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Enhancement of Knowledge Regarding Worm Diseases in Sungai Madang Village, Sungai Tabuk District, South Kalimantan

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A B S T R A C T

Sungai Madang Village, located in Sungai Tabuk District, poses a heightened risk of intestinal worm infections due to its proximity to the river. Many residents lack awareness of these infections. Thus, our community service initiative focuses on providing essential health information about worm infections, including risk factors, consequences, and prevention through deworming medications. Our methods involve discussions, lectures, and interactive Q&A sessions. Evaluation includes pre- and post-test assessments, with 39 participants, mainly housewives, involved. In conclusion, our community service significantly increased participants' worm infection knowledge by 59%. We aim to empower households, especially housewives, to better protect their families against worm infections.

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INTRODUCTION

In 2018, the World Health Organization (WHO) declared that 24% or more than 1.5 billion people worldwide were infected with worms. Infections occur through soil transmission. Regions with a high population infected with worms include Africa, the Americas, China, and East Asia (Wiyono, 2020). The prevalence of worm infections in Indonesia, in general, remains very high, ranging from 2.5% to 62%. Worm infections are not limited to children but can also affect adults. The high prevalence is attributed to poor environmental conditions with inadequate sanitation and hygiene (Kemenkes RI, 2017). Those at high risk of worm infections include people living in unsanitary areas, individuals with immunodeficiency, and those who frequently engage in activities involving soil, such as farmers. Population density, geographic conditions, and climate also influence the transmission of worm infections.

One of the efforts to control worm infections is Mass Drug Administration (MDA). MDA has been implemented in South Kalimantan since 2017. This activity is carried out in five non-filarial endemic districts/cities, namely Hulu Sungai Selatan District (HSU), Tanah Laut District, Banjarbaru City, Banjarmasin City, and Banjar District. The MDA for worm infections involves administering albendazole twice a year, typically in February and August. It is provided to preschool and school-age children and is an integrated program with school health services and nutrition programs. In the filariasis MDA program, a combination of albendazole and DEC is given once a year (Rahayu et al., 2019).

Gudang Hirang Village is better known as Sungai Madang Village because it is located on the outskirts of the Madang River. Gudang Hirang Village is one of the villages in the Sungai Tabuk District, Banjar Regency, South Kalimantan. The population of Gudang Hirang Village is 5,496 people, with an even distribution of ages from 0 to over 75 years. Approximately 25.33% of the population are housewives, 22.43% are unemployed or not working. Females make up 50.15%, and males account for 49.85% of the population (BPS Kab Banjar, 2021).

On April 21, 2021, a survey was conducted in conjunction with a social service activity organized by the Faculty of Medicine, ULM. The survey results showed that the majority of respondents (75%) were unaware of worm diseases, with only 25% having knowledge about them. Respondents who were knowledgeable about worm diseases could mention the characteristics of worm diseases (Isnaini et al., 2022).

One of the factors contributing to worm infections is the lack of understanding among the public about worm infections and the low usage of worm medicine. Many people still do not understand how to take worm medicine correctly (Wiyono et al., 2020). According to Notoatmodjo (2003), an individual's knowledge is influenced by several factors, including internal and external factors. Internal factors come from the individual themselves, such as age, education, and occupation. External factors include the environment, socio-cultural factors, sources of information, and more. Therefore, interventions are needed to educate the community about worm diseases and how to prevent them. The goal of this community engagement is to provide health information

through health education. Parasitology experts will explain the causes and effects of worm infections, and pharmacology experts will explain worm medicines.

IMPLEMENTATION AND METHODS

The community engagement activities were carried out in several stages, namely preparation, implementation, and evaluation.

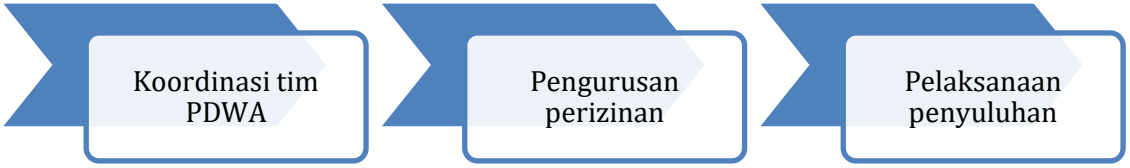
Preparation Stage

During this stage, a personal approach was made to one of the community leaders in Sungai Madang, where the activity took place. In addition, the engagement team also obtained the necessary permits, both from the faculty and the village where the activity was to be conducted.

