

Optimizing the Role of Cadres in Increasing Knowledge in the Early Detection of Malnutrition Cases in Toddlers

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ABSTRACT

Malnutrition is a condition in which the body does not get enough nutrition to maintain health. There were 59 cases of malnutrition in Padang City in 2019. By finding cases early, the handling of children under five will be done more quickly. The health cadres have an important role in relation to early detection of malnutrition. This study aimed to determine how much the cadres knowledge increased after being given cadre training. This type of research is analytic research design with Quasy experiment pre-test and post-test. This research was conducted in the working area of the Public Health Seberang Padang. The sample in this study was 20 cadres who were taken by using of the sampling technique cluster random sampling. Statistical test using the Wilcoxon test and Paired Sample T Test. The data obtained that there is no significant difference in cadres knowledge about PHBS with p value 0.317, and there is a significant difference in cadres knowledge about malnutrition with p value 0.001 and post nutrition with p value 0.008. Optimizing in the role of cadres with training methods is proven to increase knowledge about malnutrition and post nutrition, but it is not better in increasing knowledge about PHBS. It is hoped that the Public Health will conduct regular training/education of cadres to improve their skills and to realize the independence of cadres in early detection of malnutrition cases.

Keywords: Early Detection, Malnutrition, Training Of Cadres

Received January 3, 2021; Revised February 24, 2021; Accepted March 18, 2021



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BACKGROUND

Indonesia is a country with complex nutritional problems. Most of the nutritional problems experienced by children under five in Indonesia are malnutrition. Malnutrition is a condition in which the body does not get adequate nutrition, malnutrition can also be called a condition caused by an imbalance between food intake and nutritional needs to maintain health. This can happen due to eating too little or taking an unbalanced diet. In addition, malnutrition in the body also results in malabsorption of food or metabolic failure (Soetjiningsih., Ranuh, 2015).

Malnutrititions are major health problems in developing countries like Indonesia. In 2018, nationally, the prevalence of malnutrition and deficiency was 17.7% consisting of malnutrition of 3.9% and malnutrition of 13.8%. While The prevalence of malnourished and under-fives in the city of Padang in 2018 was 22.6%. In Padang City, there are some cases of malnutrition among children under five in the last three years have decreased. In 2018 there were 61 cases while in 2019 there were 59 cases (Ministry of Health, 2020).

The case of children under five who experience malnutrition is likened to the iceberg phenomenon, where cases of malnutrition that require treatment at the hospital appear on the surface, even though many children suffer from malnutrition that are not found early, especially in remote and poor areas. Finding strategies for children under five with Malnutrition cases or active case finding is very important to do. Monitoring the growth of children under five at the integrated health Centre as we called Posyandu is a very strategic effort to detect an early growth disorders. By finding cases early, the handling of children under five will be done more quickly so that children do not fall into a condition of malnutrition or even death (Adhi, Utami and Adnyana, 2016).

Labor limitations health in Indonesia causes the coverage of health services to be not optimal. So that a participatory development strategy is an effective way to deal with this malnutrition problem. Participatory means that not only the government must be aware and act, but also the community must be aware and move to deal with this problem. Malnutrition cases occur usually because this disease is not recognized by the public. So that people need empowerment to know and understand the signs of malnutrition. If people know the characteristics of malnutrition from an early age, it can be treated immediately so as not to cause bad complications. Cadres are members of the community assigned to help identify health needs in the community. The ability of cadres to measure nutritional status and recognize signs of malnutrition is needed. So that the data obtained is really valid or accurate in reporting the number of cases of malnutrition in children under five (Adistie, Lumbantobing and Maryam, 2018)

The results of research conducted by Adhi, KT in 2015 concerning Empowerment of Village Cadres and Community Figures in the Implementation of Early Detection Strategies for Child Malnutrition in the Village of Bukit Karangasem showed that training was effective in increasing the knowledge of cadres and community leaders in Bukit Village, Karangasem District, Karangasem Regency ($p < 0.001$). Evaluation of the results of D / S coverage after training showed an increase in achievement by 32% (from 65.76% to 97.88%). This shows an increase in public awareness of the importance of monitoring the weight of children under five at Integrated Health Centre.

The implementation of Integrated Health Centre in Padang City can be seen that it wasn't good enough. This can be seen from the level of community participation who comes to the Integrated Health Centre and the number of toddlers who weigh them. The level of community participation in 2018 was smaller when compared to 2017, which was 71.10%, while under-fives who weighed in the Integrated Health Centre were 66.47%. In

implementing in the Integrated Health Centre, cadres still only record the weight and age of babies or toddlers. This is due to the cadres' lack of knowledge in early detection of malnutrition cases, so that the cadres only took measurements of body weight and height and recorded them in the visit book without interpreting the results of the measurements. In addition, related to development detection and growth stimulation, in the Integrated Health Centre activities have not been implemented. (Kosasih et al., 2018).

