EFFECTIVENESS OF MEDIA INTEGRATING CARD ON MOTHER'S KNOWLEDGE ABOUT STUNTING PREVENTION IN TODDLERS

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ABSTRACT
Bogor Regency is one of the areas that has become the focus of the West Java government in tackling stunting, because the number of stunting sufferers is still relatively high. Apart from the lack of nutritional intake, the term stunting is still considered foreign by the village community, so that the community's understanding of stunting is still low. Society still thinks that the condition of a child's body is influenced by genetic factors so that children's growth is not given enough attention. Short toddlers (stunting) is a condition of failure to thrive in children under five years old as a result of chronic malnutrition caused by insufficient nutritional intake in a long time. When a child is stunted it affects his physical growth, immunity, and cognitive function. Apart from nutritional factors, stunting is caused by a lack of public knowledge, especially mothers who have toddlers. The purpose of this study was to determine the effectiveness of integrating card media on mother's knowledge about stunting prevention in toddlers. This study uses a quasi-experimental design with a nonequivalent control group design model. The sample method is a purposive sample. Respondents were taken as many as 32 respondents consisting of 16 mothers who had toddlers in the experimental group and 16 mothers who had toddlers in the control group at the Ciawi Health Center. The results showed that there were 16 respondents to the mother's knowledge in the pre-test there were 8 respondents (50%) who had sufficient knowledge, in the post-test there were 15 respondents (93.8%) who had good knowledge..

Keywords: Knowledge, Integrating Card, Stunting Prevention

INTRODUCTION

Short toddler (stunting) is a problem of chronic malnutrition caused by chronic malnutrition. Nutritional intake needed to prevent developmental delays includes good nutritional intake during pregnancy, adequate blood-boosting tablets during pregnancy, breastfeeding for children in the first six months, and continuing to provide appropriate complementary foods until the child is 2 years old. Other factors that influence the incidence of stunting are the ability of health workers to detect stunting from an early age, clean water and the environment, parenting methods, location of delivery and genetics.

Stunting children are a poor predictor of the quality of human resources, which in turn reduces the productive capacity of a nation in the future (UNICEF Indonesia, in the Ministry of Health 2012).

According to Basic Health Research (Riskesdas, 2018) conducted by the Health Research and Development Agency (Litbangkes), the stunting rate that occurred in Indonesia in 2018 reached 30.8 percent. This figure has decreased from 37.2 percent in 2013. However, this figure is still quite high because it is still above the standard set by the World Health Organization (WHO) which is below 20 percent, so that Indonesia is one of the areas experiencing acute malnutrition. In West Java, there are thirteen regions with the highest number of stunting sufferers, including Garut Regency (43.2%), Cirebon Regency (42.47%), Kuningan Regency (42%), Sumedang Regency (41.08%), Bandung Regency (40.7%), Subang Regency (40.47%), Sukabumi Regency (37.6%), Indramayu Regency (36.12%), Cianjur Regency (35.7%),

Karawang Regency (34.87%), West Bandung Regency (34.2%), Tasikmalaya Regency (33.3%), and Bogor Regency (28.29%). Bogor District Health Office (2018) West Java noted that as

many as 32.9 percent or 282,627 toddlers out of a total of 859,501 toddlers in Bogor Regency suffered from stunting until the end of 2018.

Bogor Regency is one of the areas that has become the focus of the West Java government in tackling stunting, because the number of stunting sufferers is still relatively high, although the figure is still below other regions in West Java. Apart from the lack of nutritional intake, the term stunting is still considered foreign by the village community, so that the community's understanding of stunting is still low. Society still thinks that the condition of a child's body is influenced by genetic factors so that children's growth is not given enough attention.

