

# The Influence of Ring Cards on the Knowledge and Attitude of Mother With Toddler 0-24 Month in the Prevention of Stunting

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**Abstract.** Indonesia is still facing nutritional problems that have a serious impact on the quality of human resources, one of the problems of malnutrition that is still quite high in Indonesia is especially the problem of stunting. The incidence of stunting is one of the nutritional problems experienced by toddlers under five in the world today. In 2017 22.2% or around 150.8 million toddlers under five in the world were stunting. Stunting can occur as a result of malnutrition, especially at 1000 HPK. Stunting will affect the level of intelligence of toddlers and health status as adults. In overcoming nutritional problems, there are two solutions that can be done, namely with specific and sensitive interventions. One of the sensitive interventions is increasing knowledge. The purpose of this research was to analyze the effect of the ring card on the knowledge and attitudes of the mothers who have toddler 0-24 month in preventing stunting. This research uses quasi experimental method of pre post test design with 30 of the mothers who have toddler 0-24 month in Self-Employment Midwife. Test statistical analysis using wilcoxon Test and T Test. The results obtained were was difference in the increase in the pre test 10.50 to 15.00 and while the attitude variable shows that there is an increase in the mean value from 22.31 to 25.71 ( $P < 0.05$ ). Conclusion of this research is that ring cards are proven to be influential in being used as a promotional effort for the mother who have toddler 0-24 month in preventing stunting.

**Keywords:** baduta, ring card, stunting.

## 1. INTRODUCTION

Indonesia still faces nutritional problems that have a serious impact on the quality of human resources. One of the problems of malnutrition is still quite high in Indonesia, especially the problem of stunting and thin (wasting) in toddlers as well as problems of anemia and chronic lack of energy (KEK) in pregnant women. This problem of malnutrition in pregnant women can lead to low birth weight (BBLR) and malnutrition in toddlers, including stunting [1].

*Stunting* is one of the nutritional problems experienced by toddlers in the world today. In 2017 22.2% or about 150.8 million toddlers in the world experienced stunting. However, this figure has decreased when compared to the stunting rate in 2000 of 32.6%. Data on the prevalence of stunting toddlers collected by the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in southeast Asia / South-East Asia Regional (SEAR). The average prevalence of stunting toddlers in Indonesia in 2005-2017 was 36.4% [2].

Basic Health Research 2013 recorded the prevalence of national stunting reached 37.2 percent, an increase

from 2010 (35.6%) and 2007 (36.8%). This means that the growth is not maximum suffered by about 8.9 million Indonesian toddlers, or one in three Indonesian toddlers. The prevalence of stunting in Indonesia is higher than other countries in Southeast Asia, such as Myanmar (35%), Vietnam (23%), and Thailand (16%).<sup>3</sup> Stunting data in the working area of West Bandung Regency 2018 identified as 76,148 stunting toddlers. According to midwives in The Village Ciburuy West Bandung Regency, the thing that has been done to the mother who have toddler 0-24 month stunting is to provide counseling about feeding, motor stimulation, and in collaboration with nutrition officers Puskesmas.

*Stunting* can occur as a result of malnutrition especially at the time of 1000 HPK. Fulfillment of nutrition and health services in pregnant women need attention to prevent stunting. Nutrition obtained from the moment the baby is born is certainly very influential on the level of intelligence, growth of the toddler and health status in adulthood. The failure of early breastfeeding initiation (IMD), the failure of exclusive breastfeeding, and the process of early weaning can be one of the factors of stunting. Meanwhile, in terms of breast milk companion

feeding (MP ASI) the things to note are the quantity, quality, and food safety provided. Short toddlerren face a greater risk of growing up to be less educated, poorer, less healthy adults and more susceptible to non-communicable diseases. Short toddlerren are predictors of poor quality of human resources, which further decreases the productive ability of a nation in the future [1][2]. In solving nutrition problems there are two solutions that can be done, namely with specific and sensitive interventions. Specific interventions are directed to address the direct and indirect causes of nutritional problems, while sensitive interventions are directed to address the root of the problem and its long-term nature. Sensitive interventions one of them increases knowledge [1]. The existence of such problems then arises one of the efforts in preventing stunting in clowns by increasing the knowledge and attitude of clown mother behavior regarding stunting and nutrition in clowns. This is because knowledge is able to influence attitudes that can influence how a person behaves. The mother's knowledge of stunting and the fulfillment of balanced nutrition for clowns is important. This knowledge is able to direct mothers to provide a balanced food that is in accordance with the nutritional needs of clowns so as to reduce stunting rates. The improvement of knowledge and attitudes can be done through health education, as Notoatmojo stated, that health education is a means of information that is very intensive and also effective in trying to improve aspects of health that are still left behind in a place [4].

