

TEACHING COMPLEMENTARY FEEDING AND SCREENING OF TODDLER GROWTH AT OLAK KEMANG HEALTH CENTER

Huntari Harahap, Wahyu Indah Aurora, Hanina, Tia Wida, Esa Indah Ayudia

Faculty of Medicine and Health Sciences, University of Jambi, Jambi, Indonesia

Corresponding author email: huntari_harahap@unja.ac.id

ABSTRACT

Based on a micronutrient survey in 12 provinces in Indonesia, it is known that children aged 6 to 11 months consume lower nutrients than other age groups. Toddlers who do not receive complementary feeding have a 7.4-fold risk of causing stunting in children. This community service aims to increase mothers' knowledge in making the correct complementary feeding, how to give it, when to provide it, and screening the nutritional status of toddlers. Community service activities were conducted at the Olak Kemang Health Center, attended by 15 mothers and children. Based on community service, it was found that most of them were toddlers aged 30 to 36 months (60%), had the highest anthropometric status of good nutrition (standard), namely 73.33%, and the assessment of child development using the Pre-Screening Questionnaire for Development found that 93.3% of toddlers had normal development. Routine activities are needed to increase the knowledge of mothers of toddlers regarding complementary feeding and screening the growth and development of toddlers to prevent stunting.

Keywords: Complementary feeding, Mother, Growth, Toddler.

ABSTRAK

Berdasarkan survei mikronutrien pada 12 provinsi di Indonesia diketahui bahwa anak kelompok usia 6 hingga 11 bulan mengkonsumsi zat gizi lebih rendah dibandingkan kelompok usia lainnya. Balita yang tidak mendapatkan MPASI memiliki risiko 7,4 kali lipat menyebabkan stunting pada anak. Tujuan pengabdian kepada masyarakat ini untuk meningkatkan pengetahuan ibu dalam pembuatan MPASI yang benar, cara pemberian, waktu pemberian MPASI serta skrining status gizi pada balita. Kegiatan pengabdian kepada masyarakat dilakukan di Puskesmas Olak Kemang yang diikuti oleh 15 orang ibu dan anak. Berdasarkan pengabdian masyarakat didapatkan sebagian besar diikuti oleh balita berusia 30 hingga 36 bulan (60%), memiliki status antropometri terbanyak gizi baik (normal) yakni 73,33 %, serta penilaian perkembangan anak menggunakan Kuesioner Pra Skrining Perkembangan didapatkan 93,3% balita memiliki perkembangan normal. Dibutuhkan kegiatan rutin peningkatan pengetahuan ibu balita mengenai MPASI dan skrining tumbuh kembang pada balita untuk mencegah stunting.

Kata kunci: Balita, Ibu, Makanan_Pendamping, Tumbuh

INTRODUCTION

WHO recommends achieving optimal growth through the gold standard, namely by providing exclusive breastfeeding within 30 minutes after birth and providing complementary foods (MP-ASI) after the age of 6 months to 24 months.¹ Based on UNICEF data, it is known that from 2014 to 2020, around 44% of children were given exclusive breastfeeding. However, this is still below the world target of 50%.² Parents must know their child's nutritional status.³ The leading cause of malnutrition and infection in children is usually due to parents' ignorance about how to provide food for babies and children and habits that can be detrimental to health.⁴ Malnutrition in toddlers can interfere with the growth of children; children have suboptimal growth and development, decreased intelligence, decreased learning ability, and are susceptible to disease, especially infections.⁵

Parents can improve children's survival by providing proper breastfeeding or MPASI. Exclusive breastfeeding is given in the first six months and then continued with MPASI. Exclusive breastfeeding that is given for too long can delay the provision of MPASI. This results in inadequate nutritional intake for children, which can interfere with their growth and development.⁶ MPASI must also meet the requirements: timely preparation, complete and balanced nutrition, safety, and being given correctly. Suppose the nutritional composition of MPASI is not balanced. In that case, it will result in protein deficiency disorders during the first thousand days of life, and if it lasts for a long time, it will undoubtedly result in growth disorders in children. This is one of the causes of stunting in children.⁷ Based on a micronutrient survey in 12 provinces in Indonesia, it is known that children in the 6 to 11-month age group consume lower nutrients than other age groups. Toddlers who do not receive MPASI have a 7.4 times greater risk of causing stunting in children.⁸



METHODS

Community service activities are conducted through training in making MPASI and screening the growth and development of toddlers who visit the KIA polyclinic of the Olak Kemang Health Center. The number of participants in this activity was 15 children of toddlers who visited the Mother and Child Care Clinic of the Olak Kemang Health Center. The implementation method in this community service activity was through training on making MPASI correctly, according to the child's age, and the correct and balanced nutritional composition. During the training, leaflets were also given on making MPASI correctly according to age and the composition of nutrients in MPASI. Screening toddler growth and development was done by measuring toddler growth and development by implementing the Pre-Screening Development Questionnaire (KPSP).

