



# INTERNASIONAL CONFERENCE ON MULTIDISCIPLINARY APPROACHES IN HEALTH SCIENCE

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## Health Education With Comic Media Increases Students' Knowledge About Eye Health At SDN 4 Panjer In 2024

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### ABSTRACT

Eye health can decline along with low eye health knowledge. Inadequate health knowledge can cause visual impairment which will have a negative impact later. The purpose of this study was to determine the effect of health education with comic media on students' level of knowledge about eye health at SDN 4 Panjer. The research method was pre-experimental, with a one group pre-test post-test design approach. The research subjects were grade 5 students of SDN 4 Panjer, totaling 69 students as a population and the sample used total sampling. The tool used was an eye health knowledge questionnaire. The results of the evaluation of respondents showed that as many as 32 students had good knowledge, 31 students had sufficient knowledge, and 6 students had poor knowledge before being given education with comics and increased after being given education with comics to 52 students with good knowledge and 17 students with sufficient knowledge. The results of bivariate analysis using the Wilcoxon test obtained a p-value of 0.000 ( $<0.05$ ). This shows that the level of knowledge of students increased after being given education with comics. The conclusion of the study is that there is an effect of health education with comic media on students' level of knowledge about eye health at SDN 4 Panjer in 2024. It is expected that from the results of this study, the provision of health education with comic media is used as an alternative to provide education to elementary school students.

**Keywords:** health education, comic, knowledge level



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## Introduction

The eye is a complex sensory organ with the main function of carrying out visual processes, this organ is one of the senses that is very vital in capturing visual information and carrying out various activities. The ability of the eye is not only limited to receiving information, but also includes the ability to organize and organize information from the surrounding environment. Eye health is often underpaid so that many diseases attack the eyes and if not treated properly will cause visual impairment (Syiafuddin, 2013)

According to data released by WHO, visual impairment is experienced by more than 285 million people in the world. According to the results of Basic Health Research (Riskesdas) in 2018, it was found that the prevalence of severe low vision or impairment of vision function and blindness was 1.49% and 0.5% in the productive age group (15-54 years) (Riskesdas, 2018). Data from the Indonesian Ministry of Health in 2017 stated that the results of the 2014-2016 Rapid Assessment of Avoidable Blindness (RAAB).

survey reported that the prevalence of blindness in 15 provinces in Indonesia was 3% (Riskesdas, 2018). The prevalence of blindness in Bali based on the Rapid Assessment of Avoidable Blindness (RAAB) survey in 2015 is 2%. The prevalence is classified as high based on the World Health Organization (WHO) and is a public health problem (Dewi et al., 2021). Based on the results of the interview with the principal of SDN 4 Panjer, it was found that students at SDN 4 Panjer had never received health education about eye health. Based on the results of the preliminary study, the number of students in class 5 is 69 students. The results of interviews with 10 students, 7 out of 10 students said they did not know how to maintain eye health.

The importance of providing education about eye health lies in an effort to improve

students' understanding of eye health problems. One of the approach methods that can be used to attract students' attention in providing education is through the use of comics. Comics are a form of visual education media that combines images and writing to convey information in an interesting way (Sasia et al., 2021). Comics have an effective role in developing reading habits, especially in children aged nine to eleven years who are generally able to read fluently and understand the content of the reading. Therefore, eye health education methods can be applied through the use of comics as an educational tool (Setyawati, 2019).

The purpose of this study is to find out whether there is an influence of health education with comic media on the level of student knowledge about eye health at SDN 4 Panjer in 2024.

## Research Method

This study uses a type of pre-experimental research, with a one-group pre-test post-test design approach. This research was carried out at SDN 4 Panjer and was carried out for 1 week starting from March 18-25, 2024. The sampling technique uses non-probability sampling with a total sampling type and a sample of 69 people. The inclusion criteria include grade 5 students of SDN 4 Panjer who are voluntarily willing to become respondents and sign informed consent. The exclusion criteria included grade 5 students of SDN 4 Panjer who were not present during the research period. Primary data were obtained through filling out an eye health knowledge questionnaire. The validity of the questionnaire was tested with the results of  $r \text{ count } (0.331-0.781) > r \text{ table } (0.312)$ , while its reliability was tested with an alpha coefficient of 0.850 showing a strong relationship.



