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# Education on the Importance of Breast Milk and Complementary Foods for Breast Milk (MPASI) as an Effort to Prevent Stunting

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## ABSTRACT

Stunting is a form of growth failure (growth faltering) due to the accumulation of nutritional deficiencies that last for a long time, from pregnancy to 24 months. Optimal nutritional intake for newborns by providing exclusive breast milk as the main food until the age of 6 months and then continuing until the age of 2 years, accompanied by appropriate and high-quality complementary foods, will prevent stunting in toddlers. One important effort to prevent stunting is empowering the community, especially parents, to pay attention to breast milk intake and complementary foods for their babies. By providing knowledge to the public about the importance of correct breastfeeding and MPASI, it is hoped that the public can change their behaviour to prioritize exclusive breastfeeding and correct MPASI. This community service method uses an educational approach through outreach with a total of 139 participants who live in five villages in Jatigede District, Sumedang Regency, West Java. Socialization involving experts showed increased participants' knowledge as measured using pre-test and post-test instruments. The percentage of participants who experienced an increase in knowledge was 139; participants the results obtained were 118 participants (85%) experienced an increase in knowledge about breast milk and complementary foods, and 19 people (14%) had the same knowledge before and after socialization, while 2 people (1%) gained The score decreased during the post-test due to several factors, including some participants who did not have time to complete the post-test questionnaire due to having to do other work.

## 1. INTRODUCTION

### 1.1. Background

The problem of stunting is one of the nutritional problems that is the focus globally, including in Indonesia. The problem of stunting is one of the nutritional problems faced in the world, especially in poor and developing countries. Stunting is a problem because it is associated with an increased risk of morbidity and death, suboptimal brain development resulting in delayed motor development, and stunted mental growth. Stunting is a form of growth failure (growth faltering) due to the accumulation of nutritional deficiencies that last for a long time, from pregnancy to 24 months. This situation is exacerbated by the lack of adequate catch-up growth [1]. Factors causing children's stunting are grouped into direct and indirect causes. Some of the direct causal factors that can have an impact on stunting include the

practice of giving colostrum and exclusive breastfeeding, children's consumption patterns, and infectious diseases suffered by children. Meanwhile, access, food availability, sanitation, and environmental health are indirect causes of stunting in children [2].

Stunting itself is one of the Sustainable Development Goals (SDGs) targets included in the 2nd sustainable development goal: eliminating hunger and all forms of malnutrition by 2030 and achieving food security. The government has launched an integrated stunting prevention intervention program involving cross-ministries and institutions [3,4]. An important process in fulfilling toddler nutrition for growth and development is the provision of breast milk (ASI) and complementary foods for breast milk (MPASI). Some of the guiding principles recommended by WHO in providing food for children in the first 2 years of life include the implementation of the practice of giving exclusive breast milk until the age of 6 months, the principle of



applying MPASI at the age of 6 months and continuing breast milk and MPASI according to age until the age of 24 months; principles of implementing responsive feeding with psychosocial principles, principles of implementing sanitation, feeding, and principles of feeding when children are sick. When breast milk is deemed unable to meet a child's nutritional needs, complementary breast milk (MPASI) must be given to meet the child's nutritional needs. MPASI is also necessary to support psychomotor, brain and cognitive development in children aged 0-24 months, which is increasing [5,6,7].

Jatigede District is a sub-district in Sumedang Regency, West Java Province. According to the Ministry of Health's Indonesian Nutrition Status Survey (SGI), the prevalence of stunted toddlers in West Java reached 20.2% in 2022. Sumedang Regency was recorded as the region with the highest prevalence of stunted toddlers in West Java, reaching 27.6% in the 2022 SSGI. Figures Stunting of children under five in this district increased drastically from the previous year by 22%. For the prevalence of Jatigede District, Sumedang Regency per village, it is Karedok Village 24.24%, Cintajaya Village 23.46%, Cisampih Village 20.00%, Cijeungjing Village 17.81%, Kadu Village 16.98%, Mekarasih Village 15.83%, Ciranggem Village 15.79%, Cipicung Village 14.81%. This prevalence rate is still relatively high because the target for the prevalence of stunting rates in 2024 is 14% [9].

Examining the Focus of the Nutrition Improvement Movement policy aimed at the first 1000 days of life group [10], it is necessary to pay attention and emphasize the importance of forms of care and provision of nutrition to babies. The importance of breastfeeding mothers' knowledge about the benefits of breast milk can influence exclusive breastfeeding [11]. The mother's level of knowledge, attitude, and form of care can influence the provision of complementary foods to babies under 6 months [12]. The practice of giving MPASI affects the growth of babies and children, and there are differences in variations in MPASI ingredients and the average intake of energy, protein, iron, and zinc in the practice of giving MPASI between stunted and non-stunting children aged 6-24 months [13]. Triana and Maita (2019) emphasize the importance of counselling about nutritional needs, food processing training, and regular weighing and measuring of the baby's height. This opinion is reinforced by the results of research, which states that education about MPASI has been statistically proven to increase mothers' knowledge about MPASI [14].

