseases, such as dengue fever (Kemenkes RI, 2018).

The benefits of PHBS in schools include creating a clean and healthy school environment that protects students, teachers, and the school community from various disturbances and disease threats, enhancing the enthusiasm for the teaching and learning process, which impacts student achievement, improving the school's image as an educational institution and attracting parental interest (the community), enhancing the image of local government in the field of education, and serving as a model for healthy schools in other regions (Dwi, 2018). The development goal for Indonesia is to achieve an advanced and self-reliant nation, both materially and spiritually. One characteristic of an advanced nation is a high degree of health is essential because health status significantly impacts a nation's productivity. Only with healthy resources can a nation be more productive and enhance its competitiveness (Depkes, 2014). Health is a right of every individual to perform daily activities. To live healthily, one must adopt Clean and Healthy Living Behavior (PHBS).

Health promotion essentially involves activities or efforts to convey health messages to the community, groups, or individuals, with the hope that these messages will lead to better health knowledge. This knowledge is expected to eventually influence behavior. In other words, health promotion aims to bring about changes in the behavior of the target audience. Health promotion is also a process with inputs and outputs. In the process of health education aimed at achieving the goal of promotion—behavior change—many factors influence the process. Besides the input factors themselves, these factors include methods, content or messages, educators or practitioners, and aids or media used to deliver the message (Natoatmodjo, 2014).

The use of media for health promotion is crucial. Audio-visual media are considered more effective and engaging because they incorporate both auditory and visual elements. Another health promotion medium is the leaflet. A leaflet is a form of conveying health information or messages through a folded sheet. The content can be in the form of text, images, or a combination of both. Information provided through leaflets is part of health education media, which is an effort to enhance the ability (behavior) to achieve optimal health.

Researchers (Elisa et al., 2022) state that audio-visual media are intermediary media where the material and its application are presented through sight and sound, creating conditions that allow students to acquire knowledge and skills. The material in audio-visual media is presented with moving images and engaging storylines, as well as sound, providing a more realistic depiction.

A leaflet is a piece of paper featuring images and text, usually with more text (Kurnia, 2014). Leaflets are used as a health education medium because they allow the target audience to engage in self-directed learning. Users can view the content at their leisure, share the information with family and friends, provide more detailed information than can be conveyed verbally, and reduce the need for note-taking (Edyati, 2019).

Researchers use leaflets and audio-visual media to help elementary school children quickly understand and be interested in learning more about Clean and Healthy Living Behavior (PHBS) and to practice PHBS in their daily lives. Elementary school students also directly see the leaflets distributed by researchers and view and hear the audio-visual materials presented. This direct exposure helps children understand and become interested more quickly, leading them to pay closer attention. According to an initial survey conducted by the researchers at SD 063 Inpres Bakka-bakka, Wonomulyo District, Polewali Mandar Regency, the school covers an area of 1,125 m<sup>2</sup>. Observations revealed that there is a lack of awareness among students about practicing clean and healthy living behaviors at the school. Some students still litter, vandalize walls, spit indiscriminately, even though trash cans and toilets are available, and the toilets remain dirty. Students also buy food outside the school. Based on this relationship between Clean and Healthy Living Behavior (PHBS) and the environmental health at SD 063 Inpres Bakka-bakka, Wonomulyo District, Polewali Mandar Regency.

## **METHODS**

### **a. Research Type**

This research is a quantitative study using a Pre-Experimental method with a two-group Pretest-Posttest design. The study tests two different interventions on two separate groups.

b. Location and Time of Study

This research is conducted at SD 063 Inpres Bakka-Bakka, Wonomulyo District.

c. Population and Sample

The population for this study consists of 5th and 6th-grade students at SD 063 Bakka-Bakka, Wonomulyo District. The sample for this study includes 20 respondents, divided into two groups: 10 respondents using Audio-Visual materials and 10 respondents using Leaflets.

d. Data Collection

The instrument used in this study is a questionnaire containing items related to PHBS. Knowledge is assessed using 24 questions. Each question has several answer options consisting of true and false statements.

## RESULTS

Results of Normality Test (Shapiro-Wilk). The knowledge of respondents before intervention: For the video intervention,  $(p = 0.117)$ , and for the leaflet intervention,  $(p = 0.063)$ . This indicates that the data before the intervention is normally distributed  $(p > 0.05)$ . For the attitudes of respondents before the intervention: The normality test for the audio-visual intervention is  $(p = 0.062)$  and for the leaflet intervention is  $(p = 0.128)$ . This indicates that the pre-intervention data is normally distributed  $(p > 0.05)$ .

