Community empowerment in overcoming environmental health problems in Padukuhan Sawit Bantul

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1. Introduction

Indonesia is one of the countries in Southeast Asia that is still known as a developing country. Developing countries have many population problems, especially in the economy, which can cause people’s living standards to tend to be low and result in poverty. This problem certainly has a big impact on the level of public health and environmental health problems in the surrounding area. The aim of health development in Indonesia is to increase awareness, willingness and ability to live healthily for everyone. This is to achieve optimal health [1], [2].

Community empowerment is an effort to develop potential knowledge, skills, attitudes and accessibility to encourage and increase community awareness with the aim of forming community independence from being less empowered to being empowered so that they can achieve a better life [3], [4]. The existence of a community approach with empowerment is an alternative form of development to form a society that is able to be independent in meeting its living needs. In Minister of Health Regulation no. 8 of 2019 concerning Community Empowerment, Community Empowerment in the Health Sector, hereinafter referred to as Community Empowerment, is a process to increase knowledge, awareness and ability of individuals, families and communities to play an active role in health efforts carried out by...
facilitating the problem solving process through an educational and participatory approach, as well as paying attention to local potential and socio-cultural needs [5]. Students' knowledge and skills in Community Empowerment are one of the skills and abilities that require graduate competence to be able to strengthen local community groups so that they can help the community in overcoming problems by utilizing the community's own abilities and existing potential without external assistance. According to previous research, community empowerment regarding a problem in the village is one of the efforts to solve problems that arise and continue to increase [6], [7].

The ultimate goal of the community empowerment process is to make community members independent so they can improve their family's standard of living and optimize the resources they have [8]. Therefore, students need to carry out practical community empowerment activities so that students can face situations and conditions in the field directly. Community empowerment consists of problem exposure activities, Community Self Survey (CSS) or Self-Awareness Survey (SMD), cadre training and finally dissemination by cadres.

2. Method

Problem presentation activities use a socialization and discussion approach with the community. There was a presentation of material consisting of several topics of discussion and discussion regarding environmental health problems. Independent survey activities use qualitative approaches and observation methods [9]. A qualitative approach is an approach that aims to understand social events and problems that occur in the subjects and objects studied [10]. In this approach, data is obtained using instruments in the form of checklist. Meanwhile, observation is observation to obtain information about something being researched after seeing field conditions [11]. The methods used in qualitative research are training, socialization and use of documents [12]. The data used in this research is observation, socialization, training and documentation. Cadre training activities use discussion and practice methods. Data collection method before and after training, using instruments pre-test and post-test. Dissemination activities by cadres use a socialization approach and discussions between cadres and residents regarding problem priorities that have been determined together through scoring after independent survey activities [13].

3. Results and Discussion

3.1. Problem Presentation

The presentation of the problem was carried out through the presentation of material by students with a discussion of five topics, namely Open Defecation (Open Defecation), throwing toilet waste in rivers, throwing domestic waste in rivers, burning rubbish, and dengue fever. Apart from presenting the material, a discussion session was also held in the form of questions and answers related to the problems that had been presented. This activity was attended by community representatives from every RT in Padukuhan Sawit. The aim of this activity is to make people more aware of environmental problems in their living environment. Communities who actively participate in implementing these five topics can have a good impact on their families and the surrounding environment so that they can improve their standard of living. This is because it can reduce medical costs so that it can be focused on providing balanced nutrition to move towards an intelligent generation [14].

3.2. Community Self Survey (CSS)

After the problem presentation activity is carried out, it is continued with the Community Self Survey (CSS) or Self-Awareness Survey (SMD). In this activity, students and the community conduct direct surveys of places that are risk factors for disease to see the actual conditions at the location and create a questionnaire containing questions regarding indicators of related problems to find the truth about environmental health problems that have been presented in the problem exposure activity. The preparation of the questionnaire is carried out by female cadres who will be accompanied and guided by student female cadres. Then the questionnaire will be distributed to the public door to door so that the public fills out the questionnaire according to the existing conditions in Padukuhan Sawit. From the summary of the results of the questionnaire that has been filled out by the community, it shows that the environmental health problems that have been described are valid and actually occur. Next, the community determines the priority of the problem by giving a score of 1-5 taking into account Magnitude (the level of tendency for large and frequent problems to occur), Savety (level of loss), Affordability (availability of resources in solving it), Nursing Consent (involving the consideration and attention of
nurses), and manageability (focuses on nursing so that it can be managed for change). Problem priority scoring show as Table 1.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Mg</th>
<th>Sv</th>
<th>Mn</th>
<th>Nc</th>
<th>Of</th>
<th>Score</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>BABs in the river/river</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Dispose of toilet waste in rivers/streams</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Dispose of household waste in rivers/streams</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Burning trash</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Dengue fever in children</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>15</td>
<td>5</td>
</tr>
</tbody>
</table>

