

Developing Family Life Support Model Towards Stunting Children Born Through Sectio Caesarea in Padangsidempuan City, Indonesia

Juni Andriani Rangkuti¹, Anto J. Hadi^{2*}, Haslinah Ahmad³, Erni Yetti R⁴, Edwinn Sallipadang⁵, Rudi Hadisaputro⁶, Sumardi Sudarman⁷, La Sakka⁸.

^{1,2,3}Public Health Department, Faculty of Health, Universitas Afa Royhan, Padangsidempuan, North Sumatera, Indonesia; E-mail: antoarunraja@gmail.com

^{4,5,6}Midwifery Departemen, Akademi Kesehatan Sinar Kasih Toraja, Tana Toraja, Indonesia

⁷Public Health Department, Faculty of Public Health, Universitas Pancasakti, Makassar, Indonesia

⁸Pharmacy Department, STIKES Nani Hasanuddin, Makassar, Indonesia

Abstracts: One of the effects of stunting phenomenon in the future is having higher risk of experiencing sectio caesarea labor because it is correlated to the unideal size of the pelvis of adult women with short height. This study aims at analyzing and evaluating the effect of family life support model towards stunting child's family before and after intervention by implementing family life support model education. The design of this research was quasi experimental research with non-equivalent control group design. The sampling technique used was purposive sampling. This study was conducted in South Padangsidempuan District, Padangsidempuan City for five months from June to October 2022. The research intervention was done for three months by distributing leaflets; there was visit or monitoring using research questionnaire and anthropometric measurement each month. The collected data were analyzed using univariate, bivariate, and multivariate analyses using SPSS and independent t-test as the parametric test. This research discovered that there were differences in knowledge ($p=0.000$), attitude ($p=0.000$), and behavior ($p=0.000$), both in the treatment group and in the control group so that there was a change on the family's nutrition behavior before and after being intervened using family life support model-based stunting leaflet. After being intervened, it was noticed that there was a meaningful difference on the knowledge, attitude, and behavior at the same time on both groups ($p=0.000 < 0.05$). The conclusion of this research finding delivers the evidence that intervention to decrease stunting for the respondents also has to consider the parents' height, age, and parity, especially if it is their first pregnancy and if the parents have short height or are young. An adequate family-based nutrition education program to support the respondents and monitor children's height since birth will help preventing stunting in the future.

Keywords: Stunting, Family Life Support Model, Nutrition Behavior, Family.

1. INTRODUCTION

Indonesia currently still faces various nutritional problems especially malnutrition or stunting and excessive nutrition or obesity (1). There are several efforts that have to be done by a mother both before and after the birth of the baby in preventing stunting and obesity. Stunting is one of the chronic nutritional problems which is indicated by unideal height according to the age (1). The effects of stunting phenomenon in the future are the hampered growth and cognitive development (2), having the higher risk of suffering from non-contagious chronic diseases, and also labor through *sectio caesarea* (3) because it was correlated to the unideal pelvis size on adult women who had short height (2). Meanwhile, toddlers who suffer from stunting according to the data from World Health Organization (2017) reached 22.9% (155 million toddlers) and wasting reached 7.2% (52 million toddlers) (4). Indonesia faces the major community health nutrition problem which is stunting case on toddlers with the prevalence of 36.4% and becomes the third highest case in South-East Asia (5). Without any appropriate and in-time treatment, the number of toddlers suffering from stunting is predicted to increase by 15% or approximately seven million children around the world in the first year of Covid-19 pandemic and, in 2020, the stunting toddlers' risks were 28.7% in North Sumatera, 32.1% in Padangsidempuan, especially in South Padangsidempuan District reaching 6,761; the percentage of *sectio caesarea* birth in Indonesia reached 9.8%; the highest *sectio caesarea* birth rate was in DKI Jakarta reaching 19.9% which was followed by Kepulauan Riau (17.6%) and Bali (17.3%) and Padangsidempuan

City had the highest *sectio caesarea* birth rare reaching 22.1% (3). It indicated that the birth rate through operation is likely caused by the small pelvis size and short height inflicted by the poor nutrition status history (6).

The stunting problem has short term and long term effects because this nutritional problem becomes the indicator of the national health development which influences the quality of the future generation (7). When children suffer from stunting, there is a growth failure indicated by the short height and the obstructed intellectual development (8). In a long term, it can cause metabolic problems which increase the risk of an individual to suffer from obesity, diabetes, stroke, and heart problems (7). Malnutrition improvement is focused on the balanced nutrition as the solution to decrease stunting case (9). Balanced nutrition can be defined widely and occur to every age group (10). Balanced nutrition implementation is done by consuming various kinds of foods, attuning the clean and healthy life behaviors, keeping ideal weight, and doing physical activities in all age groups (9). Moreover, to be able to prevent stunting earlier, it is necessary to understand that the problem has to be prevented early. In this case, family life support has an important role in deciding the foods, providing the nutrition, and also nutritional parenting to the children after they are born so that it is urgent to conduct related research(11). Intervention has to try to overcome the stunting problem earlier by using intervention model of education and communication on nutritional behavior change in the form of family life support model. Therefore, the objective of this research is to analyze and assess the effect of family life support model towards stunting children's family before and after intervention by family life support model education implementation.

