
| RESEARCH ARTICLE

Evaluation of Integrated Nutritional Intervention in Cases of Stunting with Chronic Skin Infections

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| ABSTRACT

One in four toddlers in Indonesia is stunted, so the government is trying to reduce stunting by implementing integrated nutrition interventions. This case report aims to follow up on the results of the Stunting Case Audit (AKS) conducted by the Department of Health and across sectors by identifying risk factors for stunting, optimizing the role of Primary Health Care in clinically treating patients, and evaluating the implementation of integrated nutrition interventions that have been implemented. The patient is a toddler aged 25 months, weight 9.0 kg and height 78 cm, so the nutritional status according to the indicators of weight for age and height of age results in underweight and severe stunting. There are internal risks in patients, namely poor nutrition, poor personal hygiene, and chronic skin infections. In contrast, the external risks are the lack of parental income, a crowded home environment, and the mother's lack of knowledge about nutrition and health behavior. Forms of specific nutrition interventions include: handling skin infections and education on the practice of providing nutrition, while sensitive nutrition interventions include education on improving personal hygiene, providing PKH assistance, and building livable houses. The intervention and evaluation activities were carried out within 3 months. They resulted in improvements in providing nutrition, skin complaints, personal hygiene, and the implementation of PHBS in homes that were livable even though weight gain had not run optimally.

| KEYWORDS

Stunting, integrated nutritional intervention

| ARTICLE INFORMATION

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1. Introduction

Stunting is still a health problem in Indonesia. The 2018 Basic Health Research (Riskesmas) data shows the number of severe stunting by 19.3%, higher than in 2013, which was 19.2%. In contrast, the 2019 Indonesia Health Profile data show the stunting rate has decreased from 30.8% to 27.7%, even though this figure still exceeds the 2024 target of 14%.^{1,2} Based on the Indonesian Nutrition Status Study (2021), stunting cases decreased from 2019 to 2021, from 27.7% to 24.4%.³ However, data from the Department of Health Probolinggo City Show the opposite fact, where cases increased from 13.2% in 2020 to 14.25% in 2022. Kanigaran District ranks first in the discovery of stunting cases, as many as 20% in 2021 and 21.75% in 2022.

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition, so children become too short for their age. Stunting, according to the WHO growth standard 2006 and UNICEF, is a condition of impaired growth so that it cannot achieve normal linear growth, characterized by body length/height according to age below -2 standard deviations (SD).^{3,4} The problem of stunting is not only height but also short and long-term impacts. The short-term impact of stunting can be a decrease in learning ability due to a lack of cognitive development. Meanwhile, in the long term, it can reduce the quality of life of children as adults due to decreased opportunities for education, job opportunities and better income, to the risk of developing metabolic diseases such as obesity, hypertension, diabetes, cancer, and others.⁵

Many factors cause stunting: socioeconomic conditions, maternal nutrition during pregnancy, illness in infants, and lack of nutritional intake in infants.⁵ The complexity of the factors that cause stunting is the basis for efforts to improve community nutrition, focusing on the first 1000 days of life. The efforts to improve nutrition in question are specific nutrition interventions which include: families aware of nutrition, supplementary food for maternal, Early Breastfeeding Initiation, Exclusive breastfeeding, Food ASI complementary (MP ASI), supplementary food for Toddlers, Taburia (supplement powder), iron supplements for female adolescents, while sensitive nutrition interventions include Raskin assistance, increased food security, healthy housing, clean water, and sanitation.⁶

The high number of stunting cases in the working area of the Kanigaran Primary Health Care requires integrated nutrition interventions that involve the role of Primary Health Care and Health Service across community sectors. The cases that were the target of this integrated nutrition intervention had complex causal factors. Hence, the authors wanted to study the effectiveness of the nutrition intervention in cases of stunting with chronic skin infections.

