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Increasing the Capacity of Mothers of Toddlers in Early Detection of Stunting in Quality Family Village, Bengkayang Regency

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ABSTRACT

Introduction: Stunting is one of the serious nutritional problems experienced by toddlers in the world as well as toddlers in Indonesia. Stunting has a negative impact on the quality of life in the future because it can interfere with the growth and development of toddlers, and can affect children's learning abilities. One of the factors causing stunting is the lack of parental knowledge about the importance of nutritional status in children. Meanwhile, the problems found in the field are errors and inaccuracies in the use of anthropometric tools used by posyandu cadres. One of the efforts to detect early stunting can involve the participation of parents, especially mothers, an activity is needed that aims to improve mothers' skills by providing anthropometric training and stunting prevention education.
Objective: Increase the knowledge capacity and skills of mothers of toddlers in efforts to detect early stunting with anthropometric measurement training and stunting prevention education in Quality Family Village, Bengkayang Regency.
Method: This research is a quantitative study conducted directly with a Quasy experimental design of one group pre-test and post-test. The research was conducted in the Quality Family Village of Bengkayang Regency. The research sample was mothers who had toddlers who met the inclusion criteria. Samples were taken by purposive sampling. Data collection was carried out through direct interviews regarding the characteristics of respondents, taking anthropometric measurements on toddlers, filling out pre-test and post-test research questionnaires by mothers.
Result: This study showed that there was a change in the mother's knowledge score before and after education was given. The pre-test score obtained was 3.87%. Meanwhile, the post-test score obtained was 5.78%. The results of measuring the mother's skill level score in conducting early detection of stunting. The mean value obtained was 1.70% before the intervention and then obtained a value of 4.98% after the intervention.
Conclusion: This study concluded that there was an effect on the level of knowledge and skills of mothers before and after being given an intervention on early detection of stunting in the Quality Family Village (Kampung KB) Bengkayang Regency.

Keywords: Early Detection of Stunting; Anthropometry; Quality Family Village

INTRODUCTION

Nutrition is a global problem because it occurs in almost all parts of the world. Stunting is one of the serious nutritional problems experienced by toddlers in the world, as well as in Indonesia. Stunting is a growth and development disorder in children due to chronic malnutrition and recurrent infections (1). Stunting has a negative impact on future quality of life because it can interfere with growth and development. As a result, motor skills become less optimal and can affect learning ability because these conditions affect the IQ of children younger than their age (2) and put them at higher risk of suffering from non-communicable diseases (3).

Indonesia is one of the countries with the highest number of stunting cases; in 2021, the stunting rate was 24.4% and decreased by 2.8% in 2022 to 21.6%. Based on the results of the Indonesian Nutrition Status survey, the prevalence of stunting in West Kalimantan has decreased from 29.8% in 2021 to 27.8% in 2022. Bengkayang Regency is one of the contributors to stunting cases in West Kalimantan, with cases in 2021 amounting to 26.8% and increasing by 3.3% in 2022 to 30.1% (4). This figure is still above the standard and is a public health problem when referring to the World Health Organization's (WHO) maximum stunting prevalence standard of 20% (5). Bengkayang Regency's quality family village is the focus of accelerating stunting reduction because, in that location, stunting cases are high, but the village is included in the Quality Family Village category, which should have a good nutritional status for toddlers. So this is the focus of researchers in overcoming the problem of stunting in the area.

Based on research conducted by Syabaniah et al. (2023), one way to reduce stunting rates in Indonesia is to increase the knowledge of mothers of toddlers (6). A mother is a very important figure in the growth and development of toddlers (7). One of the factors causing stunting is a lack of parental knowledge about nutritional status in children. Meanwhile, the problems found in the field show that there are errors and inaccuracies in the use of anthropometric tools used by posyandu cadres. Less precise in taking measurements; for example, the tool is placed on an uneven floor, the position of the measurer is not in front of the measured, and there is a lack of accuracy in reading the measurement results. It is necessary to provide better facilities and infrastructure and maximize the role of health workers (8).

