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Capacity building of integrated health post cadres on stunting prevention in Pandeglang Regency Locus Area

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ABSTRACT

Health cadres play a vital role as community educators and frontline workers in the stunting handling program. Maternal knowledge regarding adequate nutrition for toddlers from pregnancy to birth is a crucial factor in preventing stunting, as it influences the mother's choices in terms of food ingredients and diversity. Pandeglang Regency is among the 100 priority cities/regencies in stunting reduction efforts. This activity aims to provide training to enhance the knowledge and capacity of Integrated Health Post (Posyandu) cadres in stunting, anthropometry, and nutrition. The trained cadres will be able to actively contribute to stunting prevention programs in the targeted stunting locus area of Pandeglang Regency. The training methods include classroom training, Posyandu simulations, advocacy, and licensing. The exercise focuses on three stunting locus villages: Kedeumaneh, Kadeubelang, and Medong. Knowledge improvement was evaluated through pre-test and post-test assessments, followed by simulations conducted at each Posyandu location. The results indicated that 30 cadre respondents demonstrated increased knowledge after the training (p-value = 0.044). Furthermore, the simulation results revealed that the cadres were able to accurately perform anthropometric measurements.

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1. INTRODUCTION

Stunting is the result of a chronic malnutrition condition where a child's height is less than their age. Stunting is measured using a z-score index of height compared to those who are less than -2 SD (standard deviation) (WHO, 2018; WHO et al., 2021). In the long term, a child suffering from stunting can affect cognitive and physical development which is not optimal and is not reversible, susceptible to disease, so that it will disrupt the quality of Indonesian society in the future with the possibility of

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decreasing productivity, increasing poverty, and widening inequality (Satriawan, 2018; Sutarto et al., 2018; WHO, 2018).

According to WHO, the prevalence of stunting in Southeast Asia is in the high category, namely 24.7%. The prevalence of stunting in Indonesia has experienced a decreasing trend from 2013 of 37.2%, in 2018 it was 30.80% and in 2021 based on the study of nutritional status in Indonesia (SSGI) the prevalence of stunting is 24.4%, but this figure is still higher greater than the WHO standard, which is below 20%. Based on presidential regulation No. 72 of 2021 concerning accelerating the reduction of stunting, the target for accelerating the reduction of stunting in 2024 is 14% (Kementerian Kesehatan Republik Indonesia, 2022; Satriawan, 2018).

Banten Province is one of the provinces that has an increase in the prevalence of stunting from 24.1% in 2019 to 24.5% in 2022. WHO. The prevalence of stunting under five in cities/regencies in Banten province in 2021 is sequentially Tangerang City 15.3%, South Tangerang City 19.9%, Cilegon City 20.6%, Tangerang Regency 23.3%, Serang City 23.4%, Serang Regency 27.2%, Lebak Regency 27.3% and Pandeglang Regency 37.8% (Satriawan, 2018). This high prevalence has caused Pandeglang Regency to become one of the 100 Priority Districts/Cities for stunting intervention. In 2013, the prevalence of stunting in Pandeglang district reached 38.57% with the number of stunted children under five reaching 46,775 people (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2017).

Stunting is a multidimensional problem that goes beyond just a lack of nutrition in terms of growth and development. Several factors contribute to stunting, including maternal nutrition adequacy before pregnancy, during pregnancy, and after giving birth, maternal body posture, birth spacing, maternal age, inadequate nutritional intake during pregnancy in terms of both quantity and quality, insufficient exclusive breastfeeding, adequate infant nutrition intake, socio-economic conditions, recurrent infections, especially those affecting the digestive system, sanitation, and maternal knowledge related to nutrition (Salsabila et al., 2021).

