

Effect of Stunting Education Counseling with Booklet Media on Parental Knowledge and Attitude As an Effort to Overcome Stunting

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ABSTRACT

Background: Stunting is developmental disorders experienced by children due to poor nutrition, repeated infections, and inadequate psychosocial stimulation. The problem of stunting in children under five shows an average rate of 35.3% in West Java. Stunting is a problem because it is associated with an increased risk of disease and death, suboptimal brain development, which results in delayed motor development and stunted mental growth. Jamika sub-district has a high prevalence of stunting under five in West Java, which is 23.7%. Pharmacists as Agents of Change can also optimize their role by providing information and education on stunting prevention.

Subjects and Method: This study uses a design Pretest-posttest control group design at the Posyandu, Jamika Village, from February to April 2022. The total sample in this study was 30 people who were taken from mothers who had toddler 0-24 months of age. Samples were obtained by simple random sampling. The dependent attitudes of parents. The independent variable was knowledge. The data that has been collected is then analyzed using chi square test and odds ratio (OR).

Results: Good knowledge increased the attitude of parents in efforts to overcome stunting at Posyandu, Jamaika village. Parents with good knowledge increased attitude by 1.40 times to have a positive attitude in efforts to overcome stunting, and this result is statistically significant (OR= 1.40; 95% CI= 0.87 to 2.23; p= 0.008).

Conclusion: There was a relationship between good knowledge with attitude of parents as an effort to overcome stunting in the Posyandu, Jamika village with booklet media.

Keywords: stunting, booklet, knowledge, attitudes, parents.

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BACKGROUND

Stunting is a growth disorder experienced by children due to poor nutrition, repeated

infections, and inadequate psychosocial stimulation. According to data released by The Lancet Journal in 2013, 44.7% of infant

deaths were caused by low birth weight (LBW), failure to breastfeed, stunted growth, underweight, and vitamin A and zinc deficiency (Ministry of Health of the Republic of Indonesia 2015-2019).

According to UNICEF, in 2011 there were 165 million (26%) stunting children worldwide. Indonesia is included in the 5 countries with the highest stunting rate for children under five, namely 7.5 million children under five (UNICEF, 2013).

According to the Ministry of Health (2016), compared to several neighboring countries, the prevalence of stunting under five in Indonesia is also the highest compared to Myanmar (35%), Vietnam (23%), Malaysia (17%), Thailand (16%) and Singapore (4%). Based on the 2013 Basic Health Research (Riskesdas) the prevalence of stunting nationally was (37.2%) which means an increase compared to 2010 (35.6%) and 2007 (36.8%) (Health Research and Development Agency, 2013).

According to the West Java Provincial Health Office in 2016, the problem of stunting in children under five showed an average Java West by 35.3%. Prevalence of thinness by district/city. One of the indicators to determine toddler which should be treated in the treatment of malnutrition is very thin, namely toddler with Z values <-3.0 SD. The causes of stunting are multidimensional factors, including poor nutrition practices, including a lack of maternal knowledge about and nutrition before and during pregnancy, and after the mother gives birth. There are 14 districts/cities with underweight prevalence above the prevalence in West Java in general, in order from the highest prevalence to the lowest, namely Bandung city, Karawang regency, Tasikmalaya regency, Cirebon regency, Garut regency, Bekasi city, Subang regency, Cirebon city, West Bandung regency, Bekasi regency, Ciamis regency, Sukabumi regency,

Banjar city, and Bandung regency.

In 2013 in general in West Java Province the prevalence of underweight / TB in children under five was still 10,9%. The Indonesian Pediatrician Association (IDAI) said that starting complementary foods at the right time would be very beneficial to meet the nutritional needs and growth and development of babies (IDAI, 2015).

This condition shows that the stunting problem in West Java is a serious health problem. Of the 26 regencies/ cities, there are 14 regencies/ cities that fall into the serious category and 6 regencies/cities that fall into the critical management category, namely Bekasi City, Garut Regency, Cirebon regency, Tasikmalaya Regency, Karawang Regency and Bandung City. Complementary foods for breast milk (MP-ASI) are foods and drinks containing nutrients that are given to infants or children aged 6-23 months to meet nutritional needs other than breast milk (BKKBN, 2013).