RESULTS AND DISCUSSION

This community service activity occurred on Saturday, July 13, 2024. The location of the activity was the Olak Kemang Health Center. The method of community service activities was training on how to make MPASI guided by a nutritionist so that it could help improve mothers' abilities regarding how to make MPASI and could provide education and direct management if there were obstacles in creating and giving MPASI to toddlers, measuring toddler growth and development by implementing the Pre-Screening Questionnaire for Development (KPSP). The training on making complementary foods aims to improve mothers' capacity to prepare food that meets the nutritional needs of children aged 6-59 months. Appropriate complementary foods consider not only nutritional value but also texture, frequency of administration, and food safety. At the age of 6-8 months, babies are introduced to soft or semi-liquid textured MP-ASI such as smooth porridge and iron-fortified cereals, as well as pureed vegetables and fruits to meet important nutritional needs such as iron, zinc, vitamin A, and protein. At the age of 9-11 months, the texture of food becomes coarser and more varied, including steamed rice and small pieces of soft food to support chewing ability energy and macronutrient fulfillment. At the age of 12-24 months, children begin to consume family foods with texture adjustments that are easy to chew and digest, including a variety of side dishes and healthy snacks, while maintaining nutritional quality so as not to replace the main food.⁹ Through nutritionists' assistance, mothers gain theoretical knowledge and direct practice that facilitates understanding and application at home.

This KPSP is a valid tool (instrument) for early detection of the development of children aged 0 to 6. It has been widely used in Indonesia as part of the child growth and development monitoring program. With this KPSP, it can be seen whether the child's development is normal or not.¹⁰



Figure 1. Counseling on How to Make MPASI

Age Category

The following are known based on the child's age undergoing growth and development screening.

Table 1. Age Category

No	Age Group	Amount	Percentage
1.	7-12 month	3 person	20%
2.	13-24 month	3 person	20%
3.	25-36 month	7 person	46,67%
4.	37-48 month	2 person	13,33%
Total		15 person	100 %

The results show that 46.67% of the participants were aged 25 to 36 months, 20% were aged 7 to 12 months, 20% were aged 13 to 24 months, and 13.33% were aged 37 to 48 months. This composition illustrates that activities reach children during the golden age of development when stimulation and nutrition have a long-term impact on intelligence and growth.¹¹ The age of 25–36 months is essential because children begin to show increased fine and gross motor skills and explore a broader social environment. Children need adequate



stimulation and balanced nutritional intake at this stage to optimize their brain development.¹² Activities such as training in making complementary foods and examining growth and development using KPSP are very relevant to support the developmental needs of children at this age. According to Unicef (2021), early nutritional and stimulation interventions during the first 1000 days of life (from pregnancy to age two) significantly impact intelligence and productivity and prevent stunting and developmental disorders later in life.¹¹ Therefore, the presence of the 7–24-month age group as participants is also significant because they are in a sensitive time window for nutritional intake and stimulation interventions. In addition, older age ranges, such as 37–48 months, also still need attention, especially in preparation for early childhood education (PAUD). At this age, parents' role in recognizing potential developmental delays through screening instruments such as KPSP becomes crucial for immediate referral if needed.¹³ Thus, the involvement of children at various golden age ranges in this activity is a strength because it provides broad opportunities for early detection, nutrition education, and integrated child development monitoring. The interventions carried out will have a long-term impact on children's current health and the quality of human resources in the future.¹⁴

Nutritional Status of Children

Based on the nutritional status of children who participated as community service participants, it is known that namely as follows;

Table 2. Nutritional Status

No	Nutritional Status	Amount (Person)	Percentage
1.	Underweight	2	13%
2.	Normal	11	73%
3.	Overweight	2	13%
TOTAL		15	100%

Table 2 shows the nutritional status of children who participated in community service activities: 73% have normal nutritional status, 13% have thin dietary status, and 13% have obese dietary status. This shows that most children have a relatively balanced nutritional intake according to their growth and development needs. However, the proportion of children with abnormal dietary status, both thin and fat, remains a serious concern in the context of public health.