Referring to the above problems, it is necessary to empower cadres in Padang City regarding the malnutrition of children under five so that when cadres are recording the child's weight, cadres can immediately find out whether the child is categorized as malnutrition or not. The activities we carry out are to optimize the role of cadres in increasing knowledge in early detection of malnutrition cases in toddlers. So that later, if there are signs of symptoms of malnutrition it can be prevented from an early age, and stimulation of growth and development can be carried out by cadres in the Seberang Padang Community Health Center Work Area which will be one of the concrete solutions in contributing to solving nutritional problems in the city of Padang.

METHODS

This type of research is an analytical study with a quasi experimental research design with a one group pre test post test design. In this study, the researchers wanted to see how much influence the cadre training had on increasing cadres' knowledge of malnutrition in children under five in the working area of the Seberang Padang Public Health Centre , Padang City.

The population in this study were all in the Integrated Health Centre cadres in the working area of the Seberang Padang Public Health Center. The sample in this study were some Integrated Health Centre cadres who met the inclusion and exclusion criteria and were willing to participate in this study. The sampling technique used cluster random sampling. Sub-district in the working area of the Public Health Centre Seberang Padang, there are 4 villages. This research was conducted in 2 sub-districts, namely Seberang Padang and Alang Lawas villages with a total of 20 cadres.

The subject of this study only occurred in one group, carried out a pre-test then continued with providing training to cadres and post-test after being given training to cadres to analyze the effect of training on cadres on increasing cadres knowledge of malnutrition, PHBS behavior and nutrition posts. Primary data is the result of a questionnaire assessment of knowledge about malnutrition, PHBS behavior and nutrition posts.

RESULTS

The characteristics of the research subjects are presented in table 1 below

Table 1. Characteristics of Cadres

| No. | Characteristics | Frequency | % |
|-----|-----------------|-----------|----|
| 1. | Age | | |
| | 35-45 | 5 | 25 |
| | 46-55 | 10 | 50 |
| | 56-65 | 5 | 25 |
| 2. | Education | | |
| | SD | 1 | 5 |
| | Junior High | 7 | 35 |
| | SMA / SPG | 12 | 60 |
| 3. | Profession | | |

| | | | |
|----|--------------------------|----|----|
| | Work | 2 | 10 |
| | Does not work | 18 | 90 |
| 4. | Marital status | | |
| | Marry | 16 | 80 |
| | Single | 4 | 20 |
| 5. | Experience being a cadre | | |
| | <5 years | 5 | 25 |
| | 5 - 10 years | 8 | 40 |
| | > 10 years | 7 | 35 |

Based on table 1, it is known that the characteristics of the 20 cadres involved in this study are 50% of the respondents in the age range 46 - 55 years. Most of the cadres education is 60% of the respondents have high school education. The characteristics of respondents based on occupation are mostly 90% of respondents do not work. Characteristics of respondents based on marital status are 80% already married. The characteristics of respondents from their experience as a cadre are almost half. 40% of respondents have 5-10 years of experience.

Based on the above results, it can be said that the average age of the cadres has reached early elderly so that the biological and psychological conditions are ready to fulfill their duties and functions as the Integrated Health Centre of cadres. In addition, according to Nursalam (2005) when a person's age is getting enough, the level of maturity and strength of a person will be more mature in thinking and working. The education level of the respondents found that more than a half of the cadres with a high school education background were 60%. There are many cadres with secondary education enabling cadres to easily grasp the information provided and will have an open mindset in terms of the information provided. So that it is expected that cadres can fulfill its nutrition and willing to carry out early detection of malnutrition which supports the growth and development of children (Soetjiningsih., Ranuh, 2015).

Most of the cadres in this study, or 80%, were married and most or 90% did not work, meaning that most of the cadres were housewives. So that cadres have plenty of time to carry out their duties and functions, especially in the early detection of malnutrition in toddlers who come to the posyandu. Nearly half of 40% of cadres have experience as cadres within 5-10 years. The ability of cadres in carrying out their duties and getting good results is influenced by the length of time a cadre has worked as a cadre. So that the longer a person becomes a cadre, the more skilled the cadre is in carrying out and carrying out tasks in the activities at the posyandu.

Comparison of increased knowledge and attitudes before and after the intervention is presented in Table 2.

