



Evaluation Of Programs For Stunting Prevention Management At Tajinan Public Health Center

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A B S T R A C T

East Java is one of the provinces that has a high prevalence of stunting. The government is committed to reducing stunting rates through several health policies. The Indonesian Ministry of Health recommend programs for stunting prevention management. The purpose of this study was to evaluate the programs for stunting prevention in toddlers through elements of input, process, and output. This research was qualitative. It took place at Tajinan Public Health Center (PHC). The purposive sampling technique determined the initial informants. The data collection method was in-depth interviews, observation, and documentation of 6 initial informants consisting of the head of the PHC, the coordinator midwife for children and maternal health, the nutrition coordinator, the village midwife, the cadres, and some target mothers. Two triangulation informants were the family health coordinator and the nutrition coordinator at the District Department of Health Office. The results showed that the health workers involved still needed additional at the input stage. There were no nutrition workers. There were well-implemented programs with the family approach through home visits by the cadres in the process element. The taburia administration was a program that need development. In the output element, the coverage of the prevalence of stunting at TajinanPHC, Malang Regency, in 2018 was 17.24%.

INTRODUCTION

Stunting in children is a severe problem because it can cause morbidity and mortality, obesity and non-communicable diseases in the future, short adults, poor cognitive development, and low productivity and income (Fikawati, 2017). Currently, around 162 million stunted children under the age of five. When this trend continues, by 2025, 127 million children under five years of age will be stunted. According to the United Nations, Children's Emergency Fund (UNICEF), more than half of the children are stunted, or 56% live in Asia, and more than a third or 37% live in Africa (Supariasa, 2011).

Indonesia is a country with many stunted children. 32 out of 34 provinces had numbers of stunting above 20% based on the stunting rate limit from the World Health Organization (WHO). Based on Basic Health Research (from now on, it is named with Riskesdas), in 2018, the stunting rate in Indonesia for toddlers reached 30.8%, consisting of 11.5% severely stunted children and 19.3% short children. Indonesia's stunting rate decreased compared to the 2013 Riskesdas data, which reached 37.2%, consisting of 18% severely stunted toddlers and 19.2% short children under five (Kemenkes RI, 2018)

Based on the results of Riskesdas, East Java is one of the provinces that has a high prevalence of stunting. The number of toddlers with stunting in East Java in 2018 reached 25.2%. Malang Regency was the 100 priority districts with a stunting rate of 20% spread over six priority villages (Dinas Kesehatan

Kab.Malang, 2019). Data from the Malang District Health Office, in 2017, the prevalence of stunting in toddlers was 30,323 out of the total number of toddlers 154,188 under five. There were 3,443 children under five with 17,6% short children and 9,4% severely stunted at Tajinan Public Health Center (PHC), so that the stunting cases were 27% under-five. Preliminary study on March 12, 2019, 23,9% stunted children under five at Tajinan PHC. Meanwhile, 26% of stunted children under five at Wagir PHC (Dinas Kesehatan Malang, 2019) Many factors cause stunting, including low birth weight (LBW) – babies with birth weight is less than 2,500 grams (Sistiarani, 2008). LBW has a high risk of neonatal death, child growth disorders, including the risk of stunting when it is not appropriately handled. It is in line with research conducted by (Tiwari et al., 2014), which stated that children with a history of LBW were at risk of suffering from stunting compared with no LBW. A study conducted in Nigeria also reported that children with LBW were at risk of suffering from stunting (Akombi et al., 2017).

The education level affects stunting incidence. Children born to educated parents are less likely to be stunted than children born to parents with low education levels. Research conducted in Nepal also showed that children born to well-educated parents had a lower potential to suffer from stunting. This study is in line with research conducted by Haile et al., (2016). The study reported that children born to parents with higher education tend to receive health education more easily during pregnancy, for example, health education in the importance of meeting nutritional needs during pregnancy and exclusive breastfeeding (Haile et al., 2016).

