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EVALUATION OF THE ACTIVITY OF GIVING READY-TO-USE THERAPEUTIC FOOD PLUMPY NUTS TO MALNOURISHED CHILDREN IN TANGERANG CITY

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Abstract

Background: RUTF is a high-energy lipid-based food used for the treatment of Severe Acute Malnutrition (SAM) children. RUTF is given to SAM children under five years old who are entering the rehabilitation and outpatient phase at the public health centre. RUTF plumpy nut (eeZeePaste) as a nutrition intervention for treatment SAM in Tangerang City. The implementation provision of RUTF has been going on for one year in Tangerang City. but in practice there are variations in its use. **Objective**: This study aim to evaluation of provision RUTF plumpy nut to SAM children in Tangerang City. **Methods**: A qualitative study with a case study approach aim to evaluation of provision RUTF plumpy nut to SAM children in Tangerang City. **Results**: The provision of RUTF Plumpy Nut in Kota Tangerang has not been well implemented. There is no specific SOP regarding the provision of RUTF Plumpy Nut, which has led to the suboptimal provision of RUTF Plumpy Nut. RUTF Plumpy Nut is not ideally given to malnourished children in Tangerang City because the RUTF Plumpy Nut given to malnourished toddlers is not well received in terms of taste, portion size and ingredients that are not in accordance with the habits and tastes of children in the Tangerang City area. Conclusion: The provision of RUTF Plumpy Nut to malnourished children has not gone well and malnourished children in Tangerang City don't like RUTF Plumpy Nut.

Keywords: *evaluation of provision RUTF, Ready To Use Therapeutic Food, Severe Acute Malnutrion, acceptability RUTF*

INTRODUCTION

Malnutrition does not only occur in underdeveloped villages. Unfortunately, malnutrition can also occur in big cities such as Tangerang City. There are 30 children under five in Tangerang City who are malnourished.

(Tangerang City Health Office, 2021).

In accelerating the management of nutritional problems, especially malnutrition, the mayor issued a regulation of the Mayor of Tangerang Regulation Number 87 of 2019 concerning Nutrition Problem Management. Treatment of malnutrition in Tangerang City is given therapy in accordance with the guidelines for malnutrition management. The usual therapy is the administration of additional foods in the form of F 75, F100, and ready-to-use therapeutic foods (RUTF). RUTF eeZeePaste or called plumpy nut. eeZeePaste ™ NUT RUTF is a high-energy, lipid-based ready-to-use therapeutic food that provides energy, protein, fat, vitamins and minerals suitable for treating malnourished children aged 6 to 59 months (UNICEF, 2019).

The World Health Organization (WHO) and UNICEF recommend the management of malnutrition treatment using RUTF for outpatients and given at 6 to 59 months of age entering the rehabilitation phase. The provision of RUTF Plumpy Nut in Tangerang City is included in the malnutrition management program. Based on a previous interview with the Nutrition Assistance Staff of the Cipondoh Health Center in Tangerang City, giving RUTF to children is quite difficult, one day is given a package and is not spent so the caregiver needs to force the child to consume but in the end gives up and does not give RUTF. Previously, a study in Ethopia stated that there were almost 30% of children who refused to take RUTF. The child's refusal to consume RUTF is an obstacle to the continuation of program compliance (Puett, et al. 2014).

The success of an intervention program is not spared from a problem and the challenges faced such as the end use in terms of the technical provision of RUTF is sometimes still a problem. (UNICEF, 2021). Based on the monitoring report of savory laksa at the Sangiang Health Center, Tangerang City, it shows that four toddlers who were given RUTF on the first day, did not consume it again in the future, on the grounds that toddlers did not receive it because it was sticky in the mouth and difficult to swallow (Sangiang Health Center, 2021). Seeing this, the researcher wants to further evaluate the activities of giving RUTF to malnourished children, especially in Tangerang City.

The data analysis in this study was carried out thematically. The stages of conducting thematic data analysis are understanding data, compiling code, finding themes, reviewing themes, assigning and naming themes, and presenting themes (Braun and Clarke, 2006).

RESULTS AND DISCUSSION

Characteristics of Informants

The informants in this study consisted of the Head of the Nutrition Section of the Tangerang City Health Office, 6 Nutrition Implementers, 8 mothers of toddlers and additional informants 4 cadres accompanying savory laksa who all met the inclusion and exclusion criteria. The informant of the mother of the toddler, seven other mothers of toddlers were more than thirty years old. Six mothers of toddlers with the last elementary and junior high education. There is also a variety of jobs for mothers under five, the other six become Housewives (IRT). Six mothers of toddlers have a number of children of about one to three children.