Table 2. Differences in knowledge of cadres before and after being given training

| Knowledge | Mean | Δ average | SD \pm | Minimum- Maximum | p value |
|--------------|------|---------------------|----------|---------------------|---------|
| PHBS | | | | | |
| Pre Test | 6.60 | 0.1 | 0.503 | 6 - 7 | 0.317 * |
| Post Test | 6.70 | | 0.571 | 5 - 7 | |
| Malnutrition | | | | | |
| Pre Test | 1.65 | 1.75 | 0.745 | 1 - 3 | 0.001 * |

| | | | | | |
|-----------------|-------|------|-------|---------|----------|
| Post Test | 3.40 | | 1,603 | 1– 7 | |
| <hr/> | | | | | |
| Nutrition Post | | | | | |
| Pre Test | 3.05 | 1,2 | 1,432 | 1– 6 | 0.008 ** |
| Post Test | 4.25 | | 1,293 | 1– 6 | |
| <hr/> | | | | | |
| Cadre Knowledge | | | | | |
| Pre Test | 11.30 | 3.05 | 1,940 | 9 - 16 | 0.001 ** |
| Post Test | 14.35 | | 2,346 | 10 - 18 | |

* *Wilcoxon test*** *Test T Dependent*

From the results of the normality test, it shows that the knowledge data of PHBS and Malnutrition are not normally distributed, so the bivariate analysis uses a non-parametric test, namely the Wilcoxon Signed Rank Test, while the overall knowledge of Health and cadres knowledge is normally distributed and bivariate analysis uses the Paired Sample T Test.

The results showed that the knowledge of cadres about PHBS was high before training with an average of 6.60 and there was an increase in knowledge after training by 0.1 points. Based on the results of statistical tests *Wilcoxon* stated that there was no significant difference in the cadres' knowledge of PHBS before and after the training.

The results showed that the knowledge of cadres about malnutrition before training was 1.65 and there was an increase in knowledge after training by 1.75 points. Statistical test results *Wilcoxon* stated that there was a significant difference in the cadres' knowledge of malnutrition before and after the training.

The results of the research were knowledge of cadres about nutrition posts before training with an average of 3.05 and there was an increase in knowledge after training by 1.2 points. Statistical test results *dependent* stated that there were significant differences in the knowledge of the cadres' nutrition post before and after the training.

The results showed that the overall knowledge of cadres was high before training with an average of 11.30 and the higher after training with an increase of 3.05 points. Based on the results of statistical tests *dependent* stated that there were significant differences in the knowledge of cadres before and after the training of cadres in the Work Area of the Seberang Padang Health Center.

DISCUSSION

The results showed that the knowledge of cadres about PHBS was high before training with an average of 6.60 and there was an increase in knowledge after training by 0.1 points. Based on the results of statistical tests *Wilcoxon* stated that there was no significant difference in the cadres' knowledge of PHBS before and after the training.

PHBS stands for Clean and Healthy Lifestyle. Meanwhile, the definition of PHBS is all health behavior that is carried out because of personal awareness so that the family and all members are able to help themselves in the health sector and have an active role in community activities. Implementing PHBS is one effective way to ward off disease. Unfortunately, implementing PHBS is not always easy to do, especially for people who are not used to it. In this case, the active role of cadres is needed.

In this study, there was no significant difference in the knowledge of cadres about PHBS. In contrast to research conducted by Azizah Saleh in 2017, the results showed that there were significant differences in cadres' knowledge about PHBS after counseling and training interventions were carried out in Ratolindo District, Tojo Una-Una Regency. This

is because in this study the cadres' knowledge of PHBS was high. PHBS promotion is not only carried out by health workers but also widely broadcast through mass media such as television, radio, newspapers / magazines and banners on the streets. Even though the cadres' knowledge about PHBS is high, if the community still applies a little PHBS life then this will be futile. Therefore, (Saleh and Kunoli, 2019).

The results showed that the knowledge of cadres about malnutrition before training was 1.65 and there was an increase in knowledge after training by 1.75 points. Statistical test results *Wilcoxon* stated that there was a significant difference in the cadres' knowledge of malnutrition before and after the training.

Malnutrition during childhood is a result of a wide range of factors, most of which relate to unsatisfactory food intake or severe and repeated infections, or a combination of the two. The most frequently suggested causes of malnutrition are: poverty, low parental education, lack of sanitation, low food intake, diarrhoea and other infections, poor feeding practices, family size, short birth intervals, maternal time availability, child rearing practices and seasonality. Cadres are very helpful to remind mothers in providing good complementary feeding so that the first 1000 days of life are met with the nutritional needs of children properly (Maidelwita, 2019).

Conditions of malnutrition, whether mild or severe, will have a negative impact on the growth and development of children under five. Health cadres are community groups that are empowered to improve public health. With the increased knowledge of cadres, it is hoped that there will be social sensitivity to detect cases of malnutrition so that they can be reported to health workers and can be resolved immediately (Kosasih et al., 2018).

