



Health Cadre Education on Providing Stunting Risk Family Assistance toward Children

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Abstract

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BACKGROUND: Optimizing the role of health cadres through empowerment and training activities that relevant agencies can provide is needed to improve health cadres' skills in preventing steps in their respective environments.

AIM: This study aims to determine the effect of education on health cadres in helping families at risk of having stunting children in Parigi Moutong Regency.

METHODS: The research method used was a quasi-non-randomized pre-test and post-test-only control design experiment with the independent variable. Education of cadres training uses a pocketbook. The dependent variable is knowledge, attitudes, and skills to help families risk having stunting children. The sample used was 40 health cadres scattered in the work area of Mepanga Community Health Center, Parigi Moutong Regency, with a purposive sampling technique. The data analysis technique used was the Wilcoxon test and paired sample t-test.

RESULTS: The results of p-value pre-test–post-test showed that knowledge, attitudes, and skills of health cadres were 0.000 smaller than the significance level of 0.05 ($p < 0.05$), and the mean score for each variable obtained after health cadres' education was greater than before education.

CONCLUSIONS: There is an effect of education on health cadres in helping families at risk of having stunting children. It means that education for health cadres through pocketbooks effectively increases the knowledge, attitudes, and skills of health cadres in helping families at risk of having stunted children.

Introduction

Stunting is one of the most complex nutritional problems globally, especially in poor and developing countries [1]. The resolution of stunting cases in children under five is still the focus of government work programs. It can be seen from the government's insistence through the National Development Plan Consultation for 2020–2024 to accelerate the resolution of the stunting problem [2]. Stunting is a condition of failure to thrive in children which are characterized by a child's height below the average for his age [3]. Stunting becomes a problem because it is related to morbidity and mortality, suboptimal brain development, resulting in delayed motor development and mental growth retardation. Stunting describes chronic malnutrition in the period of growth and development since early life. This condition is presented with a z-score value of height for age (height/age) < 2 standard deviation based on the growth standard according to the WHO [4]. The focus of stunting prevention in Indonesia is now directed at women, because one of the causes of children growing short is chronic malnutrition from the womb. When the child is born, the signs of malnutrition are not visible, and it is not until the age of 2 years that a child is caught [5].

Stunting is also related to good behavior patterns and family. The stunting problem occurs in families with minimum income and middle- and upper-class families because the child's behavior and food patterns are given to household assistants, so they are not well controlled [6]. Related to that matters public must be reminded periodically about the dangers of stunting. Therefore, family assistance, especially for families at risk of having stunted children, is needed by health cadres [7]. Optimizing the role of health cadres through empowerment and training activities that relevant agencies can provide is needed to improve health cadres' skills in preventing steps in their respective environments. Cadre, content, and costs for community-based care for mothers and newborns have universal health coverage implications [8]. This study aims to determine the effect of education on health cadres in helping families at risk of having stunting children in Parigi Moutong Regency.

Methods

This research was quantitative. The research design used a quasi-experimental non-randomized

pre- and post-test only control design. Before the treatment, the researcher collected the initial data, then given treatment. The treatment was namely education using the Indonesian family pocket book in handling and preventing stunting. Then, the final data were collected. This research's independent variable was an educational intervention using pocketbooks for cadres in helping families at risk of having stunting children in the Work Area of the Mepanga Community Health Center, Parigi Moutong Regency in 2020. The dependent one was ability of cadres (knowledge, attitudes, and skills) in helping families at risk of having stunting children.

The study population was all 120 cadres in 18 villages in the Mepanga Community Health Center's working area. Considering that this research was conducted in the conditions of the COVID-19 Pandemic, the sample size used was to take three samples from each village with a purposive sampling technique. The sample criteria used were active health cadres in each village's work area, willing to be respondents, and being there during the research. Based on the sample criteria, a research sample of 40 respondents was obtained.

Cadre ability data collection was carried out before the educational intervention using a pocketbook (pre-test) and after being given the intervention (post-test). Data on cadres' knowledge on the handling and prevention of stunting to assist families who are at risk of having stunting children are carried out using a questionnaire on the Guttman scale, while the attitudes and skills of health cadres use a questionnaire with a Likert scale.

