Community Service Article

Empowerment for Keliling Benteng Ulu Village's PKK Group in Overcoming Stunting to Achieve Nutrition Independent Village

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ABSTRACT

Stunting is a failure to achieve optimal growth measured by height per age (TB/U) categorized into short and very short. South Kalimantan has a prevalence of stunting under five according to SSGI data in 2021, which is 30.0 exceeding the national prevalence and is the 5th largest in Indonesia. This activity aims to increase public knowledge, especially PKK mothers about stunting and how to overcome it, as well as improve the skills of PKK mothers in the Keliling Benteng Ulu Village in processing local food ingredients into nutritious and economical food. The method used in this activity is the empowerment of the PKK group in the Keliling Village of Benteng Ulu in July 2022.This activity has three stages which include preparation, implementation, and evaluation of activities. Most (46%) of the participants are 20-30 years old who are still active and productive and the highest education level of the participants is elementary school at 46%. Most (54%) participants experienced an increase in knowledge. Overall, the participants agreed and strongly agreed that the CERDAS Pocket Book was interesting, useful, and increased the knowledge of the trainees. Most of the participants agreed and strongly agreed that this training activity was interesting and had benefits and the objectives were clear and the participants would try to process seluang pumpkin nuggets at home after the activity was over. The result of this training is that the processing of seluang pumpkin nuggets, empek-empek, pentol can be an alternative in preventing stunting in toddlers.

Keywords: Stunting, PKK, seluang fish, pumpkin

INTRODUCTION

Stunting is a failure to achieve optimal growth measured based on height per age (TB/U) categorized into short and very short. The results of the Indonesian nutritional status study (SSGI) in 2021 showed that the national prevalence of stunting for toddlers was 24.4%. In South Kalimantan, the prevalence of stunting toddlers according to SSGI in 2021 is 30.0 exceeding the national prevalence and is the 5th largest in Indonesia. Based on the results of the study, the prevalence of stunting is the highest in South Kalimantan, namely in Banjar Regency at 40.2%.[1] The results of the data collection from Banjar Regency Health Office in 2018, Keliling Benteng Ulu Village is categorized in the village which is in the red zone for stunting, which is 23.68%.[2] This is a big challenge for Banjar and South Kalimantan Regencies to reduce the stunting prevalence rate to 14% by 2024 as targeted by the government through presidential regulation no. 72 of 2021.

Keliling Benteng Ulu Village is part of the West Martapura District, Banjar Regency. The total population in 2021 is 2,083 people and 699 families. The health facilities in the village around Benteng Ulu are 2 posyandu for toddlers, 1 posbindu and 1 posyandu for the elderly. The distance between the village and the West Martapura District Health Center is about 2 km.

Geographically, Keliling Benteng Ulu Village is a swamp area with Martapura River flow which holds a lot of potential aquatic natural resources, namely various types of freshwater fish like seluang fish, sepat fish, snakehead fish, pepuyu fish and others. The agricultural sector is also the main income of the population besides fisheries. The potential

DOI: 10.20527/jbk.v9i1.14189 2023; 9(1): 80-87

of aquatic and agricultural natural resources can certainly be used as a solution to overcome the problem of stunting. So far, the fish products obtained from the river are mostly sold in fresh and salted form. There has been no effort to process these foodstuffs into processed foods with high economic value.

The management of nutritional problems in the Keliling Benteng Ulu Village must be supported by all parties, including the village PKK group. PKK aims to empower families, to improve welfare towards the realization of a family that has faith and devotion to God Almighty, has a noble and virtuous character, healthy welfare, progress and independence, gender equality and justice as well as legal and environmental awareness. In order to play an active role in helping the realization of national development, the PKK team must appear in front to provide concrete motivation and support to the community. The PKK Mobilization Team acts as a motivator, facilitator, planner, implementer, controller and mobilizer, as well as technical guidance to families and communities, carried out in collaboration with elements of government agency services.

