Journal Health Care and Dietetics
Volume 1 No. 1 (2025): 007- 010
E-ISSN: 0000- 000 (On line)
DOI :
Published by Media Publikasi Cendekia Indonesia
Journal homepage: https://journalmpci.com/index.php/jhcd

Case Study of Nutrition Education for Stunting Children in the UPT Kotu Health Center Area, Enrekang Regency

Eti Maryanti [1] *, Hijrah Azikin [2] , Aswita Amir [2] , Hendrayati [2]

Correspondence email: etimaryanti78@gmail.com
[1] *Professional Education Dietien , Health Polytechnic of the Ministry of Health, Makassar , South Sulawesi , Indonesia*
[2.] *Department of Nutrition, Health Polytechnic of the Ministry of Health, Makassar , South Sulawesi , Indonesia*

ABSTRACT

Indonesia is a country that is still face stunting problem . As many as 148.1 million (22.3%) in the world and in Indonesia, the results of the 2024 SSGI were 19.8% who suffered from stunting . Research This aim For evaluate care nutrition the standards given to stunted toddlers at the Community Health Center UPT City Regency Enrekang through studies case observational involving two respondents . The assessment results show that respondents experiencing stunting, wasting and deficits intake substance nutrition . During research conducted for 4 weeks intake substance nutrition respondents experience improvement . The conclusion is that education nutrition given to Mother respondents as much as 4 times for 4 weeks . Intake substance nutrition respondents experience improvement optimally .

ARTICLE INFO

CASE REPORTS
Submitted: 20 April 2025
Accepted: 30 May 2025
Keywords:
Sensory evaluation, Corn base pudding, Functionak food

Access this article online

Key Messages:

- Stunting is problem global nutrition with sufficient prevalence big including in Indonesia 19.8% in 2024 .
- Stunting is caused by various factors factor including , Initiation Early Breastfeeding (IMD) , low exclusive breastfeeding, not provide breast milk until two years of age , and giving complementary food that is not fulfil principle
- Case study about care nutrition standardized in society very much important For prevent problem long -term nutrition .

INTRODUCTION

WHO (*World Health Organization*) issued a stunting policy brief, which defines "stunting as stunted children if height according to his age not enough from -2 SD (standard deviation) reference WHO Child Growth " (WHO, 2023) . Stunting is consequence from problem nutritional problems experienced start in content until child age early (UNICEF et al, 2023) . UNICEF (*United Nations Children's Fund*) in 2023, reported as many as 148.1 million (22.3%) children under 5 years of age experiencing stunting and experiencing decline during the last decade . Although thus stunting cases in Asia are still tall that is by 52%, and Africa by 43% (UNICEF, 2023) .

The 2022 Indonesian Nutritional Status Survey (SSGI) reported stunting prevalence decreases from 24.4 % in 2021 to 21.6%. Meanwhile that , the results of the 2023 SKI (Indonesian Health Survey) reported prevalence of stunting has reduce to 21.5% (Ministry of Health of the Republic of Indonesia, 2024) . The latest data from SSGI shows that national stunting prevalence down to 19.8% in 2024 (Ministry of Health of the Republic of Indonesia, 2025) . Risk factors closely related to stunting are substandard child feeding practices (IYCF). This includes the absence of Early Initiation of Breastfeeding (EIB), low levels of exclusive breastfeeding, not breastfeeding until the age of two, and the provision of complementary foods that do not meet the principles (*World Health Organization* , 2025) . In addition, low parental knowledge about nutrition, poor environmental sanitation, and limited access to health services are also factors that can increase the risk of stunting (UNICEF et al, 2023) .

Providing nutrition education to mothers of stunted children is a crucial component of interventions that must be implemented appropriately. This significantly impacts increased intake, PMBA practices, and the provision of complementary feeding (MP-ASI). This process includes assessment, diagnosis, intervention, monitoring, and evaluation.

These stages align with a standardized nutrition care process, which serves not only as a clinical protocol but also as an educational approach to increase maternal commitment, knowledge, and healthy lifestyles for their children. This study aims to implement the principles of standardized nutrition care for stunted children to improve optimal nutritional intake.

CASE DESCRIPTION

Respondent assessment 1: An. A was born on November 20 , 2023. First child , occupation Mother that is Mother House Household , Mother's education is high school. Anthropometric data birth weight 2.9 kg, current weight 7 kg , MUAC 13 cm, body length 72 cm, nutritional status body weight according to age (WAZ) is very low , body length according to Age (HAZ) stunting, body weight according to body length (WHZ) is less , ideal body weight is 8.7 kg. Looks thin, cries often, has thin reddish hair, and has a poor appetite. The child's dietary history shows that he ate two main meals a day and was not exclusively breastfed. After 6 months of age, he was given strained porridge. Then, at 9 months of age, he was given soft foods, including staple foods, white rice, animal sources such as fish and chicken eggs (without the yolk), and vegetables. He also ate daily snacks such as crackers and bread from a nearby shop.

