
Benefits of Halal Meat Consumption as Nutrition for Tuberculosis Prevention

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Abstract: One of the non-pharmacological treatments in tuberculosis patients is the fulfillment of good nutrition. Complete nutrition in meat is able to keep the body healthier, thus preventing the outbreak of tuberculosis. Meat used to fulfill nutritional needs in an effort to prevent tuberculosis needs to be considered halal. Knowledge about halal meat as nutrition to prevent tuberculosis needs to be given to the community, both those who have been exposed and those who have not. Garon Village, Kawedanan Subdistrict, Magetan Regency is an area where the community has not been exposed to tuberculosis, but the area is cold in the Bancak mountainous area so the potential for people to contract tuberculosis is very high. Therefore, counseling is needed to increase community knowledge about the importance of halal meat consumption as an effort to fulfill nutrition to prevent tuberculosis. The result of this counseling was an increase in knowledge about the benefits of halal meat consumption to prevent tuberculosis by 85.3%. This value can be a reference that this service activity has an impact on the community.

Keywords: halal meat, tuberculosis, Garon village, counseling

Introduction

Tuberculosis is an infectious disease caused by the bacterium *Mycobacterium tuberculosis* with the severity influenced by the host's interaction with its environment (Salgame et al., 2015). This disease has several symptoms including a cough that lasts more than 2 weeks, fever, weight loss, loss of appetite and night sweats. To confirm the diagnosis of tuberculosis, it is not enough just to see the symptoms but laboratory examination is (Alsultan & Peloquin, 2014). Sputum examination is an examination performed to confirm the diagnosis of tuberculosis. A diagnosis of tuberculosis is made if the sputum is positive for *Mycobacterium tuberculosis* bacteria. A person with tuberculosis requires routine treatment (Floyd et al., 2018).

Tuberculosis treatment is carried out periodically for six months. The drug used for tuberculosis treatment in Indonesia following the government standard is isoniazid (INH) in combination with three other drugs, such as rifampicin, ethambutol, and pyrazinamide. (Rika Veryanti et al., 2019). Patients taking tuberculosis drugs will experience side effects such as red urination. Treatment of tuberculosis patients is not only done through pharmacological treatment but also non-pharmacological treatment (Saha, 2022). Non-

pharmacological treatment in tuberculosis patients, one of which is the fulfillment of good nutrition (Correa-Pérez et al., 2019).

Nutrition in tuberculosis patients is necessary to maintain a stable body condition during treatment (Lenaerts et al., 2015). Fats, proteins, vitamins and minerals are macro and micro nutrients that play an important role in keeping the body stable. Fat has a role for the cells in the body to build properly. Protein is a building block for the movement of all cells in the body. Vitamins and minerals as micronutrients are beneficial for the body's metabolic processes to run well. In tuberculosis patients, the patient's condition is unstable due to the bacteria that enter the body. This condition makes tuberculosis patients more susceptible to other diseases due to their weak immune system, therefore it is important to provide nutritional fulfillment to patients. Good nutrition in tuberculosis patients will make patients have good body power so as to reduce its severity (Bhargava et al., 2013). Various conditions in tuberculosis patients require special attention, so efforts to prevent this disease need to be made..

Tuberculosis prevention is everything that can be done to prevent exposure to the disease. These efforts include several things ranging from maintaining a clean life for oneself and the environment, using a mask when coughing and sneezing, and maintaining a nutritious diet. Maintaining a diet is one of the efforts to maintain the body in a balanced nutritional state (Aragon et al., 2022). One food that has a lot of nutrients is meat. Meat is a complete source of protein, fat, vitamins. Meat is the best nutrition to prevent exposure to tuberculosis. Complete nutrients in meat can keep the body healthier. Meat that is used to fulfill nutritional needs in an effort to prevent tuberculosis needs to be considered halal (Farouk et al., 2016).

