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Optimizing the Role of Posyandu through Nutrition Huts in the Context of Prevention and Accelerating the Reduction of Stunting at the Rural Level

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ABSTRACT Reducing the *stunting rate* has been declared a national priority program. The government continues to move to organize the tools for accelerating *stunting prevention* and formulating the 2018-2024 National Strategy for the Acceleration of Stunting Prevention. Community nutrition counseling is one of the strategic steps that can be taken to improve health status and optimize the role of Posyandu as a health service facility for the community at the grassroots level. Participants in this activity were community health cadres, community leaders and communities with children under five who have stunting risk factors in Buleurejo Village, Diwek District, Jombang Regency. The implementation method includes the preparation, implementation, and evaluation stages. The results of community service activities were that more than half of the respondents (53%) were aged 20-25 years, all respondents were female, the education level of most of the respondents (83%) was high school/equivalent and most (75%) of the respondents had jobs as Housewife. Referring to the requirements for cadres, the ability to read and write is one of the requirements to become a cadre so that the elementary education level meets the cadre requirements. In addition, the type of work most cadres are housewives (87.5%). Knowledge about stunting and nutrition huts before being given training more than half had poor knowledge (56%), knowledge about stunting and nutrition huts after being given training most had good knowledge (63%). This community service program has initiated the formation of a nutrition hut at the toddler posyandu in Buleurejo Village, Diwek District . In addition, there has been an increase in the knowledge and skills of cadres to carry out early detection of stunting using a Z score.

INDEX TERMS Stunting, Nutrition Huts. Rural Level

I. INTRODUCTION

One of the most pressing health problems in Indonesia is stunting. A condition called stunting is characterized by children under the age of three having a much lower than normal height for their age group. Results from the Indonesian Nutrition Status Survey (SSGI) conducted by the Ministry of Health in 2021 show that the prevalence of stunting in Indonesia in 2021 was 24.4%. The government has set a target for a lower prevalence of stunting by 14 percent by 2024, which means the prevalence should fall by 10.4 percent in the next 2.5 years. Incidence or emergence of stunting problems own potency which threaten the health status of children like hinder growth, brain development, and increase risk period long like obesity, diabetes, and hypertension at the time of maturity [1,2].

Nutrition is still a high problem, especially in Indonesia with the 5th highest *stunting rate in the world* (UNICEF, 2018). According to the WHO *Child Growth Standard*, stunting is based on the index of body length for age (PB/U) or height for age (TB/U) with a z-score limit of less than -2 SD (WHO, 2013). According to Basic Health Research (Riskesdas) data from the Ministry of Health, the national *stunting rate* has decreased from 37.2% in 2013 to 30.8% in 2018. According to the Indonesian Toddler Nutrition Status Survey (SSGBI) in 2019, this figure has decreased to 27.7% [3,4].

Reducing the *stunting rate* has been declared a national priority program. At present, the government is continuing to move to organize the implementation of accelerated *stunting prevention* and formulate a National Strategy (Stranas) for the Acceleration of Stunting Prevention for 2018-2024. The government through the 2020-2024 National Medium-Term Development Plan (RPJMN), has also set a target for the national *stunting rate* to fall to 14%. Data from the Indonesian Nutritional Status Study noted that the *stunting rate* in East Java in 2021 was recorded at 20 percent [5,6].

The occurrence or emergence of stunting problems has the potential to threaten the health status of children, this condition causes increased exposure to disease risks, productivity, economic growth, as well as poverty and inequality. All socioeconomic classes and in Indonesia have a risk related to stunting. Indonesia has a fairly high stunting rate in the world. Incidents related to stunting if action is not taken immediately, then this condition will harm economic growth, poverty and inequality in Indonesian society. The strategy for combating stunting consists of 4 strategic areas, namely: Area 1: Advocacy, partnership and leadership; Area 2: Health promotion and risk reduction; Area 3: Health systems strengthening for early detection and management of NCDs; and Area 4: Surveillance, monitoring and evaluation and research.

