

# OBSERVATION ON THE USE OF AUDIO-VISUAL MEDIA IN HELMINTHIASIS PREVENTION EDUCATION TO ELEMENTARY STUDENTS IN BLAHKIUH

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**Abstract:** Helminthiasis is one of the parasitic diseases that infect the human intestines due to poor personal hygiene and sanitation which mostly occurs in children and affects their development and performance. The use of audio-visual media to educate the children at risk should help the transfer of knowledge with simpler information and more attractive approach. This study aims to obtain the insight of responses from elementary school students as the target audience in absorbing the information about Helminthiasis prevention through audio-visual media. An observational study with a qualitative approach was carried out at Elementary School Number 3 Blahkiuh, Abiansemal sub-district, Bali, in December 2021. 80 students from grades 1, 2, and 3 that were involved in health education were directly observed. The observations utilized a checklist that assessed the student's capability to mention, explain, and define the information themselves, along with examples. Information regarding the cause, transmission, impact, and prevention of helminthiasis was delivered using a three minutes animated video. The observation shows that the use of animated video in the dissemination of health information to students in grades 1, 2, and 3 provides a good response from them in terms of their interest in the topic and media along with their active engagement in learning and receiving information related to Helminthiasis prevention. Delivering information through animated video to students in grades 1, 2, and 3 as a group in the early stage of school provide to be beneficial for the increasing student's knowledge of new health information with an attractive approach.

**Keywords:** audio-visual, responses, helminthiasis, elementary students

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## Introduction

Soil-Transmitted Helminth (STH) is a disease caused by parasitic pathogens and has infected at least 1.5 billion people worldwide (Agustianingsih et al., 2020). This disease is of particular concern in Indonesia because of the high prevalence which ranges from 40-60% and approximately 195 million Indonesians live in endemic areas with a high risk of STH (Tan et al., 2014). Based on the examination of 34 provinces in Indonesia in 398 elementary schools, shows a prevalence rate of 31.8% affected by STH. Badung regency as one of the districts in Bali Province, has a fairly high prevalence of helminthiasis, around 20-40% (Krishnandita et al., 2019). One of the highest prevalence

in Badung regency reported in the year 2003-2007, was in Blahkiuh Village, which was 94%. STH infection is more common in children, especially those living in the tropics and endemic areas to STH. Children were prone to STH infection due to lack of hygiene and sanitation practices (Brahmantya et al., 2020). Therefore, health education in children needs to be designed in a way that exhibits responsible behavior concerning their health.

Learning media will help in delivering messages and lesson content, thus making the learning process effective. One of the health education media that is widely used in health education is audio-visual-based media. Sometimes health educators ignore the use of media, especially audio-visual media, even though using learning media makes children motivated in learning and captures the learning content easily (Fitria, 2018). Audio-visual media conveys information that is easily accepted by the sense of sight and auditory. Therefore, it is considered more effective for the audience, in receiving and understanding health information. Previous studies reported that the effectiveness of audio-visual media reaches 50% and has many advantages, including and not limited to its portability features, and can be used almost anytime. Thus, the use of audio-visual media is strongly recommended for children in Elementary School (Fitria, 2018; Letrud & Hernes, 2018). Other studies on audio-visual media reported that it was very helpful in increasing children's knowledge and improving learning outcomes because students were able to see and listen to what was being told, making the learning process more exciting and fun (Mahdalena et al., 2019; Nurmala et al., 2020).

Based on those considerations, to help decrease the number of STH infections in children, particularly in Blahkiuh Village with the highest STH infection prevalence, we conducted this study to obtain the insight of responses from elementary school students as the target audience in absorbing the information about Helminthiasis prevention through audio-visual media. This is the first study to evaluate the use of audio-visual media for health education in children in Bali Province. This study takes place in Elementary School Number 3 Blahkiuh (furthermore referred to as SDN 3 Blahkiuh), the most popular Elementary School in Blahkiuh Village, Badung Regency. The use of audio-visual media to educate the children at risk should help the transfer of knowledge with simpler information and a more attractive approach.