Health education itself can be done by various methods of adjusting the goals to be given education. One of the health education media is Ring Card. This medium contains sheets resembling small albums or sitting calendars that can be carried anywhere containing health information about stunting and balanced nutrition for clowns added with color images. The advantage of this media is its small shape so that it is easy to carry, with the use of waterproof materials, making this media more durable. Its simple and composed form makes it easy for users to use this media. Not only from the form, but also in terms of the content contained in this media, where the material is informed is the main material that is applicative so that it can be directly practiced in daily activities. The use of tables, charts, images and colors highlighted in the Ring Card can make users do not get tired of seeing / reading and can also make users understand and remember the information submitted longer. Based on research, the

use of color, images that are interesting to see, can make it easier for readers to digest information, as well as create a time to remember the information submitted longer so that in addition to knowledge will also be based on the attitude of the reader. This media is quite easy to use and can be understood well by mothers, especially those who have clowns so as to increase knowledge and attitude.

This study aims to find out the influence of ring cards on the knowledge and attitude of mothers who have toddler 0-24 month about stunting and nutrition before and after the conduct of health education through ring card media. Where it is as one of the efforts to prevent stunting in for the mother who have toddler 0-24 month.

## **2. METHOD**

The data obtained is primary data using instruments in the form of questionnaires. The population in this study were all mothers who who have toddler 0-24 month in PMB Midwife PellyYulia, Amd.Keb., SKM with quota sampling technique amounting to 30 samples. The criteria for inclusion in the study are mothers who have toddler 0-24 month (0-20 months during pre-test), willing to be research respondents. While the exclusion criteria is for the mother who have toddler 0-24 month only visited BPM once. The variables studied are the knowledge and attitudes of pregnant women regarding stunting and prevention. Primary data collection is done by filling pretest and posttest. Pretest is given before health education with Ring Card method. Posttest is done 4 months after health education. The 4-month pause is due to the COVID19 pandemic. Health counseling is carried out by researchers with Ring Card as a media of health counseling containing stunting, nutrition for baduta and appropriate menus in the fulfillment of nutrition. Health counseling is conducted within 60 minutes including discussion sessions and question and answer sessions. Knowledge data from mother whohave 0-24 month was obtained based on pretest and posttest filled. Data on mother's attitude is obtained from pretest and posttest. The design of the research used in this study is experimental quasi because in the process it is given treatment / intervention on the subject of the research. The type of design used is pre post test one group. Wilcoxon test data analysis, Paired T Test

**3. RESULT**

**TABLE 1.** Frequency Distribution of Respondents' Groups based on Maternal Education

Respondents' Groups	Respondent's Education							
	Low Education		Secondary education		High education		Summary	
	n	%	N	%	n	%	n	%
0-5 Months	6	50	6	50	0	0	12	100
6-8 Months	2	66,7	1	33,3	0	0	3	100
9-11 Months	0	0	3	100	0	0	3	100
12-24 Months	5	41,7	6	50	1	8,3	12	100
<b>Summary</b>	13	43,3	16	53,3	1	3,3	30	100

Based on table 1.1 above shows the frequency distribution of respondents group based on Education. Of the 12 respondents who had toddler 0-5 months, half were poorly educated, namely 6 respondents (50%), while of the 12 respondents who

had toddler 12-24 months, less than half were poorly educated or 5 respondents (41.7%) and a small percentage of highly educated respondents (8.3%).

