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Research Article

Educational comics: a change in the attitude of 3M children aged 10-12 years during the covid-19 pandemic

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Article Info:



Article History:

Received 23 February 2022
Reviewed 22 March 2022
Accepted 28 March 2022
Published 15 April 2022

Cite this article as:

Pongoh A, Educational comics: a change in the attitude of 3M children aged 10-12 years during the covid-19 pandemic, Journal of Drug Delivery and Therapeutics. 2022; 12(2-s):49-52

DOI: <http://dx.doi.org/10.22270/jddt.v12i2-s.5423>

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Abstract

Background: Covid-19 is a disease caused by a new type of Coronavirus namely Sars-CoV-2 which is transmitted through close contact and droplets. Symptoms are acute respiratory disorders such as cough, shortness of breath and fever above 38°C. Attitude change is a stimulus or stimulus received by a person, either in the form of a positive or negative response. Educational comics are pictures and writings that make up a story, then packaged into a book. The comic "Kitorang Lawan Corona" is more interesting for the readers. **Objective:** This study was to analyze the effectiveness of educational comics on changes in 3M attitudes in children aged 10-12 years during the covid-19 pandemic. **Methods:** The research design used was a quasi-experimental approach with a one group pretest-posttest design. The subjects of this study were students of MI Al-Kautsar Sorong City aged 10-12 years. Measurement of attitude change was carried out before and after giving educational comics using a Likert questionnaire. Analysis of research data using the Wilcoxon test. **Results:** providing comics education was significantly ($p=0.000$) effective on changing 3M attitudes in children aged 10-12 years during the covid-19 pandemic. **Conclusion:** Educational comics are effective in changing 3M attitudes in children aged 10-12 years during the covid-19 pandemic.

Keywords: Attitude change, health protocols, educational comics.

INTRODUCTION

Coronaviruses are a large family of viruses that cause mild to severe illness, such as the common cold and serious diseases such as MERS (Middle-East Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome).^{1,2}

According to WHO (World Health Organization), from 224 countries around the world the number of confirmed cases of Covid-19 is 98.925.221 with a death toll of 2.127.294.³ In Indonesia alone, there were 1.037.993 positive cases of COVID-19 with 29.331 deaths. Then according to West Papua Province data, there were 6.564 confirmed cases of Covid-19. The Sorong City Covid-19 Handling Task Force stated that as many as 2,399 cases were confirmed as of December 16, 2020.

The spokesperson for the State task force dealing with Covid-19, said that the group of school children contributed 8.87% or 59,776 cases of the total Covid-19 cases in Indonesia. The school age range is divided into 5 groups, namely 0-2 years (equivalent to **early childhood**), 3-6 years (equivalent to Kindergarten), 7-12 years (equivalent to **primary school**), 13-15 years (equivalent to junior high school), and 16-years old 18 years (high school equivalent).

The number of patients who were confirmed positive for Covid-19 in the working area of the Klasaman Health Center as of April-December 2020 was 222 cases. Added case data for January-March 2021 as many as 23 cases. So that the number of confirmed patients as of March 2021 is 250 cases

in the working area of the Klasaman Health Center, Sorong City. From the data on all confirmed cases, 13 positive cases were found in children. Even though it looks like a small number, this number is very influential on the spread of Covid-19 among children.

Adhering to health protocols is one form of effort to deal with the Covid-19 virus outbreak, which is carried out with effective steps. Based on temporary observation data that the researchers conducted on March 15, 2021 at MI Al-Kautsar Sorong City, the researchers paid attention to the condition of schools and students regarding compliance with the health protocol, namely 3M. All students were wearing masks during the learning process, but it was found that 6 out of 10 students took their masks off after school and left the school area, then 4 of 8 students walked after school side by side holding hands and 10 students bought school snacks by crowding without keeping the distance.

