

Strengthening Peer Educator on Mother's Knowledge and Attitudes of Stunting in Ogan Komering Ilir Regency

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Abstract--Short children is a predictor of poor-quality human resources that are widely accepted, which in turn reduces the productive ability of a nation in the future. Stunting or malnutrition based on height by age is an indicator of chronic malnutrition. The prevalence of stunting for five-year-old infants in Indonesia in 2018 is 30.8%. This means that around 8.8 million children under five experience nutritional problems where their height is below the standard according to their age. Kader Posyandu as social capital in the community can be empowered in reducing the prevalence of stunting as peer educators in delivering information about stunting to mothers in Ogan Komering Ilir District. This study aims to analyze an increased knowledge in the experimental and control groups after intervention after given Nutrition education using flipchart education media.

This study used a two-group quasi-experimental design method. The sample of this study was mothers of toddlers in 4 villages spread in SP Padang sub-district in Ogan Komering Ilir District. Research Sampling was conducted by purposive sampling. The total number of samples was 18 in the experimental group (SP Padang and Terate village) and 18 in the control group (Belanti and Terusan Menang village). A paired T-test analysis was used to see differences in the pre and post averages. The results showed that the significance value of knowledge in the experimental group was 0,000 and the significance value

of attitude in the experimental group was 0.030. While the significance value of knowledge in the control group 0.020 and the significance value of attitude in the control group 0.057. So that the p-value <0.05 can be concluded that there is an influence of health education with Flipchart media and lectures on knowledge and attitudes about stunting. Health education with flipchart media has a score of increased knowledge and attitude higher than using the lecture method. It is necessary to develop flipchart media through digital screen displays to further enhance the knowledge and attitudes of mothers about stunting to reduce the number of stunting events in the future.

Keywords: peer educator, stunting, Ogan Komering Ilir, knowledge, social capital

I. INTRODUCTION

Indonesia is one of the countries that have a double burden on nutrition. In addition to the problem of under-nutrition that has not been resolved, more nutrition has increased every year. Malnutrition results from an unbalanced diet that does not contain all the necessary nutrients and/or inadequate or excessive consumption of nutrients. It can also result from diseases that interfere with the body's ability to use the nutrients consumed [1] and thus malnourished children have lowered resistance to infection [2]. A total of 159 million stunting children around the world, 9 million of them live in Indonesia.

Stunting is still a big problem for some countries in the world, especially in poor and developing countries.

Stunting increases the risk of child deaths, adversely affects cognitive and motor development lowers performance at school, increases the risk of overnutrition and noncommunicable diseases, and reduces productivity in adulthood [3]. It is also responsible for at least 35% of deaths in under-five children globally [1]. Every hour of every day, 300 children die because of malnutrition but it's not recorded on death certificates, and as a result, it's not effectively addressed [4], [5]. Worldwide, 165 million children below five years of age are affected by undernutrition, of which 26% are stunted [6].

Stunting is used to describe populations of children who are too short for their age [7]. It is estimated that around 26% of children under five in the world experience stunting. WHO data records that there are 162 million children under five with stunting worldwide, of which 56% are from Asia [8]. Indonesia is even included in the top five countries with the highest prevalence of stunting in Asia and Africa [8]. Based on Riskesdas data (2018) the prevalence of stunting for five-year-old infants in Indonesia in 2018 is 30.8% [9]. This means that around 8.8 million children under five suffer from nutritional problems where their height is below the standard according to their age. This figure is above the WHO prescribed threshold of 20% [10].

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition, especially in the First 1,000 Days of Life (HPK) so that the child is too short compared to children his age. Malnutrition occurs since the baby is in the womb and the early period after the baby is born, however, the condition of stunting only appears after the baby is 2 years old. Experience and international evidence shows that stunting can inhibit economic growth and

reduce labor market productivity, resulting in a loss of 11% GDP (Gross Domestic Products) and reduce the income of adult workers up to 20% [11]. Besides, stunting can also contribute to widening inequality, thereby reducing 10% of total lifetime income and also causing inter-generational poverty.

