The Effectiveness Of Health Promotion Media Through Booklets And Videos On Increasing Knowledge And Attitudes

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ABSTRACT

Water is an element that can transmit disease, so clean water treatment is important for the community. This study aimed to determine the effectiveness of health promotion through videos and booklets on increasing public knowledge and attitudes about clean water treatment. This research used experimental research with One Group Pretest Posttest design. The population is the people of Simpang Warga Luar Village RT 01, Aluh-Aluh District, Banjar Regency. The sampling technique used the purposive sampling method with 15 people as the number of samples. Data analysis used the Wilcoxon test. The results showed that the pre-test value of knowledge was 87% in the good category and 13% in the fair category. The post-test results of knowledge are 100% in the good category so there is an increase of 13% in the respondent's knowledge. Based on the results of the attitude pre-test, the results were 46.4% in the good category, 26.8% in the fair category, and 26.8% in the poor category. The results of the attitude post-test were 100% in the good category, so there was an increase of 53.6% in the attitude of the respondents. In this study, it can be concluded that the media through booklets and videos proved to be effective in increasing the knowledge and attitude community about clean water.

Keywords: Clean water, knowledge, attitude

INTRODUCTION

The existence of water is very important to maintain life sustainability. Water resources are one of the many elements that play an important role in human survival. Water has an important meaning to improve the standard of living of humans in this world. Besides that, water is also an element that provides very significant benefits to all living things other than humans, such as animals and plants. Humans are also related because, in a few years, it could be now or later, they will all need water for their survival. Especially as a vital natural resource, management of water resources is important so that it is easy to access drinking water, sanitation, and fulfill the necessities of life. For example, farmers irrigate their crops and manufacture various products such as detergents, fabrics, and other products that require water to process. Due to the large number of people who need water, it can predict will not be enough water because of its limited existence (1). Therefore, humans try to get enough water for themselves. However, the water used is not always under health requirements (2).

Clean water is a type of water-based resource that has good quality and is commonly used by humans for consumption or in carrying out their daily activities, including sanitation (3). For consumption of drinking water according to the health department, the requirements for drinking water are tasteless, odorless, colorless, and free of heavy metals. Even though water from natural sources is drinkable by humans, there is a risk that this water has been contaminated by bacteria (Escherichia coli) or harmful substances. Although bacteria can be killed by boiling water to 100°C, many harmful substances, especially metals, cannot be removed in this way. Clean water has initial characteristics that are colorless, odorless, and tasteless. In healthy clean water, there are no microbiological contaminants or chemical compounds. The cleanliness of the water is assessed by its physical, chemical, and biological properties (4).
If environmental sanitation has a positive condition, it will affect optimum health status as well. Environmental sanitation prioritizes prevention efforts to maintain cleanliness on environmental factors so that negative impacts such as disease can be avoided. However, the provision of sanitation facilities in Indonesia is still not fully available and implemented by the community. This can be seen from the existence of people who still do not have sanitation facilities according to the standards set by the government in their homes. Government Regulation of the Republic of Indonesia Number 66 of 2014 concerning Environmental Health, Article 31 (or called Peraturan Pemerintah Republik Indonesia Nomor 66 Tahun 2014 tentang Kesehatan Lingkungan, Pasal 31) states that sanitation is carried out on environmental media in the form of water, air, soil, food, as well as facilities and buildings. The regulation of environmental health aims to create a quality healthy environment in terms of physical, chemical, biological, and social aspects so that everyone can achieve the highest degree of health. Therefore, environmental sanitation needs to start in the community first (5).