Attitudes in humans are the main predictors of everyday actions. The attitude itself is influenced by several factors, namely internal factors and external factors. These internal factors can come from oneself and external factors can come from one's environment such as the influence of communication, group interaction and cultural influences.^{4,5}

According to Fishbein and Ajzen's Theory of Reasoned Action, someone who believes that the action to be taken will have a positive impact on him, he will tend to take the action. On the other hand, if a person believes that the action to be taken will have a negative impact on him; he will refuse to take the action. This is called behavior belief. Which means that sometimes attitudes can determine a person's actions, but sometimes

attitudes do not manifest as actions, depending on the factors that influence them.^{6,7}

The impact that will occur if you don't apply the correct health protocols will be a spike in Covid-19 cases every day. If this is not handled properly, it will not only be detrimental in terms of health, but will have an impact on the economy in Indonesia.^{8,9}

Based on the above phenomenon, researchers are interested in conducting research on preventing the transmission of Covid-19 in children by changing children's attitudes in complying with the 3M health protocol. Researchers want to do education through media that is interesting for children, namely through educational comics. The definition of comics is a media that can be used to express ideas with pictures and often combined with text or other visual information.¹⁰

Research from Shobirin proves that comics media are effective and able to increase knowledge and attitudes about Dengue Hemorrhagic Fever in elementary school children. It is proven from the results of his research, namely that 70% knowledge increases to 87% good knowledge. Meanwhile, the increase in attitude from a negative attitude of 77% to a positive attitude of 80%⁷. Comics are also able to support the process of medical informed consent in children⁸. This means that comics are suitable media for health issues targeting children and adolescents.¹¹

MATERIALS AND METHODS

The study used a quasi-experimental research design. The selection of research subjects was carried out non-randomly, and did not have a control group. This study was conducted to see the effectiveness of educational comics on changes in 3M attitudes in children aged 10-12 years at MI Al-Kautsar Sorong City in dealing with the COVID-19 pandemic.

The sampling technique used is total sampling, that is, all members of the population are used as samples, so that the sample in this study were students aged 10-12 years at MI Al-Kautsar Sorong City with a total of 45 students. There are two variables in this study, including the provision of educational comics as the independent variable and attitude change which is the dependent variable.

The researcher gave an explanation to the respondent the intent and purpose of this research. Prospective respondents are willing to be respondents of this study and sign a letter of willingness to become respondents. The data collection technique chosen by the researcher in this study was using a questionnaire sheet. The first data collection begins with providing an explanation to the respondents the intent and purpose of this research. After that, respondents were asked to fill out a pre-test questionnaire. The researcher distributed 1 educational comic to all respondents. Respondents read comics and researchers explained the contents of the educational comics. Respondents practice the application of 3M health protocols such as those in educational comics. Researchers conducted questions and answers to the respondents. Furthermore, respondents filled out the post-test questionnaire. Data analysis using SPSS with Wilcoxon test.

RESULT

The results showed that the characteristics of the respondents obtained the highest frequency of student age, namely at the age of 12 years as many as 17 students (37.8%) and the highest frequency of the number of students according to gender, namely female, as many as 28 students (62.2%) (Table 1).

Table 1. Frequency distribution of respondent characteristics

Variable		n	%
Age	10 years	15	33.3
	11 years	13	28.9
	12 years	17	37.8
Gender	Male	17	37.8
	Female	28	62.2

Table 2. The average change in attitude of children aged 10-12 years at MI Al-Kautsar Sorong City

Attitude	Mean
Pre-test	68.53
Post-test	75.33

Table 2 shows that before being given educational comics, the average attitude value was 68.53, namely the category of enough attitude, while the average value of the attitude of the group after being given educational comics was 75.33, namely good attitude. It can be seen that the average attitude value after being given educational comics is higher than the average attitude value before being given educational comics with a difference of 6.8.

Table 3. Frequency distribution of change in attitude of children aged 10-12 years at MI Al-Kautsar Sorong City

Attitude	Pre-test		Post-test	
	n	%	n	%
Good	6	13.3	21	46.7
Enough	22	48.9	18	40.0
Less	17	37.8	6	13.3
Total	45	100	45	100

Table 3 shows that after giving educational comics there was a change in attitude from less to enough as many as 11 children so that the attitude was enough to 18 children while the change in attitude from enough to good increased by 15 children so that the change in good attitude became 21 children.

Table 4. Test wilcoxon change in attitude of children aged 10-12 years at MI Al-Kautsar Sorong City

Attitude	Z	p-value
Pre-test		
Post-test	-5.598	0.000

Table 4 shows that changes in 3M attitudes in children before and after giving educational comics obtained p value = 0.000, which means it is smaller than $a = 0.05$. If the p value < 0.05 , it means that there is an effectiveness of educational comics on changing 3M attitudes in children aged 10-12 years in dealing with the Covid-19 pandemic at MI Al-Kautsar Sorong City.

