



The Effect of Communication, Information, and Education (CIE) of Tuberculosis in Public Communities on the Awareness of Early Detection of Tuberculosis

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ABSTRACT

Tuberculosis (TB) is one of many infectious diseases that are still a public health problem worldwide. In 2019, WHO declared a global TB disease emergency because, in most countries, TB is getting out of control, especially in developing countries. Media use in health education should include things that support TB control programs, especially MDR-TB. This study aimed to determine the effect of tuberculosis communication, information, and education (CIE) in the community on awareness of early detection of tuberculosis in the community at the Kedondong sub-district health center, Pesawaran district, in 2021. The type of research used in this research is the Quasi Experiment. This type of experimental research makes observations twice, where before (pre-test) and after (post-test). The population in this study is the community at the Kedondong Health Center, Kedondong District, Pesawaran Regency. Three hundred sixty samples of respondents were taken by purposive sampling technique. Data were collected by questionnaire and analyzed by chi-square statistical test. The results of the validity and reliability tests revealed that there was an effect of IEC on awareness of early detection of tuberculosis. The results showed that the median value before giving CIE was 31, and the median value after giving CIE was 40. There was a clear difference in the average between before and after being given the CIE intervention. The statistical test obtained a p-value of 0.00, where the p-value <0.05 means that giving CIE affects awareness of early tuberculosis detection. Activities like this can be carried out on an ongoing basis to monitor medication adherence and PHBS habits in preventing the transmission of TB disease.

Keywords: awareness; CIE; tuberculosis

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INTRODUCTION

Tuberculosis (TB) is one of many infectious diseases that are still a public health problem worldwide. In 2019, WHO declared a global TB disease emergency because, in most countries, TB is getting out of control, especially in developing countries (WHO, 2019). In 2019 there were around 9.4 million incident TB cases globally. The prevalence globally reaches 14 million cases per 100,000 population (WHO, 2019). Indonesia has currently ranked the third country with the highest TB burden in the world. The estimated prevalence of TB in all cases is 660,000, and the incidence is 430,000 new cases per year. The prevalence of TB in South Sulawesi is still relatively high, namely around 61,550 suspected TB cases out of 7,908,807 population. TB is considered the deadliest infectious disease in the world. It is caused by a bacterium that most commonly affects the lungs and can spread quickly. An estimated 14 million people were treated for TB between 2018 and 2019. They only represent about a third of the 40 million TB sufferers UN agencies hope to treat by 2022. WHO noted

that although the incidence of the disease fell by 9% between 2015 and 2019 and deaths decreased by 14% over the same period, more than 1.4 million people died from tuberculosis in 2019 (Kemenkes RI, 2019).

From Infographics, It is known that the achievement of suspected TB case detection in Lampung Province in 2018 is still far from the target, which is only 43.87% of the national target of 70.0%, meaning that the detection of suspected TB cases in health facilities is shallow. In 2018 the highest cases of TB were in the Central Lampung district, 59.32%, and the lowest in West Lampung city, 16.29%, while for the Pesawaran district, there were 29.24% TB cases (Dinkes Lampung, 2019). In 2019 the highest number of TB cases was in the Pesawaran district, namely in the Kedondong Health Center, namely 544 cases with a case notification rate (CNR) of 122.42 per 100,000 residents. And the lowest case was in the Pedada sub-district, with 19 cases (Dinkes Pesawaran, 2019).

The Strategic Plan of the Ministry of Health of the Republic of Indonesia 2015-2019 outlines that health promotion aims to empower individuals, families, and communities to foster healthy living behaviors and develop community-based health efforts. Its main activity is the development of health promotion media and communication, information, and education technology (CIE) (Nasution, Siregar, & Yustina, 2019). According to Setiawati and Dermawan (2018), cited in Palupi (2013) the use of print media produced through mechanical and photographic processes only stimulates the sense of sight (vision). This media has characteristics including linear reading, one-way communication, static, and participant-oriented. The available information can be arranged by students (Palupi, 2013). A study conducted by the Center for Research and Development of Pharmacy and Traditional Medicine, NIHRD in 2017 in Cianjur, West Java, regarding the effect of drug counseling using lecture methods and printed media (leaflets) on knowledge in self-medication by mothers found that there was a significant increase in knowledge of mother about self-medication.

Media use in health education must include things that support TB control programs, especially MDR-TB. For example, things that lead to OAT resistance, including the use of a single drug in the treatment of TB, the use of inadequate drug combinations, irregular drug administration, and the phenomenon of addiction syndrome, namely a drug added to a combination of treatments that are not successful, the use of drugs combinations where the mixing is not carried out properly so that it interferes with the bioavailability of the drug, and the drug supply is not regular, sometimes stopping delivery for months (Bangun, 2010).