In the research of Rantung et al in 2010, it was concluded that the existence of the PKK is quite important in driving community participation and empowering and trying to meet the needs of the community. [3] Shalfiah's research in 2013 concluded that the counseling provided by the PKK in Bontang city has provided a lot of support for the government to carry out various programs both in the fields of education, health and the economy.[4]

The PKK group of Keliling Benteng Ulu Village consists of housewives who are economically non-productive but have the potential to be economically independent. Based on the existing problems and the potential of the PKK group in Keliling Benteng Ulu Village, it is necessary to cooperate and empower the PKK group in overcoming nutritional problems and making it a pioneer of the nutrition independent village.

The high incidence of stunting in The Keliling Benteng Ulu Village must be a concern for all parties. The results of a preliminary study in November 2021 obtained a 50% stunting incidence in children under five who measured their height.[5] For this reason, the role of the community must be increased in various efforts to overcome these nutritional problems, including the pkk group which is very potential. The PKK group can become an agent of change in the community, namely by providing education to the public about a clean and healthy lifestyle, especially the fulfillment of optimal nutritional intake for overcoming stunting problems.

Based on the results of the Focus Group Discussion (FGD) with pkk administrators and members, several problems are known, namely:

1. There are still many PKK members who do not know about stunting, there are still many pregnant women and toddlers who do not like to eat vegetables and fish
2. There are no PKK activities that are economical in nature and help overcome the problem of stunting
3. PKK members do not know how to market food products that have been processed.

Based on the identification of problems that have been discussed together, several problem-solving solutions can be proposed, like:

1. Increasing the knowledge of PKK members of the Village around Benteng Ulu about stunting and nutrition in general by providing counseling, making and distributing SMART Pocket Books (Prevent Generations from Stunting) which are easy to understand by ordinary people
2. Improve the skills of PKK members to managelocal food ingredients available in Keliling Benteng Ulu Village through training on making highly nutritious food to overcome stunting with local ingredients; and
3. Provide training and assistance to PKK groups in the manufacture of food products and their marketing so that they can be sustainable.

One of the highly nutritious local foodstuffs that are easily available in Keliling Benteng Ulu Village is seluang fish and waluh (yellow pumpkin), so that in the training of processing foodstuffs will be given the skills to process seluang fish and waluh into processed foods that are liked by all ages, not only children.

Seluang fish (Rasbora spp) or more specifically, rasbora argyrotaenia is a freshwater fish that is found in many rivers in South Kalimantan. The nutritional content of seluang fish includes Ca, P, Fe, Zn, linoleic acid, linolenic acid, DHA and 20 amino acids both essential and non-essential. Waluh or yellow pumpkin (Cucurbita moschata durch) is also used as a basic ingredient for nutritious solid food inthis community service progra m. The nutritional content of 100 grams of yellow pumpkin is 51 kcal of energy, 0.50 grams of total fat, 1569 mcg of beta carotene, 2 mg of vitamin C, 1.70 grams of protein, 2.70 g of fiber, 40 mg of calcium, 180 mg of phosphorus, 280 mg of sodium, 220 mg of potassium, 350 mg of copper, 0.70 mg of iron, 1.50 mg of zinc.[6]

DOI: 10.20527/jbk.v9i1.14189 2023; 9(1): 80-87

This community partnership program aims to increase community knowledge, especially PKK mothers about stunting and how to overcome it and improve the skills of PKK mothers in Keliling Benteng Ulu Village in processing local foodstuffs into nutritious and economically valuable foods.

METHOD

This activity was carried out in the form of empowering PKK groups in Keliling Benteng Ulu Village in July 2022, at the meeting house of Keliling Benteng Ulu Village. In an effort to provide knowledge about good nutrition and skills to process simple foodstuffs that are widely available into nutritious solid food and preferred by children in PKK mothers, thereare activities that include:

