Journal Center of Excellent : Health Assistive Technology
Volume 3, Number 2, Year 2025, pp. 64-68
ISSN (Online): 2987-2200 DOI: 10.36082/jchat.v3i2.2025
Open Access: https://ejournal.poltekkesjakarta1.ac.id/index.php/jchat



Comic media in improving dental health knowledge in elementary schools

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ARTICLE INFO

Article history:
Received: August 22, 2025
Revised: September 11, 2025
Accepted: September 15, 2025
Available online: September 17, 2025

Keywords:
Knowledge, oral health care counseling, comics

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ABSTRACT

Background: Increasing knowledge and awareness of the importance of maintaining oral health is done by counseling, one of the counseling media that can be used to attract responden attention is in the form of images, one of which is comics. Objective: To analyze the level of knowledge of oral health before and after counseling with comic media for class 5th respondents of SDN Jampang Hambulu Bogor. Method: This type of research is a pre-experimental with a pretest and posttest with one group design, with a purposive sampling technique of 34 respondents of class 5th SDN Jampang Hambulu, the instruments used was a questionnaire sheets and comics. Results: The results showed that the average value of knowledge before counseling was 7 in the moderate category, and after counseling was 9,29 good category. The frequency distribution of the good category was 35,3% to 85,3%, the sufficient category was 52,9% to 14,7%, and the less category was 11,8% to 0%. Conclusion: Counseling with comic media effectively increases knowledge of oral health in class 5th respondets of SDN Jampang Hambulu.

INTRODUCTION

Oral health is an important aspect in the life of every individual including children, because oral problems in children can also affect children's growth and development and have a role in the growth of their permanent teeth (Purnama et al., 2020). In addition, dental health problems experienced by children will have an impact on their quality of life because they are the future assets of the country (Kantohe et al., 2016).

One way to improve health is to follow a healthy and clean lifestyle in everyday life (Purnama et al., 2024). The mouth not only functions as a place to eat and drink, but many people have not realized the importance of the mouth for human health (Nurilawaty et al., 2021). So the aspect of oral health cannot be ignored for health. Oral health maintenance needs to be seen with various factors, such as environmental conditions, level of knowledge, educational background, individual awareness, and a health management system that includes aspects of prevention and treatment (Ratih & Yudita, 2019).

The results of the Indonesian Health Survey (SKI) in 2023 showed that 37.2% of oral problems occurred in children aged 10-14 years. The data from West Java province shows that 48% of the Indonesian population experience oral health problems (Kemenkes, 2023)

Knowledge is important in influencing individual attitudes, which can be acquired naturally or through education. Knowledge can be formed or developed due to various things, including social, economic and environmental conditions around it. The level of knowledge reflects the degree to which individuals are able to obtain and understand health-related information (Sukarsih et al., 2022). Understanding of oral health includes various aspects related to maintaining oral health, including knowledge about diets that support dental health, how to brush teeth, and periodic dental and oral examinations (Riolina, 2017). Increasing knowledge can be done by counseling on how to maintain oral health, as an important alternative to improve health, especially for children with poor oral health (Andreastiti & Widodo, 2023).

Some of the things that need to be considered in designing an extension program are the appearance so that the media is not only interesting to watch or read, but the content of the media is also

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important. The media must contain messages with simple, concise, and clear language so that health messages can be conveyed and able to create behavioral changes in the community (Pertiwi, 2020).

One of the effective counseling media to attract students' interest is visual media such as comics. Comics have a positive influence, especially in building reading habits (Setyawati, 2019). Some research results show that the use of comics as a learning tool provides an interesting and efficient approach for students thanks to its clear, easy to understand nature, and is able to bring subject matter to life with creative visual (Mikamahuly et al., 2023).

The results of the study (Rusyadi et al., 2020) showed that there was a difference between counseling with comic media and exhibition media, with comic media experiencing a higher increase in knowledge than counseling with exhibition media. Another study conducted by (Setyawati, 2019) showed that there was a difference in the level of knowledge using comic media, which was proven to be able to increase students' knowledge about proper tooth brushing techniques.

METHOD

The research design used in this study used a pre-experimental method with a one-group pretest-posttest design. The research was conducted on class 5th respondents of SDN Jampang Hambulu Bogor. The sampling technique used purposive sampling, involving 34 respondents. The instruments used consisted of informed consent, questionnaires (pretest and posttest), and healthy teeth bright smile comics to measure knowledge about oral health.

The instruments used consisted of informed consent, questionnaires (pretest and posttest), and comic media. The study was conducted over three days. Pretest and posttest were given 2 days apart. The activities carried out are as follows:

1. Giving a list of pre-test questions to find out the knowledge of oral health on respondents before being given counseling.
2. Collecting pre-test question answer sheets
3. Provide comic media to respondents for 2 days as a guide for respondents for the independent learning process at home
4. Then 2 days later, give a list of post-test questions to find out the knowledge of oral and dental health in respondents after being given counseling with comic media.
5. Collecting answers to post-test questions
6. Checking the completeness of the data.

The data collected from the results of filling out the questionnaire by the respondents were then processed and analyzed.

RESULT

Table 1. Frequency distribution of respondent characteristics by age

Age	Frequency	Percent (%)
years		
10	3	8,8%
11	26	76,5%
12	5	14,7%
Total	34	100%

Table 1 shows that the majority of respondents were 10 years old, as many as 3 respondents (8.8%), 11 years old, as many as 26 respondents (76,5%), while 5 respondents (14,7%) were 12 years old.