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## Results and Discussion

The results of the research on the influence of health education with comic media on the level of student knowledge about eye health at SDN 4 Panjer in 2024 are as follows:

Table 1. Frequency Distribution of Respondents by Age at SDN 4 Panjer in 2024

Age	Frequency (n)	Percentage (%)
10	18	26,1
11	51	73,9
Total	69	100

Based on table 1, out of 69 students, the majority of students are 11 years old as many as 51 students (73.9%) and students who are 10 years old are 18 students (26.1%).

Table 2. Frequency Distribution of Respondents by Gender at SDN 4 Panjer in 2024

Gender	Frequency (n)	Percentage (%)
Man	31	44,9
Woman	38	55,1
Total	69	100

Based on table 2, out of 69 students, the majority of students were female as many as 38 students (55.1%) and male students as many as 31 students (44.9%).

Table 3. Frequency Distribution of Students' Knowledge Level Regarding Eye Health Before Being  
Given Comics at SDN 4 Panjer in 2024

Level of Knowledge of Student Eye Health	Frequency (n)	Percentage (%)
Good	32	46,4
Enough	31	44,9
Less	6	8,7
Total	69	100

Based on table 3, the results of the study showed that the level of knowledge of students with a good knowledge amounted to 32 students (46.4%), a sufficient knowledge amounted to 31 students (44.9%), and a poor knowledge amounted to 6 students (8.7%).

Table 4. Frequency Distribution of Students' Knowledge Levels Regarding Eye Health After Being  
Given Comics at SDN 4 Panjer in 2024

Level of Knowledge of Student Eye Health	Frequency (n)	Percentage (%)
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<b>Good</b>	52	75,4
<b>Enough</b>	17	24,6
<b>Less</b>	0	0
<b>Total</b>	69	100

Based on table 4, the results of the study showed that the level of knowledge of students with the good knowledge amounted to 52 students (75.4%) and the sufficient knowledge amounted to 17 students (24.6%).

**Table 5.** Frequency Distribution of Students' Knowledge Levels Regarding Eye Health Before and After Being Given Comics at SDN 4 Panjer in 2024

<b>Level of Knowledge of Student Eye Health</b>	<b>Pre-Test</b>		<b>Post-Test</b>	
	<b>Frequency (n)</b>	<b>Percentage (%)</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Good</b>	32	46,4	52	75,4
<b>Enough</b>	31	44,9	17	24,6
<b>Less</b>	6	8,7	0	0
<b>Total</b>	69	100	69	100

Based on table 5, the results of the study showed that there was an increase in the number of students who had a good level of knowledge from 32 students (46.4%) to 52 students (75.4%), and there were no students with a low level of knowledge (0%).

**Table 6.** Results of Analysis of the Influence of Health Education with Comic Media on Students' Knowledge Level Regarding Eye Health at SDN 4 Panjer in 2024

<b>Post-Pre</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>	<b>p-value</b>
<b>Post-Test &lt; Pre-Test</b>	0	0	
<b>Post-Test &gt; Pre-Test</b>	64	92,8	
<b>Post-Test = Pre-Test</b>	5	7,2	
<b>Total</b>	69	100	0,000

Based on table 6, the results of the study show that after being given health education with comic media, there was no decrease in scores during the post-test. There was an increase in post-test scores obtained by 64 students (92.8%), and there were 5 students (7.2%) who received the same score in the pre-test and post-test.

All students are in the age range of 10-11 years old which falls into the primary school

age category. Students at this age have developed the stages of logical thinking



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(Prasetyo, 2018). In particular, children aged 10-11 years are at the stage of cognitive development which is a very comprehensive development that is related to thinking abilities, such as the ability to reason, remember, memorize, solve real problems, have ideas, and creativity. Cognitive development has an influence on children's mental and emotional development as well as language skills (Longitude, 2018).

The researcher's opinion is that at the age of 10-11 years or the age of grade 5 elementary school students is the right time to provide eye health education with comic media because of the ability of students who are able to understand and follow the storyline conveyed from comics, and with the combination of pictures and writing, it can attract students' interest in reading so that education feels more fun and interesting for children.

The use of this comic learning media can help students in understanding the material studied. The comic makes students emotionally immersed in the images and storylines in the comics. The subject matter shown through the stories in the comic makes students interested in reading it. In addition, students become easy to understand the subject matter. The desire of students to learn has also increased. Students are able to solve problems given based on the stories in the comics they have read. Learning also becomes meaningful because through animation in the comics they have read will be stored in their memories (Syahmita, 2019).