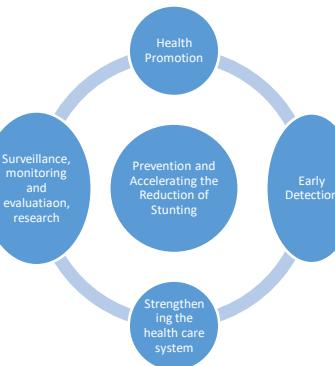


Figure 1. Prevention and reduction of stunting in Indonesia

Stunting is failure to thrive in children under the age of five due to chronic malnutrition. This condition causes children to be thin for their age and results in children who are too short for their age, besides that it also affects IQ, the risk of contracting disease, productivity, and economic growth, and stunting is a contributing factor to increasing poverty and inequality [9]. In Indonesia, children with stunting can be found in all socio-economic classes and in all regions of the country. Indonesia consistently ranks among middle-income countries with the highest rates of child stunting. These conditions will have a detrimental effect on Indonesia's development performance in terms of economic growth, poverty levels, and levels of inequality if immediate action is not taken to address them. Inadequate parenting, inadequate early childhood education and health programs, no access to nutritious food, and no access to clean water and sanitation, all play a role in the growth and development of stunted children [10,11].

One of the efforts that can be made is the importance of increasing and providing knowledge about proper nutrition to mothers of toddlers. Activities related to health education include nutrition education, which is defined as a planned effort to change health-related behaviors of individuals, families, groups, and communities. Health education can take place in a variety of settings, including schools, hospitals, and community centers. Nutrition education as a formal process designed to train the client's abilities or increase the client's knowledge in choosing food, physical activity, and health-related behavior. Nutrition education can also be considered as a process that aims to improve the client's ability to make healthy food choices. Even though children's physical development does not improve immediately due to nutrition education, mothers' understanding and eating habits can still be improved [13,14].

The Specific Nutrition Intervention Method and the Nutrition Sensitive Intervention are used by the government to combat stunting. The Specific Nutrition Intervention is designed for use in children during their first thousand days of life, while the Nutrition Sensitive Intervention is targeted through development activities in the non-health sector. The Specific Nutrition Intervention targets pregnant women, nursing mothers and infants aged 0 to 6 months, as well as breastfeeding mothers and

infants aged 7 to 23 months. Provision of supplementary food to pregnant women as a means of compensating for chronic lack of energy and protein intake, promotion of Early Breastfeeding Initiation (IMD) and exclusive breastfeeding, and promotion of continuation of breastfeeding until the age of 23 months accompanied by complementary feeding of ASI are some of the actions that have been taken [1516].

Since 2018, the government has implemented a program known as the National Strategy for the Acceleration of Stunting Prevention, which is used to prevent and reduce the number of stunting cases. The targets of this national policy are to improve the quality of preparation for family life, ensure that children's nutritional needs are met, increase access to and quality of health services, improve the quality of drinking water and sanitation, and improve parenting patterns. method. Monitoring, evaluation, and reporting on the implementation of stunting prevalence reduction programs must be carried out in an integrated and periodic manner so that progress, achievements, and obstacles encountered in implementation can be identified so that further steps can be taken to ensure objectives are met. Monitoring, evaluation, and reporting on the implementation of stunting prevalence reduction programs must be carried out. As a result of the convergence of specific and sensitive intervention programs that are right on target, supported by better and integrated target data, the establishment of TPPS, and (strengthening) its implementation at the household level through Posyandu [17,18].

Community nutrition counseling is one of the strategic steps that can be taken to improve health status and optimize the role of Posyandu as a health service facility for the community at the grassroots level. Posyandu routinely and directly provides health services to the community through Pondok Gizi in an effort to improve the quality of human resources or cadres and the community at the lower or village levels. Education about community nutrition is one of the strategic steps that can be taken. Medical and supporting components who have knowledge about fulfilling nutrition are urgently needed in order to accelerate the process of reducing the prevalence of stunting and preventing stunting [19,20].