Stunted children are children whose nutritional status is determined according to length or height for age compared to the 2005 WHO-MGRS (MuIticenter Growth Reference Study) standard. Z value is less than -2SD. If the z-score is small, they are classified as very short. From -3SD. (Ministry of Health, 2016) According to the World Health Organization (2018), a stunting prevalence of 20% or higher is a public health problem. In 2016, 22.9% or 154.8 million toddlers were stunted (WHO, 2018: 04)

The lack of participation of health workers in providing nutrition promotion for mothers during pregnancy, among other things, has an impact on mother's knowledge as well as mother and child health (Arrish et al., 2017). Therefore, corrective actions must include actions to directly prevent and reduce disturbances (specific nutrition interventions) and actions to prevent and reduce indirect disturbances. Special nutrition interventions are usually carried out in the health sector, but only reach 30%, while 70% are special nutrition interventions involving various sectors, such as food security, provision of clean water and sanitation facilities, poverty alleviation, education, social affairs (Ministry of Health, 2016) .

The existence of public education is needed as one of the efforts so that the community understands stunting better. Efforts to prevent stunting can be carried out by using health promotion methods with media integrating cards, which has previously been researched by Sri Astuti, Ginna Megawati, and Samson CMS regarding promotive efforts to increase knowledge of mothers under five about preventing stunting with media integrating cards in Jatinangor District, Sumedang Regency, with results based on characteristics, most knowledge about stunting was sufficient for mothers aged 20-35 years (40.8%), based on education, knowledge was lacking in the elementary and junior high school education groups (45.0%, 27.0%), based on the work of mothers who do not work have less knowledge 28.9%, 9%, based on parity on muItivara have sufficient knowledge (55.3%). Mothers who did ANC at most 4 times had sufficient knowledge of stunting (47.3%, although 27.0% lacked). (Research results of Sri Astuti et al, 2018). According to the research that has been carried out by them regarding the stunting prevention movement through community empowerment in Jatinagor sub-district, Sumedang Regency with the results of the research on stunting prevention promotion using media integrating cards for posyandu cadres as many as 50 people who filled out the questionnaire completely before the pre-test, there are still cadres' knowledge that is lacking (24%), after getting a promotion by playing cards, less knowledge decreased (40%). (Research results of Sri Astuti et al, 2018). According to the research that has been carried out by them regarding the stunting prevention movement through community empowerment in Jatinagor sub-district, Sumedang Regency with the results of the research on stunting prevention promotion using media integrating cards for posyandu cadres as many as 50 people who filled out the questionnaire completely before the pre-test, there are still cadres' knowledge that is lacking (24%), after getting a promotion by playing cards, less knowledge decreased (40%). (Research results of Sri Astuti et al, 2018). According to the research that has been carried out by them regarding the stunting prevention movement through community empowerment in Jatinagor sub-district, Sumedang Regency with the results of the research on stunting prevention promotion using media integrating cards for posyandu cadres as many as 50 people who filled out the questionnaire completely before the pre-test, there are still cadres'

knowledge that is lacking (24%), after getting a promotion by playing cards, less knowledge decreased (40%).

Efforts to prevent stunting can also be carried out by using the method of providing health education about stunting to mothers conducted by Suryagustina, Wenna Araya, and Jumielsa regarding the effect of health education on stunting prevention on the knowledge and attitudes of mothers in the Pahandut Village of Palangka Raya with the results of research on the effect health education about stunting prevention on mother's knowledge in Pahandut PaIangka Raya Village which was conducted on 25 respondents consisting of mothers with children 0-24 months, there were 19 respondents (76%) who had less knowledge, 5 respondents (20%) have sufficient knowledge, and 1 respondent (4%) who has good knowledge but after being given health education there are 20 respondents (80%).

RESEARCH METHODS

The design used daIam penIthis itian existsIoh quasi experimentaIdesign and use modeInonequivalent control group design. SebeIum given treatment, good toIexperimental group and toIcontrol groupIgiven a test, namely the pretest, with the intention of knowing the state of theIompok sebeIum treatment. Then setIah given treatment, keIexperimental group and toIcontrol groupIgiven a test, namely the posttest, to find out the state of theIompok seteIah treatment. On penIitian this toIexperimental group, defenderIteachings inIdo it using aIat educational games for keIcontrol groupIdefenderIteachings inIdo it by using media integrating cards, namely be activitiesIteaching using cards. PenIitian is inIi willIam 7 kaIi meeting in every keIomok. The population of this research is mothers who have toddlers under 5 years of age in Pasirjaja Sukaraja Village, Bogor Regency. The population of participants was taken as many as 32 people, with a sample of 16 people who were given treatment/treatment and 16 people who were not given treatment/treatment. This research was conducted in the area of the Ciawi Health Center and the Jagakarsa Village Health Center.