Table 2. Frequency Distribution of Knowledge Before Counseling on Dental and Oral Health with Comic Media

Knowledge	Before		After	
	F	%	F	%
Good	12	35,3%	29	85,3%
Moderate	18	52,9%	5	14,7%
Less	4	11,8%	0	0%
Total	**34**	**100%**	**34**	**100%**

Table 2 shows that before the counseling with comic media was conducted on respondents in class 5th, most of the 12 respondents (35,3%) had knowledge about dental and oral health in the good category, 18 respondents (52,9%) had knowledge in the sufficient category, and 4 respondents (11,8%) had knowledge in the poor category. Meanwhile, after the counseling with comic media was conductedt on all respondents in class 5th the total knowledge about dental and oral health was in the gppd category, namely 29 respondents (85,3%) and was iin the sufficient category. Namely 5 respondents (14,7%) and no respondents were in the poor category.

Table 3. Effectiveness test of respondents dental health knowledge before and after education with comic media

Knowledge	*Mean*	SD	p-value
Pre-test	70.00	12.060	0.000
Post-test	90.29	10.879	

Table 3 shows that the effectiveness test results on respondents dental health knowledge obtained an average pre-test score of 70.00, which increased to 90.29 in the post-test with a p-value of 0.000 ($p<0.05$). These results indicate that the comic media is effective in improving respondents' dental health knowledge.

DISCUSSION

The results of research on class 5th responden at SDN Jampang Hambulu Bogor in March 2025 showed that the respondents' knowledge about oral health maintenance before counseling with bright smile healthy teeth comic media mostly had knowledge with good knowledge category as many as 12 respondents (35.3%), sufficient knowledge category as many as 18 respondents (52.9%), and with less category as many as 4 respondents (11.8%).

Although the preliminary results in this study showed that most respondents were in the moderate category, this finding confirms that the level of knowledge of elementary school respondents about oral health maintenance is still not optimal. Oral health problems are one of the problems that occur in school-age children in addition to nutritional imbalances, infectious diseases due to lack of clean and healthy living behaviors. One of the causes and factors of oral health problems is the level of knowledge (Octavianita et al., 2024). There is still low knowledge about oral health, so it is necessary to increase knowledge by providing innovative and interesting health education to increase their learning motivation (Suci Pratiwi et al., 2023).

In an effort to improve the knowledge of class 5th respondents of SDN Jampang Hambulu Bogor, researchers provided counseling interventions with comic media to be read at home for two days. Counseling with comic media as a learning medium can help respondents in understanding the message because comics do not only contain text but also images or illustrations. Images and illustrations in comics, especially health comics, can help develop the thinking power of readers. In addition, images in comics stimulate readers to read the comics repeatedly (Haq, 2015).

This can be seen in accordance with table 4.3, which explains that after being given counseling on maintaining oral and dental health with bright smile healthy teeth comic media, most of them have knowledge in the good category, which is increased by 29 respondents (85.3%), the category of sufficient knowledge is respondents (14.7%), and there are no respondents with the category of less knowledge. From the results of this study, it can be concluded that there is an increase in knowledge seen from the results of research before and after counseling with comic media on respondents knowledge of oral health maintenance where initially respondents did not know to know, and in the good category increased high from (35.3%) to (85.3%), while the moderate category decreased dramatically from (52.9%) to (14.7%), and the poor category decreased dramatically from (11.8%) to (0%).

The results of this study when compared with research conducted by (Haq, 2015) on the use of dental health comics in increasing the knowledge and trust of fifth grade students of SDN Martopuro 01 Purwosari District Pasuruan Regency in 2015, obtained the same results, namely a very sharp increase in the good category. In Haq's research, an increase in the excellent category occurred from (40%) to (85%), this can be interpreted that the dental health comics given can increase the knowledge of respondents, because health promotion media, especially dental health in the form of comic media can be used as an

alternative learning tool. Whereas in this study an increase in knowledge in the good category occurred from (35.3%) to (85.3%).

When this study is compared with research conducted by (Suci Pratiwi et al., 2023) on the Effect of Health Education with Comic Media on the Level of Knowledge about Dental and Oral Health in Class IV and V Students at SD Negeri 1 Dukuhwaluh, the same knowledge results are obtained, namely a very drastic decrease in knowledge in the lack category. In Holy research, the decrease in the lack category occurred from (77.5%) to (0%), and in this study a decrease in knowledge also occurred in the lack category from (11.8%) to (0%). It can be concluded that the use of comic media can increase knowledge about oral health, because comic media has attractive colors and images and a good storyline.

Research (Pakpahan et al., 2022) on Comparison of the Effectiveness of Lecture and Comic Reading Methods on the Level of Knowledge of Dental and Oral Health at SD Negeri 13 Sungai Ambawang, when compared to this study, the same results were obtained, namely an increase in knowledge in the good category in the comic reading method occurred from (37.5%), to (75.0%), it can be concluded that the comic reading method is effective on the level of knowledge of oral health because comics are one of the communication media favored by various groups, ranging from teenagers to adults, because the delivery of the story is not only through text, but also through creative and interesting illustrations, making it easier to understand. Whereas in this study an increase in knowledge in the good category occurred from (35.3%) to (85.3%).

The results of the research conducted at SDN Jampang Hambulu are the same as the three previous researchers, that after counseling with comic media on oral health maintenance there is a greater increase in knowledge than before. This indicates that this comic media can develop respondents interest and motivation to learn, can help respondents to easily understand the content of the material to be learned, foster respondents interest in reading, have attractive designs and colors and are easy to carry anywhere because they are small (Narestuti et al., 2021).

CONCLUSION

Based on the research results, it can be concluded that there was an increase in knowledge before dental and oral health counseling using comic media.

ACKNOWLEDGE

Thank you to SDN Jampang Hambulu Bogor for permission to conduct reserarch.

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