The nutritional intake of toddlers is influenced by the availability of information, both before and after childbirth. Poor childcare practices, including lack of knowledge and understanding of maternal health and nutrition, can impact a mother's decision in selecting a variety of ingredients and foods consumed during pregnancy as well as in preparing complementary foods for infants entering the stage that requires additional nutrition intake, known as complementary feeding (MP-ASI). Statistical data shows that 60% of infants aged 0-6 months do not receive exclusive breastfeeding. Additionally, 60% of infants aged 0-24 months are not given complementary foods. Children above six months of age are introduced to complementary feeding alongside breastfeeding. Apart from introducing various types of foods to infants, complementary feeding also helps meet the nutritional needs of infants that are no longer fulfilled by breastfeeding. It also contributes to the development of the immune system and strengthens the child's defense mechanisms against different foods or beverages (Tim Riskesdas 2018, 2019; Salsabila et al., 2021).

To address nutrition issues effectively, a comprehensive strategy is needed that covers multiple sectors. One of the targets of the national movement to accelerate nutrition improvement is the community, especially pregnant women, breastfeeding mothers, mothers of toddlers, and health cadres as the frontline in providing health services and early detection of stunting in the community. Optimal nutritional intake for stunting prevention can be achieved through a national movement (Tim Riskesdas 2018, 2019).

Integrated Health Posts (Posyandu) are one of the primary healthcare institutions located closest to the community and easily accessible. Posyandu is a form of community-based health effort implemented by, for, and with the community to facilitate access to information and healthcare services,

particularly for pregnant women, lactating mothers, toddlers, and couples of reproductive age. Posyandu aims to provide information and healthcare services to anyone in need. Posyandu activities are guided by Posyandu cadres who have received guidance, training, and evaluation from the local health center (puskesmas) (Nurbaya et al., 2022). Posyandu cadres are part of the selected members of the community who dedicate their time to assist the health center or healthcare professionals in managing the Posyandu. They play a crucial role in detecting, identifying, and assessing the healthcare needs of the community. In disseminating information related to child growth and health during weighing sessions at the Posyandu, the cadres have a significant role to play. Empowering the cadres is one approach that can be used to enhance their abilities and promote their self-reliance, enabling them to effectively carry out their responsibilities and functions in improving the overall health status of the community (Simbolon et al., 2019).

Knowledge about stunting should be possessed by Posyandu cadres to fulfill their role in preventing, early detection, and addressing stunting within the community. Competent and well-informed cadres who approach their services with a positive attitude at the Posyandu are a form of active participation from and by the community. They contribute to disseminating health information and delivering quality healthcare services, ultimately leading to an improvement in the overall health status of the community (Handayani et al., 2019; Saharuddin, 2020).

Health education activities are crucial and should be conducted by all stakeholders involved in healthcare management. It has been proven that through health education, community knowledge can be improved. Training sessions for health cadres in the Stunting-focused areas of Pandeglang district can enhance their skills in utilizing stunting mats (tikar stunting) and increase their knowledge about the risk factors of infectious diseases related to stunting (Mardhiyah et al., 2021). Providing health education to at-risk mothers with infants in Pandeglang can also enhance their understanding of stunting and the risk factors associated with environmental sanitation (Ernawati et al., 2022).

Posyandu cadres, as key drivers in addressing health issues, particularly stunting, and being the individuals closest to the community, play a vital role in providing information. They need to have the necessary knowledge and proficient skills to deliver effective services. The Posyandu cadres in the three villages (Kedeumaneh, Kadeubelang, and Medong), which are specific locations for stunting interventions in Pandeglang district, still require improvement in their knowledge and skills to fulfill their roles effectively.

Therefore, the objective of this activity is to provide training to Posyandu cadres, equipping them with sufficient knowledge about stunting, anthropometry, nutrition, and enabling them to apply this knowledge in their respective Posyandu working areas.

2. METHODS

Before conducting the activity, the team advocated and obtained permission from the Pandeglang District Health Office and the Pandeglang Regent regarding the prioritized location for reducing stunting rates in the district. The target villages for the activity are Kadumaneuh Village, Kadubelang Village, and Medong Village. Kadumaneuh Village falls under the jurisdiction of Banjar Health Center, while Kadubelang and Medong Villages are within the jurisdiction of Mekarjaya Health Center. These three villages were selected because Kadubelang and Medong are included in the Special Location (Lokus) for the Stunting program in Pandeglang District for the year 2021-2022. The team also advocated and obtained permission from Banjar Health Center, the head of Kadumaneuh Village, Mekarjaya Health Center, the head of Mekarjaya Village, and the head of Kadubelang Village for the planned activities.