Efforts to provide education or Health promotion are critical for understanding tuberculosis patients so that it is expected to minimize tuberculosis incidences. Health promotion is a process of communication, and the process of habit changes through education in health. Health promotion activities can achieve maximum results, and health promotion methods and media receive attention significantly and should be tailored to the target. Using a combination of various methods and media health promotion will be very helpful in the process of conveying health information to the public. The more many senses used to receive a message delivered, the more precise understanding or knowledge obtained by somebody. Pro props in health promotion will significantly deliver messages to a person or society more clearly (Notoatmodjo, 2014). Health promotion media, such as the lecture method, is significant in improving society's knowledge and attitudes. So, as well as various other promotional media shows that media leaflets and audiovisuals can be combined with group discussion and is quite influential in increasing knowledge and attitudes in society.

This area is very dense. Even buildings from one house to another have a very close range, there are many ditches, and also many small alleys in within the region, for that environment adjacent to the main road, the area exceptionally clean, however, the more we enter into in an area with small alleys of environmental conditions spelled out not too clean, residents who were living in the area did not pay much attention environmental cleanliness, primarily houses in small alleys is a rented house. They need to learn what causes tuberculosis, how to prevent and the mode of transmission, and also, they need to know how to treat sick people with tuberculosis properly.

In the results of the pre-survey at the Kedondong Health Center, there were 544 cases with a total population of 3,565 residents. Based on data in 2021 there are Kububatu Village had 20 cases of TB, Gunung Sari village 30 TB cases, Sukajaya village 45 cases, Kedondong village 68 TB cases, Kertayasa village had 45 cases, Negeri Agung village 60 cases, Way Keparang village 65 TB cases, Tanjung village 55 TB cases, Bagas Jaya Village 60 cases, Tempel Rejo Village 65 cases, Kertasana Village 31 cases, Teba Java Village 68. Based on the preceding, researchers were encouraged to research the effect of CIE on the Kedondong community to learn about TB disease from an early age.

METHOD

The type of research used in this research is Quasy Experiment. (Nursalam, 2013). This type of experimental research which makes observations twice, where before (pre test) and after (post test). Before being given communication, information and education, measurements were carried out using a questionnaire and after that the measurement was again carried out. In Notoatmodjo (2014) one group design. In this pretest-posttest there is no comparison group (control), but at least the first observation (pretest) has been carried out which allows testing the changes that occur after the experiment. The population in this research is 3,565 people. This research was attempted in June-July 2021. Sampling used the total sampling technique.

RESULTS

Table 1. Frequency distribution value of the influence of tuberculosis communication, information, and education (CIE) in the community on awareness of early detection of tuberculosis before CIE intervention

Variable	N	Min-Max	Means	SD
Before giving CIE	360	10-42	29.08	8,351

Table 1 of the 360 respondents studied, it was shown that the min-max value before giving CIE was 10 and 42, and the average value before being given the intervention was 29.08.

Table 2.

Frequency distribution of the influence of tuberculosis communication, information, and education (CIE) in the community on awareness of early detection of tuberculosis after CIE intervention

Variable	N	Min-Max	Means	SD
After Giving CIE	360	33-44	39,91	3,449

Table 2 of the 360 respondents studied, it was shown that the min-max value after the CIE was given was 33 and 44, and the mean value after the intervention was given was 39.91.

Table 3.

The effect of tuberculosis communication, information, and education (CIE) in the community on awareness of early detection of tuberculosis

	N	Means	Median (Minimum-Maximum)	P-value
Prior to Giving CIE	360	29.08	31 (10-42)	0.000
After Giving CIE	360	39,91	40 (33-44)	

Table 3 of the 360 respondents studied, it was shown that the median before giving CIE was 31 and the median after giving CIE was 40, and there was a clear difference in the mean between before and after IE was given. The results of the statistical test obtained a p-value of 0.00, where if the p-value <0.05 means that there is an effect of giving CIE on awareness of early detection of tuberculosis.

DISCUSSION

The value of the frequency distribution before conducting tuberculosis communication, information, and education (CIE) counseling in the community on awareness of early detection of tuberculosis before CIE intervention.

Based on table 1 of the 360 respondents studied, it was shown that the min-max value before giving CIE was 10 and 42, and the average value before being given the intervention was 29.08. Some people already know and think that pulmonary TB is a contagious and dangerous disease which is very embarrassing, so it is necessary to keep the disease a secret. In comparison, some other people think that pulmonary TB is not dangerous and is a disease of bias. Pulmonary TB disease in this area is called songkah cough or 100-day cough, usually due to heredity. This disease is also called manciok angoknyo (dry cough), covetousness, sobbing, and dirty disease resulting from eating something that is not rightfully his. This disease is usually found in groups of people who are economically still lacking. Furthermore, the weight keeps dropping. Other people stated that the symptoms of pulmonary TB were coughing up blood and shortness of breath.

The cause of the disease, according to the perception of some people, is due to germs that are transmitted by pulmonary TB sufferers, conjuring/witchcraft or magic (acts of humans and demons), and due to heredity (from parents). According to the informant, other things that are also considered to be the cause of pulmonary TB are the habit of going out at night (sitting in a shop) or being exposed to the night breeze, smoking, drinking coffee and alcohol, an unclean home environment, working in an environment that emits much dust, working too hard. and eats irregularly. The mode of transmission of pulmonary TB is through inhalation and splashing of saliva! Splashes of phlegm from sufferers. It was further said that sufferers avoid other people because the disease is contagious. Most people believe health workers can cure their illnesses because they believe that they can cure pulmonary TB. However, a few other people believe in healing their illnesses through the services of traditional healers, arguing that some disease symptoms can only be cured by traditional healers (diseases related to things outside of medical power).