Preparation of activities

1. Conducting discussions with the PKK group of Keliling Benteng Ulu Village to determine the right schedule and training methods
   a. Conducting meetings and discussions with PKK administrators at the village hall according to the agreed time
   b. Establish a schedule of extension, training and marketing activities
2. Preparation of counseling tools and materials
3. Create SMART Pocket Book leaflets, banners, posters and drafts
4. Preparation of tools and training materials to make processed fish food seluang and waluh
   a. Buying tools and materials for processing seluang and waluh fish.
   b. Trying various recipes for processed fish seluang and waluh that are the most optimal in terms of taste and nutritional value content
   c. Calculating the nutritional value in each serving
5. Preparation of training materials
   Create training materials in the form of PPT and brochures that will be distributed to the trainees

Implementation of activities

During the implementation of activities, strict health protocols are implemented. All participants who attend must wear masks, wash their hands and have their temperature checked. During the activity, masks are not allowed to be carried out. The implementation of the activity was held in several meetings, namely:

1. Printing SMART Pocket Books
2. Providing counseling / education on knowledge about stunting (causes, risiko, how to prevent and overcome stunting) as well as distributing SMART Pocket Books and brochures
3. Installing posters and banners about stunting prevention in posyandu, village halls and puskesmas
4. Providing training on how to process healthy and hygienic fish-based food processing
5. Providing the right marketing tips including packaging methods, promotions and sales methods directly and online
6. Handing over the purchased processing equipment to the PKK group so that it can be used sustainably
7. Assisting in marketing processed products based on seluang fish and waluh

Evaluation of activities

Evaluation of the activities carried out together with the Chairman of the PKK of Keliling Benteng Ulu Village in the form of:

1. Filling inoner questionnaires about training materials filled out by all participants before and after the training
2. Filling out a questionnaire on the implementation of activities by all training participants after the training is completed as evaluation material for the team implementing service activities
3. Furthermore, make a joint commitment to continue these activities even though the community service program has ended.
4. Assistance in making processed fish-based food and marketing will continue to be provided until the PKK group can be independent

RESULT AND DISCUSSION

This activity was carried out on June 18, 2022 and July 22, 2022, which was attended by 37 participants and 6 service teams. Characteristics of participants are presented in Figures 1 and 2.

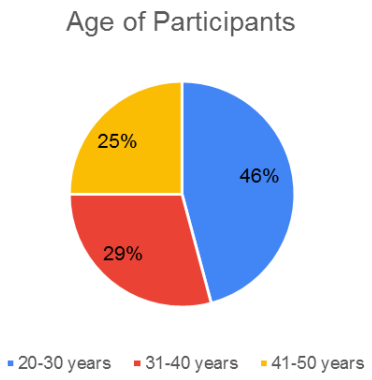

Figure 1. Characteristics Diagram of Participants by Age

DOI: 10.20527/jbk.v9i1.14189 2023; 9(1): 80-87

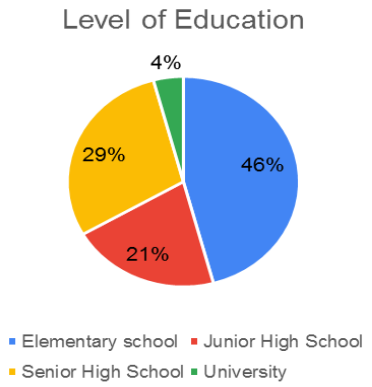

Figure 2. Diagram of The Characteristics of Participants by Education

Based on Figure 1, it can be seen that most (46%) of the participants are 20-30 years old who are still active and productive so that they can become community mobilizers in their respective environments. Based on Figure 2, the highest level of education of the participants is elementary school at 46% and 29% high school. Before and after counseling, pre-tests and post-tests were carried out to determine the level of knowledge of participants about stunting and nutritious food. The results of the pre-test and post-test are presented in Figures 3 and 4.