One of the efforts to detect early stunting can involve the participation of parents, especially mothers. An activity is needed that aims to improve mothers' skills by providing anthropometric training so that mothers can monitor nutritional status in toddlers, as well as education on stunting prevention, with the hope of being one of the first steps in the early detection of stunting (9). Anthropometry is widely used to measure the nutritional status of children. This is because the procedures used are very simple and safe, relatively do not require experts, produce accurate data, and can detect or describe past nutritional history (10). Several studies have shown that mothers who are given training in measuring nutritional status can improve their knowledge and skills so that they can make a good contribution to preventing stunting in Indonesia (11). This is also in line with research conducted by As-Syifa et al. (2022), which states that knowledge of stunting prevention is very important for mothers to know in order to encourage positive behavior in preventing stunting (12). Based on this, this study aims to increase the knowledge and skills of mothers of toddlers in efforts to detect early stunting with anthropometric measurement training and stunting prevention education in Quality Family Village (Kampung KB) in Bengkayang Regency.

METHOD

This research is a quantitative study conducted directly with a quasi-experimental design of one group pre-test and post-test. The research was conducted in the Quality Family Village (KB Village) of Tumiang Village, Samalantan District, Bengkayang Regency, and was carried out in October–November 2023. The research sample was mothers who had toddlers who met the following inclusion criteria: (1) families at risk of stunting; (2) willingness to become respondents; and (3) having a MCH book. Samples were taken by purposive sampling. Based on the screening results, there were 30 mothers who met the criteria as samples in this study. Data collection was carried out through direct interviews regarding the characteristics of respondents, anthropometric measurements on toddlers, filling out pre-test and post-test research questionnaires by mothers to explore and evaluate maternal knowledge about the nutritional status of toddlers, anthropometric tools, how to measure nutritional status, toddler growth and categorization of nutritional status, and observation sheets for early detection of stunting to determine maternal skills. The instruments used were pre-test and post-test questionnaires and observation sheets. Data analysis was conducted by univariate and bivariate analysis using paired sample t-tests to see the difference in the increase in knowledge and skills of mothers before and after the intervention.

RESULTS

The research was conducted in the area of the quality family village (Kampung KB) in Samalantan District, Bengkayang Regency.

Table 1. Characteristic Variable

Variable	Frekuensi (f)	Persen (%)
Mother Education		
Unfinished SD	3	10.0
Finished SD	3	10.0
Finished SLTP/MTS	11	36.7
Finished SLTA/MA	11	
Diploma (D1/D2/D3)	1	3.3
S1 Finished	1	3.3
Mother Job		
Not Working	16	53.3
Wiraswasta	2	6.7
Frmermer/workes	10	33.3
Nurse	1	3.3
Father Job		
Private Employee	3	10.0
Self-emloyed	2	6.7
Farmer/workes	24	80.0
Nurse	1	3.3
Income		
< UMK (Rp.2.767.564)	21	70.0
>= UMK (Rp. (Rp.2.767.564)	9	30.0
Gizi Status		
Stuting	14	46.7
Not Stunting	16	53.3
Birh Weight		
BBLR	3	10.0
Normal	27	90.0
Gender		
Male	16	53.3
Female	14	46.7

Table 1 shows that the average of the last education of mothers who became respondents was a graduate of SLTP/MTs and SLTA/MA graduates by 36.7%. Most mothers of toddlers did not work (53.3%). Most fathers' jobs are farmers, laborers, or garden workers (80%). This type of work certainly affects the income received by the family for the daily needs of its family members. More than half of the families had incomes below the District Minimum Wage (UMK), which was < 2,767,564, amounting to 70.0%. The nutritional status of the measured toddlers was 46.7% stunted. Most of the measured toddlers were born with a history of a normal birth weight of as much as 90%. Male toddlers are more dominant, with a percentage of 53.3%.

Tabel 2. Analysis Results Before and After Being Given Stunting Early Detection Education

		Mean	N	Std. Deviasion	T	df	Sig. (2-tailded)
Pair 1	Pre-Test	3.87	30	1.106	-7.972	29	0.000
	Post-Test	5.73	30	1.258			

Table 2 shows that there is a change in the score of the mother's knowledge level before and after being given education. Before the education, the pre-test score was 3.87, which increased to 5.78 after the education, with an increase of 1.86. From the results of the paired T statistical test using the T-test sample, a significant difference was

obtained between the pre-test and post-test scores. This means that providing education has an effect on mothers' knowledge about the early detection of stunting.