The problem of stunting is an intergenerational nutritional problem. Stunted women will give birth to babies with LBW, which contributes to the cycle of malnutrition in life (Haile et al., 2016). Mothers with a height less than 150 cm tended to give birth to stunted babies (42.2%) than the group mothers with standard tall (36%). A study conducted in Ghana, with a sample of children under five years, showed that children with mothers who were shorter than 150 centimeters were at risk of suffering from stunting (Ali et al., 2017) Exclusive breastfeeding for less than six months is a factor that inhibits stunting. A study conducted in Nepal reported that children aged 0-23 months had a significantly lower risk of stunting than children aged > 23 months because of breast milk protection (Tiwari et al., 2014). WHO declares the resolution of global targets on maternal and child nutrition as a priority. Its main target is to reduce stunting in children by 40% globally or a 3.9% reduction annually from 2012 to 2025 (World Health Organization, 2012). The 2015-2019 National Medium-Term Development Plan stated four priority health development programs in Indonesia. Stunting prevalence reduction was one of them.

Prevention efforts in stunting begin in adolescence. Young women should raise their knowledge and understanding of the importance of fulfilling nutrition as a teenager. Adequate intake during adolescence can prevent malnutrition during pregnancy. Furthermore, it can prevent stunted growth in the fetus (World Health Organization, 2014). Stunting prevention also focuses on the first 1,000 days of life, from pregnant

mothers to nursing mothers, until the child reaches 24 months of age or two years old. The critical 1,000 periods effectively prevent stunting because it is a period that determines the quality of life – the child's growth will be rapid in the "Golden Period". Therefore, nutritional coverage must be fulfilled starting from 270 days during pregnancy and the first 730 days after the baby is born. However, prevention of stunting does not only begin at the first 1,000 days but begins in adolescence by improving nutrition (World Health Organization, 2014). Stunting prevention starts with improving the nutrition of pregnant women. Nutritional improvement is giving Fe supplementation at least 90 tablets during pregnancy. Also, mothers who experience chronic energy deficiency (CED) need to get additional food to improve the nutrition (World Health Organization, 2014). Increased breastfeeding practice is also one of the measures to prevent stunting. Early initiation of breastfeeding and exclusive breastfeeding for six months can protect against gastrointestinal infections. It is in line with research conducted by Tiwari, which reported that children with exclusively breastfed were less likely to suffer from stunting compared to children who were not nutrition (World Health Organization, 2014).

The factors that cause stunting from the mother are the mother's education level and nutritional status. Factors causing stunting in infants are Fetal growth restriction (FGR), LBW, gender, and exclusive breastfeeding. This study aims to evaluate the management of the nutritional status in children under five with stunting at Tajinan PHC, through system elements (input, process, and output) including programs: 1) health program for pregnant women, 2) exclusive breastfeeding for infants 0-6 months, 3) infant growth and development monitoring, 4) supplementary food, 5) vitamin A supplements to toddlers, 6) taburia (multivitamins and mineral supplement for children age 6-59 months) administration.

METHOD

It was a qualitative study at Tajinan PHC, Malang Regency. The purposive sampling technique determined the initial informants. The data collection method was in-depth interviews, observation, and documentation of 6 initial informants consisting of the head of the PHC, the coordinator midwife for Child and Mother Health, the nutrition coordinator, the village midwife, cadres, and target mothers who have a baby. The data validity used two triangulation informants: the coordinator of family health and the nutrition coordinator in the Malang District Department of Health Office. The data analysis technique was reducing, displaying, and drawing conclusions.