2. Case Report

On behalf of A, male aged 25 months, the patient came to the Kanigaran Primary Health Care with his mother on September 6, 2022, to take routine PMT (Supplementary Food) at the Nutrition unit. The patient's mother said her child had itching on the scalp and feet. Complaints of itching in the head have been experienced for 2 weeks and have worsened in the last 3 days. Itching initially appears as small papules, then enlarging and breaking into scabs. Fever experiences ups and downs as long as the itching in the head remains. Head lice not found.

Complaints of itching have also been experienced on the legs and feet for about 1 year and have worsened over the last 2 weeks. Complaints of itchy feet are never resolved and always grow flexible. The splint initially contains liquid, then turns cloudy, breaks forms a scab, dries, and turns hyperpigmentation. The child always seems to be scratching the itchy limbs with dirty and black nails. The appearance of persistent discharge and itching often causes children to have a fever and lose appetite. This is also why children's weight stays the same and even tends to decrease until now.

The patient's mother rarely checks the child for skin problems, except when the child has a fever because there is no means of transportation (motorcycle). Skin complaints are only treated with eucalyptus oil or bathing. Bathe twice a day with baby bar soap. Patients rarely return for control because the itching has dried up and healed even though a few days later, the itching reappears. Every day the patient plays and sleeps in beds without sheets or dirty and has urine marks that have never been dried in the sun. Other family members also experienced similar itching, namely the patient's aunt and older siblings, and none of them received optimal treatment.

Regarding nutritional status, the patient is in the category of severely stunted and underweight. During pregnancy, the mother only went to the midwife 4 times, namely 3 times in the 2nd trimester due to abdominal pain and once in the 3rd trimester due to loud noises. ANCT was performed at 29 weeks of gestation and obtained Hb 10.6 g/dL, upper arm circumference is 23 cm (included in the KEK category), and the weight gain from K1 at 25 weeks to K4 at 37 weeks was only 2 kg.

The patient was born at 40 weeks of gestation with an operation due to a long opening 1. Birth weight 2700 grams, body length 49 cm. At birth, the patient was directly breastfed, then breastfed in the first 1 month after birth, received a mixture of formula milk from the age of 2 months, and received MP ASI at 4 months without consultation with a doctor. The mother admits that she does not pay too much attention to the food her child consumes at the age of under 12 months because she is busy working, so she entrusts her child to her relatives.

Regarding current nutrition, the patient's mother said that the patient eats twice a day, drinks formula milk 1-2 times a day, and drinks 200 ml of sugar water at the rate of two tablespoons of sugar one to two times a day. The food often consumed is rice with crispy chicken and *lontong* (an Indonesian dish made of compressed rice cake in the form of a cylinder wrapped inside a banana leaf) with *Pentol* (a type of meatballs with flour, usually given with peanut sauce or tomato sauce, soy sauce and sambal). The patient very rarely consumes fruit; vegetables and only want carrots. Biscuits from Primary Health Care are eaten every morning; sometimes, they still need to be finished. The dosage for giving formula milk is 5 measuring spoons in 200 ml of water. In addition, children are rarely brought to Posyandu, so their weight and height are never measured, and they rarely receive vitamin A and deworming medication. However, the patient received complete basic and follow-up immunizations and participated in the measles-rubella immunization during BIAN (Bulan Imunisasi Anak Nasional).

The physical examination showed that the child's general condition looked mildly ill, with *compos mentis*, pulse 102x/minute, respiratory rate 24x/minute, and body temperature 36.8 C. On generalist status examination, multiple macula hyperemia were found, firm boundaries, yellowish crusts, minimal exudate, and no hair loss in the scalp area. The conjunctiva does not appear

anemic; the sclera is not icteric, and the sunken eye is not found. On examination of the neck, there were no enlarged lymph nodes, and the JVP was normal. Examination of the heart, lungs, and abdomen within normal limits. Extremities obtained dirty hands and long black nails. Musculoskeletal status and neurological status within normal limits.