Environmental sanitation activities are needed with the aim that a healthy environment can be realized for all living things. A healthy environment also affects the quality of life and health status in the community. Environmental sanitation activities refer to the Decree of the Minister of Health Number 1529/Menkes/SK/X/2010 concerning General Guidelines for Active Alert Village and District Development (or called Keputusan Menteri Kesehatan Nomor 1529/Menkes/SK/X/2010 tentang Pedoman Umum Pengembangan Desa dan Kelurahan Siaga Aktif). This guideline contains promotional material on the importance of basic sanitation for rural communities and assistance to meet the needs of basic sanitation facilities which include clean water, latrines, garbage, and waste disposal. Many people still do not aware of the importance of clean water facilities and family latrines as a necessity for health. Defecation activities are still mostly carried out in the river around the house. Not only that, but the community also washes clothes using the same river flow. This habit has been going on for a long time and still cannot be changed, even though they know that it will harm them later. Meanwhile, clean water is still not a concern for the community, so that clean water facilities that meet the requirements and standards are still minim. Even though there are people who still use river water for their daily needs (1).

If environmental sanitation efforts are not applied, the environment will change for the worse and trigger the development of disease. To prevent the development of the disease, it is necessary to provide basic sanitation facilities such as clean water, use of latrines, wastewater, garbage disposal, and cultivate a culture of clean and healthy living in everyday life. The community's need for clean water emphasizes that water monitoring must be carried out carefully and regularly to prevent contamination of clean water sources in the community. Water pollution by contaminants, one of which can be in the form of disease agents that can cause waterborne diseases (infectious diseases that are spread through water) (1).

Based on the results of the 2018 Riskesdas, households using less than 20 liters/person/day of water decreased by 14% when compared to 2017. The number of households with good physical quality drinking water increased from 2017 by 86% to 90% in 2018. Not all main sources of water for household use are used as drinking water. For example, tap water/PAM is used as the main source of water for household needs by 19.7% and 14.4% for drinking water, or around 27.0% of tap water/PAM is not used as a source of drinking water (6). The amount of clean water distributed to customers in 2020 in South Kalimantan reached 132.37 million m$^3$. Most of it is consumed by the household group, namely 84.99 million m$^3$ or 64.21%. Next in line is the commercial group with 11.34 million m$^3$ or 8.57%. Next are social groups with 3.4 million m$^3$ or 2.59%, special groups with 4.6 million m$^3$ or 3.53%, and government agency groups with 4.3 million m$^3$. The remainder is included in the distribution of leaks with a fairly large number, namely 23.17 million m$^3$ or 17.51%. Meanwhile, the amount of clean water distributed to customers in the research location, namely Banjar Regency, in 2020 reached 16,931,609 m$^3$ (7).
Based on the preliminary survey, shows that Simpang Warga Luar Village is a village located in a lowland and swampland area with salty water conditions. The village has poor road conditions because it is still filled with potholes and lots of rocks. Apart from that, the waste problem there is very high due to still many people who throw garbage carelessly, such as in their yards and rivers. Besides, many people still defecate directly into rivers, resulting in difficulties in obtaining clean water.

Clean water is needed by humans because it is a necessity to fulfill human survival. In Indonesia, the clean water supply system is still faced with various problems that are quite complex and cannot be overcome (8). The problem that often occurs in the community is the low level of clean water services. People still use river water for their daily needs, even though river water does not under the requirements of clean healthy water (9). The problem often found shows that the quality of groundwater and river water used by the community does not follow the requirements of healthy drinking water, even in some places it is not suitable for daily use such as bathing and washing. Drinking water has certain standard requirements, namely physical, chemical and bacteriological requirements (3). Water is also an element that can transmit disease, especially diarrheal diseases, skin diseases, and others. Improper water will also have an impact on human health, so clean water treatment is very important for the community. The requirements for clean water itself are pH neutral, colorless, clear, tasteless, non-toxic, free of microorganisms, and odorless (10).

Knowledge of clean water treatment is very important so that people can avoid the bad effects of consuming water polluted as diarrhea, cholera, dysentry, typhus, intestinal worms, skin diseases, and poisoning. Knowledge can be interpreted as the result of knowing from the patient about the disease, understanding the disease, how to prevent it, treat it, and its complications. Good knowledge will help attitudes and be able to influence people’s habits in managing clean water (11). One way to increase knowledge is through education. Form of health education can be in the form of providing health promotion. For educational materials to be as acceptable as possible, supporting media such as booklets and videos are needed. Video is an educational tool or media that can re-show movements, and messages using certain effects so that it can strengthen the learning process and can attract the attention of the audience (11). Video is one of the audiovisual media that can provide a stimulus to hearing and vision so that maximum results can be obtained (12).