Stunting management requires comprehensive and holistic interventions, starting from promotive, preventive, curative and rehabilitative efforts, as part of a continuum of care. The strategic approach to reducing the burden of stunting is increasing promotive and preventive efforts through optimizing the role of Posyandu through Pondok Gizi, empowering community cadres at posyandu as increasing knowledge about stunting, and increasing knowledge on detection and multisectoral anticipation efforts, so that public health monitoring, especially on stunting problems or related to be more effective. The working area of the Diwek Health Center is an area with high stunting cases and has not implemented efforts to tackle stunting in a holistic and comprehensive manner at the lower level through community empowerment [20,21]

Bulurejo Village, in the working area of the Cukir Health Center, already has a Toddler Posyandu, but there is no

specific structure or component related to fulfilling nutrition in cases of stunting. Efforts to optimize the role of the Posyandu through the establishment of the Gizi Pondok because the community health cadre leaders do not have sufficient knowledge about stunting so that people or families with indications of stunting have never had their health status monitored. The fundamental problem that needs to be resolved immediately is to establish a Nutrition Hut, so that the health of the community or families with indications of stunting can be monitored routinely [23].

II. IMPLEMENTATION METHOD

Community service program participants are community health cadres, community leaders and communities with toddlers who have stunting risk factors in Bulurejo Village, Diwek District, Jombang Regency. The implementation method includes the preparation, implementation, and evaluation stages, with the details of the stages as follows:

Phase I (Preparatory Stage)

a. Licensing stage

Licensing was done by applying for a permit to the Jombang District Health Office and a copy to the Cukir Health Center and Bulurejo Village.

b. Preparation phase

The activities carried out are to prepare the equipment and supplies needed in community service activities which consist of minimum standard equipment including; Pondok Gizi training modules, measuring tools for weight (scales), measuring tools for height, measuring tape for abdominal circumference (midline) and representative places

Phase II (Implementation Stage)

a. Orientation stage

The leader of the service team introduces himself and the team before the activity begins, explains the purpose and objectives of the activity, the time contract, and explains the mechanism for carrying out the activity.

b. Work stage

Pondok Gizi activities consist of 2 main activities carried out for 6 months, namely the formation and training of Posyandu cadres for Pondok Gizi activities; and implementation evaluation activities in Bulurejo Village . In the report the community service team only reported the results of forming, training cadres, and evaluating Pondok Gizi activities for 3 months. Formation and training activities consisted of 3 main activities, namely hamlet level meetings, cadre training, and the launching of Pondok Gizi.

1. Village level meeting

This activity began with a meeting with service partners, namely health workers from the Cukir Health Center and community leaders including hamlet heads, RT heads and health cadres. This activity aims to explain the Pondok Gizi program and ask for support and commitment from related parties regarding the establishment of Pondok Gizi.



Figure 2. Village level meeting

2. Counseling for cadres about stunting detection and the role of cadres in nutrition huts

One of the efforts that can be made is the importance of increasing and providing knowledge about proper nutrition to mothers of toddlers. Activities related to health education include nutrition education, which is defined as a planned effort to change health-related behaviors of individuals, families, groups, and communities.



Figure 3. Health Education for Health Volunteers

3. Volunteers Training

Volunteers training was held on the second day after the hamlet level meeting. This training begins with pre-test and post-test knowledge about Toddler Nutrition and Stunting. The cadres were also taught the skills of measuring weight and height, measuring abdominal circumference, and using the Z Score Card.



Figure 4. Volunteers Training

4. Formation of Nutrition Huts This activity aims to introduce the Nutrition Huts program to the community and early detection of participants who attend the activity.