This research was conducted in two stages, namely, preparation and implementation. The preparation stage includes making pocketbooks in collaboration with experts. Prepare educational materials that will be given to health cadres and families who will be assisted, namely, families at risk of having stunting children. Together with Puskesmas, officers prepare cadres for educational activities in research. The implementation stage includes informed consent with respondents, retrieval of respondents' initial data (pre-test). It provided education to cadres through lectures, discussions, and demonstrations. It also collected data on knowledge, attitudes, and skills at the end of each educational activity to see the progress. The knowledge variable is the knowledge of health cadres about the handling and prevention of stunting so that they can provide assistance to families who are at risk of having stunting children. The knowledge questionnaire uses the Guttman scale with the number of questions, that is, 20. The attitude variable is a closed response from health cadres regarding the handling and prevention of stunting so that they can provide assistance to families who are at risk of having stunting children. The attitude questionnaire uses a Likert scale with the number of questions, that is, 20. The cadre skill variable is the action of the cadre to the assisted family in relation to the handling and prevention of stunting. The cadre

Table 1: Characteristics of respondents

Characteristics	N	%
Age		
<20 years old	2	5.0
21–30 years old	12	30.0
31–40 years old	18	45.0
41–50 years old	8	20.0
Education		
Elementary school	9	22.5
Junior high school	15	37.5
Senior high school	16	40.0
Experience Being a Cadre		
0–5 years	29	72.5
6–10 years	8	20.0
11–15 years	3	7.5
Total	40	100.0

skills questionnaire uses a Likert scale with a total of 21 questions. This activity was carried out 4 times, 1 time each before education, and 3 times after education.

Data analysis was performed using univariate and bivariate analysis. Univariate is used to see descriptions of each health care provider's ability in helping families who are at risk of having stunting children. In contrast, bivariate was used to see the differences in variables before and after the treatment. Normality and the homogeneity test must be done before the treatment. The normality and homogeneity of variance tests were used to determine whether the data analysis used is parametric or nonparametric statistics. The test for differences in cadres' knowledge was carried out using nonparametric statistics using the Wilcoxon test.

Results

The results of the description of the characteristics of the respondents indicated that most of the health cadres sampled were aged 31–40 years (45.0%). In comparison, the lowest was more than 40 years old (20%). Most respondents' education was at the senior high school (40.0%), while the lowest was elementary school graduates (22.5%) and junior high school (37.5%). Most of them have been health cadre for <6 years (Table 1).

Based on Figure 1, it is clear that education carried out using the pocketbook given to cadres helps families who are at risk of having stunted children has a positive impact. Figure 1 was indicated by the increase in the distribution of categories leading to the "good" category before and after the educational intervention using pocketbooks. If it is seen based on the average score of the health cadres' ability which consists of knowledge, attitudes, and skills, it has also increased at each meeting (Figure 2).

The research hypothesis testing used the Wilcoxon Test because distributing data were not normal. The results of the Wilcoxon test on the knowledge variable before (pre-test) and after (post-test)

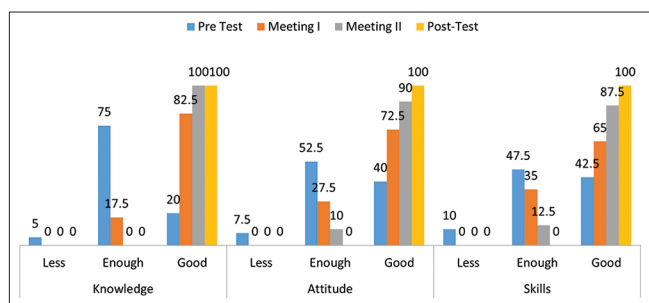


Figure 1: Comparison of the distribution of the score categories of each variable

intervention (Table 2) obtained Z value of 5.851 with a significance value (p) of 0.000. This showed that the significance value was smaller at the significance level of 5% ($0.000 < 0.05$). It can be concluded that there was an effect of education toward the knowledge of health cadres in helping families at risk of having stunting children in the Work Area of Mepanga Puskesmas, Parigi Moutong Regency 2020.

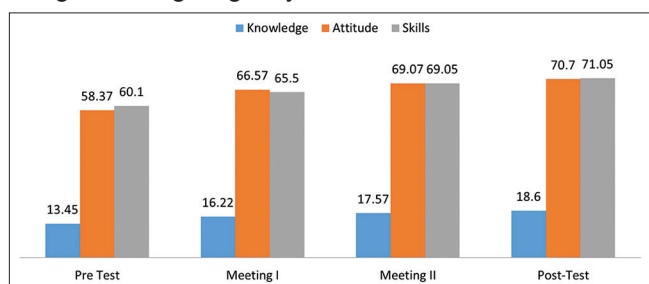


Figure 2: Comparison of health cadre ability scores in helping for families at risk of having stunting children

Table 3 shows that health cadres' attitudes and skills help families at risk of having stunted children. The results of statistical tests (paired sample t-test) show that the attitude variable has the p-value is 0.000, which is smaller than the 0.05 significance level. This means that there is an effect of education on health cadres on the attitudes and skills of health cadres in helping for families at risk of having stunting children in the Work Area of the Mepanga Community Health Center, Parigi Moutong Regency in 2020.