**TABLE 2.** Frequency Distribution of Respondents Group Based on Maternal Age

Respondents' Groups	mother's age							
	<20 years		20-35 years		>35 years		Summary	
	n	%	N	%	n	%	n	%
0-5 Months	2	16,7	7	58,3	3	25	12	100
6-8 Months	0	0	3	100	0	0	3	100
9-11 Months	0	0	3	100	0	0	3	100
12-24 Months	0	0	8	66,7	4	33,3	12	400
<b>Summary</b>	2	6,7	21	70	7	23,3	30	100

Based on table 1.2 above shows the frequency distribution of respondents group based on Age. Of the 12 responders who had toddler 0-5 months, a small percentage were less than 20 years old, namely

2 respondents (16.7). While in respondents who have toddler 6-8 months and 9-11 months, in total or 3 respondents (100%) 20-35 years old

**TABLE 3.** Frequency Distribution of Respondents' Groups based on Maternal Work

Respondents' Employment Group	Respondents' Employment					
	Not Working		Working		summary	
	n	%	n	%	n	%
0-5 Months	12	100	0	0	12	100
6-8 Months	3	100	0	0	3	100
9-11 Months	2	66,7	1	33,3	3	100
12-24 Months	11	91,7	1	8,3	12	100
<b>Summary</b>	28	93,3	2	6,7	30	100

Based on Table 1.3 above shows the frequency distribution of respondent groups based on employment. Of the 12 respondents who had toddler 0-5 months, all (100%) housewives, as well as in respondents who have toddler aged 6-9 months.

**TABLE 4.** Frequency Distribution of Respondents Group by Parity

Respondent Group	Paritas							
	Primipara		Multipara		Grandemulti		Summary	
	n	%	N	%	n	%	n	%
0-5 Months	9	75	0	0	3	25	12	100
6-8 Months	3	100	0	0	0	0	3	100
9-11 Months	3	100	0	0	0	0	3	100
12-24 Months	7	58,3	0	0	5	41,7	12	100
<b>Summary</b>	22	73,3	0	0	8	26,7	30	100

Based on Table 1.4 above shows the frequency distribution of respondents group based on parity. Of the 3 respondents who had toddler aged 6-8 months and 9-11 months, a total of 100%, were primipara. While of the 12 respondents who had toddler 12-24 months, almost half were 5 respondents (41.7%) is Grandemultipara.

Normality Test results found that the distribution of knowledge data before treatment is normal with a value of  $p = 0.224$ ; while the knowledge after being given treatment is abnormal  $p = 0.011$  ( $p < 0.05$ ) so that the data analysis used is a test wilcoxon. For attitude variables have a normal data distribution with the values  $p = 0.703$  and  $p = 0.257$  ( $p > 0.05$ ) so that the analysis used is a paired t test. Skill variables have abnormal data distribution with values  $p = 0.001$  and  $p = 0.000$  ( $p < 0.05$ ) so the data analysis used is a wilcoxon test.

**TABLE 5.** Effect of Ring card on the knowledge and attitude of mother who have toddler 0-24 month in the prevention of stunting

Knowledge	Pre	Post	Nilai p
Mean	10.47	14.97	0,000*
Median	10.50	15.00	
SD	1.737	1.402	
Minimum-Maksimum	7-15	11-17	
<b>Attitude</b>			0,000**
Mean	22.31	25.71	
Median	21.62	25.40	
SD	2.61	3.50	
Minimum-Maksimum	16-26	18-32	

\*Uji Wilcoxon \*\*Uji T Berpasangan

Based on the table above obtained that there is an increase in median value at the pretest of 10.50 to 15.00 at the time of posttest means that the number of correct answer questions in posttest is greater than the pretest, so it can be concluded that there is a meaningful difference between the number of

answers to the correct knowledge question during pretest and posttest with a value of  $p = 0.000$  ( $p < 0.05$ ). In the attitude variables obtained that there is an increase in the mean value from 22.31 to 25.71, so that it can be concluded that there is a meaningful difference in the attitude of respondents before and after 7 treatment with a value of  $p = 0.000$  ( $p < 0.05$ ). Based on these results can be concluded that the ring card proved influential to be used as an effort in the prevention of stunting, it can be seen from the increase in knowledge and attitude of respondents before and after being given treatment.

The results showed that the percentage of respondents with educational characteristics obtained maternal education is still relatively low judging from 12 respondents who have toddler 0-5 months 50% are poorly educated and 12 respondents who have toddler 12-24 months 41.7% are poorly educated while highly educated responden only 8.3%. According to the results of research conducted by Picauly and Magdalena, in Kupang and East Sumba, NTT, shows that mothers with low levels of education have a 0.049 times greater chance of stunting than mothers who have higher education that affects the chances of stunting. This is supported by the results of research according to Sulastris that the level of maternal education will affect the health and well-being of the toddler so that this will affect the nutritional status of the toddler with mothers who have a higher level of education will be easier to absorb information when compared to mothers who are less or uneducated, so that with a sufficient level of education it is expected that a mother will and is able to behave well in order to improve the nutritional state of her toddler [5][6]. Knowledge may be affected by several internal and external factors. Internal factors that influence education, employment, age, while external factors are environmental and socio-cultural. In this study, it was known that as a large number of respondents