The researcher's opinion is that education about eye health must be given as additional material in addition to the material that has been given at school so that students get to know more about eye health so that the target level of student knowledge reaches the good category. Eye health education is good for elementary school-age children because children at this age are still in the developmental stage, and giving them an understanding of the

importance of maintaining eye health early on can help prevent eye problems in the future. The eye health education provided includes how to maintain eye health and eye diseases with the aim that students know how to maintain eye health and avoid behaviors that can have a bad impact on the eyes.

With the knowledge of eye health possessed by students, it is hoped that it can reduce the risk of preventable non-communicable eye diseases such as nearsightedness or myopia which can cause visual impairment.

The provision of education with comic media in this study was carried out three times by being given 30 minutes of reading time. The research involved 69 students in grade 5 at SDN 4 Panjer. The material contained in this comic includes the types of eye diseases and ways to maintain eye health. Grade 5 students who have been educated with comic media are given an online comic link with the purpose of education that can be disseminated to friends from other classes.

Knowledge is the result of a person's perception of a particular object that we owns. This knowledge will be maximized if it is influenced by the intensity of one's attention and perception of certain objects. The object of the student is the comic that is read, the comic can attract students to read repeatedly. So that students' knowledge increases because comics spur stimulus to remember the message (Setyawati et al., 2019).

The researcher's opinion is that the provision of eye health education is very important to be given from the age of children so that children can know eye health materials and can apply how to maintain eye health in an effort to reduce the risk of visual impairment that has been found in elementary school children.

The results of the analysis using the Wilcoxon test obtained a p-value of 0.000 which is a value smaller than 0.05 ( $\alpha$ ) so that the



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hypothesis is accepted. There is a significant difference after being given health education with comic media. The difference between the level of knowledge of students about eye health before the provision of health education with comic media and after the provision of health education with comic media. Looking at the results of the test, it can be concluded that there is an influence of health education with comic media on the level of students' knowledge about eye health at SDN 4 Panjer.

The results of this study are in line with the research conducted by Ridho et al. (2017) entitled "The Influence of Comic Media on Eye Health Knowledge in Children" and research from Pratiwi et al. (2023) entitled "The Effect of Health Education with Comic Media on the Level of Knowledge about Dental and Oral Health in Grade IV and V Students at SD Negeri 1 Dukuhwaluh" which said that there is an influence of the use of comic media on the level of knowledge of students.

This can happen because the use of comic media allows the use of more human senses in the process of receiving information so that it can increase student knowledge. This is supported by the statement that the provision of health education is one of the efforts to provide information that can increase knowledge. Exposure to information sources is an indication of how little knowledge can be accessed by individuals (Pratiwi et al., 2023).

Health education or education is the application or application of education in the health sector. Operationally, health education is

## Conclusion

The level of students' knowledge about eye health before being given health education with comic media was mostly in the good knowledge amounting to 32 people (46.4%), the sufficient knowledge amounting to 31 people (44.9), and the poor knowledge amounting to 6 people (8.7%). After being given health education with comic media, the level of student

all activities to provide and improve knowledge, attitudes, and good practices of individuals, groups, or communities in maintaining and improving their own health (Notoatmodjo, 2018).

The use of comics as an educational medium can increase students' understanding of the material being studied. The comic presents an emotional experience for students through the images and storylines presented. The storyline of the comic makes it easier for students to understand the message and material conveyed in the comic (Anita, 2014).

Educational materials conveyed through narratives in comics are able to attract students' interest in reading them, making it easier for them to understand the concepts taught. Students' interest in learning is also stimulated, which has an impact on a better understanding of the material. Through the stories conveyed in the comics, students can understand the concepts better, and the educational process becomes more meaningful because of the visual experience they get (Syahmita, 2019).

According to researchers, the use of comics as an educational medium is not only entertaining, but also very effective and interesting for children. Providing educational materials through comics can speed up children's understanding because it is more interesting than delivery methods such as lectures and questions and answers, which tend to make them bored quickly. Thus, the use of comics as an educational medium is able to increase students' knowledge about eye health. knowledge increased with 52 people in the good knowledge (75.4%) and 17 people in the sufficient knowledge

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## Conflic of Interest

The authors declare that they have no conflict of interest.

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