Children with normal nutritional status reflect a condition in which the needs for energy and macro and micronutrients are met proportionally with growth. According to WHO (2021), normal nutritional status is an essential indicator in assessing the success of dietary interventions and healthy eating behaviors in families.¹ Optimal nutritional adequacy is critical, especially during the golden age, because it is closely related to developing the child's brain, motor skills, and immunity.¹¹ Underweight children indicate acute nutritional problems due to insufficient food intake or repeated infections. This condition can lead to wasting, which is rapid weight loss in a short time. This is dangerous because it increases the risk of death, impaired brain development, and reduced immunity.¹⁵ Lack of parental knowledge about fulfilling balanced nutrition, economic limitations, and access to nutritious food are often the leading causes.¹⁶ On the other hand, children who experience excess nutrition (obesity) also cannot be ignored.

According to Riskesdas (2018), the prevalence of obese children increases along with changes in diets that are high in calories but low in nutrients, as well as minimal physical activity.¹⁷ Obese children are at risk of experiencing metabolic disorders such as type 2 diabetes, hypertension, and psychosocial disorders from an early age.¹⁸ This condition shows the importance of nutrition education in malnourished groups and people who tend to be overnourished. With a combination of nutritional status data and appropriate education, dietary interventions can overcome malnutrition and prevent obesity early on. A comprehensive approach through strengthening the role of families, posyandu cadres, and health workers is the key to realizing a healthy and quality generation.¹⁹

Child Growth & Development Measurement

Based on the measurement of child growth and development with the application of the Pre-Screening Development Questionnaire (KPSP), it is known that the following;

Table 3. Results of the Pre-Developmental Examination Screening Questionnaire (KPSP) Examination

No	KPSP	Amount	Percentage
1.	According to development stage	14 person	93,33%
2.	Not appropriate for developmental stage	1 person	6,67%
TOTAL		15 person	100%



Table 3 shows that almost all community service participants who underwent growth screening using KPSP were in the developmental stage. Namely, 93.33% and 6.67% were out of stage. These results indicate that most children have received good stimulation and are in an environment that supports optimal development. However, a small number of children still need special attention. KPSP is an early screening tool prepared by the Directorate of Child Health Development, Ministry of Health of the Republic of Indonesia, to identify possible developmental disorders in children aged 0–6. This instrument consists of questions based on the stages of child development, including gross motor skills, fine motor skills, language, and personal social skills.¹⁰ Its routine implementation is essential to prevent early detection of delays.²⁰ The high percentage of children with development according to stage shows that parenting patterns, environmental stimulation, and nutritional status of children are primarily adequate. Early stimulation from the family, especially the mother as the primary caregiver, plays a vital role in accelerating the child's learning process, exploration, and social interaction.¹¹ Research by Yuliani (2021) also states that children who often receive verbal and physical stimulation from their parents tend to show optimal development.²¹ Although the number is small, children who do not match the developmental stage need further attention. This can be caused by factors such as lack of stimulation, neurological disorders, chronic nutritional problems, or environmental factors such as lack of social interaction.¹⁸

According to Sutanto & Widuri (2020), early detection through KPSP allows for rapid referral to professionals for further treatment through therapy or special stimulation interventions. It is essential to follow up on KPSP results with education for parents on how to provide appropriate stimulation according to the child's age.²² Involving parents in training and direct demonstrations can increase the effectiveness of growth and development programs.²³ As the spearhead of primary services, health centers must strengthen the Posyandu program to monitor child development regularly and comprehensively.²⁴ Community service activities integrating nutrition education and development screening like this are very beneficial. In addition to increasing mothers' awareness of the importance of monitoring growth and development, this activity also builds collaboration between health workers, academics, and local communities.²⁵ Screening results can be used as a database for follow-up through home visits, parenting training, or early therapy.

CONCLUSIONS

The community service activities at the Olak Kemang Health Center went smoothly. The implementation of this service is expected to help improve mothers' abilities regarding how to make MPASI. It can provide education and direct management if there are obstacles in creating and giving MPASI to toddlers. This activity was attended by most children aged 25 to 36 months, namely 46.67%, with the most nutritional status being normal. Namely, 73% of the growth and development screenings were by development, 93%. In conclusion, timely identification and appropriate intervention for children not meeting developmental milestones are crucial. Through proper referral, parental education, and ongoing follow-up, the community service initiative supports optimal growth and development in toddlers.