Pharmacists as Agents of Change can also optimize their role, namely providing adequate information and education to patients about the correct use of drugs, monitoring drug therapy achieve treatment goals, especially in TB elimination programs, immunizations and stunting prevention. Prevention of stunting by pharmacists can be done by providing information and education related to stunting, use of adequate vitamin and mineral blood supplement tablets, treatment of intestinal worms, as well as supplementary food (PMT) and complementary feeding (MP-ASI). The existence of pharmacists in this case is part of the change agent to achieve these three targets(WHO, 2010).

Based on the explanation above, the authors are interested in conducting a prospective study for the effect of stunting education counseling with booklet media on the knowledge and attitudes of parents as

an effort to overcome the incidence of stunting in the Posyandu, Jamika Village.

SUBJECTS AND METHOD

1. Study Design

This was an experimental study with no control group. This study was conducted in 15 integrated health posts, Jamika sub-district, Bandung, West Java.

2. Population and Sample

The population that will be taken in this study is all mothers giving birth at Muhammadiyah Babat Hospital from October-December 2021. The sample criteria are divided into two, namely the inclusion criteria include all mothers giving birth at Muhammadiyah Babat Hospital for the October-December 2021 period with complete medical record data and exclusion criteria included gestational age <22 weeks, baby's weight <500 grams during delivery and incomplete medical record data. The sampling technique used a total sampling technique, namely all mothers giving birth at the Muhammadiyah Babat Hospital from October to December 2021, namely 127 subjects.

3. Study Variable

The dependent variable was the knowledge and attitude of parents. The independent variables were stunting education counseling and booklets. Confounding variables were mother's height, parents' education level, parents' economic status, exclusive breastfeeding, baby's birth weight, gender toddler, and immunization status.

4. Operational Definition of Variables

Knowledge was Knowledge about stunting education counseling with the booklets.

Attitude was attitudes of parents in efforts to prevent stunting.

Stunting was state of a person's nutritional status is based on the z-score of height (TB) for age (U) which is located at <-2 SD obtained from measurements, and TB for weight is below the average.

Parenting namely the practices and habits carried out by families, especially mothers, towards children toddler her to meet the needstoddler.

Parenting eat namely the mother's actions or habits in meeting food needs toddler. This includes the type of food given, the time of feeding, the frequency of feeding and the efforts/ methods used in feeding children.

Parenting health namely the mother's actions or habits in maintaining health toddler through regular health monitoring, disease prevention efforts, how to treat toddler if sick, practice feeding when the child is sick and after illness.

Parenting psychosocial namely the mother's actions or habits in giving mother's attention and involvement to support development toddler in the form of practice, play and acceptance of behavior toddler.

Parenting personal hygiene and environmental sanitation namely the mother's actions or habits in maintaining clean lines toddler and home environment for prevent toddler sick.

Baby birth weight a measure of the weight or mass of the baby that is weighed grams during the first 1 hour after birth. Parameters measured at risk (<2500 gram), and not at risk (>2500 gram).

Mother's height maternal height in early pregnancy obtained from medical records. The parameters measured were at risk (<145 cm), and not at risk (>145cm).

Economic Status salary or income earned by the mother and father at the beginning of pregnancy obtained from a questionnaire. The parameters measured are low (if the average number of family incomes per month is <Rp. 3,742,276.48, and high (if the average number of family incomes per month is >Rp. 3,742,276.48) in accordance with the salary wage in Bandung year 2022 .

Level of education The level of formal education in question is the last education taken by the mother.

5. Study Instrument

The data consists of primary data and secondary data. Primary data was obtained by using a questionnaire filled out by the research subjects. Data were obtained in 15 posyandu, Jamika sub-district. The data instrument used a questionnaire.

6. Data Analysis

Univariate analysis was carried out to examine the frequency distribution of the samples, while bivariate analysis used the chi square test.

7. Research Ethics

Research permit number 568/UN6.0.1./-PT.00/2022 Faculty of Pharmacy, University of Padjadjaran, Bandung.

RESULTS

1. Univariate Analysis

Table 1 shows that there were 12 children (40%) born with low birth weight (<2,500 grams and 24 stunted children.

Table 2 shows that before being given counseling or pretest, the majority of parents had poor knowledge of 29 (96.7%) people regarding stunting prevention efforts. After being given counseling with booklet media related to stunting prevention efforts, it turns out that the results of the post test, the knowledge of parents has improved, the majority have good knowledge as many as 23 (76.7%) people. Good knowledge after counseling with booklet media has increased while bad knowledge has decreased compared to before counseling with booklet media.

Table 3 shows the average value or mean of the results of the pre-test and post-test of parental knowledge. The mean value for the knowledge pre-test result is 10.97, while for the knowledge post-test it is 15.43. Thus, statistically descriptive, it can be that there is a difference in the average results of

the pre-test and post-test of parental knowledge.