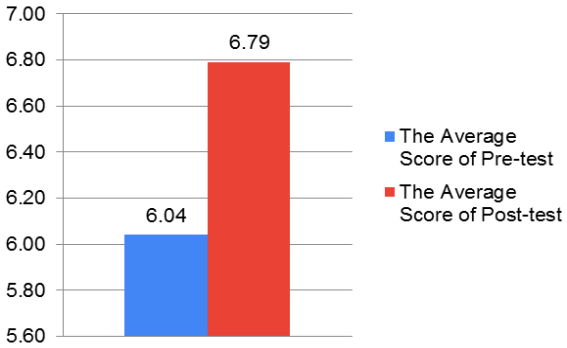

Figure 3. Diagram of The Average Pre-Test And Post-Test Values

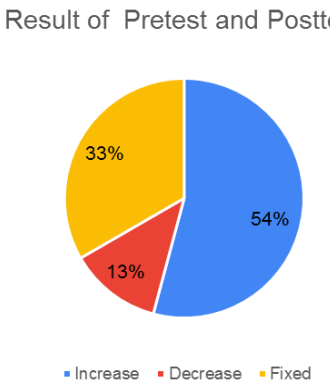

Figure 4. Pre-Test And Post-Test Result Change Chart

Based on Figure 3, the average pre-test value is 60.4 and the post-test is 67.9. When viewed from the pre-test and post-test values, it is not too different. This means that participants already have good knowledge about stunting and nutritious food. Based on Figure 4 most (54%) of the participants experienced an increase in knowledge. Of the 10 true or false statements submitted, there is 1 item of the mostfalse statements, namely about balanced nutrition is avoiding foods that contain protein. Most consider the statement to be true.

At the next meeting, training was carried out on processing seluang fish and waluh into processed produts that were favored by children, adolescents and adults. The processed products that are trained are the manufacture of nugets and empek-empek made from seluang fish and waluh fish. At the time of the presentation, an explanation was also conveyed about the nutritional content and benefits of each of these ingredients. In addition to making processed nuget, another variation of seluang fish and waluh is also carried out, namely empek-empek. Demonstrations of procedure in making nuget and empek-empek are presented by Figures 5, 6, and 7.

Figure 5. Demonstration of Nugets and Empek-Empek from Seluang Fish and Waluh

Figure 6. Processed nugets from seluang fish and waluh

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Figure 7. The Processed Results Of Empek-Empek From Seluang Fish And Waluh

In this activity, participants were also asked to fill out an activity evaluation questionnaire consisting of responses to the CERDAS Pocket Book, the implementation of activities and the processed results of nugets. The results of the participants' responses were presented on Figure 8 and 9.

Based on Figure 8 , it can be seen that overall participants agree and strongly agree that the SMART Pocket Book is interesting, has benefits, and adds to the trainee's knowledge. Most of the participants agreed and strongly agreed that the explanations in the SMART Pocket Book used language that was easy to understand but there were participants who were hesitant about the SMART Pocket Book using language that was easy to understand. Most of the participants disagreed that the contents of the SMART Pocket Book were difficult to understand and some sentences were confusing. This explains that the contents of the SMART Pocket Book are easy to understand and not confusing. Most of the participants agreed and strongly agreed that the SMART Pocket Book helps to improve family nutrition and the images presented are interesting. Most of the participants also agreed and strongly agreed that the healthy menu exemplified in the SMART Pocket Book met their tastes and was affordable and participants wanted to try the menu in the book at home.

