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Original Research

Media Audio Barcode Monitoring Book (Dicotobook) Effectively Improves Detection of Stunting Risk

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ABSTRACT

***Background*:** *Stunting is the growth retardation that occurs in children as a result of chronic malnutrition, recurrent infections, and persistent psychological and social stress. 88 toddlers in Bengkulu City experienced stunting with a prevalence of 0.86%. This study aims to determine the effectiveness of the Audio Barcode Monitoring Book (Dicotobook) media on maternal behavior in the early detection of stunting.*

Methods: *This study used a quasi-experiment design with a pretest-posttest design with a control group. The sample in this study was breastfeeding mothers, totalling 30 people in the intervention group and 30 in the control group using a purposive sampling technique. Data analysis in this study used the Wilcoxon signed rank test, the Mann-Whitney test, and the Analysis of Covariance test.*

Results: *The statistical test results showed differences in mothers' average knowledge, attitudes, and actions before and after education using Dicotobook media (intervention group) (p-value 0.001) and leaflet (control group) (p-value 0.001). Education with Dicotobook media is more effective in increasing knowledge (p-value 0.004), attitudes (p-value 0.009), and actions (p-value 0.016) in the early detection of stunting risk after controlling for factors such as maternal education, maternal occupation, and distance to health facilities.*

Conclusion: *Dicotobook media is a very suitable educational media that can motivate improvement* in *knowledge, attitudes, and actions in the early detection of stunting risk. This Dicotobook media can be used as an alternative to provide education to the public.*

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INTRODUCTION

Stunting is the growth retardation that occurs in children as a result of chronic malnutrition, recurrent infections, and persistent psychological and social stress. (Ruswati et al., 2021). Globally, there are 149.2 million stunted children under the age

of 5 years, and the prevalence is 26.7% (UNICEF, 2020). The prevalence of stunting in Indonesia has decreased over the last 4 years, but its prevalence has not reached the target set by the government.

The Government of Indonesia targets *a stunting prevalence to decrease to 14% in 2024 with a* morbidity rate in 2021 of 24.4% and 26.92% in 2020, so to achieve this target set by the government, a decrease of 2.7% is needed each year (Kemenkes RI dan BPS, 2019). Data from the Indonesian Nutritional Status Study (SSGI) in 2022 states that the prevalence of *stunting* in Bengkulu Province is still quite high, at 20.6% in several regencies/cities. Telaga Dewa Health Center is the 2nd highest area that is *stunted*, namely 11 toddlers, followed by Jalan Gedang Health Center with 10 *stunting* toddlers.

Stunting is a problem that requires attention from all circles because malnutrition can cause adverse consequences and is very difficult to treat after passing the first 1000 days of life (HPK). *Severe stunting* in children can cause differences in both physical and mental growth and development over the long term so they cannot learn optimally in school compared to children with normal growth. *Stunting* can occur if caused by maternal factors such as poor maternal nutrition during pregnancy, insufficient maternal height, and poor maternal parenting (Sukirno, 2019).

Maternal behavior which includes the knowledge, attitudes, and actions of mothers, is the most important aspect of *stunting*. This is because mothers tend to have good behavior which will ultimately improve the nutritional status of their toddlers, which is directly related to nutritional status and health status (Sumiarti, 2021). Research results by Mardihani & Husain, (2021) revealed that maternal awareness of *stunting is still low, and most mothers do not understand what is meant by* stunting in children.

One essential strategy to address the decline is implementing nutrition education for mothers, focusing on enhancing their knowledge during the first 1,000 days of life (1000 HPK) (Family Hope Program of the Ministry of Social Affairs, 2018). Then the government has also implemented a family nutrition improvement program known *as the Applied* Nutrition Program or Family Nutrition Improvement Business Program (UPGK). The program provides practical nutrition education to families by monitoring the growth and development of toddlers at posyandu as a whole (Masita *et al*., 2018).

Efforts to increase knowledge can be made through health promotion. Research results from Rezky, (2020) show that health promotion media is the most effective means of increasing knowledge. One of the health promotion media that can increase knowledge is media in the form of books, also called *Audio Barcode Monitoring Book (*Dicotobook*).*

This Dicotobook is an educational book that is combined with audio so that mothers, when reading, are not bored but can also listen to health rhymes, *stunting* prevention education, and so on contained in the book, which can be listened to *online* and *offline* in line with research. Damayanti, (2019) stated that media in the form of books can increase the knowledge of pregnant women about the incidence of *stunting*. This study aims to determine the effectiveness of *Audio Barcode Monitoring Book* (Dicotobook) media on maternal behavior in the early detection of *stunting risk.*

MATERIALS AND METHOD

This type of study employs quantitative methods by using the experimental design of inquiry and pre-test and post-test control groups. The study's ethical clearance

number is KEPK. BKL/043/02/2023. The dependent variable in this study is the promotion of health. In the intervention group using Audio Barcode Monitoring Book (Dicotobook) media while in the control group using leaflet media, the dependent variables are maternal behavior (maternal knowledge, maternal attitude, and maternal actions), as well as confounding variables (mother's age, mother's education, mother's occupation, distance of health facilities, and number of children).