Information:
- Mg (Magnitude): the large tendency and frequency of the problem to occur
- Sv (Severity): the amount of loss resulting from the problem
- Mn (Manageability): focuses on maintenance so that changes can be managed
- Nc (Nurse Consent): involves the nurse's consideration
- Af (Affordability): availability of resources
- Grades 1-5
  - 5 = very capable; 4 = capable; 3 = sufficient; 2 = less capable; 1 = unable

Based on discussions and agreements between the community and Padukuhan Sawit cadres listed in the Table 1, 1 problem was obtained which was a priority problem to be addressed immediately, namely the activity of burning dry leaf waste. Until now, burning of waste is still a problem that is often found in other areas, based on previous research through introspective surveys, it was stated that in Jelun Village, in 100 sample households, a percentage of 73% still threw rubbish in rivers, empty land, behind the house and a percentage of 24% still burning trash [15].

3.3. Cadre Training

The activity begins with carrying out a pre-test regarding the knowledge possessed by cadres regarding priority problems obtained from the Community Self Survey (CSS) activity and the material that will be presented in this activity which must be answered by cadres as they are according to what is known. After that, it was continued with a presentation of material related to solutions or efforts to reduce problems that are priority problems in CSS activities, namely making compost from dry leaf waste, which consists of the definition, tools and materials that must be prepared, the function and use of tools and materials, work procedures, and tips for successful composting. Activity: students practice making compost show as Fig. 1

![Fig. 1. L3 activity: students practice making compost](image-url)
Based on previous research, carrying out training activities provides basic knowledge first so that the public can understand the purpose of implementing the training [16]. Students also practiced directly making good and correct compost together with cadres who also tried it at that time.

Discussion activities were carried out in the form of questions and answers by cadres and students. The enthusiasm of the cadres when carrying out practical compost making activities is very great because based on their experience in making compost they often get unsatisfactory results (failure). This research is also the same as that carried out in Sumbermulyo Village, which conducted training in making compost using used items such as paint buckets [17]. Finally, a post-test was carried out, the post-test results obtained showed that the majority of cadres had answered everything correctly. These results are in line with the service carried out in Nanjung Village, Margasih District regarding composting, this activity also explores aspects of understanding through pre-test and post-test. This research is also in line with research conducted in Tanjung Ketapang Village which managed waste by producing marketable works of art from various plastic waste [18]. It can be seen that the comprehension score before being given the material was 84.8% - 84.85%, then after being given the presentation of the material, it increased to 5.55% - 6.85% [19]. Score results show as Table 2.

![Table 2. Score Results Pre and Post Test](image)

Based on analysis with the SPSS application, the results obtained are known to be average pre-test amounting to 75.71 and post-test amounting to 97.14. There is a difference between pre and post results, so it is necessary to ensure systematically between them pre- and post-test. Based on the results on Paired Samples Test shows the sig (2-tailed) value, namely 0.000 or less than 0.05. This shows that there is a significant difference between the variables before the cadre training was held and after the cadre training was held. Activities accompany cadres in creating environmental health problem question show as Fig. 2.

![Fig. 2. Student L2 activities accompany cadres in creating environmental health problem question](image)

### 3.4. Dissemination by Cadre

Dissemination activities by cadres were carried out in the RT 05 Multipurpose Building. In this activity, material was delivered by cadres on the topic of making compost from dry leaf waste using EM4 show as Fig. 3.
Fig. 3. Activity L1 delivers waste management material to cadres

The problems taken are problems that have been agreed upon by the residents of Sawit Hamlet and the cadres. This activity is intended so that the people of Sawit Hamlet can deal with the waste problem in their respective environments, and can use the waste into compost and no longer burn it. This effort also has the aim of inviting the public to understand the potential for waste generation so that they can adopt a better mindset, lifestyle and culture in managing waste [20]. The public is advised not to burn waste anymore, because this will not solve problems for the environment but will actually worsen the quality of the environment due to soil and air pollution caused by the smoke from burning the waste itself. Community regarding compost making show as Fig. 4.

Fig. 4. Activity L4 is a presentation by cadres to the community regarding compost making

4. Conclusion

Based on the activities carried out, it was concluded that:

- Carrying out comprehensive outreach on the problem to the community aims to make the public more aware of existing environmental health problems.
- The introspective survey in Padukuhan Sawit obtained the highest score of 17 and found 1 problem which was a priority problem to be addressed immediately, namely the activity of burning dry leaf waste.
- Implementation of problem prioritization based on community needs and potential in the surrounding environment, with the aim of making efforts to improve environmental health problems.
- The implementation of cadre training aims to increase cadre creativity in utilizing Natural Resources (SDA) and Human Resources (SDM) to expand science and technology...
After the cadre training was carried out, there were significant differences between the variables before the cadre training was held and after the cadre training was carried out.

Dissemination by cadres to the community is carried out to increase community independence in solving environmental health problems.

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Declarations

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References


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