Stage III (Nutrition Hust Evaluation)

Evaluation of this activity is carried out by monitoring Nutrition hust which is carried out every month. With this program, it is hoped that groups of mothers under five and other groups belonging to productive age can be more active in accessing community-based health services independently. It is our hope that this activity can be carried out every month either with assistance or not and can better reach the target toddlers who have not utilized posyandu services in the community so that the prevention and control of stunting can be carried out as a whole.

III. RESULTS AND DISCUSSION

The community service was carried out in Bulurejo Village, Diwek District, Jombang Regency on 15 June - 30 July 2023 with a series of activities ranging from advocacy and outreach, formation, counseling and education and training of cadres, and evaluation of nutrition cottage activities at the toddler Posyandu. The series of activities began by carrying out *Focus Group Discussions* with health cadres, village heads of village apparatus, village midwives and community service teams did not encounter significant obstacles during the series of activities, because community leaders and village heads provided full support and commitment to implementing nutrition huts in Posyandu for toddlers in Bulurejo Village which has not been implemented so far. This activity resulted in an agreement, namely the establishment of a nutrition hut in the toddler Posyandu, Bulurejo Village, Diwek District, Jombang Regency. Cadres involved in this activity also act as Posyandu cadres for toddlers and the elderly. Before the training was given, the community service team first gave a *pre-test questionnaire* to all cadres with the aim of knowing the level of knowledge of cadres about stunting and nutrition at the toddler posyandu in order to reduce stunting at the

rural level and after being given training the cadres were given a post-test to assess the *effect* of giving training for cadres.

The characteristics of the cadres and the results of the questionnaire are presented in the table below.

Table 1. Frequency Distribution of Cadres based on age, gender, education level, and occupation in Buleurejo Village, Diwek District, Jombang Regency

Age	Amount	%
20 - 25	16	53
26-30	6	20
35 - 40	5	16
41-45	3	10
46-50	3	10
Total	30	100
Gender		
Woman	30	100
Total	30	100
Education		
SD/MI	0	
SLTP/equivalent	2	7
SMA/Equivalent	25	83
PT	3	10
Total	30	100
Work		
Employee	5	25
Housewife	25	75
Total	30	100

Source: Primary data, 2023

Based on table 1, more than half of the respondents (53%) are aged 20-25 years, all respondents are female, the education level of most respondents (83%) is high school/equivalent and the majority (75%) of respondents have jobs as housewives ladder. Referring to the requirements for cadres, the ability to read and write is one of the requirements to become a cadre so that the elementary education level meets the cadre requirements. In addition, the type of work most cadres are housewives (87.5%). Work as housewives does not limit their role as cadres [6]

Table 2. Knowledge of posyandu cadres about stunting and nutrition huts before being given training

No	Category	Amount	%
1	Good	5	17
2	Enough	8	27
3	Not enough	17	56
	Amount	30	100

Source: Primary Data, 2023

Based on table 2, it was found that more than half had insufficient knowledge about stunting and nutrition huts before being given training (56%).

Table 3. Knowledge of posyandu cadres about stunting and nutrition huts after being given training

No	Category	Amount	%
1	Good	19	63
2	Enough	11	39
3	Not enough	-	-
	Amount	30	100

Source: Primary Data, 2023

Based on table 3, it was found that most of the knowledge about stunting and nutrition huts after being given training had good knowledge (63%)

IV. DISCUSSION

Stunting management requires comprehensive and holistic interventions, starting from promotive, preventive, curative and rehabilitative efforts, as part of a continuum of care. The strategic approach to reducing the burden of stunting is increasing promotive and preventive efforts through optimizing the role of Posyandu through Pondok Gizi, empowering community cadres at posyandu as increasing knowledge about stunting, and increasing knowledge on detection and multisectoral anticipation efforts, so that public health monitoring, especially on stunting problems or related to be more effective. The working area of the Diwek Health Center is an area with high stunting cases and has not implemented efforts to tackle stunting in a holistic and comprehensive manner at the lower level through community empowerment [22].