RESULT

Input: From the interview results on managing the nutritional status for toddlers with stunting at the Tajinan PHC, human resources (human resources) still required an additional nutrition coordinator. There was task integration in the management of stunting toddlers. Still, there was no special team – the job and

functions were not according to competence, especially the nutrition coordinator held by midwives. The Health cadres participated in the management of children under five in every integrated service post (from now on, it is named with posyandu) activity. They carried out home visits to motivate clients who had not received health services. The facilities were sufficiently supportive in stunted toddlers' management, including drugs, vitamins, micronutrients, and examination equipment. The District Department of Health Office subsidized all the funding. The only problem was the limitation of the tools for anthropometry measurement. There was a lack of anthropometric measurement tools, only one tool available.

Process: Based on the process element, the Tajinan PHC has implemented a first 1000 days of life program according to the guidebook. The Tajinan PHC also has a policy in managing stunting in toddlers by empowering village midwives as the primary implementing staff with the help of cadres and health workers to motivate all pregnant women to carry out prenatal visits to PHC.

Stunting begins from the nutritional status of pregnant women, even before pregnancy. It determines fetal growth. Undernourished pregnant women are at risk of giving birth to LBW babies, a significant cause of stunting (World Health Organization, 2014). After delivery, babies without adequate breastfeeding have a risk of suffering from various infections due to inadequate nutritional and unhygienic diets. Infant and child feeding greatly determines a child's growth. After the age of 6 months, children need to get nutritional intake to meet the needs of micro, macro, and safe nutrition (Putri, 2012) Socio-economic conditions, food security, availability of clean water, and access to various primary service facilities are predisposing factors in stunting prevalence (Sattu, 2014).

A study on pregnant mothers who visited health professionals and gave birth at Banyumas Hospital in 2012 reported that LBW babies incidence correlated 5.85 times with poor quality antenatal compared with good quality antenatal. LBW is a factor that plays a role in the incidence of stunting (Sistiarani, 2008).

Output: The stunting prevalence decreased to 17.24% in 2018. It was much less than in 2017 and 2016, which reached up to 30% or more. The prevalence reduction because of stunting prevention management, including the health program for pregnant women, exclusive breastfeeding, growth monitoring, supplementary feeding, vitamin A supplementation, and taburia administration.

DISCUSSION

The health program for pregnant women is a part of managing the nutritional status of stunted toddlers at the Tajinan PHC. From the input element, human resources (HR) required additional, especially in health promotion related to nutrition and healthy socialization. The job descriptions were integrated, but not by their primary duties and competence. There were no nutritionists at the Tajinan PHC, while the health promotion staff were nurses. The health cadres of the Tajinan PHC in managing stunting toddlers focused on the health program for pregnant women – they had been accommodating. Last year, the Tajinan PHC

had implemented a program for the first 1000 days of life. The difference in 2019 was that apart from the Tajinan PHC still implemented 1000 HPKs; the Tajinan PHC also mobilized cadres for home visits for pregnant women to motivate them to carry out integrated ANC visits at the PHC. Based on the interview, stunting management focused on health program for pregnant women was subsidized by the District Department Health Office. The program also focused on pregnant women with CED by milk administration. Observing the facilities and infrastructures at the Tajinan PHC in stunting management focused on health programs for pregnant women was good.

The interview revealed that all health workers had run the 1000 first day of life program at the implementation stage, appropriate with the guidebook. Cadres also did home visits to monitor targets who had not received health services, especially mothers. All the pregnant women had antenatal care as early detection. ANC visit analysis to monitor the output of the program. The first ANC visit (K1) was 96.5%, and the fourth ANC visit (K4) was 84.8%.

Results showed that the management of the nutritional status for stunted toddlers focused on the health program for pregnant women at the Tajinan PHC had been 97,8% integrated quite well but has not been 100%. Human Resources (HR) needs an additional, especially implementing personnel who increase their competence for cross-sectoral socialization about integrated ANC.

The integration of a health program for pregnant women at the Tajinan PHC was influenced by many factors, including health workers and cadres. The percentage of pregnant women who made ANC visits on the K1 96.5%, and K4 were 84.8%. It means that pregnant women's compliance in the ANC examination met the Tajinan PHC policy standards and significantly affects stunting prevalence.