The value of the frequency distribution after conducting tuberculosis communication, information, and education (CIE) counseling in the community on awareness of early detection of tuberculosis after CIE intervention.

Based on table 2 of the 360 respondents studied, it was shown that the min-max value after the CIE was given was 33 and 44, and the mean value after the intervention was given was 39.91. The level of awareness of some people about TB disease in the research location is quite good. They already know that the TB treatment procedure takes quite an extended period, which is approximately 6 (six) months. Pulmonary TB is a dangerous disease that attacks the lungs and is contagious and deadly. Most people already know the symptoms of

pulmonary TB or what they call TB, namely coughing for more than three weeks, coughing up blood, shortness of breath, decreased appetite, fatigue, and others. Although most people already know that one of the symptoms of pulmonary TB is coughing up blood, knowledge of some people about the causes of pulmonary TB is still lacking. People still think pulmonary TB is caused by supernatural powers or magic (utility/delivery).

Data from the Kemenkes RI (2017) also reveals that some people still think that pulmonary TB occurs due to others, especially when the disease has reached an advanced stage so that the sufferer coughs hard and is accompanied by bloody phlegm. If the condition is like that, the assumption immediately appears that other people transmit the disease to harm resigned sufferers, as shown by their lack of enthusiasm in carrying out treatment efforts. In addition, some people also perceive that pulmonary TB is not a dangerous disease but is considered a common cough disease and does not need severe treatment. Things that are not much different were also found from the results of research conducted by Tobing in North Tapanuli, where the behavior of some people in North Tapanuli also considered that pulmonary TB was a shameful disease, so they did not want to visit a health service to get treatment immediately. The results of research conducted by Tobing in North Tapanuli in 2019 also found the same thing, where the attitude of the community thought that pulmonary TB is a common cough disease that can heal by itself through the consumption of ordinary cough medicines that are sold freely. Contracting or avoiding pulmonary TB, especially for the patient's family, is done by isolating all food equipment used by the patient and covering the mouth when sneezing. In addition, efforts can be made by getting used to clean living behavior and keeping the environment clean.

The effect of tuberculosis communication, information, and education (CIE) in the community on awareness of early detection of tuberculosis

Based on table 3 of the 360 respondents studied, it was shown that the median value before giving CIE was 31, and the median value after giving CIE was 40. It was clear that the difference in mean between before and after being given the CIE intervention. The results of the statistical test obtained a p-value of 0.00, where if the p-value <0.05 means that there is an effect of giving CIE on awareness of early detection of tuberculosis. The counseling activity began with coordination with the Kedondong Health Center in the Pesawaran district. The counseling media were in the form of leaflets and videos. The leaflets were distributed to each respondent. The leaflets contained an invitation to prevent the transmission of TB disease by implementing a Clean and Healthy Lifestyle. This result follows Ifroh, Susanti, Permana, & Noviasy's statement (2019) that using communication, information, and educational media in leaflets helps educate the public. A collection of images based on everyday life can increase attitudes and awareness about events or incidents that influence people's health behavior.

The pre-test and post-test were used as evaluation materials using the self-assessment method. The participants answered the questionnaire themselves with the instructor's guidance from the researcher. Then after delivering the material, a post-test was carried out to determine how far the respondent understands TB disease and how to prevent it. Counseling or health education can increase the average value of knowledge from before and after counseling. This increase in knowledge will also be followed by an increase in the average perceived value, which in turn can influence the behavior of early detection of TB disease. Health promotion in health programs aims to increase awareness and change attitudes to produce specific awareness. Health education is a process of change in human beings that involves achieving individual and community health goals, which makes it broader than the development of health education materials because it includes the process of communication and building

communication networks. Health education must involve the active participation of the target audience, use methods and techniques familiar to the audience (Haryono in Sriyono, 2012).

CONCLUSION

The results of the statistical test obtained a p-value of 0.00, where if the p-value <0.05 means that there is an effect of giving CIE on awareness of early detection of tuberculosis. The 360 respondents studied showed that the median value before giving CIE was 31, and the median value after giving CIE was 40. There was a clear difference in the mean between before and after being given the CIE intervention. The results of the statistical test obtained a p-value of 0.00, where if the p-value <0.05 means that there is an effect of giving CIE on awareness of early detection of tuberculosis. Counseling through the media in the form of posters or leaflets Counseling through the media in the form of posters or leaflets is considered quite effective in increasing knowledge about TB disease, the transmission of TB disease, the treatment of TB disease, and the prevention of TB disease through PHBS. It can be seen from the increase in answers during the pre-test and post-test. Activities like this can be carried out on an ongoing basis to monitor medication adherence and PHBS habits in preventing the transmission of TB disease.

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