2. METHOD

This research applied quasi experimental design with non-equivalent control group design. The object of this study was the family of stunting children (*sectio caesarea* respondents) with purposive sampling technique. This research was conducted in South Padangsidempuan District, Padangsidempuan City, for five months from June to October 2022. The research intervention was applied for three months by distributing leaflets; there was visit and monitoring each month by using research questionnaire to find out the nutritional behavior change before and after the intervention was applied. Anthropometric measurements (weight and height) and food recall for 24 hours were done. The collected data were then analyzed using univariate, bivariate, multivariate analyses using SPSS and independent t-test as the parametric test (12).

3. RESULT

Table 1. Distribution of Section Caesarea Respondents Based on the Characteristics on Treatment Group and Control Group in Padangsidempuan City, Indonesia

Characteristic	Group				Total	
	Treatment		Control		n	%
	n	%	n	%		
Age Group (Years)						
< 20	7	16.3	5	11.6	12	14.0
20 – 35	33	76.7	34	79.1	67	78.0
> 35	3	7.0	4	9.0	7	8.0
Education Level						
Uneducated	10	23.0	6	14.0	16	19.0
Elementary School	14	33.0	11	25.0	25	29.0
Junior High School	16	37.0	21	49.0	37	43.0
Senior High School	1	2.0	3	7.0	4	4.5
University	2	5.0	2	5.0	4	4.5
Occupation						
Farmer	35	81.0	33	77.0	68	79.0
Housewife	6	14.0	7	16.0	13	15.0
Entrepreneur	2	5.0	3	7.0	5	6.0
Total	43		43		86	

Table 1 showed that the distribution of *section caesarea* respondents according to the age group both on the treatment group and the control group was bigger on the age group of 20-35 years old or the low risk group. It also happens to the *sectio caesarea* respondents' education, both on the treatment group and the control group was

bigger on the education level of junior high school, but the proportion was bigger on the control group (49.0%) compared to the treatment group (37.0%). While for the respondents' occupation, most of them were farmers (81.0% on the treatment group and 77.0% on the control group).

To find out the effect of the distribution of family life support model leaflet towards the behavioral change (knowledge, attitude, and behavior) of the *sectio caesarea* respondents, there were several conditions that were measured, they were: a) Behavioral change (knowledge, attitude, and behavior) of the *sectio caesarea* respondents before and after intervention on the treatment group and the control group; b) Behavioral change (knowledge, attitude, and behavior) of the *sectio caesarea* respondents between the treatment group and the control group before and after intervention on the treatment group can be overviewed in the following Table 2:

Table 2. The Effect of Distribution of Family Life Support Model Leaflet Towards the Behavioral Change of *Sectio Caesarea* Respondents in Padangsidempuan City, Indonesia

Variable	Group	Before (Mean±SD)	After (Mean±SD)	Value
Knowledge	Treatment (n=43)	25.3±7.6	35.5±3.0	$p^*=0.000$
	Control (n=43)	24.3±7.0	28.8±4.3	$p^*=0.000$
	Value	$p^{**}=0.528$	$p^{**}=0.000$	
Attitude	Treatment (n=43)	48.4±4.5	49.9±3.9	$p^*=0.000$
	Control (n=43)	48.7±4.9	50.6±4.8	$p^*=0.000$
	Value	$p^{**}=0.751$	$p^{**}=0.490$	
Behavior	Treatment (n=43)	13.7±3.1	17.2±1.1	$p^*=0.000$
	Control (n=43)	12.0±4.6	14.4±2.3	$p^*=0.000$
	Value	$p^{**}=0.059$	$p^{**}=0.490$	

*Wilcoxon Test, **Mann Whitney Test

Table 2 showed that the behavioral changes of *sectio caesarea* respondents including the knowledge, attitude, and behavior occurred on both the treatment group and the control group. However, it also indicated that the initial condition of *sectio caesarea* respondents, in the variable of knowledge, attitude, and behavior on the treatment group and the control group did not show any difference ($p>0.05$). After intervention, it was shown that there was significant difference on knowledge and behavior variables between the treatment group and the control group ($p<0.05$). Meanwhile, in attitude variable, there was no difference between the treatment group and the control group after being intervened ($p>0.05$).