Research revealed that several factors predisposed stunted toddlers, one of them was ANC visit. ANC visits can detect earlier risks in pregnancy in mothers, especially those related to nutritional problems (Putri, 2015). A study found that babies whose mothers did ANC visits only once (less than the minimum standard) had a 2.4 times risk of stunting than four times ANC visit Najahah et al., (2013). The exclusive breastfeeding program in the management of stunted toddlers in the Tajinan PHC was not conducive because health workers were not following their primary duties and functions. Some health workers didn't receive training on lactation counsellors, so they had lack confidence when providing health education to patients. The health worker is the key to successful breastfeeding education for the mothers. This opinion is in line with former research that concluded that health workers' support was related to the mothers' exclusive breastfeeding behavior. Health workers are the key to success in exclusive breastfeeding education (Rosita, 2014).

Based on an interview with the head of PHC, exclusive breastfeeding program for infants aged 0-6 months at the Tajinan PHC consist of: a) Skin to skin contact between mother and baby immediately after giving birth b) Breastfeeding in the first 60 minutes c) Giving colostrum d) Emptying one breast before

transferring the baby to the other breast e) Not giving any other food including plain water, sugar water or other food until six months old f) On-demand breastfeeding, according to the baby's wishes day and night at least eight times per day. All health workers at the Tajinan PHC must know the existing policies to provide health education related to standardized exclusive breastfeeding. Thus, the implementation process had been integrated following the guidelines of the Tajinan PHC, although it was not yet optimal. The coverage of the exclusive breastfeeding program as the output of the program at the Tajinan PHC in 2018 was 89.3%. It means that exclusive breastfeeding significantly affects the stunting prevalence.

Every month, the village midwife as the implementer, with the help of cadres, carried out weighing and measuring the babies during the posyandu activities. There was a lack of anthropometric measuring tools. The Tajinan PHC had one midwifery and nine village midwiferies. At the stage of the process, the Tajinan PHC had a policy in monitoring the growth and development of infants, namely monitoring the body weight measured every month and the height of the toddler measured simultaneously every year. These results were recorded and entered into a growth and development chart. When there are subnormal anthropometric results, the village midwife will report them to the PHC and directly visit the target toddler's house. Based on the interview, the coverage of the infant's growth and development monitoring program did by weighing and measuring periodically every month and simultaneously through posyandu activities. The percentage of presence infants and toddlers in monitoring growth and development at the Tajinan PHC in 2018 was 79.5%.

A study related to consumption patterns, health status, and its correlation with nutritional status and development of toddlers reported that nutrition in toddlers was essential. It is the foundation for health, strength, and intellectual abilities. The study also revealed that toddlers had a more excellent average developmental value of 71.60 ± 11.91 than preschool-aged subjects of 68.08 ± 15.54 (Lampung et al., 2018). Monitoring children's growth and development should be attention because it will affect the nutritional status, one of which is stunting.

The supplementary feeding program (SFP) in managing stunting toddlers in the Tajinan PHC was quite integrated. Every month the village midwife as the implementer, assisted by cadres, implemented the posyandu. They gave additional food to toddlers who come during weighing and measurement. PHC and Health Operational Cost (BOK) funded this activity. Providing additional food at the Tajinan PHC involved cadres in posyandu activities. The Tajinan PHC have standardized procedures related to SFP, including 1) Local food or food ingredients and not given in the form of money 2) SFP is only as an addition to the food consumed by target children daily, not as a substitute for the main meal 3) SFP intend to meet the nutritional needs of target toddlers as well as a learning process and a means of communication between mothers of target children 4) SFP is an activity outside the PHC building with a public empowerment approach with cross-program activities and other related sectors. Based on the interview,

the SFP coverage was through activities during the posyandu activity involving cadres. The output coverage of infants and toddlers at the posyandu that received SFP at the Tajinan PHC in 2018 was 79.5%. It is following the policy standards of the Tajinan PHC. However, there should be a concern in the quality and quantity of additional food so that children health status, especially nutritional status, can be optimal. Research on risk factors for underweight children aged 7-59 months stated that parenting played a significant role and dramatically affected the nutritional status of children, one of which was stunting. One of the critical aspects of food parenting is compiling and giving complementary foods, namely in additional food (Septiana et al., 2014). The practice can include colostrum administration, exclusive breastfeeding, and weaning practices (Doloksaribu et al., 2016).

