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Evaluation Of The Implementation Of The Supplementary Food Program In The Prevention Of Stunting In Madatte Village, Work Area Pekkabata Public Health Center, Polewali Mandar District

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ABSTRACT

Introduction: Stunting is caused by malnutrition during the growth and early development of children, thus inhibiting physical development, increasing morbidity rates, inhibiting children's mental development, and can even lead to death. Providing Additional Food (PMT) is an intervention program for toddlers who suffer from malnutrition where the aim is to improve the child's nutritional status and to meet the child's nutritional needs so that good nutritional status and nutritional conditions are achieved according to the child's age.

Method: This study uses a qualitative research method with a case study approach. Interviews were conducted with 7 informants, including 2 key informants and 5 supporting informants.

Results: The study consisted of human resource input in the implementation of the program consisting of health workers and posyandu cadres who distributed PMT to program targets with a budget from the BOK and the facilities and infrastructure provided were sufficient for the program being run, the program was run through the policies given and had been in accordance with the procedures for provision so that the program ran quite well, only the lack of communication or cooperation between officers in distributing PMT in the field, in recording reporting was quite good and the results of the program evaluation ran smoothly and had a visible impact with an increase in nutritional status figures after the program was implemented, although it had not yet affected the stunting reduction rate.

Conclusion: The implementation of the PMT program has been running well and in accordance with the procedures given with a sufficient budget and facilities and infrastructure and the impact obtained after the program was running with an increase in nutritional status figures which will also have an impact on stunting reduction if the program continues to be implemented properly.

Keywords: Evaluation, Stunting, Provision of Additional Food (PMT)

INTRODUCTION

Stunting is a form of growth and development disorder that causes linear growth inhibition in young children due to the accumulation of nutritional deficiencies that occur over a long period of time from pregnancy to 24 months of gestation. (1)

The government has also issued a policy in an effort to Provide Additional Food (PMT) for undernourished toddlers, namely by providing biscuits as additional food distributed through the Health Center to toddlers who are undernourished or severely malnourished. ⁽²⁾ Providing Additional Food (PMT) is an intervention program for toddlers who suffer from undernourishment where the aim is to improve the child's nutritional status and to meet the child's nutritional needs so that good nutritional status and nutritional conditions are achieved according to the child's age. ⁽³⁾

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According to the World Health Organization (WHO), the prevalence of stunting in toddlers in 2018 was 21.9% or 149 million. In 2019 it fell to 21.3% or 144 million. Then it rose to 22% or 149.2 million toddlers who experienced stunting in 2020. ⁽⁴⁾ Globally, around 162 million toddlers experience stunting. Sub-Saharan Africa and South Asia are home to three-quarters of the world's short children .⁽⁵⁾ The area with the highest prevalence of stunting in Indonesia is West Sulawesi Province. Based on data from the Indonesian Nutrition Status (SSGI) in West Sulawesi, the prevalence of stunting in toddlers is the second highest province in Indonesia in 2022. In 2021, the prevalence of stunting in toddlers was 33.8%. According to the results of the Indonesian Nutrition Status Survey (SSGI) of the Ministry of Health, the prevalence of stunting in toddlers in West Sulawesi province was 35% last year .⁽⁶⁾

The area with the highest prevalence of stunting in Indonesia is West Sulawesi Province. The results of the 2018 Riskesdas showed that the prevalence of stunting in West Sulawesi reached 41.6% or the second highest in Indonesia. Although it has decreased from 48.00% in 2013, the prevalence of stunting in West Sulawesi is still very high compared to government targets and WHO standards. Based on the region, in West Sulawesi Province, the prevalence of stunting nutritional status of toddlers based on TB/U (Height for Age) was recorded at 48.0% consisting of very short and short, respectively 22.3% and 25.7%. The prevalence of very short and short toddlers in 5 districts in West Sulawesi, the first is Majene Regency with 58.6%, then PolewaliMandar Regency with 48.5%, followed by North Mamuju 47.8%, Mamuju 47.3% and Mamasa as much as 37.6%. (7)

Based on the results of observations and interviews conducted with one of the Health Service officers, it was stated that the high number of stunting in PolewaliMandar Regency was due to the lack of public understanding regarding stunting and also the lack of public interest in taking their children for examination to the local integrated health post or health center. It was also stated that the stunting handling program was directly given to the Health Center which identified and carried out the Additional Feeding (PMT) program in order to prevent stunting. In the Pekkabata Health Center Working Area in 5 Sub-districts, it was stated that there were more than 281 toddlers who experienced stunting in 2023 and for the Madatte Sub-district area there were 63 toddlers who experienced stunting in 2023, the data was obtained directly from the Pekkabata Health Center.

Related to the second pillar of the strategy to accelerate stunting prevention, it shows how important behavioral change communication is. The second pillar concerns the national campaign and communication of behavioral change aimed at increasing knowledge and social awareness so that it can trigger positive behavior to prevent stunting. The second pillar plays an important role in improving the effectiveness of specific and sensitive nutritional interventions of the Ministry of Health of the Republic of Indonesia. Communication of behavioral change efforts to prevent stunting aims to increase public awareness and change key behaviors. Behavior change communication is discussed for important but not urgent matters (requires a process and time for change). Reducing stunting rates is a long-standing problem. Therefore, key behavioral changes must be sustainable and sustainable. It takes time to change people's behavior. (8)

METHOD

The type of research used in this study is qualitative research with a case study approach. The purpose of this study is to create a description or descriptive of the Evaluation of the Implementation of the Supplementary Food Program (PMT) in Stunting Prevention in the Pekkabata Health Center Working Area in Madatte Village, Polewali Mandar Regency consisting of input , process , output and impact which are compared with predetermined indicators. This study uses purposive sampling , namely the determination of data sources is selected based on consideration of certain objectives. The number of informants in the study was 7 (seven) people consisting of key informants and supporting informants.

RESULTS

The Supplementary Feeding Program has been implemented in terms of reducing stunting that occurred in Polewali Mandar and with the decision that has been made by the local government regarding the acceleration of stunting reduction so that the Supplementary Feeding program was implemented to find out if there were changes in the community after participating in the program. The role of health workers who participate in running the program and knowing the progress of the program so that the program can run well and according to procedure. The characteristics of the informants can be seen in Table 1 below.

Table 1. Informant Characteristics Table

Informant	Age	Education	JK	Position	Information
SA	50	S1	P	Head of the Associate Expert Nutritionist Section	Key Informant

МН	47	S1	P	Nutrition Sub Coordinator/Nutrition Implementing Staff, Pekkabata Health Center	Key Informant
GN	47	SENIOR HIGH SCHOOL	P	Mentari Integrated Health Post Cadres	Supporting Informant
W	51	S1	P	MentariKope Integrated Health Post Cadres	Supporting Informant
STS	33	SENIOR HIGH SCHOOL	P	Public	Supporting Informant
M	43	S1	P	Public	Supporting Informant
DWR	45	S1	P	Public	Supporting Informant

1. Input

a. Human Resources (HR)

Based on the results of in-depth interviews conducted with key informants and supporting informants regarding the availability of Human Resources in the implementation of the Additional Food Provision program in the work area of the Pekkabata Health Center and the PolewaliMandar Health Office, it was said that the nutrition staff had not been met, in the implementation of the program it was said that human resources were said to be adequate in implementing the program. The following is an excerpt from the interview:

"... no, here there is only one PN officer, and if based on job analysis, there are at least 2, it could be 2 or 3 but now there is only 1, to go to the field we have here called nutrition assistants so they are contract children. The contract is 1, the volunteers are 3 people. For the implementation of PMT itself, the human resources are already there so we have a team and divided it into a monitoring team and a cooking team so there are also midwives who also shop and then cook and then distribute so there are each of them that has been arranged ..."(MH, 47)

"... If there are 5 cadres including a village midwife and indeed the rule is that one integrated health post has 5 people ..."(GN, 47)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that the availability of Human Resources in the agency has not been met from what it should be so that it is said that there is still a lack in terms of quantity and quality even though outside the health agency, especially in Posyandu, it has been met, but there is a need for an increase in the number of human resources in the related agency so that in carrying out tasks it is even better.

b. Facilities and infrastructure

In the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area, it is necessary to look at the facilities and infrastructure to support the success of the program and it is also very important for the smooth implementation of the PMT program.

Based on the results of interviews with key informants and supporters regarding facilities and infrastructure, it is said that it is very important to fulfill facilities and infrastructure in running the Supplementary Food Provision program in the Pekkabata Health Center work area. The following is an excerpt from the interview:

- ".... must and very, very important, for example, the first operational vehicle for friends to go to the field is very helpful, especially those who do not have vehicles, it is a shame to reach other areas, the second if for example at the integrated health post the facilities and infrastructure are not complete, how can they take measurements to find accurate data if that is not sufficient, then the other thing is when they arrive at the office they want to process the data, especially since the laptop that is needed is very necessary, especially now for nutrition officers there is a PPGBM application that aims to help in viewing nutritional status data with general nutritional reports ..."(SA, 50)
- "...facilities are important in running the program because if they are incomplete or lacking, it will be difficult for us to run the program, so I think it is important..." (W, 51)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that in the successful implementation of the Supplementary Food Provision program in the Pekkabata Health Center work area, it is very important to have the facilities and infrastructure provided so that it can facilitate the implementation of the program.

Interview excerpts from key informants and supporters who said that the availability of facilities provided has been partially met but still needs to be provided again to support the sustainability of the implementation of the Additional Food Provision program in the Pekkabata Health Center work area. The following is an excerpt from the interview:

- ".... For PMT, we are supported by facilities and infrastructure here, so I think it is complete, it's just that there is only 1 official vehicle, if 1 is not enough, I think because we have 5 regions, it means that the vehicle facilities are not sufficient ..."(MH, 47)
- "... in my opinion, I am not yet satisfied because there are still not enough vehicles to deliver food to people's homes ..." (W, 51)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that a small part of the infrastructure provided has been fulfilled, only that the facilities in the form of vehicles used to run the PMT program are not sufficient or are still lacking in fulfilling the PMT program.

c. Target Program Recipients

In the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area, there are targets that have been recorded from the previous Posyandu specifically to receive the Supplementary Feeding program that will be implemented.

Based on the results of interviews with key informants and supporting informants, it is said that the target recipients of the Supplementary Food Provision program are said to be in accordance with the target and target community who need to receive the Supplementary Food Provision program in the Pekkabata Health Center work area. The following are the results of the interview:

- "... yes, because we look at children whose weight is below the line, then we see whether their nutritional status is good or malnourished ..." (GN, 47)
- "... the target recipients were only given 1 criterion, well, for later this has been relaxed, there are 3 criteria that can be obtained, then we determine it from the data obtained from the integrated health post, which every month there is an examination at the integrated health post, then we make a data collection and after it is obtained, there are so many who need to receive the program ..." (SA, 50)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed stating that the target in receiving the Additional Food Provision program in the Pekkabata Health Center work area has been in accordance with the target or in accordance with the target that has been taken from the existing data

d. Funding/Budget

The availability of budget in the form of funds needed to support and meet all needs to implement the Supplementary Feeding program in the Pekkabata Health Center work area. Without a maximum budget, the program will be implemented and will not achieve its goals and objectives.

Funding for the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area comes from BOK funds, while funding from the PolewaliMandar Health Office for Health Centers comes from the Center or local ministries. The following is an excerpt from the interview:

- "... enough, funding from BOK funds, whether it is sufficient or not, is according to the target because we are limited by the target given and the budget allocation, so it is according to the budget. If funded by BOK, if it is for toddlers, the budget is 16,500 for 1 toddler, if for pregnant women it is 21,500, that's where we divide it from 80% of the funds for purchasing ingredients, 15% for cooking wages, 5% for administrative costs..." (MH, 47)
- "...I don't know about the funding, it's only the health center that arranges it, but those involved in this program, such as cooking, shopping, distributing, each of them has their own salary, but it usually takes a long time to get it..." (GN, 47)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that the funding provided by several informants received a budget to support the implementation of the PMT program sourced from the BOK for the Pekkabata Health Center while the budget at the PolewaliMandar Health Office came from the center or local ministry, however, the cadres stated that the budget provided was managed by the Health Center and the cadres only distributed the budget regarding the incentives which were still not optimally provided.

e. How to Organize

The guidelines and procedures used in the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area. Based on the results of in-depth interviews with key informants and supporting informants who stated that there are procedures and SOPs in the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area. The following is an excerpt from the interview:

"... yes, there is definitely an SOP for each program and it has been determined beforehand so from the Health Service we conveyed it at the beginning so to ensure that this program runs according to standards and achieves the expected target..." (MH, 47)

"... yes, there is an SOP for each procedure, we are told how to prepare the program until it is running..." (GN, 47)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that any health worker involved in the implementation of the Additional Food Provision program in the Pekkabata Health Center work area is given steps or processes according to the SOP provided in implementing the program.

Interview excerpts from key informants and supporters who said that there were several obstacles in implementing the Supplementary Feeding program in the Pekkabata Health Center work area. The following is an excerpt from the interview:

- "... the first obstacle was because this and that were new, so at the beginning we still didn't understand the technical aspects of how it worked ..." (SA, 50)
- "...the problem is that we are the ones who deliver the food if there is no vehicle and the house is far away..." (W, 51)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed explaining that there are obstacles because the program is relatively new and there are still shortcomings, but there are informants who state obstacles from the food delivery section for people who participate in the Additional Food Provision program in the Pekkabata Health Center work area.

f. Program Policy

There is a policy regarding the decision to implement the Supplementary Food Provision program in the Pekkabata Health Center work area.

Based on the results of in-depth interviews with key informants and supporting informants, the Supplementary Feeding program policy has been given and implemented directly, as well as technical guidance provided in implementing the Supplementary Feeding program policy in the Pekkabata Health Center work area. The following is an excerpt from the interview:

"... we just refer to the central policy, the technical guidelines are from the center, the funds are also from the center, but here we are only given the coordinator's trust, so it is from the central policy, not from the regional policy, the basics of all of that are from the center, all of which are then conveyed to us in each region. Yes, there was technical guidance given yesterday via zoom..." (SA, 50)

The interview excerpt differs from that conveyed by the supporting informant who stated that he did not know about the Additional Food Provision program policy in the Pekkabata Health Center work area. The following is an excerpt from the interview:

"...I don't know what the policy is, but maybe the requirements and standards for implementing the program have been discussed in the previous preparatory meeting..." (GN, 47 years old)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed stating that the determination of policies in the Supplementary Food Provision program states that the determination of policies is directly from the Center and the Health Service coordinates again, while informants stated that they did not know about the implementation of policies in the implementation of the Supplementary Food Provision program in the Pekkabata Health Center work area.

2. Process

a. Planning

The process of preparing the Supplementary Food Provision program in the Pekkabata Health Center work area from determining the targets for receiving the Supplementary Food Provision program.

Based on the results of in-depth interviews with key informants and supporting informants who stated that the target had been previously determined through data obtained from the weight of children below the line. Here is an excerpt from the interview:

- "...for the determination of the target, yesterday it was directly from the nutrition program, yesterday the determination of the target was if in the technical instructions it could be toddlers who are malnourished, after all malnutrition is BB/TB then toddlers who are malnourished by age then toddlers who are not increasing, but in the process it turned out that the target was narrowed down to only toddlers who are malnourished according to BB/TB, from the BOK fund there was a determination of how much the target was..." (MH, 47)
- "...from the data seen below the scale line, it is not us who determine it, it is the health center that determines the target..." (GN, 47)

Based on the results of the interviews conducted by the researcher, it can be seen from all key informants and supporting informants who have been interviewed stating that the determination of targets is seen from toddlers who are malnourished and below the BB/TB line, while supporting informants said that the determination of targets is determined directly by nutritionists at the health center from the cadres themselves who directly receive the results of the data provided.

Interview quotes from key informants and supporters who said that planning began with a preparatory meeting to discuss procedures for implementing the program, followed by monitoring carried out while the program was running.

- "... the planning, yes, started from the preparatory meeting, we conveyed the procedure on how to cook the groceries, then after the meeting we handed over the tasks for them to carry out, we were the ones who measured the ingredients, we also continued to monitor them, so that was the monitoring of each target, we weighed it, now the obstacle was that from the technical instructions, the target community should have received PMT to come to the PMT kitchen and then eat there, but during the implementation process, we waited until the evening, the community did not come, they were also waited for until it was finished, it would have taken a long time, so we took our own initiative, we changed it to being delivered to them ..." (MH, 47)
- "... as far as I know, at first we did it like a meeting so there were cadres and health workers from the village head and also from the health center. There we were given the procedures for preparing for this PMT ..." (W, 51)

Based on the results of the interviews conducted by the researcher, it can be seen from the supporting informants who were interviewed stating that there was a preparatory meeting attended by officers and the local government to discuss the program implementation procedures from initial implementation to monitoring.

b. Organizing

In the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area, it is inseparable from the people involved in the division of tasks in the program and also from the cooperation of cross-sectors involved in the implementation of the Supplementary Feeding program in the Pekkabata Health Center work area. The following is an excerpt from the interview:

- "...if there is a contract for inputer specifically for input, so I divide my area, I have 4 workers, so I divide them, some are in areas with many targets, some are in areas with few targets, then we cooperate with a third party, yes, so the third party takes care of some of the shopping, cooking, they also distribute it, but we calculate the food needs with the nutritional value in the PMT..." (MH, 47)
- "... yes, the distribution has been arranged because we attended training yesterday to prepare for PMT, where the distribution was explained to each other and we also went down to the field to work individually with our assigned tasks..." (GN, 47)

Based on the results of in-depth interviews with key informants and supporting informants, it was stated that in the implementation there was a division of work that was specifically for each section in implementing the program, and in data input there were inputter officers in inputting data, while supporting informants said that the division did not go well because they only carried out their own tasks without involving the midwives who were also on duty.

Interview excerpts from key informants and supporters who said that there was collaboration across sectors and with people involved in the Supplementary Feeding program. Here are the interview excerpts:

- "...for our cooperation we involve local sectors such as RT RW heads and so on, for cross-sector communication here it is very good, all the responses to the cooperation are also going well..." (MH, 47)
- "...from the head of the neighborhood and the local village head, if the communication is good, the village head usually also monitors the head of the neighborhood and the local village head...." (GN, 47)

Based on the results of in-depth interviews with key informants and supporting informants who stated that there was cross-sector cooperation and that it had been carried out well and also that there was cooperation carried out with the government in local villages in implementing the Additional Food Provision program, then from supporting informants said that there was cooperation with the sub-district and local environmental heads which was carried out well.

c. Mobilization and Implementation Process

The process of activities or implementation that took place in the Additional Food Provision program in the Pekkabata Health Center work area has been running well as per the procedures and techniques that have been carried out. The following is an excerpt from the interview:

"...if the implementation has been running with the given procedure so we use a 7-day menu cycle, well from the 7 days we provide complete food for 1 day, well for the 6 days we provide snacks that are rich in nutrients so it has been measured, indeed we also convey all of that to the health center to direct so we leave it to the health center because they are the ones who carry it out next..." (SA, 50)

"...yes, it has been implemented, but we are waiting for them to distribute it regularly to the community whose targets have been set..." (GN, 47)

Based on the results of in-depth interviews with key informants and supporting informants who stated that the implementation of the Additional Food Provision program in the Pekkabata Health Center work area had been running with the procedures provided, then other supporting informants also stated that they did not know for sure because the cadres were not involved.

d. Monitoring and Evaluation of Supervision

Monitoring activities and supervision activities of the stunting prevention program aim to determine the progress of the implementation of the stunting prevention program and provide suggestions for solving problems if there are obstacles in the field. (9)

The activities carried out were monitoring and evaluating the implementation of the Additional Food Provision program in the Pekkabata Health Center work area, which stated that direct monitoring had been carried out by the health center in implementing the program. The following is an excerpt from the interview:

- "....So the evaluation is that we provide food every day, there are heavy meals and snacks, so every day we deliver everything that has been measured, then once a week the nutrition officer routinely comes down to weigh and check, we also see how the development is..." (MH, 47)
- "...that is the provision of food that has been measured, but they are given other menus every day, usually chicken, nugget balls and various things. For routine checks, they usually come once a week to weigh them and ask about their progress..." (W, 51)

Based on the results of in-depth interviews with key informants and supporting informants, it was stated that the evaluation and supervision process had been carried out in accordance with the procedures and had been good in implementing the Supplementary Food Provision program in the Pekkabata Health Center work area.

Interview excerpts from key informants and supporters who said that the recording and reporting process that was carried out was quite good. The following is an excerpt from the interview:

- "... from the cadres that we have trained to join the team, there is a final monitoring format and then an evaluation of the provision, they are the ones who monitor whether their weight is sufficient or not, they measure it after that they report it to the nutrition officer...." (SA, 50 years old)
- "...we know about nutrition, here we are from each region, the integrated health post here looks at the target so we know, we are the ones who record it directly for the weight so we know..." (GN, 47 years old)

Based on the results of in-depth interviews with key informants and supporting informants, it was stated that the recording and reporting process had been running quite well in each of the responsibilities given in obtaining data from the community.

3. Output

Indicators of success in achieving goals that measure how the Supplementary Feeding program in the Pekkabata Health Center work area was successfully implemented. The success of the program is seen from the level of achievement in reducing stunting or nutrition rates from the program that has been implemented.

It is said that from the informants who have been interviewed, the achievement of the program is a decrease in the number of nutritional improvements in preventing stunting after the implementation of the Additional Food Provision program. Based on the results of in-depth interviews with key informants and supporting informants who stated that:

"...there are some changes and it really has an impact, yesterday there were around 50% whose nutrition was good, their weight was also good, so in preventing stunting, their nutrition has been handled from more than 100 children, so the target is around 30 to 40 children who are said to have good nutritional improvements, for significant changes it is not visible but there must still be changes and indeed to assess whether stunting cases have decreased or not, it actually has to be continuously monitored, but the problem is that the community rarely comes to the integrated health post so it is difficult for us to monitor...." (MH, 47)

The interview excerpt is different from that conveyed by the supporting informant who stated that the Additional Food Provision program that took place yesterday had not been optimally implemented and had not been completely successful. Here is the interview excerpt:

"....If this program is implemented, I think it will not run optimally because officers in the field do not communicate well and the facilities are lacking..." (GN, 47)

Based on the results of in-depth interviews with key informants and supporting informants who stated that the achievements obtained from the Supplementary Feeding program in the Pekkabata Health Center work area were said to have been achieved seeing the success of reducing the number of malnutrition that caused stunting although it was not significant in reducing the number of stunting, then from the supporting informants stated the difference which said that the Supplementary Feeding program had not been implemented optimally.

4. Impact

An impact aimed at the Supplementary Feeding program in the Pekkabata Health Center work area to see the extent to which the program has an impact on preventing stunting.

It is said that the key informant who has been interviewed stated that the impact generated from the program is seen from the achievement of the Additional Food Provision program in the Pekkabata Health Center work area which is said to have a success that has an effect on the community who participated in the program. The following is an excerpt from the interview:

- "...this is the target for PMT, namely malnutrition and those whose weight does not increase, so actually there is a relationship but not directly, if the indirect relationship is there because malnutrition is also one of the triggers for stunting, so if we deal with malnutrition, we can prevent stunting from occurring in children who have a history of stunting with malnutrition as well, so the achievement of this program is that we see their malnutrition, so we can prevent them from stunting, so we fulfill their nutrition from this program, so the impact of this program on stunting is there, we can see it, although for now it is not that significant because the program is also just running, so for the future we will see again how...." (MH, 47)
- "...not yet, I think, we still have to pay attention to the facilities and continue to monitor officers in the field so that those who work alone can be informed so that in the future the program can be even better..." (GN, 47) Based on the results of in-depth interviews with key informants and supporting informants, it was stated that the achievements in the Additional Feeding program in the Pekkabata Health Center work area that had been implemented had had an impact or influence in improving toddler nutrition in preventing stunting and obtaining good results during the program.

Interview excerpts from key informants and supporters who said that in achieving the target, it was said that it had not been fully achieved in terms of reducing stunting, but in improving malnutrition it was quite good. Here is an excerpt from the interview:

- "...if only through PMT, we provide additional food provision to possibly change the nutritional status of children in a short time, it is impossible, then for monitoring, this actually has to be routine and continuous, but because we have limited manpower and facilities, we do not monitor it routinely, so if we want to achieve the target in reducing stunting in this PMT program, it has not been achieved, but we have achieved the program's achievements, the program's success is there..." (MH, 47)
- "...if we reach the target, it seems like it hasn't been achieved yet because this program is still new so it can't be said that it has reached the target, but we are trying to make it happen in the future if this program is long-term..." (W, 51)

Based on the results of in-depth interviews with key informants and supporting informants, it was stated that the target achievement through the Additional Food Provision program in the Pekkabata Health Center work area had not been met and efforts were still being made to meet the target in running the program.

1. Input

a. Knowledge

Providing knowledge from health counselors is the best effort to provide additional information or knowledge for people who do not yet understand the Additional Food Provision program.

The results of in-depth interviews conducted with supporting informants in the community who have participated in the Additional Food Provision program stated that socialization regarding PMT was not given to the community but was only directly recorded. The following is an excerpt from the interview:

"...the problem of stunting is there, if there is no program, it is only recorded at the integrated health post and then the KMS is seen, the value decreases, even though the health does not match the height, weight and age of a toddler, so... it's just that as far as I know, it's an assistance program from the health office, so it goes down to the health center, the health center goes down to each integrated health post, that's what I know..." (M, 43)

Based on the results of the interviews conducted by the researcher, it can be seen from all participating informants that the provision of socialization regarding the Additional Food Provision program has not been given to the community but has only been directly recorded or registered from the Integrated Health Post so that some of the community still do not understand the Additional Food Provision program provided.

From other interview results obtained from supporting informants in the community who have participated in the Additional Food Provision program, they said that during the program, the health center often came to monitor and also weigh and provide nutritional counseling to the community. The following is an excerpt from the interview:

"...yes, it's normal, if the midwife comes from the health center, it's normal like every week she comes to weigh me... and delivers food, not only that but they also weigh me and ask about my progress and so on, there's also a doctor from the health center who comes to deliver information, but it's normal at the integrated health post every month..." (STS, 33)

Based on the results of the interviews that the researcher has conducted, it can be seen from all the informants who participated that the monitoring that was provided had been carried out routinely and well as directed.

2. Output

Indicators of success of the achievement in the implementation of the Supplementary Food Provision program in the Pekkabata Health Center work area involving the community participating in the program. The results of indepth interviews conducted with supporting informants in the community who have participated in the Supplementary Food Provision program stated that the Supplementary Food Provision program

"...if we, the community here, are very helpful, especially for people below the poverty line, it is very helpful, the government's program is good if we don't come to the Posyandu to weigh those who come to the house to become cadres and health workers know the development of the child too, so in my opinion this program is quite good for children with malnutrition and is said to be stunting because it can help prevent or reduce the impact of stunting. but the drawback is usually the snacks that are usually served, my child doesn't like it so his mother eats it like sempoltahuisi, not all children like it...." (M, 43)

Based on the results of in-depth interviews with key informants and supporting informants, it was stated that the food menu provided for the PMT program was not really liked by children, so that sometimes the mother consumed the food and did not give it to her child.

DISCUSSION

1. Input

a. Human Resources (HR)

Human Resources (HR) are the main point that is the spearhead of the implementation of the stunting prevention program. If the program to be implemented is good, both in terms of implementation and evaluation, but if the implementers are not sufficient and do not match their field of knowledge, it will be difficult to achieve the maximum program to be implemented. (10)

Human Resources in the implementation of the program at the Pekkabata Health Center, the implementing staff are sufficient in the implementation of the Supplementary Feeding program, there is a division of tasks into several teams in terms of monitoring and cooking or management and the delivery section that has been selected to be responsible for their respective tasks so that there are no obstacles related to human resources in the implementation of the Supplementary Feeding program, but it is said again that for human resources from the nutrition officer section it is said that it is still inadequate from the nutrition assistants given to contract workers and volunteers who are divided into several areas such as 1 nutrition officer is responsible for several areas that are given.

b. Facilities and infrastructure

The availability of facilities and infrastructure is very important in implementing a health program because targets and infrastructure are supporting tools to achieve the goals of a program. Health facilities and infrastructure include how many health facilities, counseling and information centers for individuals in the community.

The results of the interview stated that this program has been implemented with adequate health facilities, although there were also some informants who stated that this program has not been implemented properly due to inadequate facilities such as those stated in the facilities for vehicles used in delivering food to people who receive PMT are still not available or there are no costs provided so that officers still have difficulty in bringing food to people who are far away or people who do not come to pick it up at the PMT kitchen, but for the implementation of the next program it is said that they are still trying to provide and improve the performance of the facilities needed in the implementation of the Additional Food Provision program.

Then, for the facilities for health workers, they have been adequate, from the scales to the recording books, then for the preparation of food, it has been well organized so that in the implementation of the program it is carried out by maximizing the existing facilities and in the future efforts will be made to provide facilities to facilitate the implementation of the Additional Food Provision program in the Pekkabata Health Center work area.

c. Target Program Recipients

Determining the target who will receive the additional recovery food program is a process carried out to determine who will receive the additional food package. Nutritionists from the Health Center are tasked with the program assisted by other health workers. Finding cases of nutrition can be done through weighing all toddlers simultaneously at the Integrated Health Post in addition to monthly weighing. (11)

Based on the results of in-depth interviews, several informants stated that the targets given were in accordance with the targets and right on target, which were obtained from the results of data that had previously been examined or screened, then from the Integrated Health Post (Posyandu) where the community checked their children's health, which was usually done once a month, and it was found that the community had children whose weight was below the line and who were malnourished, then from this data the targets who received PMT were determined.

d. Funding/Budget

The provision of additional food (PMT) is funded from the Health Operational Assistance (BOK) fund. The source of the BOK fund is the APBN through the Ministry of Health's Assistance Task fund. BOK is an effort by the central government to help regional governments achieve national targets in the health sector which is the responsibility of each region. BOK is an operational cost specifically allocated to help each health center. Based on the results of in-depth interviews, several informants stated that the budget was sufficient in implementing the Supplementary Feeding program, it was said that the budget came from the center and there was a division that had been given, such as 80% for purchasing PMT materials, 15% for wages of workers who took part in the program, then 1% for administrative costs, it was also said that the funds provided were usually only used half due to the results of the screening carried out so that the remaining funds were returned to the treasury, then for the health center there were funds from the BOK for the PMT program which were given according to the targets given. As for informants who stated that they did not know where the funds provided came from, they only carried out the tasks given in running the PMT program.

e. How to Organize

Based on the results of in-depth interviews, several informants stated that the implementation of the Additional Food Provision program already has an SOP that is given before the program is run, starting with a preparatory meeting before the program runs in the meeting, the cooks, village midwives, cadres in each region and the local government or village head are presented or invited, then in the meeting they provide direct practice in how to cook food which should be done by maintaining cleanliness, then discussing the food ingredients that will be purchased to be provided later, then from the delivery of food to the targets who receive the PMT program after the preparatory meeting is complete, they immediately go to the field and are given responsibility in each region to run the PMT program that has been previously directed but remains under the supervision of the nutrition officers of the Pekkabata Health Center, then there is a weekly check to weigh toddlers.

f. Program Policy

The policy issued by the local government is in accordance with PolewaliMandar Regent Regulation Number 3 of 2003 concerning the Acceleration of Stunting Reduction in PolewaliMandar Regency in Article 1 Number 11 which states that priority interventions are interventions that are identified as having the greatest impact on preventing stunting and are aimed at reaching all priority targets, including providing additional food for thin toddlers and monitoring growth and also for pregnant women and developments in the implementation of stunting control programs so that the implementation of programs that have been previously agreed upon in accordance with applicable regulations to find out whether the programs being run have a good effect on the community in the future.

Based on the results of in-depth interviews, several informants stated that the implementation of the Supplementary Feeding program was carried out by a policy from the center given to each region to implement the Supplementary Feeding program to become one of the processes in reducing stunting. The policy given did not come from the region but from the central government, the Ministry of Health, previously also provided technical guidance on how this PMT program runs to the Health Office, from the Pekkabata Health Center, the determination of the policy was given by the Polewali Health Office, there were technical instructions delivered through meetings at the beginning of preparation and implementing the standards and targets that had been set which were given by the central government or from the Ministry of Health itself.

2. Process

a. Planning

Planning is one of the health management functions that must be implemented by the health center in an effort to achieve the goals of a program. Planning also determines the work that must be carried out by the group to achieve the goals that have been outlined. In planning an activity or program, of course, we will create a target or achievement that we want to achieve so that all toddlers avoid stunting problems. (13)

Based on the results obtained after the interview, it was found that the planning of the Supplementary Feeding program in preventing Stunting was a plan provided by the central government which had conducted initial discussions by the local government to implement the program and from the Health Center it was said that the Supplementary Feeding program had been implemented quite well and was running well. The funding obtained from the BOK funds provided was sufficient to run the Supplementary Feeding program, it was even said that the funds provided were more than those used because they were seen from the targets obtained in participating in the program so that the remaining funds were returned and put into the cash itself.

Based on the results of in-depth interviews, informants stated that the planning process for the Supplementary Food Provision program in the Pekkabata Health Center work area was carried out by determining targets through screening data obtained from nutrition, then the determination was seen from toddlers whose BB/TB were lacking or below the line that should be, then toddlers with malnutrition compared to age and toddlers who

did not increase. From the data obtained, the targets for receiving the PMT had been determined, then before the program implementation began, a preparatory meeting was held to discuss the procedures or processes for running the program from cooking to selecting ingredients which were still carried out by nutrition officers and the measurements were regulated, then the delivery process if there were people who did not take the food so that it was delivered to the target places.

Then from the results of in-depth interviews, informants stated that the planning process for the Supplementary Feeding program in the Pekkabata Health Center work area began with screening in determining the targets in the program, then a preparatory meeting was held which was attended by the local government, then from the Health Office, the Health Center, the head of the nutrition section, then from midwives and cadres of each Posyandu. In the preparatory meeting, several procedures and rules were discussed, as well as the division of each officer that needed to be done in terms of cooking, shopping and also distribution. After being implemented, every week, nutrition officers from the health center will monitor and weigh each house of the community that is targeted in this PMT program to see the developments during the program.

b. Organizing

Organizing is a process of designing formal structures, grouping, arranging and dividing tasks or work among members of an organization, so that the organization's goals can be achieved properly. The purpose of this organization is to achieve organizational goals where individuals cannot achieve them alone so that groups are needed to achieve goals. (14)

Based on the results obtained after the interview, it was found that there was a division of tasks that had been arranged for each officer in carrying out their duties in inputting the data obtained, then from the data screening was carried out in determining the target, then each posyandu was also given each task in distributing food to the community who were targeted by the program because many people did not come to pick up their food so they were given the task of delivering it to residents' homes.

The results of interviews with other informants stated that there were obstacles in the field, namely that midwives who were given joint responsibility for shopping and cooking, but one of the midwives completed her duties alone without confirming to the other midwives and cadres who were on duty together, which should have been done by different officers, but the midwife did her own duties and only when she was finished and was going to share them was it conveyed to other officers to share them, so that the other midwives did not do their duties.

The results of interviews conducted with informants also showed that there was cross-sector cooperation that collaborated in implementing the program from the regional government, local government, PMT implementation teams at the sub-district and village levels. It was also said that communication with cross-sectors was very good and all helped in launching this Additional Food Provision program in the Pekkabata Health Center area.

c. Mobilization and Implementation Process

Mobilization is an action carried out by leaders in influencing people to carry out efforts towards achieving the target. Planning and organizing actions that have been carried out by involving the participation of subordinates in carrying out activities that have been agreed upon together. (15)

Based on the results obtained after the interview, it was found that the implementation was carried out smoothly and the community and cross-sectors both from the local government and from the local government in the sub-district who worked together in helping to implement the PMT program so that it could run well, then the implementation of the program carried out by health workers who had been given the task of distributing the Additional Food Provision packages from the Health Center consisted of nutritionists, midwives and cadres and it was also said that the implementation of the program had run in accordance with the procedures given, it was said that using a 7-day menu cycle.

During the 7 days, the community targeted by the program received snacks and complete meals, the rule is that complete meals are given on Monday and only one day in 7 days, then in the next 6 days they are given snacks or snacks that have been nutritionally regulated in such a way, for example snacks or foods that are usually given are stuffed tofu, biscuits, nugget balls, lemper, chicken and others. In the study, it was stated that in the implementation of this MT program, cross-sector cooperation is needed so that the goals can be achieved and the results can be optimal, it has been shown that the distribution of Additional Food packages in the work areas of the two health centers was carried out by nutrition workers, cadres and midwives.

d. Monitoring and Evaluation of Supervision

The monitoring process that needs to be implemented so that the implementation of activities runs well and can be directed towards the planned goals. Every program has shortcomings so that monitoring needs to be carried out as often as possible so that the program can continue to run better in the next implementation and can

improve and achieve the expected goals. The control function involves monitoring, comparison and evaluation.

Monitoring activities and supervision activities of the stunting prevention program aim to determine the progress of the implementation of the stunting prevention program and provide suggestions for solving problems if there are obstacles in the field. (17)

Based on the results obtained after the interview, it was found that the program runs for 90 days or 3 months, monitoring and supervision are carried out routinely every week on Saturdays or Sundays, the Nutrition Health Center officers who will come to supervise during the program will carry out monitoring during the program and will come to each house that is the target of the program to carry out monitoring and also weighing to see the development during food consumption.

3. Output

Indicators of success in achieving objectives that measure how the Supplementary Feeding program in the Pekkabata Health Center work area was successfully implemented. The success of the program is seen from the level of achievement in reducing stunting or nutrition rates from the program that has been implemented. Output is the result of a job in this case the Supplementary Feeding program in the Health Center Work Area. Output can be done by creating operational definitions and measuring the measurement criteria that have been achieved (objective), through collecting values from stakeholders. (18)

Based on the results obtained after the interview, it was found that the achievement of the PMT program in the Puskesmas work area was said to be good, although there were still some parts that needed to be improved to support the improvement of the next PMT program. It was also said that through this program, at least we can see that there are still many children who are malnourished so that we can prevent stunting from happening so that from the PMT phrase, it can be prevented for the community from stunting and can meet nutrition through this PMT program. Some informants said that the achievement of the PMT program was said to have not run optimally due to problems that occurred in the field in the division of tasks that the Puskesmas did not know about and only field officers such as Cadres and Village Midwives.

4. Impact

Based on the results obtained after the interview, it was found that there was a visible impact after the 3-month Additional Food Provision program, there was an increase in weight in toddlers, although it was said to be insignificant, but from the monitoring results it could be seen that there were changes that occurred and had an effect after participating in this PMT program, around 50% of toddlers' weights were said to be good so that stunting prevention had been handled in terms of nutrition from more than 100 toddlers, 30 more had changes. It was also said that in assessing stunting cases, it was necessary to monitor them continuously, but the community still rarely came to each Posyandu to be examined. Several informants also said that the PMT program had not been implemented properly and needed improvements in further implementation.

Then from the interview conducted it was said that in achieving the target is still being attempted because the Supplementary Feeding program is still new so that in the future it is hoped that with the routine implementation of this PMT program it can reduce stunting that occurs and also the expected target achievement has not been achieved due to the need for routine and continuous monitoring due to limited facilities, also said that the target achievement in reducing stunting has not been achieved but the achievement in the Supplementary Feeding program has been achieved and successfully implemented. In the study of Agustinaet al in 2024 stated that the impact given showed that the impact was still detrimental and also the program had not succeeded in dealing with the problem of stunting but the program that was run was quite good but still not optimal because it had not been able to change the lifestyle and habits of some people and carry out an education process that takes quite a long time. (19-23)

1. Input

a. Knowledge

A mother's level of knowledge can affect their understanding of nutrition and health. The mother's level of knowledge can have an impact on the mother's behavior and attitude in providing food to toddlers. Mothers who have less knowledge about nutrition and health can cause an imbalance in providing healthy food for toddlers, which is very important during their growth period. (19)

Based on the results obtained after the interview, it was found that the community was not previously informed or educated about the Additional Food Provision program. It was said that the targeted community was previously registered and informed that their children were receiving the PMT program, which was previously recorded first, then officers looked at their KMS and the scales that were not appropriate or below average. The community with toddlers who were targeted still had minimal knowledge about the PMT program and what PMT was because they were not informed beforehand or there was no delivery and they only followed and accepted the food that was brought.

Then, from the interviews conducted, it was stated that the community targeted by the PMT program stated that during the program, officers from the health center routinely visited each house to monitor and weigh them once a week, as well as provide counseling at the Integrated Health Post.

b. Output

Indicators of success in achieving goals that measure how the Supplementary Feeding program in the Pekkabata Health Center work area was successfully implemented. The success of the program is seen from the level of achievement in reducing stunting or nutrition rates from the program that has been implemented. Output is the result of a job in this case the Supplementary Feeding program in the Health Center Work Area.

Based on the results obtained after the interview, it was found that the community who received the program's target said that the program provided by the government was very helpful and quite well received by the community. According to them, the PMT program was very helpful in reducing stunting in terms of improving nutrition and proving that the children who were targeted after running the program experienced weight gain and improved good nutrition, only the mothers of toddlers who received food said that many did not really like the food given, such as cheese balls, so they were not given to their children but their mothers ate it.

CONCLUSION

The implementation of the Supplementary Feeding program in the Pekkabata Health Center Work Area has been ongoing, from the Input indicator it was found that human resources from nutrition were still lacking in handling supervision in the field, but in terms of program implementation, officers were said to have been sufficient from the budget for facilities and infrastructure for the program to be covered well and the targets that received the program were met in accordance with and regulated with data previously obtained in the examination at the Integrated Health Post, the program policy provided by the central government was then conveyed back to the local government and the health office in providing the procedures that had been determined, knowledge about the PMT program for mothers of toddlers was still lacking because counselors were not given regarding the PMT program, it was said that the PMT program provided was very helpful for the community, especially those in the lower middle class and could also help improve nutrition for children. Process indicators were obtained in the implementation of the program which went quite well with the cooperation of various cross-sectors that helped participate in the implementation and there was a preparatory meeting that discussed the preparation and procedures for the implementation of the program and the division of officers who would distribute food to the community who were the targets of the program which implemented a 7-day menu cycle for 3 months, then recording of reporting and supervision carried out by nutrition officers who visited each house to weigh and check once a week, the obstacles obtained were the lack of cooperation or communication from officers in the field which were not known by the Health Center. Output indicators obtained that there was an achievement from this PMT program after running for 3 months, there was an increase in the number of nutritional status to be better by the targets who participated in the program. Impact indicators there was an impact that was seen from the PMT program that there was an increase in nutritional status, weight gain above the line so that from the results obtained it was possible to have an effect on reducing stunting even though it was not significant if the pattern was implemented properly

REFERENCE

- 1. Khoeroh H, Handayani OWK, Indriyanti DR. Evaluation of Nutrition Management of Stunting Toddlers in the Working Area of Sirampog Health Center. Unnes J Public Heal. 2017;6(3):189.
- 2. Wahyunigsih S, Devi mike indriana. Evaluation of the Supplementary Food Provision Program (PMT) for Undernourished Toddlers at the Jakenan Health Center, Pati Regency. J Nursing and Public Health. 2017;6(2):1–86.
- 3. Hosang KH, Umboh A, Lestari H. The Relationship between Providing Additional Food and Changes in the Nutritional Status of Undernourished Toddlers in Manado City. e-CliniC. 2017;5(1).
- 4. Theresia TT, Lestari S, Hutagaol M. Evaluation of the Implementation of Nutrition Programs Related to Stunting Incidence at the Palmerah District Health Center. J Kesehatan Tambusai. 2023;4(3):2332–9.
- 5. Phitra FA, Lipoeto NI, Yetti H. Evaluation of the Implementation of the Stunting Prevention and Reduction Program in Stunting Locus Villages, Merangin Regency in 2022. J Health Policy Indones. 2023;12(3):127.
- 6. Fitriani L, Wahyuni S, Usman A, Jamir AF, Purnama A. JAI: Journal of Community Service ITEKES Bali Institute of Technology and Health (ITEKES) Bali Counseling And Practice Of Healthy Food Menus For Toddlers To Prevent Stunting In Anreapi Village (Counseling On How To Present Healthy Menu To Toddlers To Prevent Stunting I. 2023;3(1):47–51.
- 7. Kaharani Putri W, Warajati Kisnawaty S, Fatimah N, Hasniati A, Asih B, E. Cross-Sectoral Stunting Prevention Program Evaluation of Cross-Sectoral Stunting Prevention Program. J Kesehatan Wira Buana. 2023;14(7):2541–5387.

- 8. Jayadi YI, Syarfaini S, Ansyar DI, Alam S, Sayyidinna DA. Evaluation of the Additional Food Provision Program for Toddlers During the Covid 19 Pandemic at the Gowa Regency Health Center. Al GIZZAI PUBLIC Heal Nutr J. 2021;1(2):89–102.
- 9. Muin IA, Musiana, Marwati E. Evaluation of Nutrition Program Management in Stunting Prevention in the Kalumpang Health Center Working Area. Ummu Journal. 2021;3:12–20.
- 10. Virlonda V, Wijayanegara H, Sutisna M. Evaluation of the Supplemental Feeding-Recovery Program (PMT-P) for Stunting Toddlers in Jagapura Lor Village, Gegesik District, Cirebon Regency. J Health Bandung. 2021;1(1):1–14.
- 11. Waroh YK. Providing Additional Food as an Effort to Handle Stunting in Toddlers in Indonesia. Embryo. 2019;11(1):47–54.
- 12. Nurhayati Darubekti. Providing Additional Food (Pmt) for Recovery for Malnourished Toddlers. Pros Semin Nas Penelit DAN Pengabdi 2021, "Research and Pengabdi Inov during the Covid-19 Pandemic." 2021;639–978.
- 13. Norsanti N. Effectiveness Of The Program To Accelerate The Reduction Of Stunting In Batumandi District, Balangan Regency (Case Study in Mampari Village and Banua Hanyar Village). J Adm Public and Development. 2021;3(1):10.
- 14. Kusuma R, Novita A, Jayatmi I. Evaluation of the First 1000 Days of Life (Hpk) Movement Program in Preventing Stunting in the Rias Health Center Work Area, South Bangka Regency in 2023. ARMADA J Multidisciplinary Researcher. 2023;1(5):395–405.
- 15. Apriastini NKT, Adnyani NPT, Selvyani PO, Setiawan KH. Stunting: Risk Factors, Diagnosis, Management, and Prognosis. Ganesha Med. 2024;4(1):17–23.
- 16. Rahman H, Rahmah M, Saribulan N. Efforts to Handle Stunting in Indonesia. J Ilmu Pemerintahan Suara Khatulistiwa. 2023;VIII(01):44–59.
- 17. Mustika W, Syamsul D. Analysis of the Problem of Malnutrition Status in Toddlers at the Teupah Selatan Health Center, Simeuleu Regency. J Health Glob. 2018;1(3):127.
- 18. Haninda P, Rusdi N, Mariyona K, Nugrahmi MA, Angellina S, Kesehatan F, et al. Evaluation of the Implementation of the 1000 Hpk Program as an Effort to Prevent Stunting in Padang Panjang City. 2023;8(2):404–10. Available from: https://sinta.kemdikbud.go.id/journals/profile/5436
- 19. Fauziah J, Trisnawati KD, Rini KPS, Putri SU. Stunting: Causes, Symptoms, and Prevention. J Parent and Child. 2023;1(2):11.
- 20. Palutturi, S., Saleh, LM, Rachmat, M., Malek, JA (2021). Mapping healthy aisles in Makassar city, Indonesia: Implications for community empowerment. Gaceta Sanitaria, 35: S42-S45. https://doi.org/10.1016/j.gaceta.2020.12.012
- 21. Lopo, C., Razak, A., Maidin, A., Amiruddin, R., Palutturi, S., Suarayasa, K., ... & Ngemba, HR (2021). Evaluation of Undata Public Hospital Service Quality and Performance Using SERVQUAL Method: Post Multi Disaster (Earthquake, Tsunami, and Liquefaction) in Palu, Central Sulawesi, Indonesia. Malaysian Journal of Medicine & Health Sciences, 17.
- 22. Napirah, MR, Amiruddin, R., Palutturi, S., Syam, A., Mallongi, A., Nur, R., ... & Anshary, A. (2021). Implementing a Non-Smoking Regional Policy to Prohibit Children's Smoking Habits In Palu City, Indonesia: A Systematic Review. Malaysian Journal of Medicine and Health Sciences (eISSN 2636-9346).
- 23. Mallongi, A.; Rauf, AU; Astuti, RDP; Palutturi, S.; Isaac, H., (2023). Ecological and human health implications of mercury contamination in the coastal water. Global J. Environ., Sci. Manage., 9(2): 1-14. url:https://www.gjesm.net/article_255151.html
- 24. Darmawansyah, SR, Syafar, M., & Balqis, AA (2014). The analysis of factors affecting the use of VCT service for high-risk groups infected with HIV/AIDS in Makassar. Int J Res Heal Sci, 2, 5.