DISCUSSION

Based on table 3 above, it shows that in the group after giving educational comics there was a change in attitude from less to enough as many as 11 children so that the attitude was enough to be 18 children while the change in attitude from enough to good increased by 15 children so that the change in good attitude became 21 children. So it can be said that after giving educational comics, there was a change in 3M's attitude in children. Wilcoxon test results show the value of $p = 0.000 < a (0.05)$. So it can be concluded that educational comics are effective on changing 3M attitudes in children aged 10-12 years at MI Al-Kautsar Sorong City.

Attitude is not something independent. There will be no reaction from one's attitude without any connection with other objects. Change is defined as a thing or condition that changes or

undergoes transition and exchange. Factors Affecting Attitude According to Azwar namely: personal experience, the influence of other people who are considered important, cultural influences, mass media, and emotional factors.¹²

The first instrument used in this research is educational comic media in the form of comic books with printed color images. The title of the comic media used as an educational medium is "Kitorang Lawan Corona". The second is a questionnaire. The questionnaire made is a Likert questionnaire to measure attitudes about changes in 3M attitudes in children before and after being given an intervention using educational comics. The analysis was carried out based on the initial data and test result data after being given an intervention or post-test. Hypothesis testing was used with the Wilcoxon test.

The average change in attitude of students who experienced an increase in the experimental group after being given educational comics was greater with a value of 75.33%, namely good attitude, compared to the average student before being given educational comics of 68.53%, which was enough attitude. For students' attitudes, the sample given the intervention p value = 0.000 which means it is smaller than the $a = 0.05$. If the p value < 0.05 , then there is a significant difference before and after being given educational comics.

It can be stated that there was a significant increase in changes in student attitudes regarding the change in 3M's attitude in dealing with Covid-19 at MI Al-Kautsar after the provision of educational comics. Based on the Wilcoxon test, it can be concluded that this educational comic is effective in influencing changes in student attitudes, because there is a significant increase in the attitude of the sample after being given an educational comic.

The results of this study are in line with a number of studies by Ridha, which prove that comics media are effective and able to increase the knowledge and attitudes of elementary school children. It is evident from the results of his research that 70% of knowledge has increased from being good knowledge to 87%, while the increase in attitudes from a negative attitude is 77% to a positive attitude is 77%.¹³

Comic books are an effective method as an outreach tool for children. Comics are proven to be able to help children in the process of learning to read, because comics provide interesting and motivating material and are equipped with visual support. This means that comics are suitable media for health issues targeting children and adolescents. Comics are also able to support the process of medical informed consent in children. The use of media in health education has the aim of attracting attention to a problem and reminding the information conveyed to cause changes in knowledge and attitudes. Print media, such as booklets or comics, are effective for health education for children. Print media itself has several advantages. Among them can lead to independent responsibility of each respondent for knowledge on the basis of information received through the media. Print media such as comics are given to each individual, so they can be studied at any time.¹⁴⁻¹⁶

The effectiveness of a media is influenced by color, letters, the suitability of images and words, as well as the substance of the material provided. The language aspect also plays an important role in the development of educational media. The local language turns out to provoke the interest of readers to read the contents of the message.^{17,18}

Structured and massive health promotion efforts are very effective in influencing children's habits in adapting to implementing the 3M health protocol during the current

pandemic. When the predisposing factors for the behaviour of implementing the 3M health protocol during the pandemic have been well established, other health efforts do not stop. It is also necessary to prepare infrastructure for these healthy habits, such as places to wash hands and the availability of water in public places. Infrastructure such as hand washing facilities have proven to be effective in facilitating hand washing habits in households or public places. Water availability is also significantly related to hand washing behaviour and hand hygiene levels.¹³

The use of educational comics is influenced by several aspects, namely color, letters, suitability of images, language and words, and the substance of the material provided. The language aspect plays an important role in the development of educational media. And the use of local language in the comic "Kitorang Lawan Corona" is more interesting for readers to read the comic and receive the message content because the local language is used as everyday language and makes it easier for readers to understand the content and messages contained in the comic.

CONCLUSION

Based on the results of the study, it can be concluded that there is educational comics is effective in changing 3M attitudes in children aged 10-12 years during the covid-19 pandemic.

ACKNOWLEDGEMENTS

The authors thank to Poltekkes Kemenkes Sorong for funding this research, all participants and research assistants.

CONFLICT OF INTEREST

The authors declare that they have no conflict interests.

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