Implementation Stage

During this stage, coordination was established with all the faculty and student teams involved in the Community Engagement for Worm Disease Awareness (CEWDA) program. The team obtained official permits through the faculty for the community engagement activity. After the preparation was completed, the activity consisted of health education sessions covering three main topics:

1. Knowledge about the factors of worm diseases.
2. Understanding the effects of worm diseases.
3. Information on the use of worm medications.



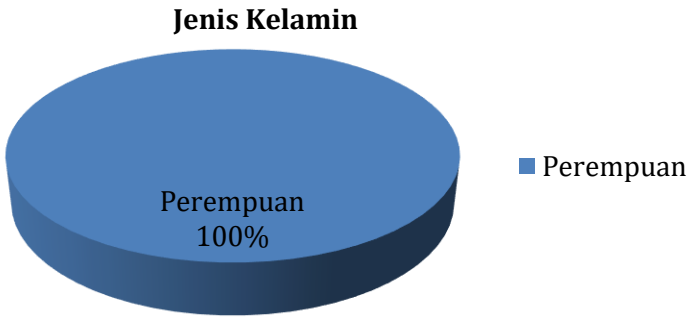
Picture 1. Flowchart of Community Engagement Activity Planning

Activity Evaluation

The evaluation of the activity was conducted through pretest and posttest assessments. Pretest and posttest assessments were conducted before and after the health education sessions to measure the level of community knowledge following the provision of health information. One way to gauge the success of the community engagement was by comparing the results of the pretest and posttest assessments. Additionally, evaluation was carried out by requesting community figures to fill out a provided Google Form.

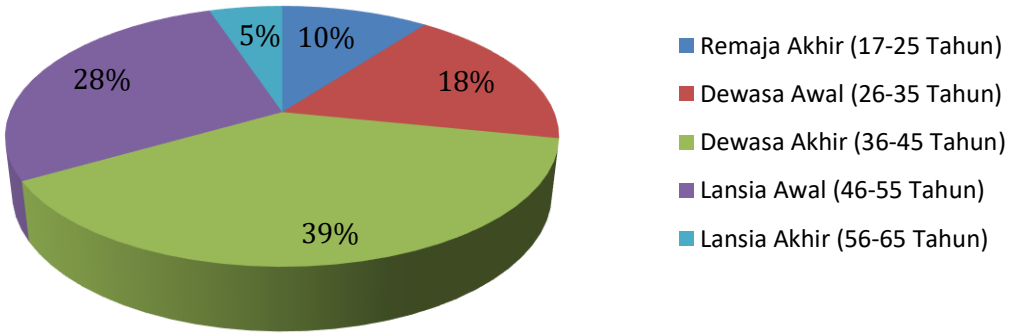
RESULTS AND DISCUSSION

The community engagement activity was conducted on July 29, 2023, in Sungai Madang Village, Sungai Tabuk Subdistrict. The activity was attended by 46 participants, but only 39 participants completed both pretest and posttest questionnaires.



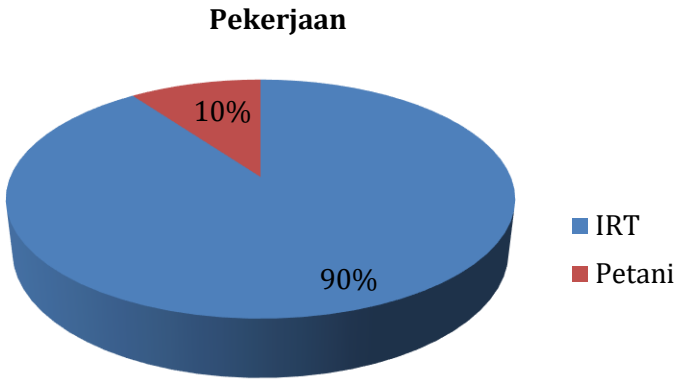
Picture 2. Distribution of Participant Gender in Community Engagement

Based on the analysis, all participants in the community engagement were female (100%).



Picture 3. Distribution of Participant Age in Community Engagement

Age is one of the factors that influence an individual's health behavior. According to the Ministry of Health of the Republic of Indonesia (Depkes RI), the productive age range is between 15 and 54 years. Based on the analysis, out of the 39 participants, most fell into the late adulthood age group (36-45 years), with 15 participants (39%). Additionally, 4 participants (10%) were in the late adolescence group, 7 participants (18%) in the early adulthood group, 11 participants (28%) in the early elderly group (46-55 years), and 2 participants (5%) in the late elderly group.