Multivariate analysis was used to assess the knowledge, attitude, and behavior at the same time on both groups before and after getting intervention on the treatment group. The description of the differences of the knowledge, attitude, and behavior on both groups at the same time before and after intervention on the treatment group can be seen in Table 4 as follows:

Table 3. Multivariate Result of Research Variables Differences at the Same Time on Both Groups Before and After Intervention in Padangsidempuan City, Indonesia

Before Intervention	Variable	Mean	p^*	p^{***}
Groups				
Treatment	Knowledge	21.50	0.528	0.068
and Control)	Attitude	2.279	0.751	
	Behavior	61.965	0.059	
After Intervention	Variable	Mean	p^{**}	p^{***}
Groups				
(Treatment	Knowledge	951.116	0.000	0.000

and Control)	Attitude	9.116	0.000
	Behavior	164.663	0.000

*Wilcoxon Test, **Mann Whitney Test, ***Logistic Regression Test

According to Table 3, it was shown that there was no behavioral change (knowledge, attitude, and behavior) at the same time on both groups before intervention on the treatment group with the value of $p > 0.005$. After being intervened, there was significant difference of knowledge, attitude, and behavior at the same time in both groups ($p = 0.000 < 0.05$).

4. DISCUSSION

Stunting develops in the time scale across generation in this population and the risk increases (13). However, children suffering from stunting tend to have skinny mothers and mothers with obesity are correlated to the lower stunting risk (14). Thus, it is necessary to have strategic effort to improve family life support related to stunting children by empowering the family through culture which affects stunting risk, so that culture differences can explain the gap in stunting phenomenon (15). This intervention was done using family life support model as the nutritional education approach for the *sectio caesarea* respondents by distributing stunting leaflet to improve nutritional behavior especially stunting risked-family, including the aspects of knowledge, attitude, and behavior (16). The process of *sectio caesarea* respondents' behavioral change can be initiated from the cognitive aspect (knowledge), through the consistent education. In this study, the knowledge of *sectio caesarea* respondents increased on both the treatment group and the control group. This knowledge improvement can be achieved from the attained information, from both media and the surrounding people, as confirmed by Notoatmodjo (2003) that there are several factors affecting knowledge, they are education level (the higher the better), the availability of information (the more information will increase knowledge), experience (something happened or experienced, for example the second or third *sectio caesarea* respondents, and also age (the older the more mature) (17).

The research findings also showed that there was knowledge difference on the treatment group and the control group after being intervened using leaflet distribution ($p < 0.005$). It also occurred to the aspect of behavior, if it was compared between the treatment group and the control group after being intervened ($p < 0.005$). Beside from the gained information in the form of nutritional education, this behavioral change happened because there was control (monitoring) from the researchers personally for three months (18). It is in line with the writing of Kelman (1961) that there are three kinds of social effect process towards behavioral shaping: compliance, identification, and internalization. Compliance happens if someone adapts to people's opinion but he will stay at the prior attitude if he is alone. Identification happens if someone accepts other people's attitude and belief so that there will be a good relation with them. Internalization occurred if the attitude and opinion absorbed really becomes ours (19). In this study, the process behavior change (action) was in the stage of compliance to identification. Compliance occurred because *sectio caesarea* respondents adapted themselves to the family's opinion who have higher education history and have better knowledge on nutrition and health. Identification occurs purely so that there will be a good relation with the researchers as the companion, not in the stage of accepting values from other people well (20). To keep this behavior change process, the role of environment is needed as the supporting factor (21).

In this research, the attitude of *sectio caesarea* respondents on the treatment group and control group before and after given a treatment in the form of leaflet distribution in fact did not show any difference ($p > 0.005$). According to Campbell (1955) in Notoatmodjo (2016), it is stated that attitude is a syndrome or symptom of consistency between the receptor and the social object value. The attitude manifestation cannot be seen directly but is only interpreted from the closed behavior. Attitude is not an action or activity but is an action predisposition of a behavior (22). Therefore, an attitude is not automatically embodied over behavior (23). To embody an attitude to be a real action, there should be the supporting factor or a condition which enables it to happen such as facilities and supporting factor from other parties (24). Family's support and capability in taking care of stunting children are the family's abilities in nurturing the children which include fulfilling the physical, psychological, psychosexual, psychosocial, social, spiritual needs, developing the body's image in protecting and taking care the children (25). Family support is very important in bringing up and nurturing children's health including in the case of children who

suffer from stunting. One strategic effort to improve child's health is by escalating the family and community's support and capability in taking care of stunting children's health (26).

CONCLUSION

The findings of this research confirm that the implementation of family life support model on the family of stunting children who were born through sectio caesarea was greatly effective and proved respondents' behavioral change after being intervened with nutritional education. The efforts to decreasing stunting case have to consider the characteristics of the family including the education, occupation, age, and parity, especially for the first pregnancy, and if the parents have short height or are at young age. From the findings, it is suggested to implement a powerful program to support family and toddlers. Education and counseling have to be given to increase parents' awareness on birth result and consequences of stunting in the development period of children at two years old, delaying first pregnancy, noting and considering parents' characteristics, and monitoring children's height since they are born as the effective strategy to prevent stunting.

Conflicts Of Interests Statement

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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