Apart from videos, there is also a method of spreading information using booklets as media. Booklets are communication media that are promotional, suggestive, prohibited to the public, in the form of print, and have the aim that the object or public can understand the message conveyed. Print media in the form of booklets has the advantage that it can be studied independently by the target community at any time because it is in the form of a book. There are more messages or information contained in booklets than in posters. An attractive booklet design can help get people interested in reading it (13). Booklets can increase knowledge and attitudes compared to visual media such as posters. Booklet media is used to encourage someone’s desire to know, explore, and finally get a good understanding to do something new (12).

Based on this background, this research was conducted to determine the effectiveness of providing health promotion media using videos and booklets on the level of community knowledge and attitudes about clean water treatment in Simpang Warga Luar Village RT 01, Aluh-Aluh District, Banjar Regency.
METHODS

This type of research used experimental research because it aims to find the effectiveness of certain treatments for other objects under controlled conditions. This study used the One Group Pretest-Posttest Design approach. One group pretest-posttest design is a research activity carried out in several stages, namely the initial test (pretest), giving treatment, then the final test (posttest). The treatment in this study was the provision of health promotion media in the form of booklets and videos. This research was conducted in Simpang Warga Luar Village, RT 01, Aluh-Aluh District, Banjar Regency in 2020.

The population is a generalized area consisting of objects/subjects, having certain qualities and characteristics, determined by the researcher to be studied, and then conclusions drawn. The population in this study were the people of Simpang Warga Luar Village RT 01, Aluh-Aluh District, Banjar Regency. The sample in this study was taken by purposive sampling method. The number of samples to be studied is 15 people. The instruments used were pretest and posttest questionnaires containing clean water treatment and the impact of the clean water crisis. The number of questions is 20 questions, with 10 questions to measure knowledge and 10 questions to measure people's attitudes. The questionnaire was given in the form of a google form.

This research was carried out from 30 November 2020 to 16 December 2020. The research was conducted online via the Whatsapp group with a total of 15 respondents who were residents of Simpang Warga Luar Village RT 01. Then on 30 November 2020 pre-test questions were administered via google forms to participants. The pre-test was carried out before giving the material to determine the level of public knowledge regarding clean water treatment. The community is given time to answer the pre-test questions. After the community had finished answering the pre-test questions, the instructor continued to deliver the material for one day on December 1, 2020. Along with the counseling activities, the community was given media to support health promotion in the form of booklets and videos. After that, a post-test was conducted to determine the level of knowledge and attitudes of the community after being given health promotion media.

The data analysis technique used is descriptive-analytic with the Paired T-Test if the data is normally distributed. Paired T-Test is a parametric test that can be used on two paired data. The purpose of this test is to ensure an average difference between two paired or related samples. However, if the data is not normally distributed, then the Wilcoxon test is used. Wilcoxon test is one of the nonparametric tests to ensure a difference in the mean values of 2 paired (dependent) sample groups. The Wilcoxon test is commonly used in pre-post-test design studies. Data analysis aims to determine the effectiveness of providing health promotion media in the form of booklets and videos on increasing public knowledge and attitudes regarding clean water treatment.

RESULTS AND DISCUSSION

The results of this study indicate that there was an increase in knowledge and attitudes before and after being given the booklet and video media to the respondents. The media is effective in increasing the knowledge and attitudes of the people of Simpang Warga Luar Village RT 01, Aluh-Aluh District, Banjar Regency with a posttest score greater than the pretest score. These results can be described in the table below:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Category</th>
<th>Pre-Test %(n)</th>
<th>Post-Test %(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean water treatment</td>
<td>Good</td>
<td>87% (13)</td>
<td>100% (15)</td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>13% (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100% (15)</td>
<td>100% (15)</td>
</tr>
</tbody>
</table>

Source: PBL 2 primary data
Based on table 1, it can be seen that the level of knowledge of respondents during the pre-test with the good knowledge category totaled 13 people (87%) and the fair knowledge of 2 people (13%). Meanwhile, in the post-test results, it can be seen that the number of respondents who have good knowledge is 15 people (100%).