Dicotobook and leaflet media contain material on the definition of stunting, characteristics of stunting, causes of stunting, impacts of stunting, and how to detect stunting and prevent stunting. The population used in this study was all breastfeeding mothers in the working area of Telaga Dewa Health Center and Jalan Gedang Health Center as intervention groups and West Lingkar Health Center and Lempuing Health Center as control groups. The sample in this study amounted to 60 breastfeeding mothers divided into 2 groups, namely the intervention group and the control group, who met several inclusion criteria, namely mothers who were breastfeeding 0-1 years, willing to be respondents, in good health, and present in the pre-test and post-test.

Sampling is carried out by non-probability sampling with purposive sampling techniques. The study was conducted in January-April 2023. The instrument in this study used questionnaires to measure mothers' knowledge and attitudes regarding early detection of stunting risk, and checklist sheets were used to measure mothers' actions regarding early detection of stunting risk. This study used three analyses, namely univariate, bivariate, and multivariate analysis.

Univariate analysis was used to determine the characteristics of respondents, which included age, maternal education, maternal occupation, distance of health facilities, and number of children, and then to determine the frequency of each research variable, namely the average results of knowledge, attitudes, and actions before and after in the intervention group and control group. Bivariate analysis using Wilcoxon Signed Rank and Mann-Whitney tests and multivariate analysis using the analysis of covariance (ANCOVA) test.

RESULTS

The result of maternal frequency distribution based on characterustics.

Table 1. Maternal Frequency Distribution Based on Characteristics

Characteristic	Intervention		Control		Total		*p-value*
	n	%	n	%	n	%	
Mother's Age							
< 20 years	3	10.0	4	13.3	7	11.7	0.424
20 -35 Years	12	40.0	16	53.3	28	46.7	
> 35years	15	50.0	10	33.3	25	41.7	
Mother's Education							
College	8	26.7	12	40	20	33.3	
Upper High School	12	40	8	26.7	20	33.3	0.487
First High School	3	10	5	16.7	8	13.3	
Elementary School	7	23.3	5	16.7	12	20	
Mother's Work							
Work	16	53.3	17	56.7	33	55	1.00
Not Working	14	46.7	13	43.3	27	45	
Distance of Health							

Characteristic	Intervention		Control		Total		*p-value*
	n	%	n	%	n	%	
Facilities							
Easy	27	90.0	28	93.3	55	91.7	1.00
Difficult	3	10.0	2	6.7	5	8.3	
Number of Children							
≤ 2 children	10	36.7	13	43.3	23	38.3	0.595
>2 children	20	63.3	17	56.7	37	61.7	

a. Uji Chi-Square

Table 1 shows that the mothers of the intervention group were mostly aged >35 years (50%), while in the control group most were aged 20-35 years (53.3%); the last education in the intervention group was mostly high school (26.7%), while in the control group most were educated PT (40%). Most mothers worked in both the intervention and control groups (53.3% and 56.7%). Almost all mothers easily went to health facilities in both the intervention and control groups (90%) and (93.3%), and most mothers had children >2 both in the intervention group and the control group (63.3%) and (56.7). So it can be concluded that there is no difference in maternal characteristics between the intervention and control groups (p > 0.05).

Table 2. Changes in Knowledge Before and After Education using Dicotobook and Leaflet Media

Group	Knowledge	Pre-test	Post-test	Δ x̄	*p-value*
Intervention	Min-Max x̄±SD	10-90 6.17±2.679	50-100 8.10±1.709	1.93	0.001
Control	Min-Max x̄±SD	20-90 4.90±1.863	40-100 6.70±1.760	1.80	0.001
***p-value*[b]**		0.374	0.004		

[a]*Wilcoxon signed rank test*
[b]*Mann-Whitney*

Table 2 shows the results of *the Wilcoxon signed-rank test, which* obtained *a p-value* of 0.001 < 0.05, then H0 is rejected, which means that *the* Dicotobook media affects maternal knowledge in early detection of *stunting risk.* The results of the Mann-Whitney test obtained *a p-value of* 0.004 < 0.05, so the Dicotobook media is more effective in increasing maternal knowledge on early detection of *stunting risk.*

Table 3. Changes in Attitudes Before and After Education using Dicotobook and Leaflet Media

Group	Attitudes	Pre-test	Post-test	Mean Difference	*p-value*
Intervention	Min-Max x̄±SD	65-75 27.87±1.502	65-100 31.13±2.980	3.26	0.001
Control	Min-Max x̄±SD	60-80 28.23±2.344	62.5-100 30.20±2.511	1.97	0.001
p-value		0.590	0.009		