Interventions for lowering short children must begin right before birth, with prenatal care and maternal nutrition, and continue until the age of two years. The process of becoming a child of short stature - called growth failure (growth faltering) - begins in the womb, until the age of two years. By the time a child passes the age of two, it is too late to repair the damage in the early years. Therefore, maternal health and nutrition status is an important determinant of short body in children. To achieve good maternal health and nutrition status, it is first necessary to increase the knowledge of the mother first so that the mother is expected to be able to apply the knowledge possessed in the parenting pattern and family.

Maternal knowledge is an indicator of the achievement of child health as well as the fulfillment of child nutrition. The level of maternal knowledge influences the pattern of parenting in the fulfillment of nutritional intake. Poor parenting patterns will affect the fulfillment of children's nutritional intake so that children grow into stunting [12]. The Riskesdas (2018) results show that the incidence of stunting among children is much influenced by low income and education of parents [9].

The prevalence of stunting for children under two years in Indonesia in 2018 reached 17.1% for the short category and 12.8% for the very short category, while the prevalence of stunting for toddlers in South Sumatra in 2017 reached 22.8% [13]. Almost all districts in South Sumatra have a low stunting prevalence rate that exceeds or approaches the national stunting prevalence rate. Regencies in South Sumatra with high stunting rates

include North Musi Rawas (32.8%), Banyuasin (32.8%), Ogan Ilir (29.5%), Lahat (28.2%), Empat Lawang (27.7%). While the Ogan Komering Ilir (OKI) stunting rate is 22.6%, which is close to the South Sumatra prevalence rate [13]. OKI Regency is one of the 100 Regencies used as the locus in handling stunting [10].

We obtain that community's role, health service access, qualified health service also have significant role in stunting in Indonesia. one of them is posyandu. The extensive Posyandu network in Indonesia is the only structure that provides the possibility for nutritional counseling to the community level. From 2010 to 2016, the number of Posyandu has increased by 35 percent, while the number of Posyandu types that function better and are more sustainable (Purnama and Mandiri) increased by 60 percent, a trend that deserves support. Development in the last ten years with the model models such as Taman Posyandu show that community support for Posyandu is more sustainable when families are motivated by educational and social reasons rather than by health or nutrition reasons, information about stunting to mothers in Ogan Komering Ilir regency.

This research is to support government programs in reducing integrated stunting. Ogan Komering Ilir Regency is one of 100 regencies which is the locus in handling stunting. This research is also part of the road map and the Research and Community Service Development Master Plan of Sriwijaya University. The results of this research are expected to improve the quality of the Source of Resources Community power, especially Ogan Komering Ilir, in reducing the prevalence of stunting.

II. METHOD

This study used a quasi-experimental design with two group pre and post-test design sampling that was carried out with purposive sampling. The population of the

research is the mother of toddlers. This research was conducted in July-August 2019. The intervention group was given nutrition education using flipchart education media whereas the control group was given nutritional education with the lecture methods. The sample of this study was mothers of toddlers in 4 villages spread in SP Padang sub-district in Ogan Komering Ilir District. The total number of samples was 18 in the experimental group (SP Padang and Terate village) and 18 in the control group (Belanti and Terusan Menang village). Nutritional education was carried out for 2 weeks with the intervention frequency of three times. This activity takes 20-30 minutes starting from the pre-test, material presentation, and post-test. Nutrition and health education material covers 2 topics such as knowledge and attitude of stunting prevention.

Research data used in the research is the primary data include mother characteristics, knowledge and attitudes about stunting prevention. The data consists of a pre-test (before intervention) and post-test (after the intervention). Data pre-test and post-test nutrition knowledge and attitudes were collected using a questionnaire. A validated questionnaire was used to assess knowledge at pre and post-intervention. Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors. The mean difference before and after the intervention was analyzed using the Wilcoxon Signed-Rank Test which wasn't fit of normality distribution.