1. Human Resources Giving RUTF Plumpy Nut

Nutrition Implementers are the most important Human Resources in the health sector, especially nutrition. The number of nutrition implementers affects the implementation of activity programs. The Tangerang City Office has 39 nutrition implementers spread across 33 health centers. According to the Tangerang City Health Office, this number is enough to add to the fact that all health centers already have Nutrition Implementation Personnel. This is in accordance with the information obtained from the informant.

> *"In terms of the number of health centers, thank God, all health centers in the city of Tangerang have nutritionists, so there are no more nutrition programs held by other nutrition graduates, so all health centers already have nutritionists and the number is enough" (Head of the Nutrition Section of DinKes)*

Regulation of the Minister of Health of the Republic of Indonesia No. 75 of 2014 states that nutrition workers with urban inpatient health centers are 2 people and non-inpatient urban health centers are 1 person. In reality, in the field, nutrition implementers feel that they are lacking in the number of nutrition human resources available. The number of population, the number of villages, and the workload provided are not proportional to the number of nutrition human resources in each health center.

Nutrition implementers are often given other tasks outside of the nutrition program such as holding the BOK budget.

> *"[The number] is, here [the health center] has its own nutritionist here, secondly I hold pptk as well, pptk BOK, so my nutrition is quite a bit there" (Nutrition Implementation Personnel 3)*

The insufficient availability of health human resources, both in number, type and qualification as well as uneven distribution, has an impact on low public access to quality health services (Ministry of Health, 2017). The availability of human resources for Nutrition Implementers who are considered to be lacking can affect imperfections in carrying out RUTF delivery activities. Based on the results of Fitriani's research (2022), it shows that at the input stage, the health workers involved need additional resources so that the program runs optimally. The lack of human resources for Nutrition Implementers can affect the weak monitoring of the administration of RUTF because TPG has responsibility in the implementation of the provision of RUTF Plumpy Nut which is part of the activities of the malnutrition management program.

To prevent this failure, the Head of the Nutrition Section of the Tangerang City Health Office seeks to increase the human resources of nutrition submitted to the SDK field of

the Tangerang City Health Office, in addition to that the health office and puskesmas involve cadres to be used as savory laksa cadres. Savory laksa cadres are special cadres for malnutrition management programs so that they recover (Savory Laksa) in Tangerang City. This cadre will later assist TPG in accompanying, distributing, and monitoring the consumption of RUTF Plumpy Nut for toddlers.

2. Delivery of RUTF Plumpy Nut Delivery Services

The process of delivering RUTF Plumpy Nut delivery services starts from the distribution and storage of RUTF Plumpy Nut, delivery of education on the provision of RUTF Plumpy Nut and how to receive mothers under five related to RUTF Plumpy Nut. Starting from the distribution, the Tangerang City Ready To Use Therapeutic Plumpy Nut product was obtained directly from the Banten Provincial Health Office in December 2020. The distribution of RUTF Plumpy Nut products from the Tangerang City Health Office to the Health Center was carried out in early 2021, however, there is currently no SOP regarding the distribution and storage of RUTF Plumpy Nut.

> *"Indeed, if the special SOP of RUTF does not exist, either from what start, distribution counseling, storage does not exist" (Nutrition Implementation Staff 5)*

There are no obstacles in storing RUTF Plumpy Nut products at the Health Office and Puskesmas, but the stock in the place is still quite large because of the lack of interest in malnourished children under five to consume RUTF Plumpy Nut.

The distribution of RUTF Plumpy Nut to mothers under five was carried out by Nutrition Implementation Personnel. If mothers of toddlers do not come to the Health Center, distribution is carried out by cadres who accompany savory laksa to the house of toddlers. Information on the use of RUTF is not only given to mothers of toddlers, but also given to cadres accompanying savory laksa. Not all Nutrition Implementers provide complete RUTF Plumpy Nut information to cadres because information related to the provision of RUTF Plumpy Nut has been carried out directly to mothers under five at the Health Center. So, there are still cadres who feel that they do not get complete information about the Plumpy Nut RUTF.

> *"I don't think I've ever heard of [Scott] and I don't know what he thinks of the Scots, but I think he has a lot of respect for the Scots."*
> *(Admiral Sturgeon 2)*

If the accompanying cadres are not given more complete information, they do not re-educate about RUTF during a visit to the toddler's home once a week. This can affect the

low information of mothers under five due to the forgetfulness factor, considering that mothers under five are only given information when nutrition control is carried out at the Puskesmas and nutrition control is not carried out regularly.

The delivery of the information that has been provided by the Nutrition Implementation Staff to mothers under five is expected to go well. However, often the information received is different and they answer that they forget and do not remember the details conveyed by the Nutrition Implementation Personnel.

"Forget me.... For this, increase your appetite, huh? "Gain Weight" (Mother) (3)

Toddler mothers only remember how to eat RUTF Plumpy Nut. Even so, there are still mothers of toddlers who give RUTF Plumpy the wrong way. In fact, the Nutrition Implementation Staff has informed mothers under five regarding the provision of RUTF Plumpy Nut.

3. RUTF Grant Monitoring

Monitoring involves the Health Office, Nutrition Implementation Personnel, and accompanying cadres. Based on the Ministry of Health (2020), the Tangerang City Health Office realizes that there is no detailed monitoring specifically for the provision of RUTF Plumpy Nuts. This is reflected in the information obtained from the informant as follows:

"Indeed, we (the health office) have not detailed monitoring the RUTF specifically, yes, special monitoring but only get a report on the acceptability" (Head of the Nutrition Section of the Health Office)

Monitoring the administration of RUTF Plumpy Nut in the field, assisted by malnutrition companion cadres to monitor children's consumption of RUTF Plumpy Nut at the home of toddlers. There are two ways to monitor the administration of Plumpy Nut RUTF, namely direct and indirect monitoring. Direct monitoring is when mothers under five control to the nutrition poly of the health center and visits to the toddler's home by cadres. Indirect monitoring, namely nutrition implementers contacting mothers under five via WhatsApp.

“I'm going to go through the phone and he sent me a picture of it. But for, to monitor him one hundred percent, I don't understand what he means in the sense that I just "how is ma'am?" only through this [whatsapp], I don't know if for example how he is at home, I lack this too."
(Nutrition Implementation Personnel 3)

However, TPG often monitors only when the mother of the toddler comes to the health center, if the mother of the toddler does not come, the monitoring is carried out by the accompanying cadre of the savory laksa.

> *"We are assisted by a cadre of savory admirals to monitor the giving [of the RUTF Plumpy Nut], at least (...)" (Nutrition Implementation Personnel 2)*

Savory laksa companion cadres monitor malnourished children by visiting the house of toddlers once a week. Based on the results of the interview, not all cadres are educated about RUTF Plumpy Nut. They only gave RUTF Plumpy Nut to mothers of toddlers and told them to finish RUTF Plumpy Nut without re-educating about RUTF Plumpy Nut.

> *"If I were to say this, follow what was conveyed by this nutritionist, followed by the question of RUTF, [nutritionist] said that it was very fast to gain weight" (Savory Admiral 2)*

In addition, when monitoring and asking about the food intake of toddlers, the cadres did not record how much RUTF Plumpy Nut was consumed. This can be seen from the application of savory laksa, the food records for toddlers in the RUTF column are not often filled. This will affect the incomplete recording related to the provision of RUTF. The obstacles that occurred in the field were toddlers returning home and mothers of toddlers who were not honest in answering. The existence of these monitoring problems can affect the incomplete monitoring records of the cadres accompanying the savory laksa and the report that will be written by the Nutrition Implementation Staff.

4. Reporting of RUTF Plumpy Nut Grant

Recording and reporting of the administration of RUTF Plumpy Nut in Tangerang City is still lacking because reporting is still mixed with other food intake. Based on the results of Putri's research, et al. (2021) also stated that recording and reporting related to dietary supplements is still considered insufficient because it is only limited to reports on the development of nutritional status, not specifically about dietary supplements. Recording and reporting using the savory laksa application and cohort reports. The savory laksa application is a monitoring report application while the cohort report is an excel application-based report that is sent to the Tangerang City health office once a month. This is in accordance with the Ministry of Health (2010) Recording and reporting can be recorded, among others, on the e-PPGBM application and the cohort of toddlers

The lack of specificity in recording and reporting the administration of RUTF Plumpy Nut makes data related to the administration of RUTF in malnutrition incomplete. In fact, if

the data related to the administration of RUTF is complete, TPG and the Health Office can further evaluate the administration and receipt of RUTF Plumpy Nut in malnourished toddlers

5. Provision of RUTF Plumpy Nut to Toddlers

The results of the study showed that one in eight toddlers liked RUTF Plumpy Nut.

"Finished, one day immediately [RUTF Plumpy Nut] ran out, he [his son] loved it" (mother of toddler 8)

In addition to the child liking the taste of RUTF Plumpy Nut, according to the informant of the cadre accompanying savory laksa, the mother's economic situation is lacking and included in the family is not there so the food is often used as a snack by the mother as a substitute for snacks. This result is reinforced by previous research that stated that in households with limited economic resources, the importance of the potential contribution of RUTF Plumpy Nut for everyday meal replacement (Tadesse, et al, 2015).

Based on the results of direct observation, seven out of eight malnourished toddlers disliked RUTF Plumpy Nut. Mothers of toddlers said that their children did not like RUTF Plumpy Nut.

"he doesn't want to, doesn't like [with RUTF Plumpy Nut]" (toddler mother 5)

The researcher also gave the choice to children under five, the researcher gave RUTF Plumpy Nut, F100 and toddler biscuits. However, toddlers prefer and take toddler biscuits and F100 instead of RUTF Plumpy Nuts. The child's dislike is due to the taste of nuts, too sweet which makes it delicious and boring when consuming RUTF Plumpy Nut. One toddler who could be communicated with said that the taste of RUTF Plumpy Nut was not good because of the taste of nuts. "Not Taste [Taste](....) [Taste] Nuts" (Toddler 1)

In addition to being peanut and too sweet, in accordance with the guidelines for poor nutrition management, RUTF Plumpy Nut must continue to be consumed by toddlers every day. Based on the malnutrition management pocketbook, RUTF consumption must be done every day to achieve the desired nutritional status (Ministry of Health, 2020). This makes children under five feel bored consuming RUTF Plumpy Nut.

Children's tastes and preferences affect the amount of consumption that children spend during a day.

"I should have used up [the RUTF Plumpy Nut] one day but he [the toddler] sometimes I get another [RUTF Plumpy Nut] inserted, not all of it. Sometimes [the RUTF Plumpy Nut] makes it again tomorrow, not a day [pack] is done, ma'am." (Mother of toddlers 3)

When the child refuses, there is no coercion from the mother of the toddler to the child so that they spend the RUTF Plumpy Nut. Children who do not want to consume RUTF Plumpy Nut are left alone by their parents.

> *"Ah now he [his son] mah, if he wants me to give him if he doesn't want it, yaudah" (Nutrition Implementation Worker 3)*

This causes the consumption of RUTF Plumpy Nut is also not routinely done by toddlers. In fact, TPG has provided information that the RUTF Plumpy Nut provided by the health center must be routinely consumed and spent. The non-compliance of toddler mothers can affect the outcomes that toddlers will receive after consuming RUTF Plumpy Nut. If we reflect on the program of giving taburia which is equally given to malnutrition, according to the results of research in Makassar, there is no compliance of mothers in giving taburia to their children so that the outcome obtained is that there is no improvement in nutritional status in the child (Alim, et al. 2011). The outcome received may be the same as non-compliance or non-routine mothers under five in giving RUTF Plumpy Nut because considering the results of giving RUTF can increase weight.

Seeing the reality in the field related to RUTF Plumpy Nut products being disliked by toddlers, it has caused a buildup of RUTF Plumpy Nut products in Puskesmas and Health Offices. Nutrition Implementers, mothers and cadres provided suggestions for improvements in RUTF products. According to them, RUTF products are better given such as dry food, tastes that are not too sweet or tastes that are suitable for children such as chocolate, strawberry, so that children are more attracted to eating RUTF. RUTF product proposal

This must be followed up so that the program of giving RUTF to malnourished children is not like giving taburia where children do not receive taburia well because it tastes and smells like medicine (Helmi, et al. 2011).

If the use of RUTF is the main solution to improve nutritional status and is used in the long term, it is necessary to improve in terms of RUTF products. The development of RUTF in Indonesia has been carried out by many previous researchers, so it would be good for the policymakers to provide RUTF to take steps and collaborate with researchers in Indonesia to make RUTF products that are in accordance with the culture of Indonesian children, especially the city of Tangerang and without reducing the value of the content of RUTF products. So that if that happens, this program can be applied in the long term, toddlers can receive RUTF products and can achieve *the desired weight gain* outcome.

CONCLUSION

Based on the results of the research, the conclusion obtained is that the provision of RUTF Plumpy Nut in Tangerang City has not gone well. There is no special SOP regarding the RUTF Plumpy Nut giving activities so that the RUTF Plumpy Nut giving activity is not optimal.

RUTF Plumpy Nut is not ideal given to malnourished children in Tangerang City because RUTF Plumpy Nut given to malnourished children under five is not well received in terms of taste, portion measurement and ingredients that are not in accordance with the habits and tastes of children in the Tangerang City area.

The suggestions given by the researcher are that it is necessary to conduct further studies on the implementation and usefulness of the RUTF Plumpy Nut program by the Banten Provincial Health Office and it is necessary to carry out new innovations in nutritional intervention products that are more in accordance with the characteristics and needs of children in Banten Province.

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