One way that can be done to prevent stunting incidents is by increasing community knowledge, especially mothers, regarding the dangers of stunting through community empowerment activities. Community empowerment is an important element and can even be considered the spearhead of health promotion. Empowerment will be more successful if implemented through partnerships and appropriate methods and techniques (Ministry of Health of the Republic of Indonesia, 2011a). Health education is one method that can be implemented as a preventive measure to remind people of the importance of maintaining health. Thanks to methods of increasing awareness, maintaining public health can start from the awareness of each individual, family, group and society as a whole. Direct educational activities for the community, especially people who are still far from the reach of the media and health facilities, will be able to help the community obtain health information; therefore, with this community service activity, we will be able to support the right of every individual to control information [8].

The results of research and community service activities that have been carried out show the importance of knowledge for mothers with babies about providing breast milk, MPASI, and nutritious food. With sufficient knowledge, mothers will provide or practice healthy parenting patterns for their children, which is expected to prevent the next generation from stunting. Based on this phenomenon, the service team collaborates with students to carry out education through socializing on the importance of giving breast milk and MPASI in Jatigede District, Sumedang Regency, West Java

### 1.2. Activity Objectives

This activity aims to educate people in Jatigede District, Sumedang, about the importance of breastfeeding and MPASI.

### 1.3. Benefits of Activities

- a. Increase knowledge about the importance of breastfeeding and MPASI.
- b. Increase knowledge about the benefits obtained by providing breast milk and MPASI.

## 2. MATERIALS AND METHODS

The method for implementing a community service program (PkM) uses a socialization and counselling approach to the community in five villages in Jatigede District, Sumedang Regency, West Java. Socialization by presenting expert speakers who are also lecturers at the Faculty of Medicine and also companions consisting of students from the Faculty of Medicine, UKI, from November to December 2023

Stages of implementing Community Service (PkM) include:

### Stage 1. Preparation:

1. Coordinate with the regional government of Jatigede District, Sumedang Regency, West Java
2. The approval of the relevant party in this case is the regional government of Jatigede District, Sumedang Regency, West Java
3. Design a schedule and place for implementing PkM
4. The team organizes groups of activity participants
5. Preparation of tools and materials
6. Conduct evaluations on each implementation of activities
7. Prepare activity reports

### Stage 2: Core Activities (Education through Socialization)

#### Extension activities:

1. Pretest  
To determine the level of participants' knowledge, before being given counselling, participants were given a pre-test with several questions using a Google form. The questions given consisted of 10 questions about MP-ASI.
2. The next stage is providing education through counselling as the beginning of the community empowerment process. This education aims to increase public knowledge and understanding regarding the appropriate management of giving MP-ASI according to the child's age based on WHO standards.

3. Discussion and questions and answers regarding the material that has been provided.

At this stage, participants asked several questions regarding MPASI material.

4. Evaluation.

After the counselling is complete, the next stage is for participants to be given a post-test with the same questions as the pre-test. The evaluation results will be a reference in assessing the success of activities in implementing efforts to increase public knowledge regarding stunting and MPASI.

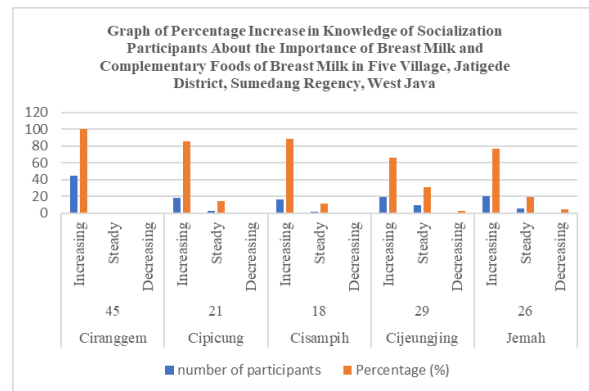
### 3. RESULT AND DISCUSSION

Community Service Activities at the Faculty of Medicine in seven villages in Jatigede District, namely Ciranggem Village, Cipicung Village, Cisampih Village, Cijeungjing Village, and Jemah Village, were carried out in parallel in each village. The PKM team is divided into five groups, each tasked with carrying out outreach in a designated village. Each team in each village first coordinates with village officials, specifically regarding the use of village facilities and infrastructure as a gathering place for residents. The team also obtained permission from village officials to visit people's homes (home visits) and even to reach pregnant and breastfeeding mothers. Evaluation of the implementation of socialization obtained satisfactory results; during the implementation of socialization of breast milk and MPASI in five villages in Jatigede District, Sumedang Regency, the local government and residents welcomed it enthusiastically. In general, there was an increase in participants' knowledge about the importance of breast milk and MPASI based on the pre-test and post-test results. The distribution of the percentage increase in participants' knowledge about the importance of breast milk and MPASI covers five villages based on the pre-test and post-test results, as presented in Table 1.