Halal meat is a concern in several countries including Indonesia, where the majority of the population is Muslim (Ratanamaneichat & Rakkarn, 2013). Halal meat is meat that is permissible, obtained and processed in a halal manner. One example of halal meat that is widely consumed is beef. Beef is widely available, but the price is quite expensive, making this meat often mixed with other cheaper meats. One example of mixing beef is with pork, where beef that should be halal when mixed with pork makes this meat non-halal (Harlina et al., 2022). Therefore, it is important for us to know the knowledge of halal meat as a good nutrient for the prevention of tuberculosis.

Knowledge about halal meat as a nutrient to prevent tuberculosis needs to be provided to the community, both those who have been exposed and those who have not (Alqudsi, 2014). People who have never been exposed to tuberculosis, but whose area has the potential to be easily infected, also need to receive this counseling. Garon Village, Kawedanan Subdistrict, Magetan Regency is an area where the community has not been exposed to tuberculosis, but the area is cold in the Bancak mountainous area so the potential for the community to contract tuberculosis is very high. In areas with a

cool climate such as Garon village, the bacteria *Micobacterium tuberculosis* can easily multiply. The bacteria will easily grow in humid areas, so if there are people who are exposed to tuberculosis, it will easily spread to other residents. Preventive efforts to prevent tuberculosis in this area are to increase public knowledge about the fulfillment of nutrition from halal meat (Sirois et al., 2013).

Method

Identification of Partner Needs

Garon village is one of the villages located in Kawedanan sub-district, Magetan district. Most of the villagers work in the agricultural sector as farmers with abundant yields due to its location near the Bancak mountain range (Kasus et al., 2021). The location of this village close to Mount Bancak gives the area a cool climate, so the spread of microorganisms including bacteria is very easy. One type of microorganism that is able to multiply quickly in a cool climate is mycobacterium tuberculosis, which is the cause of tuberculosis disease. This bacterium quickly invades the host, making it easy to spread. The incidence of tuberculosis in this village is still zero or there has never been a community affected by tuberculosis infection, but the area that has the potential for rapid spread causes this area to require prevention efforts in order to maintain zero cases of tuberculosis.

The people of Garon village have never received knowledge in the form of socialization about tuberculosis prevention efforts, especially in terms of nutrition. Nutrition has a great influence on the condition of the body, so good nutrition will make the body not easily exposed to diseases, including tuberculosis. The absence of sufficient knowledge in the Garon village community about the importance of nutrition to prevent tuberculosis, especially nutrients found in meat, makes this community service activity necessary for the community. This community service activity is carried out to add insight into the importance of halal meat consumption as an effort to fulfill nutrition to prevent tuberculosis disease so as to maintain zero cases of tuberculosis. This activity will have a very good impact on the community of Garon Village, Kawedanan District, Magetan Regency to improve the correct diet by maintaining the necessary nutrients. This activity is expected to be able to change the habitual behavior of people who are not accustomed to meat consumption. One of the things that the Garon village community does not know is about the advantages of halal meat consumption compared to non-halal, so knowledge about the importance of halal meat consumption as an effort to prevent tuberculosis disease is needed through socialization activities.

Approach Methods Offered:

One way to overcome the prevention of the spread of tuberculosis is by fulfilling the nutrients contained in halal meat through socialization activities held in Garon village, Kawedanan sub-district, Magetan Regency. This solution is expected

to increase the knowledge and curiosity of the community to be able to increase the importance of halal meat consumption as a preventive effort to prevent the transmission of tuberculosis. This activity will make the people of Garon village have a good immune system so that they are not easily infected with tuberculosis even though the region has a cool climate.

Activity Plan and Work Procedure

The activity plan is divided into the following three stages:

1. Approaching the Head of Garon Village, Kawedanan District, Magetan Regency to convey the work program or solutions offered to overcome existing problems.
2. On the first day, conducted socialization/education to the community of Garon Village, Kawedanan Subdistrict, Magetan Regency, totaling \pm 40 people about the importance of halal meat consumption as a fulfillment of nutrition to prevent tuberculosis. In addition to the material, the community was shown an interactive video about the adverse effects of tuberculosis disease, so prevention efforts are needed. Through this video, understanding about tuberculosis is easy to understand.
3. Giving pre and post tests to the community to measure their level of understanding of the material presented.