Efforts to optimize the role of Posyandu through the establishment of Pondok Gizi because health cadres public which are owned have no knowledge Enough about stunting so that people or families with indications of stunting never monitored health status. Fundamental problem which needs to be resolved immediately is to form a nutrition hut, so that the health of the community or family with indication stunting can monitored in a manner routine. Activity will started with socialization and advocacy to related parties in this case hamlets, sub-districts and health centers. The socialization aims to gain support and commitment in organizing and establishing the Nutrition Center. As soon as the Nutrition Center is formed, the next priority is to train cadres so they are able to carry out their roles, tasks and technical activities. The agreement on an action plan to help solve the above health problems is to form a Gizi Pondok in order to optimize the role of Posyandu and empower community health cadres in carrying out early detection of stunting risk factors that have been mutually agreed upon with the health cadres [25].

V. CONCLUSION

This community service program has initiated the formation of a nutrition hut at the toddler posyandu in Buleurejo Village, Diwek District . In addition, there has been an increase in the knowledge and skills of cadres to carry out early detection of stunting using a Z score. In principle, the handling of stunting is to communicate, provide the widest possible information and education to the public and public health cadres to reduce and prevent

stunting by implementing behaviors such as: Periodic health checks, increasing fulfillment of balanced diet and nutrition needs, and maintaining oneself and the environment to stay healthy by minimizing risk factors.

REFERENCES

[1] Priyono, PK (2022). Empowerment of Posyandu Cadres on Stunting Management in Toddlers in Mlese Village, Ceper District, Klaten Regency. *INVOLUTION: Journal of Obstetrics* , 12 (1), 6–12. <http://ojs.stikesmukla.ac.id/index.php/involution/article/view/329/186>

[2] Bappenas. (2019). Percepatan Penurunan Stunting Langkah Strategis Dalam Pembangunan Manusia Berkualitas. Materi disampaikan oleh Direktur Kesehatan dan Gizi Masyarakat pada MUNAS XVI ISMKMI, Makassar, 02 Maret 2019.

[3] Kementerian Kesehatan RI. (2013). Hasil Riset Kesehatan Dasar 2013. Jakarta

[4] Kementerian Kesehatan RI. (2018). Hasil Riset Kesehatan Dasar 2018. Jakarta

[5] Laksono, AD, Wulandari, RD, Amaliah, N., & Wisnuwardani, RW (2022). stuntamong children under two years in Indonesia: Does maternal education matter? *PLoS ONE*, 17(7 July), 1–11. <https://doi.org/10.1371/journal.pone.0271509>

[6] Rosha, BC, Yunita, I., Amaliah, N., & Winarto, AT (2020). Specific and Sensitive nutritional Intervention Toward Stunting in Mandalaheyu Village Tasikmalaya District: A Qualitative Study. 26, 311–317. <https://doi.org/10.2991/ahsr.k.200523.075>

[7] Secretariat of The Vice President of the Republic of Indonesia. (2020). National strategy to accelerate stunting prevention 2018-2024 & Implementation progress. ministry State Secretary R, August. https://stunting.go.id/?smd_process_download=1&download_id=52

[8] Titaley, C. R., Ariawan, I., Hapsari, D., Muasyaroh, A., & Dibley, M. J. (2019). Determinants of the stunting of children under two years old in Indonesia: A multilevel analysis of the 2013 Indonesia basic health survey. *Nutrients*, 11(5). <https://doi.org/10.3390/nu11051106>

[9] UNICEF Indonesia. (2020). the state of Children in. the state of Children in Indonesia p.sTrends, Opportunities and Challenges for Realizing Children's Rights. [https://www.unicef.org/indonesia/sites/unicef.org.indonesia/files/2020-06/The State of Children in Indonesia, 2020.pdf](https://www.unicef.org/indonesia/sites/unicef.org.indonesia/files/2020-06/The%20State%20of%20Children%20in%20Indonesia%202020.pdf)