**Table 1.** Percentage of Increase in Participants' Knowledge about the Importance of Breast Milk and MPASI

Village Name/Total Participants	Knowledge Status (pre-test to post-test)	Number of participants	Percentage (%)
Ciranggem (45)	Increasing	45	100
	Steady	0	0
	Decreasing	0	0
Cipicung (21)	Increasing	18	86
	Steady	3	14
	Decreasing	0	0
Cisampih (18)	Increasing	16	89
	Steady	2	11
	Decreasing	0	0
Cijeungjing (29)	Increasing	19	66
	Steady	9	31
	Decreasing	1	3
Jemah (26)	Increasing	20	77
	Steady	5	19
	Decreasing	1	4

In the form of a bar chart, the percentage of participants who experienced an increase in knowledge from the pre-test and post-test scores can be seen more clearly in Figure 1.



**Fig 1.** Graph of Percentage Increase in Knowledge of Socialization Participants about the Importance of Breast Milk and MPASI

From the data in Table 1 above, it can be seen that the percentage of participants with a higher increase in knowledge was in Ciranggem village (100%), followed by Cisampih (89%) and Cipicung (86%). The largest number of participants who participated in the counselling were residents of Ciranggem village, namely 45 participants. Overall, the results obtained based on processed pre-test and post-test data show an increase in participants' knowledge about the importance of breast milk and MPASI after participating in the socialization of the PKM team with a total of 139 participants. Those who experienced an increase in knowledge were 118 people (85%) and 19 people (14%) in the same condition of knowledge before and after socialization, while 2 people (1%) got a decreased score during the post-test due to several factors, including that there were participants who did not have time to fill out the post-test questionnaire to completion because he had to do other work. Through exposure to resource persons, the participants gained increased knowledge about breast milk and MPASI theoretically. They were also trained to make correct and high-quality MPASI. The PkM team demonstrated making several MPASI options, such as the Mango Dessert Box, as documented in Figure 2.



**Fig 2.** The PkM Team carried out a Demo on Making One Example of MPASI

Based on the results of interviews with the PkM team, several mothers decided not to give exclusive breast milk to their babies because breast milk did not come out from the start of the baby's birth and then continued with formula milk. Likewise, MP-ASI is given early, namely from the age of 4 months, to avoid babies crying or fussing frequently. Inaccuracy in giving breast milk or MPASI too early can increase the risk of stunting.

MPASI must be given at the right time of administration, with the right nutritional content, safe in presentation and storage, and in the right way of administration. MPASI begins to be given to babies when breast milk can no longer meet energy and nutrient needs. When a baby is 6 months old, general nutritional needs are no longer met by breast milk alone, especially energy, protein, and several micronutrients, especially iron (Fe), zinc (Zn), and vitamin A. This gap must be filled by providing appropriate MPASI, adequate, safe, and the right way of administration. Giving MPASI that is not timely, given too early (less than 4 months), or too late (after 7 months of age) can result in detrimental things such as the risk of diarrhoea, allergic sensitization, the potential for failure to thrive, and iron deficiency [14]. The nutritional content in MPASI must consist of energy, protein, fat, carbohydrates, zinc, and iron. If the content in MPASI is not fulfilled, it will cause stunting conditions; this can be seen in research results showing that 70.8% of stunted toddlers do not get complete nutrition in their MP-ASI [15].

The role of educators, health and nursing staff, in this case, is as Educators and Counselors for the community; it is hoped that they can provide health education regarding appropriate MPASI so that the community can provide the right nutritional needs to their children so that they can avoid chronic nutritional problems which can result in incidents stunting. Providing public health education can increase public awareness, especially for parents of toddlers, to be able to meet their children's nutritional needs by providing appropriate MPASI.

#### 4. CONCLUSION

The implementation of Community Service (PKM) in increasing public understanding of the importance of appropriate MPASI to prevent stunting was successfully carried out with the enthusiasm of participants, who were enthusiastic about discussing the material directly with resource persons who were experts in their fields. Success in community service was also demonstrated by an increase in participants' understanding scores, where the percentage of participants who experienced increased knowledge was obtained from a total of 139 participants. Those who experienced an increase in knowledge were 118 people (85%) and 19 people (14%) in the same condition of knowledge before and after socialization, while 2 people (1%) got a decreased score during the post-test due to several factors, including that there were participants who did not have time to fill out the post-test questionnaire to completion because he had to do other work. Apart from the results of the pre-and post-test scores, the suitability of the material presented to the community's current problems is also shown, namely the high incidence of stunting. Parental knowledge is crucial in creating the right MPASI to meet their child's nutritional needs and avoid stunting.

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