The results of the consumption recall showed that the total energy intake was 569.13 kcal, while the requirement of 1000 kcal or only met by 56.9% (insufficient). Protein intake was 34.33 g of the requirement of 30 g (114.5% fulfilled, more), fat intake was 19.74 g of the requirement of 38.8 g (59.9% fulfilled, less), and carbohydrate intake was 70.71 g of the requirement of 132.5 g (53.4% fulfilled, less). *Caesarean* section , the third child of three siblings, mother's occupation is a housewife, mother's education is vocational school. Anthropometric data birth weight 2.8 kg, current weight 7.2 kg, body length 72 cm, MUAC 13.5 cm, nutritional status weight according to age (WAZ) is low, body length according to age (HAZ) is stunting, body weight according to body length (WHZ) is normal, ideal body weight is 8.2 kg. Looks thin, often cries, thin reddish hair, the child is often sick, has poor appetite and lives with a smoking father.

The child's dietary history shows that he ate three main meals a day and was not exclusively breastfed. Commercial porridge was introduced at six months of age. At eight months of age, the child was introduced to soft foods consisting of white rice as a carbohydrate source, animal-based side dishes such as fried fish and chicken or quail eggs, and mixed vegetables such as moringa leaves (a local food). In addition to his main meals, the child was also breastfed, supplemented with commercial formula once at night, and frequently consumed daily snacks such as crackers and packaged snacks.

The results of the consumption recall showed that the total energy intake was 858.38 kcal, while the requirement is 1000 kcal or only met by 85.8% (sufficient). Protein intake is 43.48 g of the requirement of 30 g (met by 144.9%, more), fat intake is 29.92 g of the requirement of 38.8 g (met by 77.1%, less), and carbohydrate intake is 103.7 g of the requirement of 132.5 g (met by 78.3%, less). Nutritional diagnosis; the high prevalence of stunting in the working area of the Kotu Community Health Center (UPT Puskesmas) in Enrekang Regency in 2023-2024 was 34.3% based on the 2024 Indonesian Nutritional Status Survey, and the intake of energy, protein, fat, and carbohydrates among toddlers was <80% of the recommended intake. This problem is related to several factors such as a lack of awareness and knowledge of families regarding the importance of providing a balanced diet, a high incidence of infectious diseases, such as fever, cough, cold, and diarrhea, and poor parenting practices in feeding.

Nutrition Intervention. Providing nutritional counseling to mothers of toddlers once a week for 4 weeks (Jan 14 to March 13, 2025) on: 1) IYCF practices, 2) Procedures for active and responsive feeding, 3) Local food supplementary feeding (FSF) alternatives that can be made at home when the child does not want to eat, and 4) The importance of maintaining personal and home environmental hygiene. Nutritional needs are determined based on the child's RDA according to the Indonesian Minister of Health Regulation No. 28 of 2019, namely 1000 kcal of calories, 30 g of protein, 38.8 g of fat and 132.5 g of carbohydrates.

DISCUSSION

Study This report implementation care nutrition standardized on two cases child namely , An. Adan An. Z who experienced stunting or at risk of stunting. WHO defines that stunted children if height according to his age not enough from -2 standard deviation reference WHO Child Growth (WHO, 2023) . Conditions This is problem nutrition serious chronic conditions that occur since baby in content up to the age of early . Stunting is still become a problem that threatens Indonesia. The risk factors that cause stunting are very diverse , such as low early initiation breastfeeding, lack of exclusive breastfeeding , inadequate provision of complementary feeding in accordance with principle (Aldina, et al. 2025) . Intervention proper nutrition is education nutrition for mother , which aims For increase intake nutrition and practice giving food good child . Study (Morns et al., 2023) report that Complementary feedeing which is not right (too early , late , texture No according to age) can increase the risk of stunting is 2-3 times greater.

The results of the study on the case of An. A, born in November 2023, experienced stunting (HAZ) and very low body weight (WAZ). Nutritional intake before the intervention showed a deficit, namely with only 56.9% of energy and needs, 50.9% of fat, and 53.4% of carbohydrates. Through a nutrition intervention that included nutrition education and

counseling for 4 weeks, regarding PMBA practices, good feeding methods, local PMT alternatives and environmental sanitation, it can be reported that there was a significant increase in nutritional intake. At the end of the intervention (June 13, 2025), An. A's energy intake reached 95.1% of needs, 106.8% of protein, 92.0% of fat, and 102.1% of carbohydrates. This shows that the intervention has had real success in improving the nutritional status of toddlers.