Based on table 1, it is known that most of the respondents' knowledge regarding clean water treatment during the pre-test and after the post-test changed. The good category, which was originally 13 people (87%), changed to 15 people (100%), while for the fair category, 2 people (13%) became 0 people (0%) because they experienced an increase in knowledge and entered the good category. So that it can be said that the provision of health promotion was successful and there was no score decrease. Knowledge is the result of human sensing, or the result of knowing someone about an object through the senses they have (eyes, nose, ears, and so on). So knowledge is a variety of things that are obtained by someone through the five senses. In this study, the better the knowledge, the more people understand clean water. The knowledge possessed by a person will affect attitudes and behavior in managing clean water. So it can be interpreted that knowledge is a very important domain for the formation of one's actions because good knowledge can create good behavior (14).

Health education requires media in conveying the material to be provided, such as using video. Video is a type of audio-visual media that relies on the senses of sight and hearing in the form of notifications, warnings, or appetizing which usually contain pictures. The use of media in providing health education will attract the community to study the material provided. Interesting media will provide confidence so that cognitive, affective, and psychomotor changes can be accelerated (15). The results of increasing knowledge after being given video media are in line with research conducted by Safitri (2022). This study states that the provision of media in the form of videos affects knowledge in the form of increased knowledge in the pre-post test (16).

Providing education using various media such as booklets and educational videos can help increase public knowledge. The media that is often used for education is a booklet. The simple form of the booklet, presenting one idea and achieving one main goal, colorful, having a special slogan, as well as clear and varied writing, can make it easier and faster for the audience to catch the message presented. Apart from booklets, educational media that is also often used to educate the public is video. This media combines two types of media that can stimulate thoughts, feelings, attention, creativity, and innovation as well as provide direct experience to respondents. The learning process involving more than one sense will be more easily accepted and remembered by the community (17).

The use of media that involves many senses will further increase the understanding of some information so the use of audio-visual media in the form of videos involving the senses of sight and hearing will help the community clearer and easier to understand the information obtained. The use of video is felt to be more effective and interesting for clients so that the achievement of health education goals will be more optimal (15). In research conducted by Suryani (2022), the results obtained there was the influence of using booklet media on the level of knowledge. This shows that giving booklets can increase knowledge about clean water. The use of booklet media aims to provide information through books that contain short, concise, easy-to-understand sentences (18).

Table 2. Level of Respondents' Attitudes Based on Pre-Post Test Results

<table>
<thead>
<tr>
<th>Activity</th>
<th>Category</th>
<th>Pre-Test % (n)</th>
<th>Post-test % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean water treatment</td>
<td>Good</td>
<td>46.4% (7)</td>
<td>100% (15)</td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>26.8% (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>26.8% (4)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100% (15)</strong></td>
<td><strong>100% (15)</strong></td>
</tr>
</tbody>
</table>

*Source: PBL 2 primary data*
From table 2 it can be concluded that the results of the pre-post test as many as 8 (53.6%) respondents experienced an increase in attitude from the fair and poor to good category. There was no decreased value of the attitude pre-post test between before and after the provision of clean water treatment material, so it can be concluded that the intervention in providing the material was successful. After giving the pre-post, the results show that the community's attitude towards clean water is good. So it is hoped that the community can carry out good attitudes or activities regarding clean water to prevent disease or other problems. Based on the theory put forward by Notoatmodjo, someone who has a good attitude will lead to good practice. To manifest an attitude so that it becomes a real action or action, supporting factors or supporting conditions are needed, such as facilities, infrastructure, and support from other parties. This is in line with a study, where after being given treatment, the attitude value obtained increased followed by an increase in practice value (19).