[10] UNICEF. (2021). Social and Behavior Change Communication Strategy: Improving Adolescent Nutrition in Indonesia. Unicef, 1–83. https://www.unicef.org/indonesia/media/9221/file/Executive _ _ summary of social behavioral change communication strategy. pdf

[11] Victora CG, Adair I, Fall C, Hallal PC, Martorell R, Richter I, Sachdev HS. (2008). Maternal and Child Undernutrition Study Group. Maternal and Child Undernutrition: Consequences for Adult Health and Human Capital. *Lancet*. 371:340-57.

[12] WHO, UNICEF. (2013). Improving Child Nutrition: The achievable imperative for global.

[13] Kemenkes RI. (2018). Riset Kesehatan Dasar. Jakarta: Kementerian Kesehatan Republik Indonesia- Badan Peneliti dan Pengembangan Kesehatan.

[14] Kraemer et al. (2018). The Biology Of The First 1000 Days. England: Taylor and Francis Group.

[15] Kosasih, C. E., Purba, C. I., & Sriati, A. (2018). Upaya Peningkatan Gizi Balita Melalui Pelatihan Kader Kesehatan. *Media Karya Kesehatan*, 1(1); 90-100.

[16] Legi, N. N., Rumagit, F., Montol, A. B., & Lule, R. (2015). Faktor Yang Berhubungan Dengan Keaktifan Kader Posyandu Di Wilayah Kerja Puskesmas Ranotana Weru. *Jurnal GIZIDO*, 7(2); 429-436.

[17] Megawati, G., & Wiramihardja, S. (2019). Peningkatan Kapasitas Kader Posyandu Dalam Mendeteksi Dan Mencegah Stunting Di Desa Cipacing Jatinangor. *Jurnal Aplikasi Ipteks Untuk Masyarakat*, 8(3); 154-159.

[18] Mpembeni R, Bhatnagar A, LeFevre A, et al. (2015). Motivation and Satisfaction Among Community Health Workers in Morogoro Region, Tanzania: Nuanced Needs and Varied Ambitions. *Human Resources for Health*, 13; 1-10.

[19] Notoatmodjo, S. (2007). Kesehatan Masyarakat Ilmu dan Seni. Jakarta: Karya Medika.

[20] Nurhidayah, I., Hidayati, N. O., & Nuraeni, A. (2019). Revitalisasi Posyandu melalui Pemberdayaan Kader Kesehatan. *Media Karya Kesehatan*, 2(2); 145-157.

[21] Pemerintah Provinsi Jawa Tengah. Angka Stunting Jateng Turun 7 Persen, Lampaui Target SDGs . 2021. [cited 2021 Dec 31]. Available from : <https://jatengprov.go.id/publik/angka-stunting-jateng-turun-7-persen-lampaui-target-sdgs>

[22] Sardiman. (2011). Interaksi dan Motivasi Belajar Mengajar. Jakarta: Rajawali Press.Tim Nasional Percepatan Penanggulangan Kemiskinan. (2017). Ringkasan 100 Kabupaten/Kota Prioritas untuk Intervensi Anak Kerdil (Stunting). Jakarta: Sekretariat Wakil Presiden Republik Indonesia.

[23] WHO, UNICEF, World Bank. (2018). Percentage of Children Who were Stunted in Leading Countries Worldwide as of 2017. *Statistika*.

[24] WHO. (2013). Child Growth Indicators and Their Interpretation. <http://www.who.int/%0Anutgrowthdb/about/introduction/en/%0Aindex2.html>. Diakses tanggal 17 Februari 2020.

[25] Husniyawati, Y. R., & Wulandari, R. D. (2016). Analisis Motivasi Terhadap Kinerja Kader Posyandu Berdasarkan Teori Victor Vroom. *Jurnal Administrasi Kesehatan Indonesia*, 4(2).