Picture 4. Distribution of Participant Occupations in Community Engagement

Occupation is a necessity, especially to support one's own and their family's livelihood. Based on the analysis, the majority of community engagement participants were housewives, accounting for 35 participants (90%), while 4 participants (10%) were farmers. Mothers within households play a crucial role in promoting family health. Therefore, mothers should possess good health knowledge to care for and maintain the family's health.

The community engagement activities consisted of several components:

a. Pretest
b. Presentation of materials
   1) Causes and risk factors of worm infections
   2) Effects of worm infections
   3) Use of worm medications
c. Posttest

Picture 5. Participants filling out pretest questionnaires

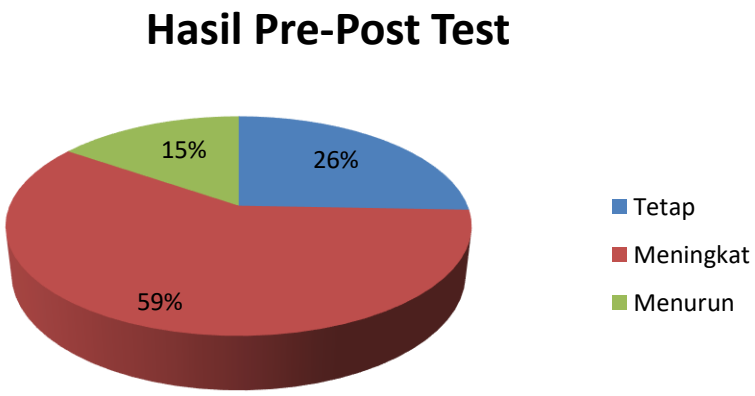
Before the core activities of community engagement, participants first completed attendance lists and pretest questionnaires distributed by the engagement team (Figure 6). This was done to assess the participants' knowledge levels regarding worm infections before the presentation of materials. After answering the pretest, participants received presentations from parasitology and pharmacology experts. The material was delivered through lectures and a

question-and-answer session with the aid of posters. Throughout the session, participants attentively listened and actively participated in the Q&A session (Figure 7).

Picture 6. Presentation of materials by the three presenters

After the presentation of materials and Q&A sessions on worm diseases, the three presenters took turns explaining risk factors for worm infections, the effects of worm infections, as well as prevention and the use of worm medications (Figure 7). At the end of the activity, participants were given posttest questionnaires to evaluate their knowledge retention following the material presentation (Figure 8).

Picture 7. Participants filling out posttest questionnaires



Picture 9. Distribution of Pretest and Posttest Results of Community Engagement Participants

From the pretest and posttest analysis, it was found that the majority of community engagement participants experienced an increase in knowledge, with 23 participants (59%) showing improvement, while 10 participants (26%) maintained the same level of knowledge, and 6 participants (15%) showed a decrease.

The productive age category represents the age range of adults who are active in activities, which supports the learning process and maintains high information retention (Muijburrahman et al., 2021). In this engagement, participants were predominantly in the late adulthood age group, which allowed them to effectively absorb information from the presenters. Good knowledge is knowledge that has been acquired beforehand, either from personal experience or other sources of information, and is complemented by a high level of curiosity.

The participation of parents, especially mothers, significantly influences the hygiene level of families and children. Mothers play a role in educating their families about environmental hygiene to prevent worm infections. However, this effort may not succeed if the mother's knowledge about worm infections itself is lacking. Mothers should have knowledge about worm infections. In this engagement, the majority of participants were housewives, and as a result of increased knowledge, these mothers now have information about worm infections, prevention, and the use of worm medications.

CONCLUSIONS AND RECOMMENDATIONS

The community engagement activity conducted in Sungai Madang Village, Sungai Tabuk Subdistrict proceeded smoothly as anticipated, without significant obstacles. Therefore, it can be concluded that there was an improvement in the knowledge of the participants after the delivery of health education materials. Through this activity, the community gained a better understanding of the dangers of worm infections and the importance of preventing them. It is hoped that with the health information provided, the engagement participants, especially mothers, can take the lead in preventing worm infections in children and families by ensuring regular worm medication consumption and maintaining hygiene and sanitation within the family environment.

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