III. RESULT

Univariate analysis showed that characteristics distribution of samples. The study recruited 36 mothers. Mothers with 26-35 years old were 72.2% (Experiment) and

50% (Control) with high school 66.7% (Experiment) and 33.3% (Control) as most of the mother's education. Housewife 94,4% (Experiment) and 77,8% (Control) as most of the mother's occupation (Table I).

Table I.
Characterics Distribution of Respondens

Characteristics	Flipchart (n=18)		Lecture Method (n=18)	
	N	%	n	%
Mother's Age				
17-25 years old	1	5.6%	4	22.2%
26-35 years old	13	72.2%	9	50%
36-45 years old	4	22.2%	5	27.8
Mother's Education				
Elementary school	3	16.7%	5	27.8%
Secondary school	2	11.1%	5	27.8%
High school	12	66.7%	6	33.3%
University	1	5,5,%	2	11.1%
Mother's Occupation				
Not employed / Housewife	17	94.4%	14	77.8%
Farmer	1	5.6%	3	16.7%
Private Employee	0	0	1	5.5%

Source: Primary Data

Table II showed that Flipchart media as an experimental group have pre-test (21.11 ± 4.54) dan post-test (28.05 ± 4.69) of knowledge score which higher than Lecture method as a control group with pre-test score (15.61 ± 6.35) and post-test score (20.94 ± 6.71). The study result showed that there was a mean difference in children's knowledge score before and after intervention in the experimental group (Flipchart media) and the control group (Lecture method) (p-value < 0.000). Flipchart media as an experimental group also have pre-test (38.66 ± 4.98) dan post-test (42.88 ± 5.66) of attitude score which higher than Lecture method as a control group with pre-test score (32.22 ± 7.65) and post-test score (32.66 ± 8.35). The

study result showed that there was a mean difference in children's attitude scores before and after intervention in the experimental group (Flipchart media) and the control group (Lecture method) (p-value < 0.030) (Table III). The mean difference before and after the intervention was analyzed using the Wilcoxon Signed-Rank Test which wasn't fit of normality distribution.

Table II.
Mean Difference Pre-Post Test of Knowledge Score

Groups	n	Knowledge		p-value
		Pretest $\bar{x} \pm SD$	Posttest $\bar{x} \pm SD$	
Experiment (Flipchart)	18	21.11 ± 4.54	28.05 ± 4.69	<0.00*
Control (Lecture)	18	15.61 ± 6.35	20.94 ± 6.71	<0.02*

*sig < 0.05 with Wilcoxon Signed Ranks Test

Table III.
Mean Difference Pre-Post Test of Attitude Score

Groups	n	Knowledge		p-value
		Pretest $\bar{x} \pm SD$	Posttest $\bar{x} \pm SD$	
Experiment (Flipchart)	18	38.66 ± 4.98	42.88 ± 5.66	<0.03*
Control (Lecture)	18	32.22 ± 7.65	32.66 ± 8.35	>0.057

*sig < 0.05 with Wilcoxon Signed Ranks Test

IV. DISCUSSION

The knowledge and attitudes tested in this study are the knowledge and attitudes of mothers of toddlers about stunting prevention. Measurement of the mother's knowledge and attitudes in this study was carried out using flipchart media and lectures. The results showed there were significant differences between knowledge before and after health education (p-value <0.05). This means statistically, counseling using flipchart media and lectures shows a significant influence in increasing maternal knowledge about stunting prevention in Ogan Komering Ilir District. This is in line with Azwar (2010) that training

or education/counseling can increase the value of knowledge and attitudes [14].