Table 4 shows the attitude of parents media on stunting prevention efforts results after being given counseling with booklet media on stunting prevention efforts, namely eating parenting is still dominated by poor 25 parents (83.3%), health care patterns 21 parents (70%), while psychosocial parenting has changed well as many as 27 parents (90%), and the majority of good hygiene parenting 16 parents (53.3%).

Table 5 shows that the frequency distribution of attitudes before and after being given counseling that before being given counseling parents had a good attitude 17 people (56.7%) and 13 people (43.3%), had a bad attitude. The results of attitudes after being given counseling mostly have a good attitude as many as 28 people (93.3%). It can be concluded that judging from the frequency of attitudes before and after being given counseling through the media booklet there is a change in attitude.

Attitudes before and after being given counseling using booklet media about stunting prevention efforts at Posyandu, Jamika Village based on the average value or mean results of pre-test and post-test Parental attitudes. The mean value for the Attitude pre-test is 80.10 while the Attitude post-test is 93.57. Thus, statistically descriptive, it can be concluded that there is a difference in the average results of the pre-test and post-test of parents' attitudes.

2. Bivariate Analysis

Table 6 about bivariate analysis shows that good knowledge increased the attitude of parents in efforts to overcome stunting at Posyandu, Jamaika village. Parents with good knowledge increased attitude by 1.40 times to have a positive attitude in efforts to overcome stunting, and this result is statistically significant (OR= 1.40; CI95%= 0.87 to 2.23; p= 0.008).

Table 1. Distribution of stunting in toddlers at Posyandu, Jamika Village

Stunting	Frequency (N)	Percentage (%)
LBW	12	40.0
Normal	18	60.0
Stunting	24	80.0
Severely Stunting	6	20.0
Total	30	100.0

Table 2. Distribution of knowledge frequency before and after counseling is given at Posyandu, Jamika Village

Characteristics	Frequency (N)	Percentage (%)
Pre test		
Well	1	3.3
Not good	29	96.7
Post test		
Well	23	76.7
Not good	7	23.3

Table 3. Differences in knowledge levels before and after being given stunting education counseling at the Posyandu, Jamika Village

Knowledge level	N	Mean
Pre Test Knowledge	30	10.97
Post Test Knowledge	30	15.43

Table 4. Frequency distribution based on the pattern of family care

Family Parenting	Frequency (N)		Percentage (%)	
	Pre test	Post test	Pre test	Post test
Parenting Eating				
Well	0	5	0	16.7
Not good	30	25	100.0	83.3
Health Parenting				
Well	2	9	6.7	30.0
Not good	28	21	93.3	70.0
Psychosocial Parenting				
Well	9	27	30.0	90.0
Not good	21	3	70.0	10.0
Hygiene Parenting				
Well	11	16	36.7	53.3
Not good	19	14	63.3	46.7

Table 5. Distribution of attitude frequency before and after being given counseling using booklet media at the Posyandu, Jamika Village

Attitude	Frequency (N)	Percentage (%)
Pre-test		
Well	17	56.7
Not good	13	43.3
Post-test		
Well	28	93.3
Not good	2	6.7

Table 6. Relationship between knowledge and parents' attitudes an effort to overcome the incidence of stunting in the Posyandu, Jamika Village

Knowledge	Attitude				OR	CI 95%		p
	Well		Not good			Lower limit	Upper Limit	
	N	%	N	%				
Well	23	82.1	0	0	1.40	0.87	2.23	0.008
Not good	5	17.9	2	100				

DISCUSSION

1. Child Characteristics

Characteristics of children in this study the majority of children aged 13-24 months, as many as 25 children (83.3%). The sex of the children in this study were 18 children (60%) female compared to 12 (40%). Group of children aged 0-24 months as a critical period. At this time children need a balanced intake of nutrients both in terms of quantity and quality to achieve optimal weight and height. The development and growth of the toddler period is a success factor for the growth and development of children in the future (Adriani et al., 2014).

2. Characteristics of Parents

Characteristics of parents in this study the majority of mothers aged between 31-40 years as many as 13 people (43.3%), only 5 people (16.7%) were over 40 years old. The father's age was dominated by 15 people (50%) aged 31-40 years, and at least 5 people at the age of 21-3 years (16.7%). Age is one of the factors in determining a person's actions. This age is called the reproductive period, where this period is expected to be able to recognize, prevent and overcome nutritional problems at the family or household level (Ministry of Health of the Republic of Indonesia, Guidelines for the Process of Nutrition Care in Health Centers, 2017).