The data was then analyzed using the Paired Sample t-test, with results showing  $(p = 0.000)$ . This means there is a significant difference in the effectiveness of health education between leaflet and audio-visual media on Clean and Healthy Living Knowledge among 5th and 6th-grade students at SD 063 Inpres Bakka-Bakka, Wonomulyo District.

Respondents' Knowledge Before and After Audio-Visual Intervention Based on the research results, the average knowledge score before the intervention was 6.30 out of 10 questions about PHBS education given before the audio-visual intervention to 20 respondents. After the intervention via WhatsApp group on PHBS education, the average score increased by 2.00, resulting in a post-test score of 8.00 out of 10 questions for the 20 respondents. The questions before and after the intervention remained the same. The p-value was  $0.000 < 0.005$ , indicating a significant effect of the audio-visual method on knowledge of PHBS education.

These findings are consistent with previous research (Saban, 2017), which states that audio media significantly impacts knowledge because audio-visual material is presented with engaging storylines and sound, providing a clearer depiction. According to (Igjany et al., 2016), audio visual media are easier to understand and can be listened to repeatedly, making them effective in changing the perspectives of the target audience. This theory was confirmed when the researcher conducted health promotion on PHBS education, showing a significant difference after the intervention using audio-visual methods. Factors that can influence knowledge when using audio media include clear sound, proper volume, and language that is easy for the audience to understand. Respondents' Attitudes Before and After Intervention Through WhatsApp Group Using Audio-Visual Methods Based on the research results, the average pre-test attitude score was 24.70 out of 10 questions given before the audio-visual intervention to 20 respondents from SD 063 Inpres Bakka-Bakka. After the intervention via WhatsApp

group on education, the average score increased by 2.60, resulting in a post-test score of 27.30 out of 10 questions for the 20 respondents. The p-value was  $0.000 < 0.005$ , indicating a significant effect of the audio-visual method on attitudes towards PHBS education.

These findings are consistent with previous research by Selviana and Suwarni (2018), which states that there was an improvement in attitudes before and after the use of audio-visual media concerning the implementation of G1R1J, leading to an improvement in attitudes among elementary school children at SD 063 Inpres Bakka-Bakka. The increase in the average attitude test score was due to the addition of information previously unknown to the respondents. Respondents' attitudes were also evident during health promotion when I provided audio-visual material in the WhatsApp group, where all respondents were able to receive and respond to the questions I posed. The researcher believes that knowledge, thinking, beliefs, and emotions are crucial in forming positive attitudes. Respondents' Knowledge Before and After Intervention Through WhatsApp Group Using Leaflets.

Based on the research results, the average knowledge score of SD 063 Inpres Bakka-Bakka students before the intervention was 6.45 out of 10 questions regarding PHBS education. After the intervention via the WhatsApp group using leaflets, the average score increased by 2.55, resulting in a post-test score of 9.00 out of 10 questions for the 20 respondents. The questions before and after the intervention remained the same. The p-value was  $0.000 < 0.005$ , indicating a significant effect of the leaflet method on knowledge of PHBS education.

According to researchers Anisha, Farid, and Akira (2017), leaflets can significantly improve knowledge levels ( $p = 0.00$ ) regarding the prevention of gastritis before and after counseling. Research by Syukaisih (2018) also indicates that health promotion using leaflets is effective in increasing knowledge among poor communities about smoking. Providing information through leaflets in the WhatsApp group can enhance respondents' willingness to pay attention to the information presented. The leaflet's content, clarified with text and images, helps respondents read and understand the message better, thereby improving their knowledge. The increase in respondents' knowledge is attributed to their ability to read and view the images displayed, which enhances their recall of PHBS education.

Respondents' Attitudes Before and After Intervention Through WhatsApp Group Using Leaflets. Based on the research results, the average pre-test attitude score was 29.80 out of 10 questions given before the leaflet intervention to 20 cadre mothers from the Posyandu in Desa Katikan. After the intervention via the WhatsApp group on PHBS education, the average score increased by 3.60, resulting in a post-test score of 33.40 out of 10 questions for the 20 respondents. The p-value was  $0.000 < 0.005$ , indicating a significant effect of the leaflet method on attitudes towards PHBS education.