Result

This activity was attended by residents of Garon village, Kawedanan sub-district, Magetan district, totaling approximately 40 people. Before starting the counseling, a pre-test was conducted to determine the level of understanding of the community about the importance of halal meat consumption as an effort to fulfill nutrition to prevent tuberculosis. The process of filling the pretest is presented in Figure 1 below:



Figure 1. The pretest filling process before counseling

The results of the pretest showed that the level of public knowledge about the importance of halal meat consumption was only 67, 64%. From the results of this pretest, it shows that the level of knowledge is still lacking, so counseling activities are needed. During the counseling, the material was given for 60 minutes and continued with a discussion. Discussion activities with the community went smoothly. The majority of the questioners were mothers with children under five. Counseling activities are presented in Figure 2 below:



Figure 2. Counseling activities on the importance of halal meat consumption as a fulfillment of nutrition to prevent tuberculosis

Figure 2 shows that the residents were very enthusiastic. This can also be seen from the number of residents who asked questions about the counseling material. Discussion and questions and answers lasted for almost an hour. After completing the discussion and question and answer session, the post-test was continued. The results of the post-test showed that the score of community understanding of this activity was 85.3%. These results show that the counseling activities have succeeded in increasing the knowledge of the community of Garon village, Kawedanan sub-district, Magetan regency.

Discussion

This community service activity was carried out on Wednesday, July 26, 2023 at the Garon village hall, Kawedanan District, Magetan Regency, followed by ± 40 who were selected by partners to take part in the socialization. This socialization began with remarks by the partners and the head of the service team. Before

entering the socialization session, a pre-test was conducted about the material to be presented. The pretest results mentioned 67.64% of participants who were able to answer questions correctly. The next session was the provision of counseling material conducted by a resource person using the lecture method, powerpoint presentation and video on the importance of halal meat consumption as nutrition for tuberculosis prevention. The socialization materials included: definition of tuberculosis, symptoms, diagnosis and treatment. In addition, the socialization material was also about tuberculosis prevention efforts. Tuberculosis prevention efforts include the fulfillment of good nutrition to maintain body health, one of which is by consuming meat. Various knowledge about the benefits of meat was given including the importance of knowing the halalness of meat. Halal meat will have a good impact on the health of the body, and can be used as an effort to prevent tuberculosis (Sitti et al., 2022).

After the lecture, a discussion and question and answer session between the participants and the resource person followed. Activities in the form of input carried out through a question and answer process by the resource person to individuals in order to overcome a problem related to the prevention of tuberculosis through the fulfillment of nutrition by consuming halal meat. At the end of the event, a questionnaire (post test) was given to determine whether the material had been conveyed well to the participants. The questionnaire contains questions about the material that has been delivered. This questionnaire was given to find out whether the material presented by the resource person could be conveyed entirely and could be understood by the participants. Based on the results of the post test, it can be seen that 85.3% of participants can answer the questions contained in the questionnaire correctly. This is in line with the service carried out by Arini, M., 2021 where after counseling community knowledge has increased (Arini et al., 2021). The increase in scores from pretest to posttest shows that this socialization activity is able to increase community understanding of the importance of halal meat to prevent tuberculosis.

Conclusion

This activity can be a means to provide knowledge and form awareness of Garon village residents, Kawedanan District, Magetan Regency to consume halal meat as a preventive nutrient for tuberculosis.

Recognition

Thank you to the village government of Garon, Takeran District, Magetan Regency for giving permission for this activity. Thank you also to the Faculty of Health and Science, PGRI Madiun University, which has provided all the assistance so that this service activity can be carried out properly.

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