REFERENCES

1. World Health Organization. Continued breastfeeding for healthy growth and development of children [Internet]. 2019 Jun 17 [cited 2025 Jun 22]. Available from: who.int
2. UNICEF. United Nations Children's Fund, Division of data, analysis, planning, and monitoring. UNICEF Global Databases on Iodized salt, New York; 2019. Available from: data.unicef.org
3. Wahyuningrum T, Purwati H. Parent Involvement in Increasing Children's Application. *Journal of Scientific Research, Education, and Technology (JSRET)*. 2022 Dec 6;1(2):92-5. Available from: jsret.knpub.com
4. Hizni A, Muis AA, Kunaepah U, Sulistiyono P. Feeding Practices and Frequency of Food Refusal in Children. *Pakistan Journal Of Nutrition*. 2020;19(1):25-31. Available from: repo.poltekkestasikmalaya.ac.id
5. Ministry of Health of the Republic of Indonesia. Pocket Book of Results of the Indonesian Nutritional Status Study (SSGI) 2022. Ministry of Health of the Republic of Indonesia; 2022. p. 1–14. Available from: litbang.kemkes.go.id
6. Nurkomala S, Nuryanto N, Panunggal B. Practice of Providing Complementary Food (Complementary Food for Breast Milk) to Stunting and Non-Stunting Children Aged 6-24 Months [dissertation]. Diponegoro University; [date unknown]. Available from: eprints.undip.ac.id
7. Andriani R. Effectiveness of education by applying complementary foods on children's height. *Masker Medika*. 2022 Dec 8;10(2):650-8. Available from: jmm.ikestmp.ac.id
8. Sari AA, Kumorojati R. The Relationship Between Provision of Complementary Food Intake (MPASI) and Growth of Infants or Children Aged 6-24 Months. *Journal of Traditional Midwifery and Health*. 2019 Oct 31;4(2):93-8. Available from: jurnalbidankestrad.com
9. Suryanto T, et al. Empowerment of Mothers in Making Local MPASI for Stunting Prevention. *Journal of Nutrition and Food*. 2020;15(2):127-35.
10. Ministry of Health of the Republic of Indonesia. Guidelines for Implementing Stimulation of Early Detection and Intervention of Child Growth and Development at the Basic Service Level. Jakarta: Directorate of Family Health; 2019.
11. UNICEF. Early Childhood Development: A Foundation for Sustainable Development. New York: United Nations Children's Fund; 2021.
12. Soetjningsih. *Child Growth and Development*. Jakarta: EGC; 2016.
13. World Health Organization (WHO). *Improving Early Childhood Development: WHO Guideline*. Geneva: WHO; 2020.



14. Damayanti R. The Importance of Nutrition in the First 1000 Days of a Child's Life. *Indonesian Journal of Nutrition and Health*. 2019;11(2):45-52.
15. Indonesian Ministry of Health. *The Situation of Wasting Toddlers in Indonesia*. Jakarta: Data and Information Center; 2020.
16. Pramitasari H. Risk Factors for Malnutrition in Toddlers. *Journal of Nutrition and Food*. 2020;15(2):107-13.
17. Riskesdas. *National Report on Basic Health Research*. Health Research and Development Agency, Ministry of Health of Indonesia; 2018.
18. Suharni N. Childhood Obesity and Its Prevention. *Journal of Health Sciences*. 2021;9(1):45-50.
19. Lestari NW, Putri DR, Wulandari A. The Role of MPASI Education on Toddler Nutritional Status. *Andalas Public Health Journal*. 2022;16(1):33-40.
20. Ramadani L. Early Detection of Early Childhood Growth and Development Using KPSP at Posyandu. *Journal of Nutrition and Health*. 2020;12(1):22-8.
21. Yuliani S. The Relationship between Stimulation and the Development of Children Aged 1-5 Years. *Journal of Early Childhood Education*. 2021;9(2):130-6.
22. Sutanto A, Widuri R. The Role of KPSP in Knowing the Development Status of Early Childhood. *Journal of Public Health*. 2020;15(3):80-6.
23. Aisah S, Nuraini L, Fatmawati D. Increasing the Role of Mothers in Stimulating Child Development Through Parenting Education. *Journal of Community Service*. 2022;4(1):55-61.
24. BKKBN. *Family Role Strengthening Module in Preventing Stunting*. Jakarta: BKKBN; 2021.
25. Lestari NW, Damayanti A. The Role of Community Service in Stimulating Child Growth and Development in Rural Areas. *Udayana Community Service Journal*. 2021;20(2):112-20.