Attitude is a person's feelings of being happy, unhappy, or normal (neutral) about something. In this case, it can be an object, event, situation, person, group, or whatever. When you feel happy, it's called a positive attitude, when you're unhappy, it's called a negative attitude, and when you don't feel anything, it's called neutral. It can also be said that attitude is a comprehensive assessment, allowing individuals to respond positively or negatively to the object being assessed. Based on this definition, the attitude of the respondents expected in this study is a positive attitude that cares about clean water and the surrounding environment (20).

The attitude of a good respondent is supported by good knowledge. The results of the pre-test and post-test most of the respondents have good knowledge related to water treatment. Knowledge plays a major role in providing insight and forming public attitudes toward health. This attitude will be followed by action in carrying out efforts to improve health. Attitudes are influenced by several factors including personal experience, the influence of other people, the influence of local culture, the mass media, educational institutions/religious institutions, and emotional factors (21).

Then a test was carried out to find out whether there was a significant difference in the knowledge of the respondents before and after giving the material. Previously, a normality test was carried out first to ensure whether the data distribution was normal or not, as well as a consideration for further analysis tests to find out the meaning of the relationship to the results of the pre-post test. The table below is the results of the normality test and the Wilcoxon sign rank test (7).

<table>
<thead>
<tr>
<th>Clean water treatment</th>
<th>Shapiro-Wilk</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Asymp. sig</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(sig.a=0.05)</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>15</td>
<td>0.00</td>
</tr>
<tr>
<td>Post-Test</td>
<td>15</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Source:** PBL 2 primary data

Based on table 3 it is known that the significant value for the results of the knowledge pre-post test on clean water treatment material is less than 0.05. This means that the pre-post test data is not normally distributed, so the Wilcoxon test is used to find out the meaning of the relationship between the provision of material with knowledge and attitudes. Wilcoxon test results for the value of the knowledge obtained 0.068 > 0.05 "Ha rejected". This means that there is no significant relationship between the value of the pre-post test of knowledge before and after the provision of clean water treatment materials (22).
Table 4. Normality Test Results and Wilcoxon Sign Rank Test of Attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Shapiro-Wilk</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Asymp. sig</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>15</td>
<td>0.000</td>
</tr>
<tr>
<td>Post-Test</td>
<td>15</td>
<td>0.339</td>
</tr>
</tbody>
</table>

Source: PBL Primary Data 2

Based on table 4 it is known that the significant value for the results of the attitude pre-test on clean water treatment material is less than 0.05, meaning that the data is not normally distributed. Meanwhile, the attitude post-test on clean water treatment material is greater than 0.05, meaning that the pre-post data is normally distributed. Based on the combination of the two results it can be concluded that the data is not normally distributed (23).

Furthermore, the Wilcoxon test will be carried out to determine whether there is a significant relationship between the provision of material and attitudes. Wilcoxon test results for attitude values obtained 0.001 < 0.05 "Ha accepted". This means that there is a positive or significant relationship between the pre-post test scores and there is a difference in attitude improvement before and after the provision of clean water treatment materials (24). Giving material is a process to enter information so that knowledge increases. This is in line with research conducted by Renityas (2021), there is a significant difference in Wilcoxon Sign Rank Test obtained p value = 0.001. Value p value = 0.001 < α = 0.05 shows that there is an influence on the attitude of the respondents after being given information and carrying out the pre-post test. Attitude change can happen slowly and along with the increasing information and experience gained. The information comes from health education. Health education is a process of human transformation and is closely related to achieving personal and community health goals (25).

CONCLUSION

Based on the results of research regarding the effectiveness of booklet and video media on the level of knowledge about clean water treatment in the people of Simpang Warga Luar Village, RT 01, Aluh-Aluh District, Banjar Regency, it was concluded that the media through booklet and video have proven to be effective. This is evidenced by the results of the knowledge post-test which increased by 13% and the results of the attitude pre-test which increased by 53.6%. It is hoped that there will be an increase in community organizations by forming a business or group. These businesses or groups will be able to manage and develop clean water facilities and infrastructure independently and sustainably. In addition, the community is also expected to continue to implement clean and healthy living behaviors amid the COVID-19 pandemic.

REFERENCES