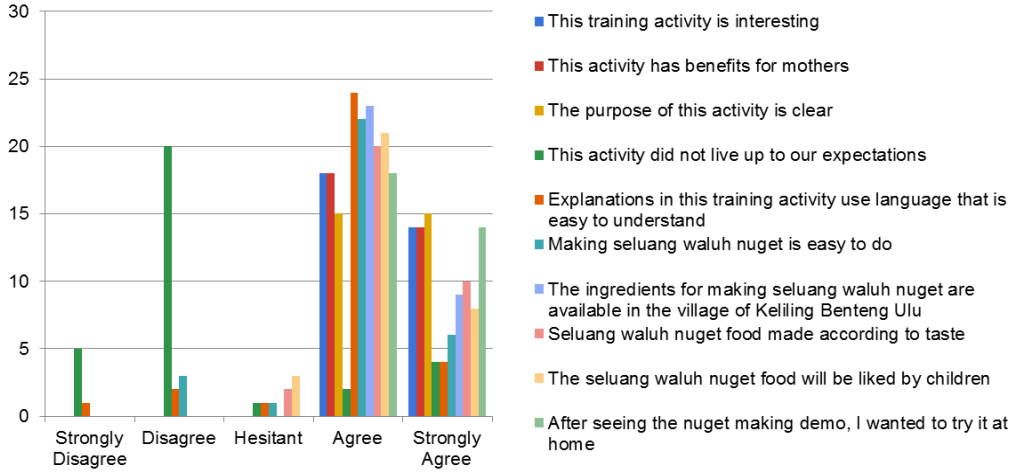

Figure 8. Respondents Responses Werein The SMART Pocket Book

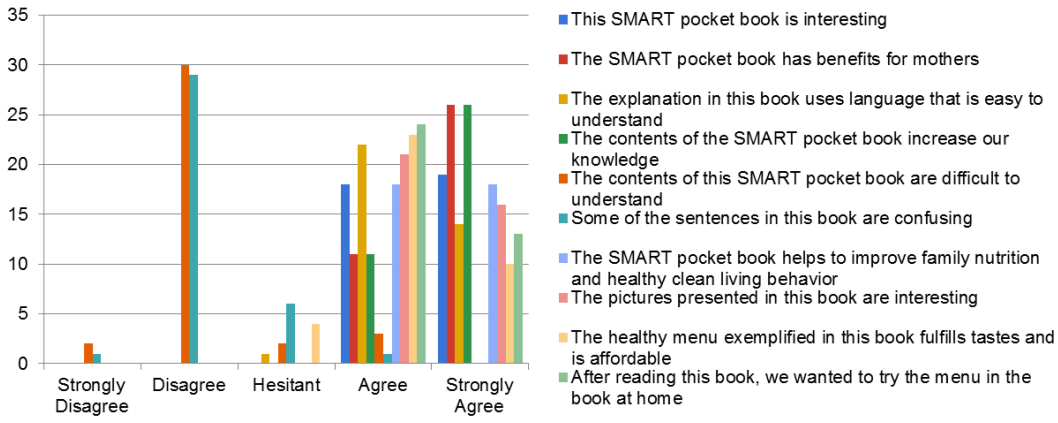

Figure 9. Respondents Responses Totraining Activities

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Based on Figure 9 it can be seen that most of the participants agreed and strongly agreed that this training activity was interesting and had its benefits and objectives were clear. Most of the participants disagreed that this training activity did not meet the expectations of the participants. This explained that this training activity met the expectations of the participants. Most of the participants agreed that the explanations in this activity used language that was easy to understand and that making nugets was easy to do. Most of the participants agreed and strongly agreed that the nuggets from seluang fish and waluh met the tastes and would be liked by the children. Overall, participants agreed and strongly agreed that the materials for making nuggets from seluang fish and waluh were available in the Keliling Benteng Ulu Village and participants would try to process them at home after this activity.

In this service program, the partner group is the PKK group in Keliling Benteng Ulu Village. At the time of socialization, the participants present were mostly aged 20-30 years, namely 46% (Figure 1). The age of 20-30 is included in the productive age and is still active so that it can become a disseminator of information and a driver of society in their respective environments. Most of the participants had an elementary education level of 46% (Figure 2). Education is one of the social aspects that affects a person's mindset, attitudes, behavior and habits. The mindset and behavior of a person with low education will be easily influenced by the prevailing environment or traditions. Therefore, it is necessary to conduct training and assistance to participants. A person with low education if often exposed to the right information can make the individual's knowledge increase.[7]

The average pre-test result of the participants was 60.4 while the post-test was 67.9 (Figure 3). Most of the participants experienced an increase in the post-test value of 54%. Pre-tests and post-tests were carried out to measure participants' knowledge about stunting and nutritious food. Knowledge is the result of knowing and one of the predisposing factors of a person's behavior so that knowledge plays a role in the formation of a person's behavior. [7] A person's knowledge can increase if exposed to the right information, one of which is by participating in counseling. Parisudha's research states thatlecturing has been shown to be effective in helping to increase one's knowledge. The increase in knowledge can occur due to the willingness in participants to follow and know about stunting and nutritious food.[8]