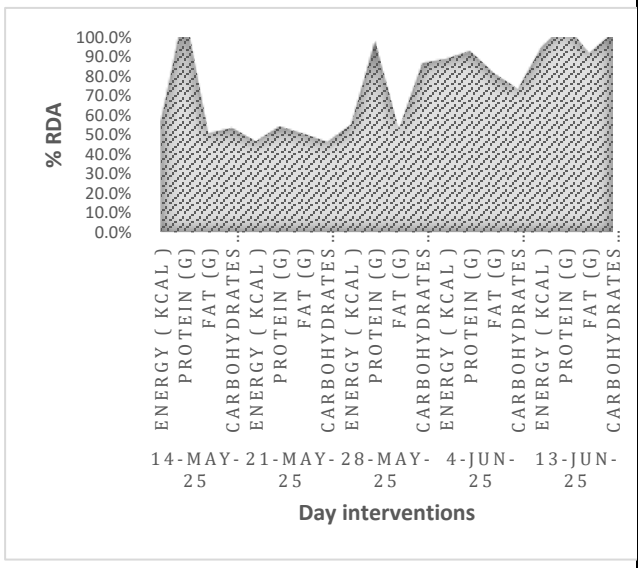

Figure 1. Monitoring and Evaluation An. A Intake

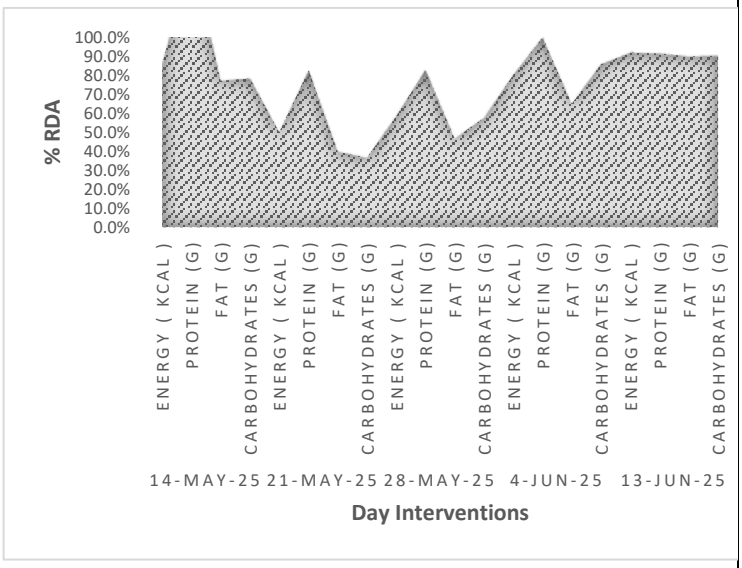

Figure 2. Monitoring and Evaluation An. Z Intake

The results of the study on the case of An. Z, born in March 2024, also experienced stunting and low body weight. Nutritional intake before the intervention was 85.8% of energy requirements, 144.9% of protein, 77.1% of fat, and 78.4% of carbohydrates. Although his energy intake was better than that of An. A at the beginning of the intervention, fat and carbohydrates were still in deficit. After a similar intervention, it can be reported that An. Z's intake showed an increase at the end of the intervention carried out on June 13, 2025, energy intake reached 92.0%, protein 91.5%, fat 90.0%, and carbohydrate 90.2%.

These results indicate that a four-week nutrition education intervention covering IYCF practices, proper feeding practices, local FSF alternatives, and environmental sanitation had a positive impact, both in terms of knowledge related to IYCF, local food, and environmental sanitation. This study aligns with previous research, as reported by Stark et al., 2009, which found that nutrition education and counseling can significantly improve nutritional intake. This is also consistent with research conducted by Abdillah et al., 2020, which also reported that nutrition education for mothers of toddlers significantly increased their nutritional intake. Another study by Sinaga et al., 2023 also reported that toddlers' nutritional intake increased after education. that , research the latest in 2024 conducted by (Pritasari et al., 2024) report that education nutrition can increase intake substance nutrition .

Good knowledge can influence behavior somebody in arrange pattern Eat yag more good . Beressa et al., 2025 education nutrition capable push pattern eat more healthy and relevant in handle problem Nutrition . Knowledge of IYCF practices increased significantly after interpersonal nutrition education (Starkweather et al., 2020) . Intervention based education can increase knowledge and practice giving Eat mother , so that can increase intake and quality food (Purwanti et al., 2020) .

CONCLUSION

Based on studies cases that have been was carried out on two toddlers who experienced stunting . concluded that care nutrition standardized with intervention education can increase intake substance nutrition child optimally . Intake adequate and healthy substances can support growth as well as development children . Research results This emphasize that importance integrate education nutrition and intervention nutrition For overcome stunting problem .

Funding : Writer No receive external funds
Saying Thank You: writer say accept love to Head of the Community Health Center UPT City Regency Enrekang which has give permission For do study .
Conflict of interest : The author does not declare that he has no conflict of interest.

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