## **Materials and Methods**

### ***Study Design***

An observational qualitative study with a phenomenological approach was conducted at SDN 3 Blahkiuh, Abiansema Sub-District, Badung Regency, Bali Province, in December 2021. The research participants in this study were elementary school students grade 1, 2, and 3 from SDN 3 Blahkiuh. Because this study intended to observe the student's live experiences in the use of audio-visual media to deliver health information, an interpretive research paradigm and a phenomenology approach was the most appropriate approach used to observe the elementary school student's responses, while receiving health information related to helminthiasis prevention.

### ***Data Collection***

Three minutes animated video that originated from the work of the committee was used to deliver health information regarding the cause, transmission, impact, and prevention of helminthiasis in the Indonesian language. Research participants were chosen using the total sampling method. The people

who were involved in the interview and data collection are nine college students from different institutions and multiple disciplines, including public health, nursing, veterinary, and pharmaceutical sciences. Three interviewers were assigned to each class. They were assigned based on a random approach. The interviewer had received a briefing regarding their role prior to the data collection. None of the interviewers has any relationship with the students previously.

Student's capability to mention, explain, and define the health information given, along with examples, were also collected in this study. Research participants were observed in general. The observation result depends on the interviewer's observation individually. In addition, a questionnaire consisting of five questions regarding helminthiasis was used before and after the animated video was shown, to trigger the student's participation in the data collection. Three interviewers assigned in each class were asked to report their experiences during the education session.

## **Results and Discussion**

### ***Observation in the grade 1 students***

Showing the animated video to grade 1 student granted positive responses from students. The positive responses were given by the students as they focused their attention on the displayed video. The atmosphere of the class which was previously quite crowded began to be conducive during the animated video showing. So that the materials delivered through the animated video were easy to understand and convey well.

### ***Observation in the grade 2 students***

Students in grade 2 seemed to be actively discussing with each other at the end of the video shows. This was seen from the increasing number of students who raised their hands to answer questions that were given to them, compared to before the video was shown. Students were able to understand the material delivered through the video easily.

### ***Observation in the grade 3 students***

Students in grade 3 were observed to be more focused when the video was playing. One of the students was seen trying to read the subtitles on the video. Students claimed to enjoy learning to use animated videos. Students were keeping their focus on the video, even though when the video was shown, it is the end of the counseling session.

### ***Overall Observation***

The observation shows that the use of audio-visual media in the dissemination of health information to 80 students in grades 1 to 3 at SDN 3 Blahkiuh provides good response in terms of their interest in the topic and media, along with their active engagement in learning and receiving information related to Helminthiasis prevention. Generally, students were able to mention, explain, and define the health information given.

According to the result, it was shown that the students have a good motivation in learning through the usage of audio-visual media. Based on the observation, the students pay more attention to the material

that has been given. Moreover, during the discussion session, the students were active in responding to the speaker. A previous study concluded that audio-visual can bring motivation to make the students involved during the learning and teaching process in the classroom (Angreiny et al., 2020). The study conducted by Abdullah et al. (2021) concluded that audio-visual media encourages the students to be more focused, active, responsive, and have more curiosity which can improve the student's enthusiasm for learning.

This study also indicated that the students have better knowledge after being given education through audio-visual media. It can be indicated from the observation that students raise their hands more during the learning process. Moreover, students are also able to explain the material that has been given during the question and answer session. This was related to the study of Aisah et al. (2021) which concluded that audio-visual media in the form of animated videos are very effective to improve the student's understanding of health education because it is interesting, easy to understand, effective, and informative. Furthermore, Hendriani et al. (2019) also concluded that the health education delivered through audio-visual media was effective in increasing the student's knowledge.

### ***Study Limitation***

Due to the nature of a qualitative study design, the results of this study were limited to interviewer's observation only. A study with a quantitative design would likely generate better results. Observation time in this study was also relatively short, further observation time and follow-up are needed to evaluate the benefit of audio-visual media.

### **Conclusion**

Delivering information through animated video to students in grades one to three as a group in an early stage of school at SDN 3 Blahkiuh provides to be beneficial for the increase of student's knowledge regarding new health information with an attractive approach. To generate a better result, further research is needed with a bigger sample size, a better observation method in a quantitative study design, and a longer observation time.

### **Declaration of Interest Statement**

The authors declare that they have no conflict of interest.

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