Research data shows that the majority of parents' education is high school education equivalent to high school for mothers as many as 13 people (43.35) and fathers as many as 17 people (56.7%). As for the work

of parents, the majority of mothers do not work as many as 27 people (90%), and the majority of fathers work as laborers as many as 12 people (40%).

With regard to the age and education of individuals, the higher a person's education, the wider his experience and the older a person, the more experience he has. A person with higher education will have broader knowledge than someone with a low level of education. Someone who has a higher level of education, is generally open to changes or new things for the maintenance of his health (Notoatmodjo, 2013). The level of a person's education determines his attitudes and behavior patterns. The higher a person's level of education, the higher the level of behavior patterns, but the lower the level of education of a person, the level of behavior patterns also tends to be low (Sriyono, 2015).

The study of Rozali (2016) show that there is a relationship between the level of education, especially mothers, on knowledge, attitudes and mindsets in seeking and obtaining various information about knowledge about toddler nutrition, with significant results $p=0.001$.

For the work of mothers, the majority of mothers do not work or as housewives as many as 27 people (90%). Housewives are mothers who do not work this can lead to a lack of information obtained so that it can cause mother's knowledge to be less. A working mother will get more information that can increase her knowledge about health compared to a mother who does not

work. Devi's research shows that there is a significant relationship between parental occupation and the nutritional status of children under five. This is because the low income of parents will reduce the purchasing power of quality food to fulfill the nutrition of children under five and family nutrition (Devi, 2012).

3. Knowledge before and after counseling with booklet media.

Before being given knowledge counseling, the majority of parents had poor knowledge as many as 29 people (96.7%) about stunting prevention efforts. After being given counseling with booklet media related to stunting prevention efforts, it turned out that the results of the post test showed that the knowledge of parents had improved, with the majority having good knowledge of 23 people (76.7%). Good knowledge after counseling with booklet media has increased while bad knowledge has decreased compared to before counseling with booklet media.

Factors that affect a person's knowledge include education, experience, information, cultural environment, age and socioeconomic. These factors will be closely related and affect one's knowledge. A person's knowledge can be increased by being given an extension through the media. Booklet media is one of the media used to increase one's knowledge which contains brief and clear material to make it easier to understand knowledge about nutrition-aware families (kadarzi). The booklet is designed in the form of a book that contains more information so that mothers simply listen to what is being said without the need to record all the material presented (Notoatmodjo, 2013).

Based on the research of Rahmawati et al. (2020) about the effect of counseling with audio-visual media on increasing the knowledge, attitudes and behavior of

mothers of under-five and malnourished children in West Kotawaringin Regency, Central Kalimantan Province. The results of the study were the average in the group with audio-visual counseling treatment showed an increase in knowledge from before and after that was 17.53 to 21.14 with an average difference of 3.61 increases. The conclusion obtained is that there is a significant increase in knowledge between before and after counseling with audio-visual media (Rahmawati et al., 2020).

4. Attitudes before and after extension with booklet media.

The results of the study based on the frequency distribution of attitudes before and after being given counseling that before being given counseling parents had a good attitude 17 (56.7%) people and 13 (43.3%) people, experienced a change in attitude results after being given counseling most of them had a good attitude as much as 28 (93.3%) people. It can be concluded that judging from the frequency of attitudes before and after being given counseling through booklet media there is a change in attitude.

Measurement of parental attitudes was done by filling out the Parenting Questionnaire which consisted of eating parenting, psychosocial parenting, and hygiene parenting. The results of the research conducted showed that eating patterns were not good for 30 (100%) people, parenting for health was not good for 28 (93.3%), people psychosocial parenting was not good for 21 people (70%), and the majority of hygiene parenting patterns were not good. 19 (63.3%) people. Not much different from the results after being given counseling with booklet media on stunting prevention efforts, namely eating parenting is still dominated by poor 25 (83.3%) people, Health parenting 21 (70%) people, while psychosocial parenting has changed well as many

as 27 people (90%), and the majority of good hygiene parenting 16 people (53.3%). Of all the indicators of parenting,