The results found that the average knowledge score of respondents in the experimental group before and after health education was given at 21.11 and 28.05. Whereas in the control group, the average knowledge score was 15.61 and 20.94. This shows that the increase in the average knowledge score is greater in the experimental group than the control group.

According to the Integrated Health Behavior Change Theory, knowledge and beliefs related to health can improve health behavior, especially when they are part of targeted interventions [15]. Health education using media is an intervention effort to bridge the gap between health information and practice. If the health information possessed is correct, then it will motivate mothers of toddlers to apply the information, one of which is information about toddler nutrition. This can prevent toddlers from experiencing malnutrition in the golden period of growth and development.

Knowledge is a stimulus obtained by someone through the senses so that stimulates attitude and motivation. The higher the level of mother's knowledge, the easier it will be for mothers to apply health information. With correct information about toddler health, mothers will provide food for toddlers appropriately both in terms of quantity and quality and be able to provide a clean environment. This research is also in line with Masthalina's research (2017) that there are significant differences between the knowledge and attitude of the mother before the intervention and after the intervention [16]. Differences in scores of knowledge and attitude occur because of interventions for the intervention group and the control group was not given.

This is in line with Nugraeni's research (2018) that there is an increase in the knowledge of mothers of toddlers before and

after counseling with nutrition feedback media [17]. This is because the flipchart contains pictures with the contents of the message will be explained directly by the instructor. Information conveyed through flipchart media is good in increasing knowledge because the media is not only heard by the mother, but it can be observed what is in front of it, although not directly. Besides, lectures or without media are more positive in increasing the knowledge of mothers than respondents who did not receive counseling [18].

Furthermore, education with flipchart influences increasing the attitude of respondents ($p\text{-value} < 0.05$). Whereas the provision of health education using lectures did not show a significant effect on maternal attitudes about stunting prevention in Ogan Komering Ilir District ($p\text{-value} > 0.05$). This is in line with Nugraeni's research (2018) that there is an increase in the attitudes of mothers of children under five before and after counseling with nutrition feedback media [17]. According to the results of the study found that the average score of respondents' attitudes in the experimental group before and after health education was given at 38.66 and 42.88. While in the control group, the average attitude score was 32.22 and 32.66. This shows that the increase in the average attitude score is greater in the experimental group than the control group.

Attitudes cannot be seen but can be interpreted in advance of behaviors that are closed. Attitude is a predisposition to the action of behavior [19]. Attitudes are emotional reactions to social stimuli. According to Newcomb attitude is a readiness or willingness to act, which predisposes the action of behavior, not the implementation of a particular motif. Attitude is a readiness to react to certain objects in the environment as an appreciation of the object [20]. Attitudes can change if counseling is given to the mother, so stunting prevention can change

[21]. Attitudes are influenced by one's knowledge. Attitude is the result of consideration of the advantages and disadvantages of a behavior. Good knowledge will open the mind to be wider so that respondents can weigh in response to a matter. In this case, regarding stunting prevention. Mothers of toddlers with good knowledge will behave well in stunting prevention, besides that mothers of toddlers will be able to motivate other friends to prevent stunting [22]. The researcher believes that the effect of lecture on improving the attitude of respondents in the control group is also influenced by the educational background of the majority of respondents who are classified as low.

The choice of flipchart media has succeeded in increasing the knowledge and attitudes of mothers of toddlers regarding stunting prevention. This can be seen from the increase in knowledge and attitudes of mothers of toddlers. By increasing knowledge, it will trigger an increase in mothers' attitudes and behavior in caring for and caring for children. So that the incidence of stunting toddlers can be suppressed. That way, health education with nutritional feedback is considered as an effective prevention against stunting.

V. CONCLUSION

There was a difference in the average scores of knowledge and attitudes of mothers of toddlers before and after the intervention in the experimental group (Flipchart media) and the control group (lecture method) (p-value <0.05). Flipchart media is more effective in increasing mothers' knowledge and attitudes about stunting prevention than lecture methods.

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