The method used was a training conducted on August 27, 2022, at the Pandeglang District Health Office with 30 Posyandu cadres participating from the three villages. Pre- and post-training evaluations were conducted using a questionnaire with questions related to stunting, anthropometry, and nutrition. Simulations were carried out at the respective Posyandu in the three villages on September 10, 2022. The data were analyzed using SPSS version 23, and the normality was tested using the Shapiro-Wilk test. Paired t-tests were conducted to determine whether there was an improvement in participants' knowledge before and after the health education program.

3. RESULTS AND DISCUSSIONS

Advocacy and Permits

Prior to carrying out the activity, the team carried out advocacy and permits to the Pandeglang district health office and to the Pandeglang district head regarding the priority implementation sites in an effort to reduce stunting rates in Pandeglang district. The team requested permission to carry out comprehensive counseling and monitoring at several designated Posyandu locations. Kadumaneuh Village, Kadubelang Village and Medong Village are some of the main target villages which have become the locus of handling stunting in Pandeglang Regency, Banten Province. Pandeglang Regency is a city/district in Banten Province which is one of 100 cities/regencies throughout Indonesia as a priority for solving the problem of stunting.

Kadumaneuh Village is located in the working area of the Banjar Health Center, while Kadubelang Village and Medong Village are included in the working area of the Mekarjaya Health Center. The team carried out advocacy and permits for activities to be carried out at the Banjar Health Center, Kadumaneuh Village Head, Mekarjaya Health Center, Mekarjaya Village Head and Kadubelang Village Head.

Figure 1. Advocacy process and hearings to the Regent of Pandeglang

Training

Participants who took part in the training activities totaled 30 cadres from 3 villages in 2 sub-districts. Training materials include stunting and risk factors, anthropometric measurements, and nutritional status measurements. The training was carried out in the Pandeglang District health office hall starting with the opening by the head of the Pandeglang district health office then continued with filling out the pretest questionnaire for approximately 5 minutes, then presenting the material presented by the resource person using the material displayed on the screen and printed material props provided given to all participants who were present, before and after the training to assess whether there was an increase in cadre knowledge, a questionnaire consisting of 10 questions was given covering

stunting, anthropometry and nutrition (pretest and post test). The results of the pretest and post test questionnaires that have been collected were analyzed using the SPSS version 23 application with the normality test of the Shapiro Wilk and continued with statistical tests using the Wilcoxon test.

Figure 2. Counseling and implementation of pretest and post test

Simulation at Posyandu

Demonstration activities and assistance by the team were carried out on September 10, 2022 at each Posyandu during working hours by all cadres who had previously received training. The team donated demonstration tools in the form of infantometers and microtoises as well as calibrated scales to be used at the Posyandu and to prevent deviations from the results obtained or bias in the instruments.

Figure 3. Demonstration and distribution of measurement tools

Table 1. Frequency distribution of cadre characteristics

Characteristics	f	%
Age		
20-29 years old	4	13,3
30-39 years old	7	23,3
40-49 years old	19	63,3
Village		
Kadumaneuh	10	33,3
Kadubelang	9	30
Medong	11	36,7
Service period		
< 5 years	13	43,3
5-10 years	9	30
> 10 years	8	26,7

Based on the data in Table 1, it describes the characteristics of the 30 cadres involved in this study, with most cadres aged in the 40-49 year group, namely 19 people (63.3%). Respondents who attended most of the counseling activities came from Medong village, totaling 11 people (36.7%) and most of the respondents had been cadres for less than 5 years, namely 13 people (43.3%).

Before the statistical tests were carried out, a data normality test was carried out to assess the distribution of the data obtained in the test group, whether the data taken from the population were in a normal distribution or distributed symmetrically with the mode, mean and median at the center (Nuryadi et al., 2017).

Table 2. Shapiro-wilk normality test results

Variables	p
Pretest	0,006
Post test	0,018

In the data normality test using the Shapiro-Wilk test with the results of the pretest p is 0.006 and the post test p is 0.018. The p-value obtained <0.05 means that the data obtained in the sample group is not normally distributed, so the selected statistical test that can be used to determine whether there is a difference between two paired or related samples in data that is not normally distributed is the Wilcoxon test (Triwiyanti et al., 2019).

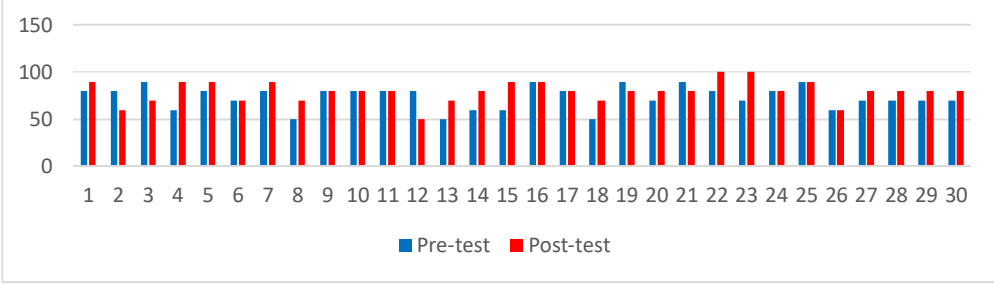

Figure 4. Results of pretest and post test scores of cadre knowledge

Table 3. Pretest and post test mean

Variables	Mean
Pretest	73,7
Post test	79,7

Table 3 shows that there has been a change in the understanding or level of knowledge of the cadres who participated in the training activities. The average value of cadres' knowledge about stunting, anthropometry and nutrition before participating in training activities is 73.7. After carrying out outreach activities related to stunting, anthropometry and nutrition, the average score of cadres increased to 79.7. The increase obtained did not really have a significant change.

Table 4. Wilcoxon test results

Variables	Negative Ranks (n (%))	Positive Ranks (n (%))	Ties (n(%))	p
Pretest & Post test	5 (16,6%)	16 (53,4%)	9 (30%)	0,044

Based on the data in Table 4 obtained from the Wilcoxon test, the Negative Rank value is 5, indicating that out of a total of 30 respondents, 5 respondents experienced a decrease in scores between the pretest and post test. The Positive Rank value is 16, indicating that out of the total respondents who completed the pretest and post test questionnaires, 16 respondents experienced an increase in scores between the pretest and post test. The Ties value is 9, indicating that out of the total respondents who completed the pretest and post test questionnaires, 9 respondents did not experience any decrease or increase in scores after the intervention. Although the mean scores in the pretest and post test did not show a significant change, the statistical test revealed a p-value of 0.044, which is less than the alpha value (0.05), indicating a significant difference between the pre-test and post-test scores after the intervention.

The results of the activity provide an overview that the majority of respondents fall into the age category of 40-49 years, with a total of 19 respondents (63.3%). Age is one of the characteristics of respondents that can influence the indicators of experience, the ability to grasp new information, and the ability to remember information previously obtained. As respondents get older, their experiences and acquired information tend to be more extensive, in line with a mindset that becomes wiser (Rahayu et al., 2021). However, this ability usually starts to decline in the third decade of life and continues throughout the rest of one's lifespan. The decrease in attentional focus on acquired information can have an impact on other cognitive factors such as memory, which is one of the most common cognitive impairments in older adults (Laksmidewi, 2016).

Most of the cadres are relatively new to their role, as the data shows that the majority of cadres, consisting of 13 respondents (43.3%), have been involved in healthcare services at the Posyandu for less than 5 years. When the working experience is still relatively short, there may be many cases in the field that have not been addressed extensively, resulting in limited application of skills and expertise in healthcare services. This, in turn, can affect the approach and working methods in dealing with mothers and children at the Posyandu (Wardhani, 2012). Cadres with long service tenure can experience an increase in knowledge due to experience in carrying out Posyandu activities and participating in trainings organized by both the government and the private sector (Putra & Yuliatni, 2016).