The results of this study were significant differences in cadres' knowledge of malnutrition before and after being given training. This is comparable to the research conducted by Handayani in 2019 with the result that there was an increase in cadres' knowledge about stunting in toddlers aged 12-36 months through the application of the application of stunting-free children (ABS). In conducting his research, Handayani provided training on stunting children and how to detect them early using the ABS application. Cadre knowledge is better about growth in children under five because of using the media when providing information. Therefore, providing information through good media can increase the knowledge and skills of cadres in early detection of malnutrition and stimulate growth and development of toddlers. (Handayani, Tarawan and Nurihsan, 2019).

The results of the research were knowledge of cadres about nutrition posts before training with an average of 3.05 and there was an increase in knowledge after training by 1.2 points. Statistical test results *t dependent* stated that there were significant differences in the knowledge of the cadres' nutrition post before and after the training.

Hearth is a service provided at Posyandu by weighing and measuring the toddler's height, which is then identified whether a toddler is in the category of malnutrition or not. This is done so that the stunting rate in children in Indonesia, especially in the regions, it can decrease. The results of this study indicate a significant difference in the knowledge of cadres about nutrition posts.

This research is comparable with the research conducted by Yudhawati in 2016 with the result that there is an effect of nutrition post on increasing maternal knowledge about nutrition and parenting. The results also showed that the first goal of the Hearth in the recovery of malnourished children had not been achieved. This is due to a problem with the input and implementation process. Problems with input include the low ability of trained cadres in weighing, health education, inadequate equipment and facilities such as hand washing and weighing stations. It is hoped that cadres can motivate mothers of toddlers to

be involved in cooking and contribute food ingredients, provide health message education and increase active home visits (Yudhawati, 2016).

The results showed that the overall knowledge of cadres was high before training with an average of 11.30 and the higher after training with an increase of 3.05 points. Based on the results of statistical test *t dependent* stated that there were significant differences in the knowledge of cadres before and after the training of cadres in the Work Area of the Seberang Padang Health Center. The results of this study are comparable to research by Megawati and Wiramihardja in 2018. The results showed an increase in cadres' knowledge about prevention and early detection of stunting. (Notoatmodjo, 2012) explain that the provision of information will increase knowledge so that it can raise awareness and ultimately produce a way of thinking according to this knowledge so that there are changes in behavior in accordance with the knowledge possessed.

Knowledge is the result of knowing someone who is influenced by internal and external factors. Knowledge can also be obtained from the knowledge of others, such as: listening, seeing directly and through communication tools such as television, radio, books and others. Enhancement knowledge does not always lead to a change, but there is a positive relationship related to change in action. These actions may not be able to change direction in response to consciousness or knowledge but the cumulative effect of increased awareness, knowledge is related to values, beliefs, beliefs, interest in action (Nurhidayah, Hidayati and Nuraeni, 2019).

Information related to nutrition in children under five can be obtained by cadres, one of which is from counseling and training. Cadre training in this study aims to increase cadres knowledge regarding nutrition in toddlers and had a positive impact on the ability of cadres to carry out proper screening of nutritional needs of children younger than 5 years. The role of cadres greatly influences the success rate of the posyandu program particularly in monitoring child development and maternal health.

The purpose of this training is in accordance with the research conducted by Gonzalez W et al regarding village training, signing and implementation of increased health workers for taking nutrition behavior change to scale. The training aims to strengthen health workers' capacity for performing basic key activities as part of the regular services and caregivers of children younger than 5 years. In particular, the training promoted the consistent use and dissemination of key messages across all health workers and community health volunteers to ensure optimal exposure to the same messages, team training, and integration. Evaluation results showed significant improvement in knowledge posttraining of up to 19 percentage points. (Gonzalez *et al.*, 2019)

The increase knowledge and attitudes rise to understanding and confidence in the needs of those who indeed have to make efforts to prevent malnutrition in infants through balanced nutrition material given during nutritional training. Attitude is one of the factors that influence a person's health behavior. Continuous attitude changes can change a person's behavior where good feeding behavior can improve children's nutritional status. Finally, it is hoped that changes in cadres' attitudes will have an impact on changes in mothers' attitudes (Arifin, Masrul and Ali, 2019).

CONCLUSION

Optimizing in the role of cadres with training methods is proven to increase knowledge about malnutrition and post nutrition, but it is not better in increasing knowledge about PHBS in Work Area of Seberang Padang Public Health Center. It is hoped that cadres can motivate mothers to know the growth and development of children and the Public Health

will conduct regular training / education of cadres to improve their skills and to realize the independence of cadres in early detection of malnutrition cases.

ACKNOWLEDGMENTS

I would like say thanks to head of the Puskesmas Seberang Padang and head of LP3M STIKes MERCUBAKTIJAYA who has given permission to the author to conduct research in the work area of the Puskesmas Seberang Padang.

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