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Optimizing Public Health through Community Service: Addressing Stunting and Open Defecation in Sidoarjo Regency

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ABSTRACT. Community service in health institutions needs to be guided by six pillars of health transformation, namely to overcome five priority diseases: tuberculosis, stunting, MCH, infectious diseases and non-communicable diseases. One of their focuses is Sidoarjo Regency, where they work closely with the Regional Government to improve public health. Some of the main problems in Sidoarjo Regency include the high rate of stunting and the practice of open defecation (ODF). There is a relationship between stunting and environmental sanitation, especially open defecation. Solutions to overcome this problem include the provision of healthy latrines to the community, increasing the capacity of Posyandu cadres, nutrition management, and promoting clean and healthy living behaviors. This community service activity is based on previous research relevant to stunting and ODF problems. The goal is to reduce stunting rates in five stunting locus villages, increase knowledge about clean and healthy living behaviors, and build 100 healthy family latrines. The method used is Theory, Practice, Follow-up (TPT) which involves training, field practice and advanced mentoring. Conclusion: with the construction of healthy latrines, there has been a decrease in the incidence of diarrhea in children. Diarrhea in children is one of the latent causes of stunting rates. By implementing this strategy, it is hoped that a significant increase will be achieved in preventing and reducing stunting rates in Sidoarjo Regency.

INDEX TERMS Stunting; Open Defecation; Public health; Community service; Sidoarjo Regency

I. INTRODUCTION

The main problem faced by Sidoarjo Regency is the high rate of stunting and the practice of open defecation (ODF) in a number of areas. Stunting is a condition where physical growth is hampered in children due to nutritional and nutrition deficits in their early growth period [1]. On the other hand, ODF is an unhygienic practice and has the potential to cause diarrheal diseases and contribute to serious environmental sanitation problems [2]. The stunting rate in Sidoarjo Regency has experienced an alarming increase, reaching 16% in 2023, and this has a significant impact on the quality of life and future of the younger generation. Apart from that, the practice of ODF which is still high is also a serious problem in maintaining overall public health [3]. The

increased risk of diarrhea and other disease transmission could hinder the region's social and economic development [4]. The stunting rate in Sidoarjo Regency will reach an alarming level in 2023, at 16%, which is an increase from the previous year. The practice of open defecation (ODF) is also still high in several villages, reaching 56.6% of the total 350 villages/sub-districts in April 2023. This health problem requires emergency action and careful planning to overcome the risks [5]. The proposed solution is through a community service program which includes various components, such as providing assistance with healthy latrines for the community, increasing the capacity of Posyandu cadres, assistance in nutritional management, promotion of clean and healthy living behavior (PHBS), and early detection of stunting

through one cadre. stunted toddlers. With this approach, it is hoped that there will be significant improvements in the health of the people of Sidoarjo Regency, including a reduction in stunting rates and better ODF practices. This solution also collaborates with partners such as the Sidoarjo District Health Service, BAZNAS, and APSANI to support these efforts. This solution is based on the urgent need to address the problem of stunting and ODF in Sidoarjo Regency. In this effort, the strategy will focus on implementing concrete actions that can produce significant positive impacts in a short time. The following are the strategic steps that will be taken:

1. Providing Healthy Toilet Assistance.

One of the main solutions is to provide healthy toilet assistance to the community. This involves building adequate sanitary latrines in areas where they are needed. This step will help reduce open defecation (ODF) practices and improve overall environmental sanitation [6].

2. Increasing the Capacity of Posyandu Cadres.

Posyandu cadres will be empowered with relevant training and knowledge about promotive, preventive and curative health, especially in identifying and assisting toddlers who are stunted. They will be agents of change in their communities to ensure the healthy growth and development of children.

3. Nutrition Management Assistance.

Efforts will be made to increase public understanding of the importance of nutrition and good nutrition [7]. This involves education about healthy food management, the importance of exclusive breastfeeding, and the promotion of a balanced diet for toddlers and pregnant women [8].

4. Promotion of Clean and Healthy Living

Behavior (PHBS).

The public will be educated about the importance of PHBS, including washing hands properly, maintaining a clean environment, and other health practices. This will help reduce the risk of infectious diseases, including diarrhea [9].

5. Early Detection of Stunting.

Posyandu cadres will be involved in early detection of stunting. Each cadre will be responsible for one stunted

toddler, monitor their growth, and provide appropriate care or direction if necessary [10].

Through these steps, it is hoped that there will be real improvements in the health of the people of Sidoarjo Regency. The implementation of this solution must be supported by commitment from all parties, including local governments, educational institutions such as the Surabaya Ministry of Health Health Polytechnic, and partners involved in community service efforts. With strong cooperation, the problem of stunting and ODF can be addressed effectively, and the quality of life of the community will improve significantly.

II. METHOD AND IMPLEMENTATION

A. METHOD

This community service will be carried out through a structured and sustainable method. The method used in this community service activity is the TPT (Theory, Practice, Follow-up) method [11]. The following is a more detailed explanation of each stage in the TPT method:

1. Theory.

This stage involves providing training to the community and Posyandu cadres. The material presented included knowledge about stunting, good sanitation practices, nutrition management, and clean and healthy living behaviors (PHBS). The goal is to increase public understanding and awareness of the importance of maintaining sanitation and nutrition to prevent stunting [12].

2. Practice.

At this stage, the community and Posyandu cadres are invited to apply the knowledge that has been obtained in the form of field practice. These activities include the construction of healthy latrines in five stunting locus villages, training on the use and maintenance of healthy latrines, and monitoring the quality of environmental sanitation. In addition, practical guidance is also provided in nutrition management and clean and healthy living behaviors [13].

3. Follow-up.

This stage involves continuous assistance to the community and Posyandu cadres to ensure that the practices that have been taught and applied can be carried out in a sustainable manner. This assistance includes periodic monitoring, evaluation of results, and provision of additional support if needed. The goal is to ensure that the knowledge and skills gained can continue to be applied and have a long-term impact in reducing stunting rates and improving the quality of life of the community [14]. By using the TPT method, this community service activity has succeeded in reducing the rate of diarrhea in children, which is one of the latent causes of the high stunting rate. It is hoped that with this strategy, a significant increase can be achieved in the prevention and

reduction of stunting rates in Sidoarjo Regency. Here are the details:

1. Identify Priority Areas.

Identify areas in Sidoarjo Regency that have high stunting rates and open defecation practices that need special attention.

2. Providing Healthy Toilet Assistance. Initial surveys and assessments will be carried out to determine areas that need the construction of healthy latrines. Site selection and technical preparation for the construction of healthy latrines. Collaboration with local governments and related parties in the process of planning, building and maintaining healthy latrines.

3. Increasing the capacity of Posyandu Cadres.

Training will be given to Posyandu cadres, including material on stunting, nutrition, child development, and the role of cadres in early detection of stunting. The training activities will involve theory, simulation and field practice sessions. The establishment of a Posyandu cadre working group that will be tasked with monitoring toddlers, reporting findings, and providing support to families in terms of nutrition and child health [15].

4. Nutrition Management Assistance. Counseling will be provided to the community about healthy food management, the importance of exclusive breastfeeding, and good food selection and preparation. Individual or group counseling will be carried out to provide guidance on providing good nutrition for toddlers and pregnant women [13].

5. Promotion of Clean and Healthy Living Behavior (PHBS).

The PHBS campaign will be carried out through community group meetings, lectures and counseling. Demonstrations of PHBS practices, including proper handwashing, monitoring environmental hygiene, and other daily health practices will be displayed to the public [16].

6. Early Detection of Stunting.

Each Posyandu cadre will be assigned one stunted toddler. Cadres will routinely monitor the growth of toddlers and record relevant data. If signs of stunting are found, cadres will provide initial treatment or refer to further health services [17].

7. Evaluation and Follow-up.

Periodically, an evaluation will be carried out on the impact of activities, including reducing stunting rates, increasing PHBS practices, and increasing cadre knowledge.

The results of the evaluation will be used to improve and adjust the program.

Through this method, it is hoped that positive changes can be created in public health practices in Sidoarjo Regency. This method combines prevention, education, training and mentoring approaches to achieve better community service goals..

III. RESULT

The results of this community service can be measured through various parameters that include direct impacts on public health and behavior change. The following are some of the results of this activity:

1. Reducing the Stunting Rate.

There has been a significant decrease in stunting rates in the areas that are the focus of the program. Trained Posyandu cadres will help early detection of stunting and provide timely handling or referrals.

2. Reduction of Open Defecation (ODF) Practice.

The practice of open defecation (ODF) can be significantly reduced through healthy latrines development programs and PHBS campaigns. The community will be more aware of the importance of good sanitation. The process of building healthy latrines is preceded by program planning. It is stated in the activity report as seen in the image below.



Figure 1. Picture of the report on the planning activities for the construction of healthy latrines

3. Increase Public Knowledge.

The public has a better knowledge of the importance of nutrition, healthy food management, exclusive breastfeeding,

and PHBS practices. This will affect their behavior regarding health and nutrition.

4. Empowerment of Posyandu Cadres.

Posyandu cadres have better knowledge and skills in managing the growth and development of toddlers, as well as providing support to families related to children's health and nutrition.

5. Construction of Healthy Toilets.

The assistance with 100 units of healthy latrines, which will provide better access for the community to defecate safely and hygienically, reduce ODF practices, and improve environmental sanitation. The construction of a healthy latrine is done as seen in the picture below. The cost of building 1 unit of healthy latrines is Rp. 1,500,000 (one million five hundred thousand rupiah).

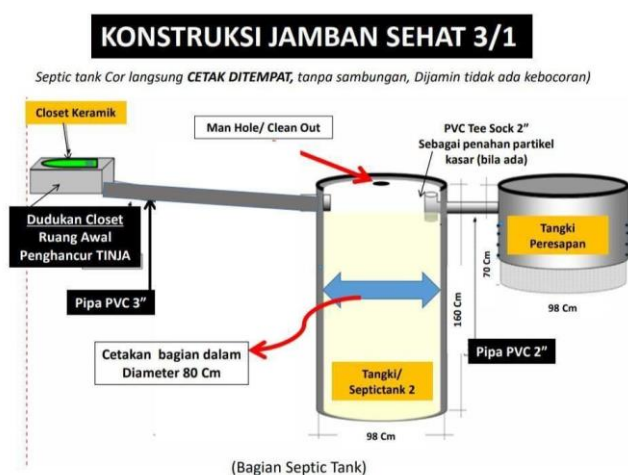


Figure 2. Picture of the construction of a healthy latrine being worked on

6. Behavior Change.

Expected behavioral changes include better nutrition practices, healthy latrine use, and consistent PHBS practices. People will become more aware of the positive impact of this practice on their health.

7. Collaboration with Partners.

The results of good collaboration with partners such as the Sidoarjo Regency Health Office, and APSANI will support the sustainability of the program and expand its impact. The results of this community service will be assessed through periodic evaluations that will measure changes in stunting rates, ODF practices, community knowledge, and the roles and skills of Posyandu cadres. With the continued implementation of this program and strong cooperation between various

related parties, it is hoped that there will be a significant improvement in public health in Sidoarjo Regency.

IV. DISCUSSION

This community service is a real effort to overcome the problem of stunting and open defecation (ODF) in Sidoarjo Regency. The problem of stunting and ODF practice is a serious problem that affects the health and quality of life of the people of Sidoarjo Regency. Stunting can have a long-term impact on children's physical and mental development, while ODF practices increase the risk of disease and affect environmental sanitation [5]. Posyandu cadres play a key role in this program as agents of change in the community. They are empowered through training to identify and help toddlers who are stunted, as well as provide education to families about nutrition and child health [6].

This program emphasizes the importance of community empowerment in solving their own health problems [18], [19]. By increasing people's knowledge and skills about nutrition, sanitation, and clean and healthy living behaviors, it is hoped that they will be able to adopt positive changes in their health practices [20]. This program seeks to change people's behavior related to nutrition, sanitation and health. This involves outreach campaigns, demonstrations of PHBS practices, and providing concrete examples of the benefits of these changes [8].

Building healthy latrines is an important step in addressing ODF practices and improving environmental sanitation [21]. This will reduce the risk of diseases associated with poor sanitation. Periodic evaluations are an important component of this program. The results of the evaluation are used to understand the impact of the program and make necessary improvements [22]. Further activities such as community service festivals motivate the sustainability of the program. Collaboration with partners such as the Sidoarjo Regency Health Office, and APSANI is a key element in the success of this program. Partners help with the necessary financing, resources, and technical support.

The sustainability of this program is important to ensure that the changes achieved remain impactful in the long term. The community and Posyandu cadres are expected to maintain good health practices even after the program is completed [23]. This program also has the potential to trigger social and economic improvement in Sidoarjo Regency through improving public health [24]. Children who grow well physically and mentally have greater potential to contribute to the development of their area [7].

This community service highlights the importance of a holistic approach in addressing public health issues [25]. By combining community empowerment, education, sanitation infrastructure, and behavior change, this program is expected to have a significant positive impact on the health and quality of life of the people of Sidoarjo Regency [26].

Integrated community service programs show a significant decrease in stunting rates in the implemented areas [27]. These interventions include nutrition education, routine health checks, and the provision of nutritious food. This program has also succeeded in reducing the practice of open defecation [28]. The community is more aware of the importance of good sanitation and has started to build and use proper toilet facilities [29]. The active participation of the community in this program increases awareness about environmental cleanliness [30]. Education and counseling campaigns have succeeded in changing people's behavior in maintaining cleanliness and health [31].

This program not only provides health solutions but also empowers the community. The training and education provided allows the community to sustain positive change independently [32]. These results show that a holistic community service approach can effectively address health problems such as stunting and open defecation [33]. Ongoing empowerment and education are key to achieving better public health [34].

VI. CONCLUSION

Community service aimed at overcoming the problem of stunting and open defecation (ODF) in Sidoarjo Regency is a concrete step in an effort to improve the health and quality of life of the community. The problem of stunting and ODF has a serious impact on the health and development of the people of Sidoarjo Regency. Both of these issues require special attention and effective prevention and intervention. This program emphasizes the importance of community empowerment in solving their own health problems. It is hoped that the improvement of people's knowledge and skills in terms of nutrition, sanitation and PHBS will bring positive changes in their behavior. This program reflects the commitment to improve the health and quality of life of the people of Sidoarjo Regency by combating stunting and ODF practices. With the continued implementation of programs and support from various parties, it is hoped that there will be a significant improvement in public health and the potential for greater social and economic change in the area. This program is a clear example of how community service can have a real positive impact on the community..

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