RESEARCH RESULTS

Table 1. Result Normality Test

Tests Of Normality							
		Kolmogorov. Smirnov			*Shapiro-Wilk*		
	ToIUS	Statistics	Df	Sig	Statistics	Df	Sig
Mother Knowledge	Pre-test Experiment	.220	16	038	.898	16	.073
	Experimental Post-test	.207	16	.066	.882	16	041
	Pre-test ControlI	.199	16	091	.944	16	.402
	Post-test ControlI	.254	16	007	.884	16	046
a.IilliefoIs Significance Correction							

Source: Results of data processing SPSS Version 25

Based on table 1 above, it is knownIai is significant (Sig.) for all data both on the norm testIitas using the Kolmogorov-Smirnov formula inItake a look from thisIai Sig (significant) namely 0.038 pre-test experimental and 0.007 post-test controlI. And using the Shapiro-Wilk formula inItake a look from thisIai Sig (significant) namely 0.041 during the experimental post-test and 0.046 during the

control post-testl. So, if thislai is significant <0.05 so it can be concludedlright that data penelitian distribution is not normall.

a. Frequency distribution of mother's knowledge about stunting prevention in balita tolsebe intervention grouplum inldo treatment using a media integrating card

Intervention

No	Knowledge	Frequency	Percentage (%)
1	Good	7	43.8
2	Enough	8	50.0
3	Not enough	1	6.3
Totall		16	100

Source: Results of SPSS 25 data processing

Based on the frequency distribution of mother's knowledge about stunting prevention in balita tolsebe intervention grouplum inlDo the treatment using the media integrating card above, it is known that of the 16 respondents, the resultslmother's knowledge about stunting prevention in balita sebelum inlDoing treatment with media integrating cards obtains the largest data, namely 50.0% with sufficient knowledge.

b. Frequency distribution of mother's knowledge about stunting prevention in balita tolcontrol grouplon Wilfather carried out his research

Control

No	Knowledge	Frequency	Percentage (%)
1	Good	5	31.3
2	Enough	8	50.0
3	Not enough	3	18.8
Totall		16	100

Source: Results of SPSS 25 data processing

Based on the frequency distribution of mother's knowledge about stunting prevention in balita tolcontrol grouplit is known that of the 16 respondents, the resultslmother's knowledge about stunting prevention in balita there are 8 respondents with sufficient knowledge (50.0%).

b. Frequency distribution of mother's knowledge about stunting prevention in balita tolsete intervention grouplah inldo treatment using a media integrating card

Intervention

No	Knowledge	Frequency	Percentage (%)
1	Good	15	93.8
2	Enough	1	6.3
3	Not enough	0	0
Totall		16	100

Source: Results of SPSS 25 data processing

Based on the frequency distribution of mother's knowledge about stunting prevention in balita tolsete intervention grouplah inlDo the treatment using the media integrating card above, it is known that of the 16 respondents, the resultslmother's knowledge about stunting prevention in balita setlah inlDoing treatment with media integrating card, 15 respondents got itluh, the biggest data is 93.8% with good knowledge.

c. Frequency distribution of mother's knowledge about stunting prevention in balita tolcontrol groupl

Controll

No	Knowledge	Frequency	Percentage (%)
1	Good	10	62.5
2	Enough	6	37.5
3	Not enough	0	0
Totall		16	100

Source: Results of SPSS 25 data processing

Based on the frequency distribution of mother's knowledge about stunting prevention in balita tolcontrol groupIabove it is known that of the 16 respondents, resultsImother's knowledge about stunting prevention in balita, there were 10 respondents with good knowledge (62.5%).

d. The effectiveness of the Media Integrating Card on mother's knowledge about stunting prevention in toddler

Wilcoxon Signed Ranks Test

Test Statistics

	Post Test - Pre Test
Z	-3.108b
asymp. Sig. (2-tailed)	002

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks

Based on results "Test Statistics" above, it is known that Asymp.Sig. (2-taIled) that the "hypothesis is accepted". This means that there is a difference between the resultsImother's knowledge for pre test and post test. So that it can be conclusion that there is an effect of using integrating card media on mother's knowledge about stunting prevention in toddler.

DISCUSSION

1. The result of mother's knowledge before treatment with media integrating card

The result of chronic malnutrition or growth failure in the past and is used as a long-term indicator of undernutrition in children (RI Ministry of Health, 2015).

The lack of involvement of health workers with mothers in providing nutrition promotion during pregnancy has an impact, among other things, on mother's knowledge and mother and child health (Arrish et al., 2017).

Based on the results of research on maternal knowledge in the intervention group, it is known that out of 16 respondents, the results of maternal knowledge about preventing stunting in toddlers before being treated with media integrating cards obtained the largest data, namely 50.0% with sufficient knowledge.

The results of this research are supported by research conducted by (Suryagustina, Wenna Araya, 2018) concerning the effect of health education on stunting prevention on mothers' knowledge and attitudes in Pahandut PaIangka Raya Village with the results of research on the effect of health education on stunting prevention on mother's knowledge in Pahandut PaIangka Village Raya which was conducted on 25 respondents consisting of mothers who had children aged 0-24 months, there were 19 respondents (76%) who had less knowledge, 5 respondents (20%) had sufficient knowledge, and 1 respondent (4%) who had good knowledge but after being given health education there were 20 respondents (80%).

Based on the results of the research, the researchers assume that compared to previous researchers, mothers' knowledge about preventing stunting in toddlers before treatment with media integrating cards is 20% who have sufficient knowledge, whereas in the results of research that has been carried out by researchers, it is concluded that respondents have sufficient knowledge (50 %) before carrying out the treatment with media integrating card.

In this study, knowledge influences stunting prevention in toddlers. If the mother's knowledge increases about stunting prevention in toddlers, the number of stunting in toddlers can decrease, and vice versa if the mother's knowledge is lacking about stunting prevention in toddlers, the greater the possibility that the toddler will experience stunting.

2. Results of mother's knowledge after treatment with media integrating card

The result of chronic malnutrition or growth failure in the past and is used as a long-term indicator for undernutrition in children (Ministry of Health RI, 2015).

The lack of involvement of health workers with mothers in providing nutrition promotion during pregnancy has an impact, among other things, on mother's knowledge and mother and child health (Arrish et al., 2017).

Based on the results of the knowledge research on the intervention group, it is known that out of 16 respondents, the results of mother's knowledge about preventing stunting in toddlers after being treated with media integrating cards, 15 respondents obtained the largest data, namely 93.8% with good knowledge.

The results of this research are supported by research conducted by (Astuti et al., 2018) Promotive efforts to increase the knowledge of mothers under five about preventing stunting with media integrating cards in Jatinagor sub-district, Sumedang regency. Posyandu cadres indicated that based on characteristics, most knowledge about stunting was sufficient at the age of 20-35 years (40.8%).

Based on the results of the research, the researchers assume that compared to the results of research conducted by previous researchers, that mother's knowledge about preventing stunting in toddlers after being treated with media integrating cards is 40.8% with sufficient knowledge. While the results of research conducted by researchers 3 times a week affect the value of mother's knowledge, it can be concluded that of the 16 respondents, the results of mother's knowledge about preventing stunting in toddlers after treatment with media integrating cards, 15 respondents obtained the largest data, namely 93.8 % of respondents have good knowledge with a mean of 88.13.

In this study, it was found that almost all mothers under five stated that media integrating cards were effective for the reasons that they were easy to understand, interesting, learning about stunting was easier with pictures and explanations. So that in the tests that are carried out after using the integrating card media, the mother's knowledge about preventing stunting in toddlers is good, there is an increase, so the number of stunting in toddlers can decrease, and vice versa, if the mother's knowledge is lacking about preventing stunting in toddlers, the more likely the toddler is to experience stunting.

3. **The effectiveness of integrating card media on mother's knowledge about stunting prevention in toddlers**

   The lack of involvement of health workers with mothers in providing nutrition promotion during pregnancy has an impact, among other things, on mother's knowledge and mother and child health (Arrish et al., 2017).

   Community education is very much needed as one of the efforts so that the community understands more about stunting, especially in its prevention. Efforts to prevent stunting can be carried out with integrating card media.

   *Media integrating card*is an effective learning card containing images, text, or symbolic signs that are used to help remind or direct the reader to something related to the images, text, or symbolic signs on the card, as well as stimulate thoughts and interest in reading so that the learning process occurs.

   Based on the research results, it is known that the results of the WiIcoxon Signed Rank Test "Test Statistics" test above, it is known that Asymp.Sig. (2-tailed) is 0.002 smallerof ≤ 0.05. Then it can be confusedFish that "hypothesis accepted". This means that there is a difference between the results of the mother's knowledge for the pre test and post test. So that it can be concluded that there is an effect of using integrating card media on mother's knowledge about preventing stunting in toddlers.

   The results of this research are supported by research conducted by (Astuti, 2018) entitled Movement for Stunting Prevention through Community Empowerment in Jatinangor District, Sumedang Regency. The results of the study show that the promotion of stunting prevention using integrating card media for Posyandu cadres as many as 50 people who filled out the questionnaire completely before the pre-test had enough knowledge of the cadres (24%), after getting a promotion by playing cards, their knowledge increased quite a bit (40%) .

   From the research results, it can be concluded that the result p value of 0.002 is smaller than 0.05, which means that there is an influence between the independent variables and the dependent variable. In this research, it is illustrated that the results of this research can increase mothers' knowledge through integrating card media because the media is easy to understand, interesting, and learning to understand stunting is easier with pictures and explanations.

CONCLUSION

1. It is known based on the results of research on maternal knowledge. Based on the results of research on maternal knowledge, it is known that of the 16 respondents, resultsImother's knowledge about stunting prevention in baIita sebeIum inIDoing treatment with media integrating cards obtains the largest data, namely 50.0% with sufficient knowledge.
2. It is known that based on the results of mother's knowledge research, it is known that of the 16 respondents, the resultsImother's knowledge about stunting prevention in baIita setIah inIDoing treatment with media integrating card, 15 respondents got itIuh, the biggest data is 93.8% with good knowledge.
3. Based on resultsI“Test Statistics” known Asymp.Sig. (2-tailed) peroIuh hasiIp-va statistical testI*eu*= 0.002 which means p-vaI*eu*< 0.05. So that it can be confusedIright that there is an effect of using integrating card media on mother's knowledge about stunting prevention in baIita.

SUGGESTIONS

1. For STIKes Wijaya Husada Bogor
   It is hoped that the research that has been carried out can add sources of information and references to STIKes Wijaya Husada Bogor students so that it can become a reference for further research.
2. For Mothers Who Have Toddlers
   Should be diligent in seeking information both from electronic media and by participating in health education activities.
3. Public health center
   Conduct outreach and outreach activities to the community about stunting, especially in terms of its prevention.

BIBLIOGRAPHY

1. A Aziz H AlimuI. (2003). Nursing research & scientific writing techniques. Salem Medika.
2. Adriani, M., & Kartika, V. (2013). Feeding Parenting Patterns for Toddlers with Malnourished Status in East Java, Central Java and Central Kalimantan, 2011. Health System Research Bulletin, 16(2), 185–193. https://doi.org/10.22435/bpsk.v16i2
3. Anugraheni, HS, & Kartasurya, MI (2012). of Nutrition College, Volume Pages of Nutrition College, Volume Pages. Journal of Nutrition College, 1, 30–37.
4. Aridiyah, FO, Rohmawati, N. And Ririanty, M. (2015). Factors Affecting Stunting in Toddlers in Rural and Urban Areas (The Factors Affecting Stunting on ToddIers in Rural and Urban Areas) | Health Library. 3(1). https://jurnaI.unej.ac.id/index.php/JPK/articIe/view/2520
5. Arrish, J., Yeatman, H., & Williamson, M. (2017). Midwives' Role in Providing Nutrition Advice during Pregnancy: Meeting the Challenges? A Qualitative Study. Nursing Research and Practice, 2017, 1–11. https://doi.org/10.1155/2017/7698510
6. Astuti, S. (2018). Stunting Prevention Movement Through Community Empowerment in Jatinangor District, Sumedang Regency. Dharmakarya, 7(3), 185–188. https://doi.org/10.24198/dharmakarya.v7i3.20034
7. Astuti, S., Megawati, G., & CMS, S. (2018). Promotive Efforts to Increase Knowledge of Toddler Mothers About Stunting Prevention with Media Integrating Cards in Jatinangor District, Sumedang Regency. Journal of Community Service, 2(6).
8. Bayu Dwi Welasasih, RBW (2012). Several Factors Associated With The Nutritional Status Of Stunting Toddlers. The Indonesian Journal Of Public Health, 99–104.
9. Grantham-McGregor, S., Cheung, YB, Cueto, S., GIewwe, P., Richter, I., & Strupp, B. (2007). Developing potential in the first 5 years for children in developing countries. lancet, 369(9555), 60–70. https://doi.org/10.1016/S0140-6736(07)60032-4
10. Hagos, S., HaiIemariam, D., WoIdeHanna, T., & Iindtjørn, B. (2017). Spatial heterogeneity and risk factors for stunting among children under age five in Ethiopia: A Bayesian geo-statistical modelI. PIoS ONE, 12(2), 1–18. https://doi.org/10.1371/journaI.pone.0170785
11. Hidayat. (2008). Introduction to Pediatric Nursing, Third Edition. SaIemba Medika.
12. IDN Supariasa, B Bakri, IF (2012). Revised Edition of Nutritional Status Assessment. ECG Medical Book Publisher.
13. Ministry of Health. (2016). Data and information Center. https://pusdatin.kemkes.go.id/articIe/view/16061400001/situasi-baIita- Short.htmI
14. Republic of Indonesia Ministry of Health. (2015). Data and information Center. https://pusdatin.kemkes.go.id/foIder/view/01/structure-pubIikasi-pusdatin-info-datin.htmI
15. Republic of Indonesia Ministry of Health. (2019). Stunting Prevention. DIRECTORATE OF HEALTH PROMOTION & COMMUNITY EMPOWERMENT. https://promkes.kemkes.go.id/prevention-stunting

16. M Saryono. (2011). Research Methodology in the Fields of Health, Nursing and Midwifery. Fitramaya Publisher CV.
17. Notoadmodjo, S. (2012). Health Research Methodology (Ed.Rev). PT. Rineka Cipta.
18. Reurings, ME AI. (2013). "Stunting Rates in Infants and Toddlers Born in Metropolitan Quetza Itenango, Guatemala", Nutrition. Elsevier Inc, 29(4), 655–660. https://doi.org/10.1016/J.Nut.2012.12.012.
19. Riskesdas. (2018). National Health Research: Stunting Rates. MediaIndonesia. Com. https://mediaindonesia.com/humaniora/195157/reset-kesehatan-nasionaI-2018-angka-stunting-turun#:~:text=The proportion of stunting or short toddler,) becomes 17%2C7%25.
20. Riyanto A Budiman. (2013). Capita Selecta Questionnaire: Knowledge and Attitudes in Health Research (RA Budiman (ed.)). SaIemba Medika.
21. S Nursalam. (2013). Nursing Science Research Methodology: Practical Approach. SaIemba Medika.
22. Singgih Santoso. (2014). Complete Guide to SPSS Version 20 Revised Edition. PT. EIex Media Komputindo Group-Gramedia.
23. Soekidjo Notoatmodjo. (2005). Health Education and Behavior. Rineka Cipta.
24. Sulaiman, U. (2014). Students' Religious Behavior (Case in Students of SITP Negeri I and MTs Negeri BuIukumba). Auladuna, 1(2), 201–217.
25. Suryagustina, Wenna Araya, J. (2018). The Influence of Health Education About Stunting Prevention on Mother's Knowledge and Attitudes in Pahandut Palangkaraya Village. 9(2).