Tabel 3. Observation Results of Anthropometric Measurements

		Mean	N	Std. Deviasion	T	df	Sig. (2-tailded)
Pair 1	Pre-Observasi	1.70	30	.837	-14.828	29	0.000
	Post-Obsevasi	4.93	30	1.574			

Table 3 shows the results of measuring the mother's skill level score in conducting early detection of stunting. The mean value obtained was 1.70 before the intervention and then obtained a value of 4.98 after the intervention, with an increase in score of 3.23. From the results of the paired T statistical test using the sample T-test, it was found that there was a significant difference between the pre-observation and post-observation scores. This means that there is an effect of anthropometric training on the knowledge of early detection of maternal stunting.

DISCUSSION

In the study of stunting early detection education based on the results of the paired sample t-test, it was found that there was a change in the average score after being given education. This finding is in line with research conducted by Lail Handini et al. (2023), which shows that there is an increase in the average score of knowledge of mothers of toddlers in the Quality Family Village of Bengkayang Regency regarding the effect of education through the Stunting Prevention Diary before and after the intervention, which was 9.40 and increased to 12.83 (13). This is also in line with research conducted by Adistie et al. (2018), which concluded that there were differences in the knowledge of health cadres in Cipacing Jatinangor Village regarding early detection of stunting before and after the intervention. The level of cadre knowledge in the good category increased by as much as 93% (14). The activity carried out is the lecture method regarding the prevention of stunting, which contains monitoring of nutritional status, categorizing nutritional status, and nutritional status indicators. The lecture method is an oral presentation of information, both formal and informal; the nutrition education method in the form of lectures has a better level of understanding among participants (15). Before education through the lecture method, mothers were given a pre-test sheet containing 10 questions related to material about early detection of stunting. In the next activity, the mother is given a post-test questionnaire sheet to evaluate her level of knowledge.

In this study, training on early detection of stunting by measuring nutritional status through anthropometric examination had an effect on mothers' knowledge and skills. This is in line with research conducted by Sari (2022), which shows an increase in maternal knowledge after measurement training with an increase of 25% (16). This is also in line with research conducted by Tri eko Sumarto and Elly Trisnawati (2022), which states that there is a difference in the level of knowledge of posyandu cadres before and after being given training in early detection of stunting in the work area of the Sukabangun Health Center, Delta Pawan District, Ketapang Regency, with a value of 2.59 to 7.84, so that providing training effectively increases knowledge of early detection of stunting (17). Based on research conducted by Isni, it shows that there is an average difference between the value before training and after anthropometric training (18). The activity was carried out with a demonstration method supported by anthropometric tools (Lila tape, stadiometer, and infant ruler). The demonstration method is carried out by demonstrating how to use the tools and steps of the anthropometric measurement process (measuring the height and body length of toddlers, weighing toddlers, measuring head circumference, and determining nutritional status). Demonstration, simulation, and practicum methods are very effective in improving the ability and skills to carry out anthropometric measurements (19). In this activity, mothers of toddlers also re-demonstrated how to measure nutritional status using anthropometric tools. Anthropometric measurements have made a positive contribution, namely by knowing the nutritional status of toddlers, so that parents will be more aware and vigilant about the nutritional health status of their children so that they can optimize the growth of toddlers (20). The indicator of success in this study is that mothers can practice well the demonstrations that have been given, but there are still some mothers who have been given training but are still wrong in taking measurements and are less precise in installing the correct tools, so efforts are still needed to improve the knowledge and skills of mothers.

CONCLUSION

This study concluded that there was an effect on the level of knowledge and skills of mothers before and after being given an intervention on early detection of stunting in the Quality Family Village, Bengkayang Regency. It is hoped that this research can be useful and applied in everyday life in order to prevent stunting.

SUGGESTION

This study recommends that health agencies be able to increase their role in providing socialization and education related to stunting. conduct ongoing education to increase the knowledge capacity and skills of mothers of toddlers in taking anthropometric measurements so that the nutritional status of children and residents in Tumiang Village can be monitored as an initial step in preventing stunting early on.

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