who had toddler 0-5 months, a small percentage were less than 20 years old (16.7%.) While in respondents who have clowns 6-8 months and 9-11 months are mostly aged 20-35 years (100%). This is supported by nugrahaeni research which shows the highest number of mothers of toddlers is 26 mothers (38.8%) is the age range of 17-25 years that age can affect the capture and mindset of the mother of a toddler against the information given to her. In addition, age is one of the determining factors of the level of knowledge, experience and motivation of the mother of toddlers that will influence how the mother behaves.<sup>7</sup> Mubarak and Chayatin mentioned that with the age of a person, there will be changes in aspects both physical and psychological. These changes will improve the level of thinking of a person making him more mature and mature considered willing and able to receive new information to change his health behavior for the better. In addition, increasing the age of a person can also improve his experience so that his knowledge will tend to be better than someone younger [8].

In this study, it was known that all respondents who had toddler 0-5 months and 12-24 months 100%. Housewives have more time to pay attention to their children. This is supported by Picauly and Magdalena's research which shows that working mothers have a greater chance of stunting than working mothers, where there is an increase in stunting events of 3,623 in working mothers.<sup>5</sup> In this study, respondents were known based on parity, from 3 respondents who had clowns aged 6-8 months and 9-11 months, all 100%, were primipara. While of the 12 respondents who have toddler 12-24 months, almost half of them are 5 respondents (41.7%), are Grandemultipara. This is not in accordance with the theory that parity is very influential on one's acceptance of knowledge, the more experience a mother has, the easier the acceptance of knowledge will be. The source of knowledge from experience can be used as a way to obtain the truth of knowledge by repeating the knowledge gained in solving problems faced in the past.<sup>4</sup> This is in line with the results of nadiyah et al research, there is no relationship between parity and stunting events so in the research states that parity is not a factor that can influence the incidence of stunting [9].

The results of this study showed that the mother's knowledge mostly increased judging by the results

of pretest 10.50 to 15.00 at the time of posttest meaning that the number of correct answer questions at the time of posttest is greater than the pretest, so it can be concluded that there is a meaningful difference between the number of correct knowledge questions during pretest and posttest with a value of  $p < 0.000$  ( $p < 0.05$ ). This is in line with Notoatmodjo's opinion, suggesting that knowledge is the result of knowing and occurs after someone has sensing a particular object. Sensing occurs through the five human senses, namely vision, hearing, smell, taste, and raba. Knowledge can be obtained among others through education both curricular, noncurricular and extracurricular. Knowledge can also be obtained from the knowledge of others, such as: listening, seeing directly and through communication tools such as television, radio, books and others [4]. According to astuti research that one of the efforts to increase the mother's knowledge about the prevention of stunting and make mothers understand the existence of stunting risk factors is through counseling (health promotion) using interactive media. In this study obtained the picture that the mother of toddlers almost entirely stated the media integrating card effectively, with the reason easier to understand, interesting, learn to understand about stunting easier with the presence of images and explanations. The results of the study can increase the knowledge of mothers of toddlers through the promotion of Integrating cards.<sup>10</sup> It is also stated in the Decree of the Minister of Health of the Republic of Indonesia (Kemenkes, 2007) that health promotion is one of the efforts to improve the ability of the community through learning from, by, for, and with the community, which can develop community-sourced activities in accordance with local socio-cultural conditions. Health promotion is an activity or effort to convey health information to the public so as to increase knowledge about better health. Therefore, providing information about the prevention of stunting is very important, because it is expected that the incidence of stunting can be reduced [11].