Vitamin A administration program in managing the nutritional status of children under five with stunting at Tajinan PHC had been integrated. The village midwife was the implementer of giving vitamin A at the posyandu and assisted by the cadres to record the targets who received the vitamin. The District Department of Health Office subsidized the provision of vitamin A. Giving vitamin A at Tajinan PHC was implemented in February and August by involving cadres to give vitamin A directly from the house to house to targets who had not received vitamin A at posyandu. The vitamin A distribution to infants was 100% in February and 98.77% in August. This coverage describes the integration of the vitamin A administration program in line with the policy target of the Tajinan PHC and significantly affects the prevalence of stunting.

Research on vitamin A and zinc deficiency as a risk factor for stunting revealed that vitamin A deficiency affected protein synthesis, affecting cell growth. For this reason, children who suffer from vitamin A deficiency will experience growth failure and lack of micronutrients (Vitamin A and Zinc). It is one of the factors that influence the stunting incidence.

The taburia administration program in managing the nutritional status of stunting toddlers at the Tajinan PHC was not effective. The coordinator, who were also nutrition coordinators, did not know the main task and function in procuring taburia. The District Department of Health Office subsidized the procurement of taburia. Simultaneously, the PHC only plans taburia needs and distributes it to target children based on projection calculations from Statistics Indonesia. The policy of giving taburia at the Tajinan PHC in terms of duties and implementation teams did not integrate, especially in managing the provision of taburia, which included planning needs, provision, storage, distribution, recording and reporting, monitoring, and evaluation. Based on interviews and documentation, the taburia administration program output coverage for children under five was 0% in 2018. This coverage does not have a positive effect on reducing the prevalence of stunting under five.

Based on the evaluation of the taburia administration program, the organizing must be coordinated. This program involves other sectors of the sub-district in disseminating taburia to the public. The handbook on

the management of taburia administration program states that socialization is an essential part of increasing the coverage of taburia giving. Socialization can mobilize all levels of society to support the activity of giving taburia as a micronutrient to prevent stunting (Alim et al., 2011).

CONCLUSION

The health program for pregnant women, development monitoring program for toddlers, supplementary feeding program, vitamin A administration, correlates with the reduction of stunting toddler's incidence at Tajinan PHC. However, the taburia administration program is not effective yet.