One strategy to increase one's knowledge so that awareness grows is to provide information that can be done by providing health education (Musdalifah et al., 2022; Kusumawati, et al., 2022). The process of increasing knowledge through learning consists of a series of events/events within a person that take place systematically starting with a stimulus and ending with feedback (pretest and post test). (Naningsih et al., 2022). The knowledge of a cadre can increase with cadre training. By providing additional information, cadres will have broader insight into health services and related to their duties when compared to those who have not received additional information. Training should be carried out on an ongoing basis and reach all cadres, so that all cadres are expected to have good knowledge (Putra & Yuliatni, 2016).

A person's abilities and knowledge can be increased through the acquisition of new skills, practices or directions in the context of health education (Kusumawati et al., 2022). Based on the data obtained, there was a change in the increase in knowledge of the cadres who attended counseling. The average score after counseling increased by 6 points, and there were 16 respondents (53.4%) who experienced an increase in scores after counseling. These results illustrate that the counseling carried out has an influence on the knowledge of cadres, both the information obtained by the cadres is new information, as well as activating old information that has been obtained during training and previous counseling, so that counseling and training activities need to be carried out on an ongoing basis and sustainable development of cadres in Posyandu.

The simulation is carried out as a stage in the application of the knowledge that has been obtained during counseling. The simulation method is a method to provide an opportunity for a person or Posyandu cadre to re-demonstrate and do everything that has been conveyed in the counseling activities that have been carried out previously (Nurbaya et al., 2022). Simulation is needed in developing thinking skills, improving skills in problem solving and intellectual, the involvement of cadres in simulations is a follow-up to perpetuate the knowledge that has been obtained and provide independent and autonomous learning (Tisnawati & Ilda, 2022). In community service activities involving these cadres, simulations are carried out at their respective Posyandu. The involvement and enthusiasm of the cadres towards the simulation at the Posyandu can be seen from the presence of cadres at the Posyandu who come before the specified time of attendance as well as their participation in demonstrations against mothers and children who are present at the Posyandu to carry out routine health monitoring.

4. CONCLUSION AND RECOMMENDATIONS

This community engagement program aims to provide education and training to Posyandu cadres, equipping them with sufficient knowledge about stunting, anthropometry, and nutrition to address and prevent stunting in the targeted stunting areas. The program is divided into three phases with four activities. The first phase involves advocacy to the local government, while the second phase includes training sessions for the designated cadres identified by the government. The third phase consists of two activities: first, conducting simulations at the Posyandu by the trained cadres to educate mothers and children attending the Posyandu, and second, distributing eggs to mothers with infants under two years of age as a nutritional supplement and a way to enhance empathy and the implementation of cadres in serving the community. Regular monitoring of mothers and children is also conducted. During this community engagement program, it was found that the majority of respondents were in the late adulthood age range of 40-49 years, totaling 19 respondents (63.3%), and the majority had less than 5 years of work experience, with 13 respondents (43.3%). The increased knowledge of cadres regarding stunting, anthropometry, and nutrition, as well as their ability to demonstrate the acquired information to the community at the Posyandu, can create a warm and closer atmosphere for the attending mothers and children.

The training should be conducted at locations near the homes of the target cadres. This ensures that the participants do not need to spend a long time traveling to the training location, allowing the activities to proceed smoothly and giving the speakers ample time to deliver the material without feeling rushed. Simulations should be conducted in a gradual and scheduled manner for mothers and children, so that when cadres perform demonstrations that require sufficient time, there won't be overcrowding at the Posyandu. This creates a more comfortable environment for the attending children and enables quick supervision without causing them distress or making them eager to leave. To follow up on the outcomes and maintain the acquired knowledge while preventing any decline in understanding of stunting, anthropometry, and nutrition, it is important to provide regular guidance, supervision, and monitoring during the education and training activities. This can be done by health officers, health institutions, and supervising personnel, which will have a positive impact on knowledge enhancement. The dissemination of information about stunting, anthropometry, and nutrition to the cadres is expected to be passed on to their fellow cadres and the wider community, especially mothers with infants under two years of age.

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