The results of this study showed that the attitude of mothers there is an increase in mean value from 22.31 to 25.71 so that it can be concluded that there are meaningful differences in respondents' attitude before and after treatment with a value of  $p < 0.000$  ( $p < 0.05$ ). According to Sunaryo, attitude is a readiness to respond positively or negatively to an object or situation consistently [12]. Attitude is a tendency to act from an individual in the form of a closed response to a stimulus or a particular object. Attitude indicates the suitability of the reaction to the

stimulus that already involves the factors of one's opinions and emotions. So attitude is not an action or activity, but is a tendency to perform actions or behaviors or roles [4]. According to Nursalam, one's attitude can be influenced by several factors, namely age, employment, education and parity. If some of the respondents have a negative attitude, eating actions and behaviors will tend to be negative, so that nutritional problems in children will occur [13]. Knowledge can not always be connected with formal education, where it is assumed that with a higher education then the person will be more knowledgeable. Low education does not guarantee that a mother does not have sufficient knowledge about her family's nutrition but the presence of high curiosity can influence the mother in obtaining information about the right food for the child. The increase in knowledge is not absolutely obtained from formal education only, but can be obtained through non-formal education. One's knowledge of an object contains two aspects, namely the positive aspect and the negative aspect. These two aspects that will determine a person's attitude, the more positive aspects and and objects are known, it will give rise to a more positive attitude towards a particular object [4].

#### 4. CONCLUSION

There is an influence of Ring Card on the knowledge and attitude of mothers who have toddler 0-24 month in the prevention of stunting.

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#### REFERENCES

- [1] Kementerian Kesehatan RI. *Cegah stunting itu penting*. Warta kesmas. 2018.No02. <https://kesmas.kemkes.go.id/>
- [2] Pusdatin Kemenkes RI. *Cegah Stunting, itu Penting*. Buletin Jendela Data dan

Informasi Kesehatan.2018. ISSN 2088-270x. Jakarta : Kemenkes RI

- [3] MCA Indonesia. *Stunting masa depan indonesia*. MCA Indonesia-Technical-Brief-Stunting-ID. 2018. [www.mca-indonesia.go.id](http://www.mca-indonesia.go.id)
- [4] Notoatmojo S. *Promosi kesehatan dan perilaku kesehatan*. Rineka Cipta. 2012. Jakarta
- [5] Picauly I, Magdalena T, Sarci. *Analisis determinan dan pengaruh stunting terhadap prestasi belajar anak sekolah di Kupang dan Sumba Timur NTT*. Jurnal Gizi dan Pangan. 2013;8(1):55-62.
- [6] Sulastri D. *Faktor determinan kejadian stunting pada anak usia sekolah di Kecamatan Lubuk Kilangan Kota Padang*. Majalah Kedokteran Andalas. 2012;36(1):39-50.
- [7] Nugrahaeni. *Pencegahan Balita Gizi Kurang Melalui Penyuluhan Media Lembar Balik Gizi*. e-journal.unair.ac.id. 2018. Vol 2.No 1
- [8] Mubarak W, C. N. *Ilmu Kesehatan Masyarakat Teori dan Aplikasi*. Salemba Medika. 2009.Jakarta
- [9] Nadiyah, Briawan Dodik, Martianto Drajat, *Faktor risiko stunting pada anak usia 0-23 bulan di provinsi Bali, Jawa Barat, dan Nusa Tenggara Timur*. Jurnal Gizi dan Pangan 2014.; 9(2)
- [10] Astuti S. *Upaya Promotif Untuk Meningkatkan Pengetahuan Ibu Balita Tentang Pencegahan Stunting Dengan Media Integrating Card Di Kecamatan Jatinangor Kabupaten Sumedang*. Jurnal.ugm.ac.id.2020
- [11] E. Maywita. *Faktor Risiko Penyebab terjadinya Stunting pada anak balita umur 12-25 bulan di Kelurahan Kampung Baru Kecamatan Begalang tahun 2015*. Jurnal Riset Hesti Medan .2018., vol. 3, pp 56-65
- [12] Sunaryo. *Psikologi untuk keperawatan*. EGC;2004.Jakarta
- [13] Nursalam. *Konsep dan penerapan metodologi penelitian ilmu keperawatan*. Salemba Medika; 2008. Jakarta:
- [14] Edwin D. *Hubungan Sikap dan Pengetahuan Ibu Terhadap Kejadian pada Anak Baru Masuk Sekolah Dasar di Kecamatan Nanggalo*. Jurnal kesehatan Andalas. 2017;6(3)
- [15] Talitha NR. *Hubungan karakteristik, pengetahuan, dan sikap ibu terhadap status gizi anak di Posyandu RW 5 dan RW 10 Kelurahan Utan Kayu Utara Jakarta Timur (skripsi)*. Universitas Pembangunan Negara Veteran Jakarta; 2015. Jakarta: