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Nutritional Fulfillment of The first 1000 Days Based on Local Food Ingredients as A Strategy for Handling the Stunting Problem

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Abstract

This community service activity aims to increase the knowledge of mothers in meeting the nutritional needs of 1000 HPK based on local food. Community service activities were carried out on Saturday, 19 August 2023 at Posyandu Melati, Panggungharjo Village, Sewon, Bantul. The target was cadres and mothers totaling 60 participants. The method used is lecture, question, and answer. Community service activities are related to providing knowledge and understanding about local food-based products as an effort to overcome the problem of stunting. Evaluate community service activities by assessing the pretest and posttest regarding stunting knowledge. The posttest was carried out after participants received information about stunting. The average results of the pretest and posttest were 60.5 and 90.5, respectively, measured at the knowledge level.. The conclusion there was an increase in the level of knowledge of mothers about stunting after being given lectures and questions and answers.

A. Introduction

One of the international issues affecting children is stunting. In 2017, stunting affected 151 million (22%) children under the age of five. According to WHO (World Health Organization), Indonesia is included in the third country with the highest prevalence in Southeast Asia. Prevalence of stunted babies born in DI Yogyakarta in 2015 was 28.7%. Meanwhile, in 2013 the prevalence of stunting in DI Yogyakarta was 25%. Therefore, improvement efforts must include efforts to prevent and reduce direct disturbances (specific nutrition interventions) and efforts to prevent and reduce indirect disturbances (sensitive nutrition interventions). Specific nutritional interventions are generally carried out in the health sector, but only contribute 30%, while 70% is the contribution of sensitive nutritional interventions involving various sectors such as food security, availability of clean water and sanitation, poverty alleviation, education, social, and so on (S. I Gusti Bagus et al., 2022). The impact of stunting, apart from causing stunted growth, stunting also has an impact on brain development that is not optimal, which causes poor mental and learning abilities, as well as poor village performance. The cognitive abilities of sufferers are also reduced, resulting in long-term economic losses for Indonesia. One of the risk factors for diabetes, hypertension, obesity, and death from infection is related to stunting. The incidence of stunting can be measured by calculating the z-Scor for height according to age (Beal et al., 2018).

Mothers of toddlers are strategic targets to be empowered in efforts to overcome the problem of stunting both at the family level and at the community group level (at posyandu). Posyandu for toddlers which is a forum for the community consisting of mothers as a forum for community empowerment to overcome the problem of stunting (Dwijayanti & Setiadi, 2020). Mothers can be empowered to provide nutrition for babies in the first 1000 thousand days of life (HPK), especially in meeting the nutritional needs of children aged 6 to 24 months. Mothers are expected to prepare good nutrition from an early age to prevent stunting

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problems. This group can be empowered to provide nutrients to prevent stunting from an early age. Referring to the situation analysis above, the team together with partners justified that the priority problems experienced by partners and the priorities agreed to be resolved were related to the importance of knowledge about strategies for overcoming the stunting problem by fulfilling nutrition for 1000 HPK based on local food ingredients (Rusmil et al., 2019).

B. Research Methods

This community service activity is carried out with a strategy of using the mother's association (Dasa Wisma/PKK) that already exists in the community. Methods that use include lectures, questions, and answers, discussions, and demonstrations. The level of success of this activity is carried out through: Pretest and posttest about stunting. Evaluation is carried out after participants receive information about stunting. This activity will be held on August 19 2023. The location of the activity is at Posyandu Dongkelan Panggungharjo Sewon, Bantul. Meanwhile, the relevant party is the Sewon II Community Health Center Nutrition Officer. The nutrition officer was involved because of his role as manager of improving community nutrition which will then follow up on community service activities. The knowledge measured is the knowledge of mothers in meeting the nutritional needs of children aged 6 to 24 months based on local food ingredients as an effort. Data is collected by test. The media used in the process of implementing nutrition education is in the form of an educational video about "Efforts to Fulfill Nutrition at 1000 HPK in Stunting Prevention" with a material composition regarding the meaning of stunting, characteristics, impacts, ways to prevent stunting and the nutritional needs of 1000 HPK in preventing stunting. The material regarding 1000 HPK nutritional needs in preventing stunting contains the meaning of the 1000 HPK period, food ingredients and nutrients that can help prevent stunting, and is equipped with props in the form of real food ingredients, examples of food menus based on local food ingredients that contain preventative nutrients. When delivering the material, participants listened and paid attention enthusiastically. The activity ended with a question and answer session, where participants actively asked several questions related to the counseling material.

C. Result and Discussion

There were around 60 participants in this community service activity in the form of counseling. The participants were 50 mothers of toddlers, 10 health cadres, and community leaders. The characteristics of the participants, as in table 1, can be seen that the majority of the participants' jobs are housewives 38 people. There are 8 participants who work as merchant, 2 workers, 12 entrepreneurs and 1 craftsman.

Table 1. Respondent's Occupation

No	Occupation	f	%
1	Housewife	38	60
2	Merchant	8	26.7
3	Workers	1	3.3
4	Entrepreneur	12	6.7
5	Craftsman	1	3.3
Total		**60**	**100**

Based on table 2, it is known that the education of most of the participants present was senior high school 30 people. There were 7 participants with junior high school education, 1 person from elementary school and 22 people from bachelor's degree.

Table 2. Respondent's Education

No	Education	f	%
1	Elementary Schoo	1	3.3
2	Junior High School	7	23.3
3	Senior High School	30	66.7
4	Bachelor's Degree	22	6.7
Total		**60**	**100**

The process of implementing counseling is carried out using lecture, question and answer and demonstration methods. The training material is in the form of "Fulfilling nutrition for children in the first 1000 days of life by empowering local food as an effort to overcome the problem of stunting." Therefore, mothers as the main target need to be provided with knowledge in dealing with stunting problems. Mothers

need to be provided with knowledge about stunting and the family's role in overcoming the problem of stunting. So that mothers are motivated to tackle the problem of stunting, it is necessary to explain the very detrimental impacts of stunting. Children who experience malnutrition in the first 1000 days of life are at risk of stunting. Children who are stunted will experience risks including: 1) The risk of developing non-communicable/chronic diseases, 2) If the brain is affected, they will experience obstacles to cognitive growth, making them less intelligent and competitive; 3) Impaired height growth, resulting in a risk of stunting (Aryastami & Tarigan, 2017). Bone growth is influenced by genetic and environmental factors, including nutrition. Optimal growth requires adequate fulfillment of various nutrients. Many nutrients are important for bone growth and development. Nutrient deficiencies are associated with stunting, such as energy, protein and zinc (Muthia et al., 2019).

Apart from being given breast milk, babies need to be given complementary food, because babies' nutritional needs are increasing and breast milk alone is no longer enough to meet babies' nutritional needs. The need for protein and micronutrients such as vitamins and minerals is needed in high quantities because this period up to two years of age is a period of growth and a high metabolic rate. The fat content in complementary foods for children's breast milk is needed as a source of essential fatty acids, facilitating the absorption of fat-soluble vitamins. Fat requirements for children in complementary foods for breast milk range from 30% -45% of energy requirements. Community empowerment in the health sector is the main target of health promotion (Budiastutik & Rahfiludin, 2019). According to the World Health Organization (WHO), the causes of stunting in children include the mother's nutritional status, exclusive breastfeeding, inadequate food intake and infectious diseases. Apart from that, there are other factors that can influence the nutritional status of stunting, namely maternal characteristics (age, education, occupation and height). Mothers with low education and knowledge do not understand nutrition and correct parenting patterns so they are at risk of having stunted children. Working mothers cannot care for their children well because they don't have much time to spend with their children, so this can be a risk factor for children experiencing stunting. This is in accordance with research in North Sumatra that mothers with high education and not working tend to have children who are not stunted.

The mother's education level has a significant relationship with the incidence of stunting, where the higher the mother's education level, the risk of the child experiencing stunting is 5 times lower than mothers with a low education level. This is because the level of education determines good knowledge about nutrition and children's health, so that even though mothers work they will still pay good attention to nutritional intake and can obtain nutritional and health information through other means besides going to the Posyandu. The proportion of food given to stunted toddlers is greater in the group of working mothers than non-working mothers. Mothers who do not work have more time in the morning to go to the Posyandu and get additional food and receive health education than working mothers. According to previous research, it shows the opposite to the results of this study, where in this study it was stated that mothers who do not work predominantly have children who are stunted, while mothers who work have children who are not stunted (Setiawan et al., 2018,Salam et al., 2014). Even though working mothers do not have time to go to the posyandu, working mothers can increase family income, so this can support children's growth because parents can meet children's nutritional needs well.

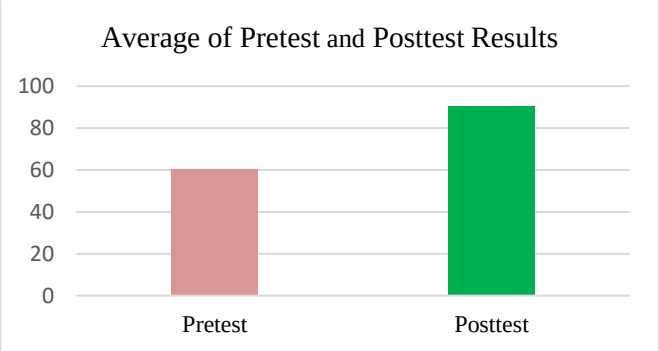

Figure 1. Average of Pretest and Posttest Results

Based on Figure 1, it is known that the average knowledge value of participants before presenting the material was 60.5 and the knowledge value of participants after presenting the material was 90.5 points, which indicates an increase in knowledge among participants. Of the 30 participants who attended, all

experienced increased knowledge regarding efforts to fulfill nutrition at 1000 HPK in preventing stunting in toddlers.

Based on the participants' knowledge scores before presenting the material, there were 4 questions with the average participant answering incorrectly, namely question number 4 with the question "Nutrient such as calcium, iodine, protein are nutrients to prevent stunting", question number 9 with the question "Complementary foods for breast milk begin to be given to babies from the age of 6 months", question number 10 with the statement "Bananas, mangoes, pineapples are food sources of vitamins needed for children" and question number 14 with the statement "Food for babies aged 0 to 6 months is breast milk and pureed food." This could be caused by the participants' lack of knowledge regarding efforts to fulfill nutrition at 1000 HPK in preventing stunting in toddlers.

Specifically regarding exclusive breastfeeding, In a study, it was found that knowledge is related to action Exclusive breastfeeding (p = 0.033) and attitudes are related to the act of giving exclusive breastfeeding (p = 0.001) (Sengkey et al., 2020). This can also cause a mother to give MP-ASI to her baby too early. One of the factors that influences giving MP-ASI too early is knowledge (Wardani et al., 2023). Family support is one of the factors that influences breastfeeding, as in the results of research which states that there is a relationship between family support and exclusive breastfeeding (p = 0.002) (Raj et al., 2020).

This increase in knowledge shows that the delivery of material in this activity can increase participants' knowledge and understanding regarding efforts to fulfill nutrition for 1000 HPK by using local food ingredients as an effort to prevent stunting. Increasing the level of maternal knowledge regarding nutrition is one factor that can indirectly influence the occurrence of stunting. After being given information about the meaning, signs and role of the family in overcoming the problem of stunting, mothers have insight into preventing stunting, its causes and prevention. Health education can increase knowledge. Likewise, in Determinants of Stunting: Logical Framework, one of the factors that influences food intake is understanding food, health and nutrition (Hidayah & Marwan, 2020). Therefore, efforts are needed to provide continuous information, so that it can increase mothers' knowledge about stunting, so that they can help in efforts to prevent stunting incidents (Soviyati et al., 2023).

The factor in increasing participants' understanding regarding stunting can be caused by the method of delivering material that is easy to understand, where the presenter uses educational video media with an attractive appearance and clear material, so that participants are interested in listening. Before being given nutrition education using audiovisual media, 45.7% had less knowledge in the pre-test,which was increased to good knowledge in 69.7%.The knowledge before and after health education interventions through video media showed a significantincreased (p = 0.00) and astrong level of effect with a correlation value (r = 0.690) (Nuraini et al., 2021).

The use of real food ingredients as an educational medium also really helps participants in providing an overview of what local food ingredients are useful in preventing stunting, so that it is hoped that participants can use these ingredients in preparing family food in their daily lives. Therefore, it can be concluded that there has been an increase in the knowledge of nutrition and social marketing education participants regarding Efforts to Fulfill Nutrition at 1000 HPK in Stunting Prevention.

Counseling is part of nutrition education which aims to improve people's knowledge, attitudes and skills in maintaining and improving their own health. Counseling can be carried out, among other things, using the lecture method. Using the lecture method alone can certainly make participants get bored quickly so that question and answer discussions can be carried out in the process of delivering the material. Then, based on the results of the participant satisfaction assessment as assessed by the counseling participants, the average score was 4, which is included in the category of very satisfied with community service services. So that the extension activities carried out have received good feedback, namely very satisfied.

In implementing this activity, there were several obstacles experienced, one of which was the diverse backgrounds of the participants who took part, so their grasp also varied. This socialization program also carries out a monitoring process. Program monitoring is carried out from the start of this activity from the preparation stage, implementation process, to the final stage of the activity. At the end of each activity stage, monitoring is carried out to determine whether the program implementation is in accordance with the program plan that has been made. At the end of the implementation, the team gave a post test to determine the level of understanding of the participants about anemia in children who had been accepted. Based on evaluations and input from participants and facilitators, many benefits have been gained through this program. Cadres and mothers said that this community service activity was very helpful, so they became more aware of anemia in children and made efforts to prevent anemia in children.

D. Conclusion

Participants' knowledge about family warfare in overcoming stunting in this outreach/PKM activity increases. The average knowledge of participants before being given the material was 60.5 and the average result after being given the material was 90.5. This means there is an increase of 30 points. Based on the results of outreach activities, the participants (mothers) fully support efforts to fulfill nutrition at 1000 HPK as an effort to prevent stunting based on local food ingredients. This was proven by the enthusiasm of the participants and community figures who attended and gave serious responses/questions. The activities in the discussion and question and answer sessions, as well as the assessment of the participant satisfaction index, showed that the participants were very satisfied with this activity, because it was considered to be useful in everyday life in efforts to prevent stunting.

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