REFERENCE

- Akombi, B. J., Agho, K. E., Hall, J. J., Merom, D., Astell-Burt, T., & Renzaho, A. M. N. (2017). Stunting and severe stunting among children under-5 years in Nigeria: A multilevel analysis. *BMC Pediatrics*, *17*(1), 1–16. <https://doi.org/10.1186/s12887-016-0770-z>
- Alim, A., Thaha, R., & Citrakesumasari. (2011). *Evaluating Ground Provision Taburia In The City Of Makassar In 2011*. 1–16.
- Anindita, P. (2012). Hubungan Tingkat Pendidikan Ibu, Pendapatan Keluarga, Kecukupan Protein & Zinc Dengan Stunting (Pendek) Pada Balita Usia 6 – 35 Bulan Di Kecamatan Tembalang Kota Semarang. *Jurnal Kesehatan Masyarakat*, *1*(2), 617–626.
- Dinas Kesehatan Kab.Malang. (2019). Profil Kesehatan Kota Malang. *Profil Kesehatan Kota Malang*, 209.
- Doloksaribu, T. H., Syarief, H., & Marliyati, S. A. (2016). Pertumbuhan Bayi Dan Pemberian Asi Eksklusif Oleh Ibu Penerima Konseling Menyusui Dan Makanan Tambahan Torbangun. *Pertumbuhan Bayi Dan Pemberian Asi Eksklusif Oleh Ibu Penerima Konseling Menyusui Dan Makanan Tambahan Torbangun*, *10*(2), 77–84. <https://doi.org/10.25182/jgp.2015.10.2.%p>
- Fikawati, S. (2017). *Gizi Anak dan Remaja*. Rajawali Press.
- Haile, D., Azage, M., Mola, T., & Rainey, R. (2016). Exploring spatial variations and factors associated with childhood stunting in Ethiopia: Spatial and multilevel analysis. *BMC Pediatrics*, *16*(1), 1–14. <https://doi.org/10.1186/s12887-016-0587-9>
- Kemendes RI. (2018). Hasil Riset Kesehatan Dasar Tahun 2018. *Kementrian Kesehatan RI*, *53*(9), 1689–1699.
- Najahah, I., Adhi, K. T., & Pinatih, G. I. (2013). Laporan hasil penelitian Faktor risiko balita stunting usia 12-36 bulan di Puskesmas Dasan Agung , Mataram , Provinsi Nusa Tenggara Barat Risk factors stunting for 12-36 month old children in Dasan Agung Community Health Centre , Mataram , West Nusa Tenggara. *Public Health and Preventive Medicine Archive*, *1*(2), 134–141.
- Rosita, NA. (2014). Peran Dukungan Orang Rua Faktor Yang Paling Berpengaruh Terhadap Pemberian ASI Eksklusif. *Unnes Journal of Public Health*, *3*(1), 1–10.
- Perdhana, M. S., Ahshen, O. A., & Diponegoro, U. (2017). *Jurnal sains pemasaran indonesia*. *XVI*(3), 195–202.
- Sattu, M. (2014). Karakteristik Balita Stunting Di Wilayah Kerja Puskesmas Teku Kecamatan Balantak Utara Kabupaten Banggai. *Online Jurnal of Natural Science*, *3*(December), 239–247.

file:///C:/Users/ASUS/Documents/SEMESTER 3/komp/3328-10355-1-PB.pdf

- Septiana, R., Djannah, S. N., & Djamil, M. D. (2014). Hubungan Antara Pola Pemberian Makanan Pendamping Asi (Mp-Asi) Dan Status Gizi Balita Usia 6-24 Bulan Di Wilayah Kerja Puskesmas Gedongtengen Yogyakarta. *Jurnal Kesehatan Masyarakat (Journal of Public Health)*, 4(2), 118–124. <https://doi.org/10.12928/kesmas.v4i2.1097>
- Sistiarani, C. (2008). Faktor Maternal dan Kualitas Pelayanan Antenatal yang Beresiko terhadap Kejadian Berat Badan Lahir Rendah (BBLR), Studi Pada Ibu Yang Periksa Hamil Ke Tenaga Kesehatan dan Melahirkan di RSUD Banyumas Tahun 2008. *Hubungan Dukungan Sosial Dari Atasan Dengan Burnout Pada Paramedis Keperawatan RSUD Arifin Ahmad Pekanbaru*, 1–86.
- Supariasa. (2011). *Penilaian Status Gizi*. Jakarta: Buku Kedokteran EGC.
- Tiwari, R., Ausman, L. M., & Agho, K. E. (2014). Determinants of stunting and severe stunting among under-fives: Evidence from the 2011 Nepal Demographic and Health Survey. *BMC Pediatrics*, 14(1), 1–15. <https://doi.org/10.1186/1471-2431-14-239>
- World Health Organization. (2012). *World Health Statistic 2012*.
- World Health Organization. (2014). Childhood Stunting: Challenges and opportunities. Report of a Promoting Healthy Growth and Preventing Childhood Stunting colloquium. *WHO Geneva*, 34.