These findings align with research by Tarigan and Eka Ristin (2016), which found differences in health promotion with leaflets before and after health promotion was provided. Attitudes improved from moderate to good regarding HIV/AIDS awareness at SMA Negeri 1 Berastagi, Karo Regency. In forming attitudes, knowledge, thinking, beliefs, and emotions play a crucial role. Respondents' acceptance or rejection of a topic/object is indirectly influenced by their level of knowledge. If an object provided to respondents is engaging, they are more likely to be interested in reading it. To ensure that leaflets are well-received, they should be presented in a concise, attractive, and

clear manner to increase respondents' interest in reading them.

Differences in Effectiveness Between Audio-Visual and Leaflet Methods on PHBS Education Regarding Students' Knowledge and Attitudes a) Knowledge.

There is a difference in PHBS education knowledge among students before and after the intervention with audio-visual media and leaflets at SD 063 Inpres Bakka-Bakka. According to the research, the average knowledge score difference for the audio-visual method was 2.00 points, while for the leaflet method it was 2.55 points, with a difference of 0.55 points.

To assess the effectiveness of both interventions, an independent t-test was performed to analyze the difference between audio-visual and leaflet media through WhatsApp groups concerning students' knowledge. The p-value obtained was  $0.031 < 0.05$  ( $\alpha$ ). From these results, it can be statistically concluded that there is a significant difference in the average score change between the audio-visual and leaflet groups, with the leaflet intervention being more effective compared to audio-visual.

Saharyah Sabah (2017) states that audio-visual media is more effective than leaflet media in improving knowledge about anemia among high school students. Based on the independent t-test results, the p-value was 0.000, compared to the alpha coefficient ( $\alpha$ ) = 0.05. Thus, the p-value  $< \alpha$  suggests that  $H_a$  is accepted, indicating a difference in effectiveness between audio-visual and leaflet media concerning anemia knowledge.

According to Notoatmodjo (2003), a person's knowledge can be influenced by the amount of information they receive, either directly or indirectly. Knowledge is also affected by the speed at which someone receives information; thus, the more information a person acquires, the better their knowledge. Knowledge results from awareness, occurring after sensory perception of a particular object. Perception happens through human senses—sight, hearing, smell, taste, and touch. Most human knowledge is obtained through sight and hearing. Cognitive knowledge is crucial for individual actions.

There is a difference in PHBS education attitudes among students before and after the intervention with audio-visual media and leaflets at SD 063 Inpres Bakka-Bakka. According to the research, the average attitude score difference for the video method was 2.60 points, while for the leaflet method it was 3.60 points, with a difference of 1.00 point. To assess the effectiveness of both interventions, an independent t-test was performed to analyze the difference between audio-visual and leaflet media through WhatsApp groups concerning students' attitudes. The p value obtained was  $0.000 < 0.05$  ( $\alpha$ ). From these results, it can be statistically concluded that there is a significant difference in the average score change between the audio-visual and leaflet groups, with the leaflet intervention being more effective compared to audio-visual. Syukaisih, Alhidayati et al. (2018) state that health promotion using both leaflet and video media is effective in improving knowledge and attitudes, but video is more effective in improving knowledge and attitudes among poor communities about smoking. The increase in the average attitude scores among respondents in the leaflet media group was higher than in the audio-visual media group. Statistical analysis of the differences in average pre-test and post-test attitude scores showed that the leaflet media achieved a higher average compared to audio-visual, demonstrating that leaflet media is more effective in improving attitudes than audio-visual. In forming attitudes, knowledge, thinking, beliefs, and emotions play a crucial role. Respondents' acceptance

or rejection of a subject/object is indirectly influenced by their level of knowledge.

## **CONCLUSION**

Based on the research findings and discussion in this study regarding the effectiveness of health education through leaflet and audio-visual media on clean and healthy living behavior (PHBS) among students at SD 063 Inpres Bakka-Bakka, the following conclusions can be drawn:

1. There is an impact of health promotion through audio-visual media on students' knowledge about managing clean and healthy living behavior (PHBS) at SD 063 Inpres Bakka-Bakka.
2. There is an impact of health promotion through audio-visual media on students' attitudes towards PHBS education at SD 063 Inpres Bakka-Bakka.
3. There is an impact of health promotion through leaflets on students' knowledge about PHBS education at SD 063 Inpres Bakka-Bakka.
4. There is an impact of health promotion through leaflets on students' attitudes towards PHBS education at SD 063 Inpres Bakka-Bakka.
5. There is a difference in the effectiveness of health promotion through audio visual and leaflet media on students' knowledge about PHBS at SD 063 Inpres Bakka-Bakka before and after the intervention.
6. There is a difference in the effectiveness of health promotion through audio visual and leaflet media on students' attitudes towards PHBS at SD 063 Inpres Bakka-Bakka before and after the intervention.

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