Table 2: Results of the Wilcoxon test analysis

Variable	Uji Wilcoxon	Z	p-value
Knowledge	Z	5.851	0.000
Pre-test-Post-test	Asymp. Sig. (2-tailed)		0.000

The average value of health cadres' attitudes in helping for families at risk of having stunting children before the educational intervention with pocketbooks was lower than the mean value of the attitude of health cadres after (post-test) counseling services were provided ($58.375 < 70.700$). The pocketbook as an educational model can improve health cadres' attitude in providing the attitudes and skills of health cadres in helping to families who

Table 3: Results of paired sample t-test analysis

Variable	Group	n	Mean	Std. Deviation	Mean Difference	t-count	p-value
Attitude	Pre-test	40	58.375	7.438	12.325	9.882	0.000
	Post-test	40	70.700	7.251			
Skills	Pre-test	40	60.100	8.114	10.950	9.238	0.000
	Post-test	40	71.050	6.267			

are at risk of having stunted children, which is normally distributed, so testing the research hypothesis using the paired sample t-test. Table 3 shows that health cadres' attitudes and skills help families at risk of having stunted children. The results of statistical tests (paired sample t-test) show that the skills variable has the p-value is 0.000, which is smaller than the 0.05 significance level. This means that there is an effect of education on health cadres on the attitudes and skills of health cadres in helping for families at risk of having stunting children in the Work Area of the Mepanga Community Health Center, Parigi Moutong Regency in 2020. The average value of health cadres' attitudes in helping families at risk of having stunting children before the educational intervention with pocketbooks was lower than the mean value of the attitude of health cadres after (post-test) counseling services were provided ($58.375 < 70.700$). This means that the pocketbook as an educational model can improve health cadres' attitude in helping families at-risk of having stunted children.

Discussion

The prevention of stunting cases has become one of the focuses of government work programs through the Village Fund budget allocation. Children are stunted when their height in height does not match the world standard growth chart. Stunting is a problem because it is associated with an increased risk of illness and death, suboptimal brain development, resulting in delayed motor development, and stunted mental growth.

In overcoming the risk of stunting cases, it can optimize the function of health cadres as agents of promoting health in the community, especially at the village level. Those health cadres are men or women who are elected by the community and trained to handle individual or community health problems and work in close relationships with health care providers. Based on this opinion, it is clear that in addition to being active in local health services such as Posyandu activities, health cadres must also be sensitive and solution to health problems, especially in society, which is related to stunting. Children who are stunted are part of the family so that the family has a strategic and essential role in shaping healthy culture/behavior that affects family members. Therefore, the function of health cadres is limited to fulfilling the nutrition of stunted children, but educating the family as the closest person to a stunting child is also very necessary to reduce the risk of stunting in children. Cadres can help mothers of toddlers to recognize and prevent the risk of stunting through maintaining a balanced nutritional intake and practicing clean and healthy living behaviors [9].

The results showed that education using pocketbooks positively impacted health cadres'

ability to help families at risk of having stunting children. This is indicated by the mean score on the knowledge, attitudes, and skills of health cadres in helping families at risk of having stunted children after the educational intervention with a pocketbook is higher than the mean value before the intervention. Besides, the hypothesis testing on each variable of knowledge, attitudes, and skills shows that p-significance value is smaller than the significance level ($p < 0.05$), which means an effect of education on health cadres in helping families at risk of having children. Stunting in the Work Area of the Mepanga Puskesmas, Parigi Moutong District, 2020. Training of health cadres effectively increases the knowledge, attitudes, and skills of health cadres about early detection of stunting and risk factors for stunting [10]. In addition, research shows that Posyandu cadres have a vital role in informing them of optimal nutrition in preventing stunting and identifying risk factors for stunting in the Posyandu working area [11], [12].

Assistance to families, especially families at risk of having stunting, is essential in preventing stunting from an early age. Stunting or short toddlers' problem describes chronic nutritional problems influenced by the mother/prospective mother's condition, fetal period, and infancy/toddler years, including diseases, suffered during infancy [13], [14]. In the womb, the fetus will grow and develop through weight and length gain, developing the brain, and other organs. Therefore, the role of the family, especially parents of toddlers, is needed. In this case, health cadres' responsiveness in accompanying families in the surrounding community, especially concerning health, is needed. Mastery of abilities, knowledge, attitudes, and skills, especially in public health, is also essential to create a society, a healthy future generation.

Inadequacy of the optimal number of health workers with appropriate skill sets is seen in rural and remote areas. Inadequate training for cadres of health staff Addressing rural and rural health workforce shortages should start with developing well-researched national rural health and loss strategies [15]. Training can significantly improve cadres' knowledge and skills about the use of the KIA book [16]. Every month, the cadres who were housewives have to conduct a health checkup on the toddlers and senior citizens and compile the health data in their village [17].

Conclusions

There is an effect of education of health cadres on the ability of health cadres both in knowledge, attitudes and skills in providing assistance to families at risk of having children in providing stunting in Parigi Moutong Regency. The average value of knowledge,

attitudes and skills of health cadres after the education intervention with pocket books in providing assistance for families at risk of having stunted children was greater than before the intervention showed that pocket book education had a positive effect on the knowledge, attitudes, and skills of health cadres in mentoring for families are at risk of having a stunted child.

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