Most of the participants gave very good responses regarding the existence of the SMART Pocket Book (Prevent Generations From Stunting) (Figure 4). The literacy culture in Indonesia is still low, so there is a need for a reading that is simple and informative and easy to understand like a pocket book. A pocket book is a small-sized book that can be carried anywhere and can be read at any time. All participants agree that the SMART Pocket Book is interesting, has benefits, and adds to the trainee's knowledge. Research by Sari et al. states that pocket books are one of the media that can be used to increase knowledge.[9]

Seluang fish (Rasbora spp) or more specifically, rasbora argyrotaenia is a freshwater fish that is found in many rivers in South Kalimantan. This fish is commonly consumed by the wider community because of its savory taste and relatively affordable price for all layers. This fish with a maximum size of 170 mm is often consumed in the form of fried or heated with all parts of the fish except the entrails. Because it is eaten together with all the bones, it is very good to meet the needs of calcium, Fe and other minerals. The nutritional content of seluang fish includes Ca, P, Fe, Zn, linoleic acid, linolenic acid, DHA and 20 amino acids both essential and non-essential. Several studies on the potential of seluang as a source of nutrition include seluang fish can improve brain oxidative stress in malnutrition rats[10], seluang fish improve nutritional status in post-malnutrition mice, namely by increasing growth hormone levels, protein levels, Hb and bone calcium levels[11.12] and seluang fish can improve spatial memory and increase gamma PPAR expression in post-malnutrition rats[13]. In addition, seluang fish can also improve oxidative stress in the brain acytality of pesticide neurotoxicity.[14] Another study on processed seluang fish concluded that the protein content of processed cookies with the substitution of seluang fish meal had twice the protein content of 12.25% compared to cookies without substitution of seluang fish meal. The highest calcium content is also found in cookies with the substitution of seluang fishmeal.[15]

In addition to seluang fish, waluh or yellow pumpkin is also used as a basic ingredient for nutritious solid food in this activity. Waluh (Cucurbita moschata durch) is widely grown in Banjar Regency and is very easy to find in markets in the West Martapura area. The nutritional content of 100 grams of yellow pumpkin is 51 kcal of energy, 0.50 grams of total fat, 1569 mcg of beta carotene, 2 mg of vitamin C, 1.70 grams of protein, 2.70 g of fiber, 40 mg of calcium, 180 mg of phosphorus, 280 mg of sodium, 220 mg of potassium, 350 mg of copper, 0.70 mg of iron, 1.50 mg of zinc.[6]

Research on the nutrients of yellow pumpkin has been widely carried out. One of them is the retention of carotene in various processed products of yellow pumpkin which concluded that the retention of carotene in cracker products was 79.44%, biscuits were 71.27% and noodles were 64.46%. This means that even though it has been processed into various products, the content of beta caroten in waluh is still above 50%[16]. In addition, another study concluded that the content of pro-vitamin A beta-carotene in waluh is an essential factor for the development of the limpoid system and the development of the mucosal surface of the gastrointestinal, respiratory and genitourinary tracts and plays a role in the formation of tissue cells damaged due to malnutrition, so that it can have an effect in improving the nutritional status of babies.[17]

Processed nugets in addition can improve family nutrition and prevent stunting in the hopepkan also dapat become a household business. The community is expected to be able in making local ingredients besides seluang fish and waluh into become processed products with high nutritional value so that they can improve the health and economy of the family.

CONCLUSION

PKK group empowerment activities in the Keliling Benteng Ulu Village through providing education and training on processing seluang fish and waluh into various kinds of food become alternatives in toodlers's stunting prevention and also become a household business. Thus, this activity can improve the community's economy and become an nutrition independent village.

ACKNOWLEDGMENT

Thank you for the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia for providing funds for this community development activity. Thank you are also conveyed to the village head and Keliling Benteng Ulu Village's PKK group.

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