[a]*Wilcoxon signed rank test*
[b]*Mann-Whitney*

Table 3 shows the results of *the Wilcoxon signed-rank test, which* obtained *a p-value* of 0.001 < 0.05, then H0 is rejected, which means that *the* Dicotobook media affects maternal attitudes in the early detection of *stunting risk.* The results of the Mann-Whitney test obtained *a p-value* of 0.009 < 0.05, so the Dicotobook *media* is more effective in increasing maternal attitudes towards early detection of *stunting risk.*

Table 4. Changes in Action Before and After Education using Dicotobook and Leaflet Media

Group	Action	Pre-test	Post-test	Mean Difference	*p-value*
Intervention	Min-Max	0-33.3	33.3-100	1.74	0.001
	x̄±SD	1.13±0.57	2.87±0.434		
Control	Min-Max	0-100	33.3-100	1.47	0.001
	x̄±SD	1.23±2.344	2.70±0.702		
p-value		0.351	0.016		

[a]*Wilcoxon signed rank test*
[b]*Mann-Whitney*

Table 4 shows the results of the *Wilcoxon signed-rank test, which* obtained *a p-value* of 0.001 < 0.05, then H0 is rejected, which means that *the* Dicotobook media affects the mother's actions in the early detection of *stunting risk.* The results of the *Mann-Whitney* test obtained *a p-value* of 0.016 < 0.05, so the Dicotobook *media is* more effective in increasing maternal attitudes towards early detection of *stunting risk.*

Table 5. Effectiveness of Media Audio Barcode Monitoring Book (Dicotobook) in Early Detection of Stunting Risk

Variable	Group		*p-value*	Age	Education	Occupation	Number of Children	Distance Health facilities
	Intervention	Control						
Knowledge								
Pre-test	6.17±2.679	4.90 ± 1.863						
Post-test	8.10 ±1.709	6.70 ± 1.760						
p-Value[1]	0.001	0.001		0.574	0.001	0.039	0.158	0.036
Δ^2	1.93	1.80	0.004					
R Square	0.256							
R^2 Adjusted	0.171							
Ancova[3]								
Attitudes								
Pre-test	27.87±1.502	16.40±1.886						
Post-test	31.13±2.344	33.70±6.232						
p-Value[1]	0.001	0.001		0.375	0.004	0.034	0.197	0.009
Δ^2	3.26	1.97	0.009					
R Square	0.224							
R^2 Adjusted	0.136							
Ancova[3]								
Action								
Pre-test	3.87 ± 0.937	4.13 ±0.860						
Post-test	9.43 ± 0.626	9.00 ± 0.587						
p-Value[1]	0.0001	0.0001		0.653	0.001	0.009	0.728	0.029
Δ^2	5.56	4.87	0.016					
R Square	0.290							
Adjusted Ancova[3]	0.209							

[1]*Wilcoxon signed rank test*: *Significant at* p<0,05
[2]*Mann-Whitney*: *Significant at* p<0,05
[3]ANCOVA: *Significant at* p<0,05: *Covariate*: Mother's age, Education, Occupation, Number of children, Distance Health facilities

Table 5 shows the results of the analysis of covariance (ANCOVA) where Ho is rejected with a p-value of <0.05, where Ho is rejected, which means there is an influence of education, employment, and distance of health facilities on maternal behavior (knowledge, attitudes, and actions), while Ho fails to be rejected if the p-value >0.05, where the mother's age and number of children do not affect the mother's knowledge of attitudes and actions. Based on Table 5, the variables of knowledge (p-value=0.171), attitude (p-value=0.136), and action (p-value=0.209) have R-squared values, where the adjusted R-squared values range from 0.19 to 0.33, which means that Dicotobook media has an effect in improving maternal behavior in early detection of stunting risk after being controlled by covariate, but the effect is weak.

DISCUSSION

The prevalence of stunting is strongly correlated with being either too young or too old (> 35 years), and children are four times more likely to be stunted than moms who are between the optimal age range of 20 and 35 (Manggala et al., 2018). The physical growth of young mothers is still ongoing, which can lead to nutritional competition between the mother and the fetus, according to Stephenson, T., J. and Schiff, W., J. (2019). Mothers who carry fetuses with intrauterine growth restriction (IUGR) run the risk of giving birth to offspring who are underweight or have short stature at birth.

The results of the analysis of the age characteristics of the analysis of covariance (ANCOVA) test found that there was no influence between maternal age and maternal knowledge, attitudes, and actions in improving maternal behavior in early detection of stunting risk. This is inversely proportional to the theory that reveals that age is a factor that affects knowledge, because as we know, the more mature a person is, the clearer his thinking and working. Another study also revealed that there was no relationship between maternal age and stunting in Hegarmanah Village, Jatinagor District, Sumedang Regency (Rahmandiani et al., 2019).

The knowledge, education, and foundation of the mother greatly affect a person's ability to determine information about early detection of child developmental delays. Given that a person's level of education strongly influences a person's decision to act, highly educated mothers are faster in absorbing new information, including increased awareness of early detection of stunting risks (Masita et al., 2018). Olsa et al., (2017) