

Specific and Sensitive Nutritional Intervention Toward Stunting in Mandalahayu Village Tasikmalaya District: A Qualitative Study

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Abstract- Objectives: *The aim of the study was to identify the specific and sensitive intervention that has been done under the National Action Plan for Stunting Program. Method :* *This study was qualitative study using in-depth interviews. We interviewed twenty informants from health sector, non health sector, and key persons. The results showed various specific nutrition interventions were targeted to under-five children, pregnant women, adolescent girls and cadres. Interventions for children under-five were growth monitoring, immunization, administration of vitamin A and supplementary feeding programs. Meanwhile for pregnant women were pregnancy class, iron-supplementation, and supplementary feeding. For adolescent girl, programs identified were iron consumption program and nutrition counseling. In addition, there were also programs to improve cadre's capacity. Behalf of sensitive nutrition interventions, there were programs to improve people's knowledge and awareness through common social activities. Besides that, cash transfer program through Family Hope and rice supply were implemented as poverty reduction interventions. Community empowerment also targeted to improve family income. Interventions also targeted school-aged children through providing nutritious breakfast at school, health counseling for pre-married couples, and physical development such as clean water facilities and communal septic tank to public usage. Conclusion: For the sustainability of those interventions, a strong and good coordination and collaboration should be established from multi-sectoral stakeholders. Besides, consider on community empowerment to scale the nutrition interventions. Keywords— motor ability; long jump; adolescent*

Keywords: *stunting, specific-nutritional intervention, sensitive-nutrition intervention*

I. INTRODUCTION

The problem of stunting in Indonesia, from year to year is still a public health problem that needs attention, moreover Indonesia has become the country with the fifth highest stunting prevalence in the world [1]. Based on the results of the Basic Health Research (Riskesdas) conducted by the National Institute of Health Research and Development (NIHRD) in 2007 and 2013 showed the prevalence of stunting children in Indonesia respectively 36.8 and 37.2 percent [2-3]. This figure shows that an increase in the prevalence of stunting by 0.4 percent. In 2017 the results of Nutrition Status Monitoring (PSG) conducted by the Directorate of Community Nutrition showed a stunting prevalence of 29.6 percent [4]. Despite the decline, the PSG results cannot be

compared with the results of Riskesdas because they have different data collection methods. Therefore we use the 2018 Riskesdas data which shows the stunting prevalence of 30.8 percent [5]. This shows a decrease of approximately 7 percent from 2013. Even though it experienced a significant decrease but the prevalence of stunting still shows that Indonesia is experiencing acute nutritional problems. According to WHO an area is said to have acute nutritional problems if the prevalence of stunting is more than 20 percent and the prevalence of underweight children is 5 percent or more [6].

Stunting has a lasting impact on both individuals and countries. Children who were stunted tend to have low intelligence, were prone to getting infected with the disease, and greater risk of decreasing the level of productivity in the future which in turn can hamper economic growth and increase poverty. To overcome this stunting problem, the government has launched a National Action Plan for Handling Stunting in August 2017 that emphasizes activities at the national, regional and village levels to prioritize specific nutrition and sensitive nutrition intervention activities in the first 1000 days of life up to 6 years of age. This activity was prioritized in 100 districts / cities in 2018. Then in each of these districts 10 priority villages were selected which became the locus for handling poverty and stunting [1].

Based on Riskesdas 2013, the stunting prevalence in Tasikmalaya Districts reached 48 percent [3]. That makes Tasikmalaya Districts one of the priority districts out of 100 stunting priority districts / cities in West Java Province, whereas Mandalahayu Village is one of 10 priority locus villages in Tasikmalaya district [1]. Based on the above, the authors are interested in seeing the magnitude of the problem of stunting in Mandalahayu village and identifying any specific and sensitive interventions that have been carried out both the health and non-health sectors in tackling the nutritional problems of children under five in Mandalahayu village.

II. MATERIAL AND METHOD

This study collection data using a structured questionnaire by in-depth interviews with 20 informants both from health and non-health agencies. Interviewed informants came from section in Salopa community health centre, namely

the Head of Salopa Community Health Center, the holder of the Mother and Child Health and Nutrition Center, the holder of the health promotion program, the holder of the UKS (School Health Unit) program, the nutrition staff (TPG) and the village midwife of Mandalahayu. Informants from the non-health sector were Salopa District Secretary, the village head of Mandalahayu, the hamlet head of Cilegi, Kalanganyar, Bojongrapih, Tamansari and Sukahurip, Empowerment and Family Welfare (PKK), posyandu cadre, UPT education, Agricultural Extension Centers, farmer women's groups (KWT), Village representative bodies (BPD), family hope program assistants, the Office of Religious Affairs (KUA), and community leaders as well as religious leaders. The study was conducted in 2018 for approximately six months until data analysis. Informants selected using non-probability sampling techniques, namely purposive sampling. Informants were chosen without random and based on a particular consideration made by the researcher on the characteristics or traits of known populations.

The qualitative data analysis was performed first with a transcript of the results of the interview then reducing the answers to certain sub-themes according to the topic of the question and entered in the matrix and made conclusions for each sub-theme. Triangulation was carried out by comparing the answers of the main informants with additional informants to maintain the validity of the answers given by the informant.

III. RESULTS

An overview of Mandalahayu village toddler stunting

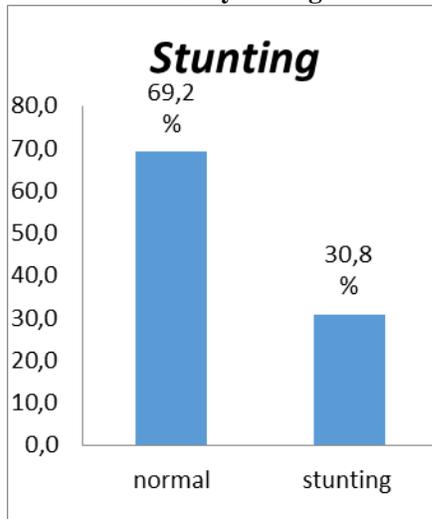


Figure 1. Stunting status of Mandalahayu village toddlers

Based on Figure 1 above shows the stunting number of toddlers in Mandalahayu village is 30.8 percent. This figure shows the magnitude of the problem which is quite high although the stunting rate in Mandalahayu village is still below the prevalence rate of Tasikmalaya Regency by 48 percent. This stunting figure also shows that there are public health problems in the village of Mandalahayu.

Specific Nutrition Interventions

Specific nutrition interventions were efforts to prevent and reduce nutritional problems directly. This activity was generally carried out by the health sector as the leading locomotive in the stunting issue in Salopa Subdistrict. The Community Health Center began to act in improving public health in stunting. This was stated by one informant:

“So far, what has been done was routine activities such as posyandu, selection of school children, giving and counseling teenage FE tablets at school, classes of pregnant women and toddlers by village midwives as well as counseling on TPG in community social activities such as recitation” (**Head of Salopa Community Health Centre**)

In addition to these routine activities, there were also activities carried out in collaboration with agencies outside of health, for example with KUA in the context of counseling the bride and groom. This was stated by one of the following informants:

“Counseling for the bride and groom in collaboration with KUA, usually once a week falls Tuesday from 10.00 WIB. We usually talk about 4T (too young, too close, too much and too old). Because there were still many people in Salopa Subdistrict who were married at a young age, so it needs to be given insight to postpone pregnancy at a very young age because the growth of reproductive organs is not yet optimal. Also material about the first 1000 days of life” (**Health Promotion Section Salopa Community Health Centre**)

Furthermore, there were activities carried out by the Salopa Community Health Centre in the form of training using health operational assistance funds (BOK). This was stated by the following two informants:

“There were training for cadres, each posyandu is representative of two cadres. Cadre training on 5-table system, anthropometric measurement, how to fill and interpret the measurement results, manufacture of SKDN blocks, filling in KMS and PMBA” (**TPG Salopa Community Health Centre**)

“We have paraji training on paraji and midwife partnerships as well as cross-sector briefings namely the police and babinsa” (**Mandalahayu Village Midwife**)

Both of these activities use BOK funds, because there were no other funds available for training activities. The lack of use of this BOK fund was the uncertainty of disbursement

so that the planned can be delayed. This was stated by one of the informants:

“Lack of use of BOK funds, the disbursement is uncertain, so the planned activities may be delayed”. **(Head of Family Health Section, Salopa Community Health Centre)**

Sensitive Nutrition Interventions

Sensitive Nutrition Intervention is an effort to overcome the problem of stunting carried out by the non-health sector. In the village of Mandalahayu some of these efforts were carried out by the education, agriculture, social services, KUA, PUPR services, and village governments. There were activities in the form of massive socialization of stunting to the community so they know about stunting. This socialization was expected to be able to change people's behavior in to healthier life style so that can become the beginning for the prevention and control of stunting problems in Mandalahayu village. This was stated by the following informants:

“We gathered the principals of Early Childhood Education (PAUD), Kindergarten and Elementary Schools throughout the Salopa District for the stunting socialization activity which was held on Monday, September 24, 2018 at the Indonesian Republic Teachers' Union's Salopa sports center. In this activity we also involved the District Head of Salopa as the opening act as well as the direction of the nutrition village, then the presentation from Ms. Yeni as a representative of the Salopa Public Health Center regarding stunting.” **(Head of Education Unit, Salopa Sub-Districts)**

The socialization of stunting was also conducted at meetings involving the community in the village such as monthly village level meetings, adult men and women religious meeting and youth gathering. This was stated by one informant:

“Whenever there were activities that gather the village community such as monthly meetings and routine recitation in the village, I will definitely deliver about this stunting so that the community knows what stunting was” **(Informant of Mandalahayu village head)**

To increase consumption of school children there was a school children nutrition program (PROGAS) in two elementary schools in the village of Mandalahayu, namely Bojonggrah elementary school and Mandalahayu elementary school. School children nutrition program (PROGAS) was a feeding program for school children for 108 food days or about 6 months. The informant said:

“PROGAS at Mandalahayu elementary school starts on July 20, 2018 and Bojonggrah elementary school starts on July 24, 2018. Until now it had been held for 49 days at Mandalahayu elementary school and 52 days for Bojonggrah elementary school” **(Headmaster Informant)**

Schools that had not yet received PROGRAS from the government were expected to be able to organize a joint meal or breakfast program independently and also develop a school garden by them self to supply food for the program. This was stated by one of the informants:

“Schools that have not yet received PROGAS were encouraged to do advocacy to the district level and also have the enthusiasm to do so while there is no program funding from the government including doing breakfast together and also developing school gardens independently” **(UKS Staff at Salopa Community Health Centre)**.

To increase the role of women to provide food on their own in the community was conducted by the agricultural sector through assistance to women farmers group. This was stated by two informants:

“Field extension officers (PPL) were in charge with providing counseling and assistance on agriculture to the target villages. We provide assistance to the Jatinunggal farmer women group (KWT), led by Mrs. Haji Zakiah, who succeeded in utilizing 50 million rupiah aid for the welfare of the Jatinunggal KWT through the cultivation of Tilapia vegetables and fish plants” **(PPL Mandalahayu Village Informant)**

“Successful programs that were monitored and receive continuous assistance by PPL officers. For example, the KWT (Women's Farmers Group) program that routinely produces vegetables that are consumed by themselves and for sell”. **(Head of Mandalahayu Village Informant)**

In addition to the farmer groups who get plant seeds, the village head using village funds also provides assistance in the form of polybags and plant seeds through youth clubs. This was stated by one informant:

“The village head gives polybags and plant seeds through youth clubs, with a budget of 1-2 million rupiah. At the same time, we will be the youth organization who provide assistance to the community” **(Chairman of the Mandalahayu Village Youth Organization)**

To improve environmental sanitation the government had program intended for the construction of washing baths and latrines (MCK) intended for 20 poor households (RTM). The assistance amounted to 100 million rupiah, with each RTM receiving a fund of 5 million rupiah, to make MCK. The funds were 60 percent used for construction materials, and 40 percent for wage costs. However, these funds were insufficient for the construction of MCK so that they were diverted into the construction of communal septic tanks for poor families who already had latrines but whose trolley channels were still flowing into the river. This was in line with what was stated by the following informants:

“These funds will not be enough, then diverted to making septic tank. The RTM criteria were poor households that already have latrines and the availability of water, but do not have a place for final disposal of sewage (usually discharged into ponds or into rivers). Making septic tank is intended for individuals, but in reality if possible, one septic tank will be allocated for 2 to 3 adjacent houses, each of which has a latrine.”
(Head of Mandalahayu Village)

Poverty is still a problem in the village of Mandalahayu, therefore many of the assistance provided to poor households is allocated to this village. One of them is a program of granting funds for poor families from the social ministry which is the Family of Hope Program (PKH). This was stated by one informant:

“The Family of Hope Program (PKH) is given to poor families who have toddlers, pre-school children, school children, the elderly and the disabled. The number of recipients until June 2018 is 156 families”
(PKH Companion Informant in Mandalahayu Village)

In addition to assistance in the form of funds, poor families in the village of Mandalahayu also received assistance in the form of chickens to increase family protein consumption and improve the family economy from the results of chicken farming. This was as revealed by one informant:

“There is assistance for poor households, the # Bekerja program is given 50 chickens that can be cultivated so that they can be sold back or consumed by the family as a source of protein food”
(PPL Mandalahayu Village)

IV. DISCUSSION

Sensitive Intervention

UNICEF has developed a conceptual framework as one of the strategies in tackling nutritional problems. The framework shows that nutritional problems, including the prehistory of stunting, were caused by direct causes

(inadequate food intake and illnesses suffered by children) and indirect causes (inadequate access to food, inadequate child care patterns and access to health services and inadequate clean water sanitation) [7]. Based on the factors causing these nutritional problems, nutrition improvement is carried out with two approaches, namely direct (specific activities) and indirectly (sensitive activities). Specific activities are generally carried out by the health sector such as supplementary feeding (PMT) of pregnant women lacking chronic energy (KEK), giving iron supplementation, examination of pregnancy, TT immunization, provision of vitamin A to postpartum mothers. For infants and toddlers, starting with the initiation of early breastfeeding (IMD), exclusive breastfeeding, provision of vitamin A, growth monitoring, basic immunization, and giving MP-ASI. In The Lancet the Mother and Child series shows that there are 13 nutritional interventions that have been proven to reduce stunting problems by one third of the world's prevalence, namely interventions through supplementation and fortification, supporting exclusive breastfeeding, counseling about children's diet, treatment for acute malnutrition and treatment of infections. This intervention was proven to bring benefits, namely cost reduction with a ratio of 15.8 to 1 [8]. In line with this, our in-depth interviews with several informants showed that several interventions carried out by the health sector in tackling stunting problems include posyandu activities (growth monitoring, immunization, vitamin A), screening of school children, giving and counseling FE tablets for adolescents and pregnant women, class activities for pregnant women and toddlers by village midwives as well as counseling on TPG in community social activities such as study and health counseling for brides-to-be. All of these activities are routine activities carried out in all work areas under the Salopa Community Health Centre. It's just that, because the village of Mandalahayu is a locus of stunting, these activities are more focused in the village of Mandalahayu and the frequency of counseling is also more frequent and intense. To increase the capacity of health workers and cadres in providing counseling, a cadre refreshing activity or other training for health workers is conducted. The obstacle of organizing the training is the change in implementation time related to the obstruction of BOK fund payment for the training. Therefore it is necessary to have a good budget sharing from the private sector (CSR) who want to be involved or from the assistance of village funds so that the cadre refreshing activity can work.

Specific Interventions

Stunting countermeasures are not optimal if only relying on sensitive nutrition interventions. According to WHO actions that must be taken to improve effective interventions include sensitive nutrition interventions and specific interventions that include cross-sectoral approaches [6]. Ruel and Alderman define specific nutrition interventions as basic factors determining good nutrition including food security, adequate care resources, access to health services and a hygienic environment [9]. The results of in-depth interviews

of this study showed some specific interventions carried out including the nutrition program for school children (PROGAS), empowering women through the provision of plant and poultry seedlings, poverty alleviation programs through conditional cash transfer programs (PKH) and poultry programs for poor families (work), the latest was a labor-intensive program with the construction of communal septic tank for poor families who already have latrines but whose trolley channels are still flowing into the river.

Stunting has an impact on the level of intelligence of children, because in stunted children brain cells develop not optimal and have shorter branches than normal children. This intelligence will certainly affect children in absorbing learning material in schools, therefore the Ministry of Education in 2016 launched a nutrition program for school children to improve the quality of education and learning achievement through providing nutrition education, increasing nutritional intake through healthy breakfast and character education that shape behavior and a culture of clean and healthy living [10]. The results of this in-depth interview showed that the nutrition program for school children in Mandalahayu Village was held in two schools namely Mandalahayu elementary school and Bojonggrapih elementary school. This program is carried out for 108 food days or about 6 months. Before the implementation of PROGAS, the Ministry of Education and Culture held training which was attended by the principal, treasurer and one cook. In this training, participants were trained to cook 8 dishes made without MSG (only using herbs and spices). The menu provided were varied to avoid boredom. The interesting thing about this program at SDN Mandalahayu is that the suppliers of raw materials (vegetables and fish) to be cooked were obtained from the surrounding community who use their yards to grow vegetables and raise fish. This is in line with what was launched by the World Food Program (WFP) the importance of feeding school children programs as one of the national social protection systems, supporting child development, and in practice supporting local agricultural products [11].

Empowering women through farmer groups in several countries have been proven to increase the participation of women outside their domestic duties. Sraboni et al in their analysis using data from national representatives in Bangladesh showed that the results of increasing women's empowerment in agriculture were positively related to the availability of energy and food diversity at the household level [12]. In line with this, the results of in-depth interviews in this study showed that the empowerment of women through the Kelompok Wanita Tani (KWT) received funding of Rp.50,000,000 for the establishment of seedlings, seedlings, and purchases of livestock (chickens and fish). Provision of seedlings was distributed to KWT member households for self-consumption as a means of family food security and there were seeds managed by the group for the proceeds to be sold and money from the sale was managed to buy the seeds back.

The village government also encouraged women to use the yard to grow vegetables. The village government used village funds to provide plant seeds to the community

distributed by the Youth Organization to mothers to use the yard to increase the consumption of family vegetables. This is in line with research in Bangladesh conducted by Schreinemachers et al., showing the impact of rural women in gardening at home is greater in vegetable production, diversity of consumption, and higher household micronutrient supply from gardens. An increase in the average supply of home vegetables by 16.5 g per capita per day or accounted for 8.2 percent of the recommended daily intake for vegetables [13]. A study in Nepal conducted by Cunningham et al, found that overall women's empowerment in agriculture was related to stunting of children under two years of age [14].

In addition to vegetables, animal protein sources are also needed to meet the needs of protein in preventing stunting. The Ministry of Agriculture had a program of giving chickens to poor families as many as 50 birds per family to increase family protein consumption and improve the family economy from the results of chicken farming. This program is called the Mandalahayu Village Work and Village program to be one of the locations of this program. The results of in-depth interviews showed that the obstacle of this program was many poultries died before breeding, this was allegedly due to illnesses suffered by chickens resulting from a long distribution of chickens from Jakarta to Mandalahayu Village so that in the expedition chickens could not adapt to changes in the environment or were infected with the disease during the trip so that several days after being distributed many died. This also caused public concern about diseases that can be transmitted by poultry to humans. This shows people's anxiety about the negative effects of livestock. In line with this Headey and Hirvonen in their study found that although poultry ownership was positively related to children's HAZ scores in Ethiopia, the practice of poultry rearing in home yards was negatively related to HAZ scores, perhaps because it increased children's exposure to chicken droppings [15]. Therefore it is important to maintain personal hygiene for example by always washing hands with soap after activity so as not to be exposed to diseases from livestock manure.

Poverty is one of the roots of the problem of stunting. Several studies have shown that poverty is a predictor of stunting. Higher household welfare index scores are significantly associated with increased protection of stunting events [16]. Research in Nepal conducted by Tiwari, R., Ausman, L.M., and Agho, K.E shows that household wealth index is a stunting risk factor [17]. Khriana A, et al conducted data analysis using 15 demographic and health survey data from Bangladesh, India, Nepal and Pakistan between 1991 and 2012 showing a significantly higher risk of stunting of 3.01 times in the group of children in the lowest wealth quintile compared to children in the highest wealth quintile [18]. Likewise, research in Indonesia conducted by Torlessse H et al shows that children from the lowest wealth quintile have more than twice the risk of stunting compared to children from the highest wealth quintile [19]. For poverty alleviation, in some countries providing assistance in the form of funding and food assistance for the poor. Likewise in Indonesia this program has been carried out from the past few years. A study

in Batu City, Malang conducted by Saiful Ludoni, Irwan Noor and Luqman Hakim showed that several programs such as giving rice to the poor, direct cash assistance (BLT), the family hope program and BPJS had a direct impact on improving the welfare of the poor in matters of food fulfillment, productivity, education improvement and health cost fulfillment [20]. Research conducted by Rosha BC, et al on specific and sensitive interventions in Bogor City also shows that the provision of cash assistance helps the poor in meeting their daily needs [21]. In this study, based on interviews with informants, shows programs for poverty alleviation such as the PKH program, poor rice, social assistance, JKN has also been distributed to Mandalahayu village, only the number of beneficiaries is still small, targeting families with stunted children. This is due to many things, first, stunting children do not always come from poor families, while the aid programs are targeting poor and very poor families. So that more appropriate interventions for families with stunted children but not poor families are health promotion interventions that can increase the knowledge of mothers and families so that they can change the pattern of future child care. Second, stunting children are in poor families but do not get help because the family is not or has not been recorded in the recipient of the assistance program. The weakness of this data collection is often found in the field and becomes a complaint for the community or poor families who do not get help. The village government states that the recipient data has been obtained from the top level (central). Therefore it is necessary to update data on poor families by re-registering the door to door so that beneficiaries are truly on target.

Environmental sanitation is an indirect cause of stunting. Inadequate sanitation triggers recurrent infectious diseases in children which in turn causes disruption of children's nutritional status. This is in line with research conducted by Checkley W, et al., found that children who come from families with poor water and sanitation conditions experience diarrhea more often than children who come from families with the best water and sanitation conditions [22]. Therefore sanitation interventions need to be optimized. Hygiene interventions (including hand washing, water quality maintenance, sanitation, and health education) contribute to a 2-3 percent reduction in stunting problems [8]. Torlessse H et al in his study in Indonesia showed that the risk of stunting was three times greater if households used latrines that were not repaired compared to households that had better latrines [19]. This is in line with research conducted by Rah JH et al in India showing that access to toilet use has the opportunity to reduce 16-39 percent of stunting among children aged 0-23 months [23]. WHO in the sanitation and health guidelines revealed that sanitation systems must meet minimum requirements to ensure security in each sanitation service chain, one of which is that latrines must have the design and construction of latrine users safely separated from dirt [24]. Therefore making septic tank as a final receptacle for sewage is an intervention that must be carried out. In this study the results of in-depth interviews with informants showed that

stunting interventions carried out related to sanitation are the construction of communal septic tanks for poor families who already have latrines but whose treads are still flowing into the river. This was dangerous because it produces the potential for feces that contain enteric pathogens to pollute the environment. Then the septic tank development intervention is an appropriate intervention.

V. CONCLUSION

Specific nutritional intervention in Mandalahayu village were supplementary feeding (PMT) of pregnant women lacking chronic energy (KEK), giving iron supplementation, examination of pregnancy, TT immunization, provision of vitamin A to postpartum mothers. For infants and toddlers, starting with the initiation of early breastfeeding (IMD), exclusive breastfeeding, provision of vitamin A, growth monitoring, basic immunization, and giving MP-ASI. While sensitive interventions were the nutrition program for school children (PROGAS), empowering women through the provision of plant and poultry seedlings, poverty alleviation programs through conditional cash transfer programs (PKH) and poultry programs for poor families (#BEKERJA), the latest was a labor-intensive program with the construction of communal septic tank for poor families who already have latrines but whose trolley channels are still flowing into the river. For the sustainability of those interventions, a strong and good coordination and collaboration should be established from multi-sectoral stakeholders. Besides, consider on community empowerment to scale the nutrition interventions.

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