Anthropometric examination results obtained a body weight of 9.0 kg, height of 78 cm, BMI below the 5th percentile, WHO status height for age < -3SD, weight for age between -2 to -3 SD, and weight for height is normal. Head circumference 47.5 cm according to the normal WHO curve. Growth and development screening with Denver 2 obtained gross motor, fine motor, language skills, and social personal according to age.

Initial diagnosis: scabies with severe stunted (weight for age < -3SD) and underweight (weight for -2 to -3 SD)

2.1 Home visit 1 (7 September 2022)

The first home visit was carried out by gathering information related to the family, the mother's knowledge about feeding children, inspecting the condition of the home environment, and carrying out specific nutritional interventions through the governance of skin infections and improved nutrition. The patient lives in a large family consisting of mother, grandmother, 2 siblings (first child aged 10 years, third child aged 2 months), 2 uncles (aged 32 years and 12 years), and 1 aunt. The patient's mother does not have a permanent job, while the patient's father is unknown. The family's regular source of income is only from the patient's grandmother and aunt, who sell donuts or accept requests to make market snacks.

The patient's mother graduated from elementary school and admitted that she did not understand how to provide good nutrition for children. The patient's mother feels that her child is short and faltering in weight, but there has been no attempt to get the child examined by a doctor. Mother's lack of understanding regarding the provision of nutrition can be evaluated from the results of a 24-hour food recall interview, and the following results were obtained:

Table 1. Level of Adequacy of Nutrition (before intervention)

Nutrients	Nutrient intake	RDA Correction	Nutritional adequacy level
Calories	808	1280	63.1%
Proteins	27.06	20	130,5%
Fat	30.65	45	68%
Carbohydrate	111.75	215	52%

Based on the results of an inspection of the house's condition and sanitation, a house measuring 3 x 8 m² was obtained, one floor, 1 bedroom, 1 kitchen, and 1 living room joined, and 1 bathroom with toilet. The floor of the house is dirt, the walls are made of brittle bricks, and there is no ceiling on the roof. The lighting could be better because ventilation is only from the house's entrance and side, whose walls have collapsed. When it rains, water will enter through the roof of the house, the house's walls, and the entrance. The patient's home is in a densely populated residential area. The water source comes from PAM water used for bathing, washing clothes, cooking, and drinking. There are no faucets for running water sources, so water is stored in open containers. There is no garbage sorting; food waste is scattered all over the house. Items in the patient's house need to be neatly arranged. There are bunk beds with dirty, not neatly arranged, smelly sheets that have never been dried in the sun, which are shared beds and a place for family members to chat. The bedroom becomes one with the kitchen so that cooking fumes and heat fill the entire house. Mice and cockroaches were also found wandering around the house.

Specific nutritional interventions that can be carried out are managing skin infections and analyzing the provision of nutrition to patients. Management of skin infections begins with non-pharmacological therapy in the form of counseling to change soiled sheets, clean the house and different fabrics that come into contact with the patient's skin, and then soak them in hot water before washing them. Cutting long and dirty nails, teaching hand washing routine to prevent secondary infections due to scratching of dirty nails. Pharmacological therapy with Permethrin 5% is applied evenly to the entire skin surface except for the face and left for 16 hours, as much as possible, not exposed to water. Oral therapy, namely cetirizine syrup 1 time 5 ml and vitamin C 1x40 mg per day. Families of patients who have similar itching complaints are also treated with the same therapy.

Furthermore, carry out health promotion and equalize perceptions regarding the importance of feeding children. Education provided to caregivers includes meal schedules, main food portions, types of animal and vegetable protein that toddlers should consume, limiting the consumption of sugar water, micronutrient needs which are mostly found in vegetables, fruit, and animal and vegetable protein, encouraging caregivers to routinely posyandu so that you can monitor your weight and height every month. Caregivers were also reminded about vitamin A months, namely February and August, so vitamin A is also a warm medicine. Mothers and toddlers have also been recorded to participate in toddler mothers' classes to accelerate the reduction of stunting in

the Kanigaran Health Center work area. One of the government programs based on Permenkes No. 51 of 2016 in providing additional food must also be given to children with chronic nutritional problems in the form of 12 pieces of biscuits per day. Children are also given syrup zinc 20 mg daily to provide additional micronutrients.

A form of nutrition-sensitive intervention carried out simultaneously is providing cash assistance to poor families (PKH) and getting access to non-cash food assistance, such as rice for poor families, regularly every month. It is hoped that this assistance can be used to meet animal protein needs for both stunting patients and other family members.

2.2 Second home visit (2 October 2022)

The second home visit was carried out after 1 month of intervention as the first evaluation stage. What can be evaluated were the results of anthropometry at 26 months of age, clinical conditions of skin infections, changes in personal hygiene, cleanliness of the living environment, changes in nutrition, and the level of mothers' knowledge regarding child feeding practices. Based on the anthropometric results, the body weight was 9.3 kg (weight for age underweight), height 80 cm (height for age severely stunted), BMI below the 5th percentile, and head circumference 48 cm (normal). Physical examination after therapy showed improvement of skin infections on the head and feet. No new patches have been found, only post-inflammatory hyperpigmentation on the skin of the feet. This clinical improvement is supported by changes in the condition of the home environment where the condition of the house is more orderly, items scattered around the bed have been tidied up, bed linen has been changed, bolster pillows have been dried in the sun, cooking utensils are neatly arranged, and trash has been disposed of in a place provided. For personal hygiene, fingernails have been cut; children also understand how to wash their hands before eating, even though they still use tap water with or without soap.

Evaluation of nutritional provision was conducted by conducting a 24-hour food recall, and the following results were obtained.

Table 2. Level of Adequacy of Nutrition (after intervention)

Nutrients	Nutrient intake	RDA Correction	Nutritional adequacy level
Calories	980	1280	76.56%
Proteins	36,61	20	183%
Fat	34,84	45	77%
Carbohydrate	135,26	215	62,91%

Table 3. Comparison of Nutritional Adequacy Levels before and after the Intervention

Nutrients	before intervention	After intervention
Calories	63.1%	76.56%
Proteins	130,5%	183%
Fat	68%	77%
Carbohydrate	52%	62,91%

The nutritional adequacy level increased because the patient's mother had implemented 3x daily feeding with carbohydrates and added a variety of animal proteins other than chicken and pistol, namely quail eggs. Further nutritional interventions are still provided by providing education to limit excessive consumption of sugar water, especially at bedtime, increasing consumption of supplementary biscuits, continuing to provide three meals a day, providing formula milk, and educating on types of food, especially animal protein that can be consumed regularly and other sources of carbohydrates besides rice.

Evaluation of the mother's knowledge of the practice of providing nutrition can be seen from the pretest and posttest results. Here are the test results from the patient's mother.

Table 3. Pretest results and posttest related to the mother's knowledge

Pretest Results	Posttest Results	Change
40	80	40

The sensitive nutrition intervention the government and related stakeholders carried out was house renovations this October. The renovation activities aim to improve the house's condition to make it fit for use, prevent entry vectors that cause disease, build access to clean water and improve sanitation in the home environment. The second evaluation stage will be carried out in November 2022, where integrated nutrition interventions have been optimally by the government, the health center, and the toddler's family. The Puskesmas still monitor through Whatsapp and continue asking patients to come to the Puskesmas when taking PMT (Supplementary Feeding).

2.3 Third home visit (November 2022)

Phase 2 evaluation was carried out in November 2022 by looking at the results of patient anthropometry, environmental hygiene and sanitation changes, compliance with posyandu, and understanding of proper feeding practices. Anthropometric results for a 27-month-old toddler showed that the child's weight was 9.5 kg, height 82 cm, BMI below the 5th percentile, WHO height for age status -2 to -3SD (stunted), weight for age between -2 s/d -3 (underweight), and normal weight for height status. The results of house renovation activities have been carried out, and it was found that the house building looks sturdy, has good ventilation, and has a source of running water. However, rats are still occasionally found in the house. The arrangement of goods and the cleanliness of the home environment need to be properly maintained, including the cleanliness of the bed, which is a family gathering place. Several family members have done personal hygiene, such as using running water to wash their hands before eating and cutting nails regularly.

In terms of feeding the child, the mother already understands the child's meal schedule, tries to increase the need for carbohydrates, and provides different animal proteins if there is extra money, such as mackerel and sunny-side-up eggs. The patient's family also took advantage of the PKH administration well and regularly visited the posyandu in the last 2 months.

3. Discussion

This toddler is a patient severely stunted based on WHO 2006. The patient has a proportional body, so in diagnosing stunting, it is necessary to determine the weight, age and height age.⁷ The possibility of a patient experiencing stunting is if $WA \leq HA \leq$ chronological age. The patient's weight (WA) is 9 months, height (HA) is 15 months, and chronological age is 25 months, so the patient can be suspected of stunting. KMS results 3 months before the first visit was at the red line, and there was no significant weight gain (growth faltering).⁷

Based on the results of the anthropometric examination, it was also found that this patient was underweight, whereas the WHO height for age curve shows -3 to -2 SD results. Several factors cause nutritional problems in patients, including inadequate nutrition, infection, inappropriate parenting, poor sanitation hygiene, and poverty. Nutritional problems can be evaluated since the time of pregnancy, where the ANCT results show the mother has anemia and malnutrition and does not routinely perform ANC. Anemia in pregnant women has a major impact on the growth and development of the fetus. Iron deficiency anemia in pregnant women, followed by deficiencies of other micronutrients such as zinc, iodine, and folic acid, can cause fetal growth retardation.⁸ Several studies have also shown a positive correlation between anemia in pregnancy and the occurrence of stunting in children under 5 years.⁹

Entering the postnatal phase, the patient is not being breastfed exclusively because MP ASI was given at 4 months. This may be related to the common knowledge of mothers about the importance of exclusive breastfeeding and the quality of complementary breastfeeding. Several studies have shown no correlation between maternal knowledge and stunting. Still, knowledge is a predisposing factor that can influence behavior, including parenting patterns in providing nutrition to children to prevent stunting.¹⁰ Breast milk is the best food for babies. It provides nutrition for the first 6 months of life. Breast milk has immunological benefits, which can prevent pneumonia, URTI, or diarrhea and indirectly prevent stunting.¹¹ The practice of giving MP ASI too early can cause health problems in children. Early solid food can impact the high incidence of infections such as allergies, diarrhea, respiratory infections, and growth disorders.¹² Proper complementary feeding can help children grow and develop optimally and prevent stunting or micronutrient deficiencies.^{13, 14}

Regarding the current condition, the patient also does not get adequate nutrition in quantity and quality. This can be evaluated from the results of a food recall 24 hours, indicating a low nutritional adequacy level. Based on the analysis of Pediatric Nutrition Care, the ideal body weight for a height of 78 cm is 12.8 kg. Nutritional status: $9.0 \text{ kg} / 12.8 \text{ kg} = 70.3\%$ (moderate malnutrition), so children experience failure to thrive. Calculation of nutritional needs by evaluating the RDA based on Height age is 14 months with an RDA of 100 kcal/kg. The target nutritional requirement is $100 \text{ kcal} \times 12.8 \text{ kg}$, 1280 kcal daily. The protein requirement for children aged 1-3 years is 20 grams daily.¹⁵ In this case, the patient requires additional carbohydrates and fats to meet daily calorie needs because the nutritional adequacy level is only 52% for carbohydrates and 68% for fat. This is reasonable because the patient is only given main food twice daily even though protein needs have been met. The amount of protein consumed by patients is sufficient but not varied. Giving less varied protein can result in a lower level of protein consumption, so children have the potential to become stunted.¹⁶ Based on data from the Directorate General Public Health (2017), toddlers in Indonesia experience a protein deficit of 31.9%, which becomes the reason for failure to thrive (growth faltering), which causes stunting.¹⁴ Proteins form new tissues during the body's growth and development, maintain body tissues and repair and replace the damaged tissue.¹⁷ Animal protein sources also provide amino acids, which are important and indispensable in metabolic processes, the formation of enzymes, hormones, and antibodies.¹⁷ Children who experience chronic protein deficiency can experience stunting, even if they have enough calorie intake.¹⁴ Several animal proteins suggested by health workers and nutrition officers are eggs, chicken liver, chicken meat, and mackerel, which are easily available and inexpensive.

This relatively complex nutritional problem is the basis for carrying out specific nutrition interventions with nutrition education, PMT administration, and fulfillment of micronutrients, as well as monitoring by health workers. Nutrition education is an effort to increase the health literacy of mothers or caregivers regarding child care. Low maternal health literacy will impact low fulfillment of childcare needs, increasing malnutrition.¹⁸ Efforts to increase maternal health literacy are also the basis for increasing maternal knowledge, triggering changes in parenting behavior and child health outcomes.¹⁹ In this case, maternal health literacy is quite low, especially since the mother is pregnant, so the nutritional care pattern applied to children up to 25 months of age is inappropriate. Therefore, education about the importance of implementing a meal schedule, types and variations of staple food menus, daily nutritional needs, and limiting the consumption of sugary drinks must be carried out.

Specific nutritional interventions related to the fulfillment of micronutrients can be carried out by evaluating the consumption of PMT biscuits for toddlers, which the Primary Health Care give every month. Evaluation of the results of food recalls 24 hours found that PMT (Supplementary Food) biscuits given to patients routinely were not consumed as recommended, namely 12 pieces of biscuits per day. PMT for Toddlers is the provision of nutritional supplementation to complement nutritional needs to achieve weight according to age. Every 100 grams of PMT contains 450 calories, 14 grams of fat, 9 grams of protein, and 71 grams of carbohydrates. PMT Toddler contains 10 vitamins (vitamins A, B1, B2, B3, B6, B12, D, E, K, and Folic Acid) and 7 minerals (iron, zinc, phosphorus, selenium, and calcium).²⁰ The content of micronutrients in PMT for toddlers is expected to be able to meet macro and micronutrient needs as a specific nutrition intervention effort.

The evaluation results of specific nutritional interventions related to managing scabies infection positively impact patients. The patient was diagnosed with scabies because he met the clinical criteria. Namely, some bumps developed into pustules on the skin, especially between the fingers, toes, and buttocks, plus a family history of similar complaints.²¹ Inadequate home environmental conditions, lack of clean running water, dirty living environment, and habits of children who never wash their hands and have dirty nails are also related to scabies in patients.²² Therefore, managing scabies is not only in medical therapy but also requires non-medical therapy. Administration of 5% permethrin applied all over the body except the face for 8 hours and oral antihistamines given to patients and their families with scabies have proven effective in treating patient complaints.²¹ This is also inseparable from the commitment of family members to clean the home environment, such as changing bed linen, soaking cloth in warm to hot water (60° C), drying mattresses, and improving personal hygiene by cutting nails and washing hands with soap.

Sanitation and personal hygiene are factors related to stunting and skin infections in this patient. Indirectly, water, sanitation, and daily hygiene practices affect nutritional status, especially linear growth in toddlers. In addition, poor sanitation hygiene often triggers infectious diseases such as URTI and diarrhea, which can cause iron deficiency anemia and impaired absorption of nutrients in toddlers.²³ In this case, the home environment is categorized as unhealthy because almost all of the criteria for a healthy home, including access to clean water, are not met. Therefore, the government's specific nutrition interventions in building livable houses, improving sanitation, and providing clean water can help overcome malnutrition. EED (Environmental Enteric Dysfunction) may be experienced by patients who are stunted.²⁴

The final evaluation of the implementation of the integrated nutrition intervention was carried out to see the results of anthropometry at the age of 27 months, the parenting style of providing nutrition, skin infections, and improving sanitation and personal hygiene for patients and their families. Overall, the patient's family has made several lifestyle changes to become healthier, including improving the practice of providing child nutrition and improving personal and environmental hygiene. However, the results of this integrated nutrition intervention have not shown a significant increase in the growth of the child. Anthropometric results show a change in weight for age status from underweight to normal, even though height for age is still in the stunted category. The patient's mother has made a habit of feeding her child 3 times per day with the proportion of carbohydrates, fiber, and animal and vegetable protein even though there is no significant diversity of animal protein. This is related to the low purchasing power of animal protein sources in families who have low incomes.²⁵ Skin complaints experienced by patients have experienced significant improvement, which is in line with changes in the home environment that is clean, has good ventilation, has a source of running water, and is free of disease-carrying vectors. Personal hygiene, such as cutting nails and washing hands before eating, can also be practiced well by some family members.

Several factors need to be studied in implementing integrated nutrition interventions for patients to be used as input for improving the handling of stunting cases. The lack of maternal health literacy related to nutrition before pregnancy, during pregnancy, to child nutrition parenting patterns can be improved by increasing health promotion efforts by health workers. Optimization of surveillance and case finding of weight faltering must be increased by cadre in integrated service posts (Posyandu). Children under 2 years of age who are at risk for failure to thrive (weight faltering) or malnourished needs to be treated immediately by a health worker.²⁶ Early detection and quick and precise referrals can passively increase case finding so that competent health workers can handle nutritional problems.²⁶

The implementation of integrated nutrition intervention is not only the responsibility of the Primary health care or the government but also the community, other sectors, and pediatricians. Based on the Guidelines for Providing Supplemental Feeding made from local food for toddlers and pregnant women in 2023, the community has some roles in carrying out early detection and referral of nutritional problems through monitoring cards, providing supplementary food with local ingredients to undernourished toddlers, conducting education such as cooking demonstrations and counseling.²⁷ Although providing additional food is not a substitute for the main meal, it has an important role in complementing the calorie needs and protein diversity. In addition, providing PMT with local ingredients is also expected to encourage family food and nutrition independence sustainably.²⁷ In this case, the patient doesn't have the opportunity to obtain PMT from local ingredients. Patients only get PMT manufacturers (biscuits) from Primary Health Care every month, and they never consume the biscuits until the recommended portion. The patient's caregiver also rarely gets an education about good nutrition or cooking demonstration from a trained community (cadre in Posyandu) that can be used as input for caregivers in implementing good nutrition practices for children. Supplementary feeding programs with local ingredients implemented according to planning and properly recorded and reported can be used for monitoring and evaluation to improve the implementation of integrated nutrition interventions in the community.

4. Conclusion

Implementation of integrated nutrition interventions is an activity to prevent and overcome nutritional problems that involve many related parties. Good and targeted cooperation between patients, the community, health workers, and the government in this intervention is the key to successfully managing nutritional problems in the community. In this case, risk factors for stunting, such as inadequate nutrition, infection, poor sanitation, personal hygiene, and poverty, are the targets of integrated nutrition interventions. The results of this intervention are that families have started to implement better nutrition practices and do healthy behavior, such as washing their hands with soap and cleaning the home environment regularly, even though the results of anthropometric measurements have not shown optimal results. Increasing health literacy for caregivers, strengthening the duties of cadres at posyandu in carrying out early risk detection weight faltering, and using local ingredients such as PMT for toddlers with nutritional problems can be a solution to strengthen the joint task of preventing and overcoming stunting.

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