This research is supported by Salamung et al. (2019) showed that stunting prevention behavior with the support of good environmental sanitation was 50% while prevention behavior was in the less category of 42.9%. Preventive behavior with poor environmental sanitation conditions can cause various types of diseases. As for the behavior of preventing stunting with feeding habits which are the results of the research Bella et al. (2020) shows the results of poor feeding habits for toddlers mostly with stunting toddlers that is equal to 68.4%, while with good feeding habits, those who have edited toddlers are only 19.8%. Inappropriate family care includes child feeding patterns, psychosocial parenting patterns, health parenting patterns as well as personal hygiene and environmental sanitation parenting patterns. 5. The effect of stunting education counseling with booklet media on the knowledge and attitudes of parents as an effort to overcome stunting at the Posyandu, Jamika Village. Based on the results of the analysis of differences in knowledge before and after counseling with booklet media with the Paired Samples T Test, the results obtained with a $p < 0.001$.

These results indicate the effect of counseling with booklet media on the knowledge of mothers of children under five about efforts to overcome stunting. Nutrition education such as counseling using media plays an important role in increasing knowledge. Before the counseling was carried out there was still poor knowledge while after the counseling the knowledge was not good reduced. The media used is booklet media. Media booklets are given to mothers of toddlers to make it easier to understand knowledge about efforts to overcome stunting. Media booklets are

equipped with pictures so that mothers of toddlers are interested in reading and learning so as to increase mother's knowledge. Increased knowledge of mothers under five has the effect of counseling with booklet media in the hope of being able to change mothers' attitudes in overcoming stunting.

A study showed that nutrition counseling using the lecture method and using booklet media to increase nutrition knowledge. Mothers Increased knowledge of mothers after receiving nutrition counseling from 7.7% to 82.1%. This shows the influence of the media in counseling. This nutrition education is given through lectures and booklets (Safitri et al., 2022).

The results of this study, attitudes before and after being given counseling using booklet media about stunting prevention efforts at the Posyandu, Jamika Village based on the average value or mean results of the pre-test and post-test attitudes of parents. The mean value for the attitude pre-test is 80.10, while the Attitude Post-test is 93.57. Thus, statistically descriptive, it can be concluded that there is a difference in the average results of the pre-test and post-test of parents' attitudes. Based on statistical tests showed that there was a significant difference in the attitudes of mothers before and after counseling. The results of the study were that there was an effect of nutritional counseling on the mother's attitude towards giving a balanced menu to toddlers (Fatmawati et al., 2014).

6. Relationship between knowledge and Attitude before and after being given counseling using Booklet media

The results of the research on the relationship between knowledge and parents' attitudes that parents who have good knowledge also have a good attitude as many as 23 (82.1%) people, and those who have poor knowledge but have a good attitude are as many as 5 (17.9%) people. Based on

the results of statistical analysis using the chi-square test, the $p = 0.008$. Because the p value < 0.05 , it can be concluded that there is a relationship between knowledge and attitudes of parents as an effort to overcome stunting at the Posyandu, Jamika Village, using booklet media.

This research is in line with research Ariestia (2020) in his research showed that there was a relationship between mother's knowledge and attitude towards stunting prevention. Other studies also show that mother's attitude has a relationship with stunting prevention efforts, but there is no relationship between mother's knowledge and stunting prevention efforts. This study discusses that in the prevention of stunting, the mother's attitude, including feeding the child, is important because with a good attitude and supported by high knowledge, positive behavior will be reflected (Arnita et al., 2020). Meanwhile, research that shows there is no relationship between knowledge and attitudes of mothers with stunting discusses that good knowledge does not necessarily produce good attitudes and behavior (Harikatang et al., 2020).

The results of this study are in line with studies of Olsa et al. (2017) that is, there is a significant relationship between the attitudes and knowledge of mothers with the incidence of stunting. Other research states Anugraheni et al. (2012) stated that there is an important relationship between maternal attitudes and the incidence of stunting.

7. Results of toddler evaluation in 3 months of monitoring

There are 24 stunting toddlers (80%), and 6 severely stunted toddlers (20%). After 3 months of monitoring, 12 toddlers (40%) did not experience an increase in height development for their age, while 18 toddlers (60%) experienced an increase in height development with age during 3 months of monitoring.

AUTHOR CONTRIBUTION

Dendy Triatmaja acted as the main researcher who coordinated the research, carried out all stages of the research, and completed the research paper. Keri Lestari played a role in compiling the research framework, processing research data, presenting the results of research analysis, and preparing research papers. Budi Setiawan plays a role in developing ideas, research designs, and research hypotheses.

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The study was self-funded.

CONFLICT OF INTERESTS

There is no conflict of interest in this study.

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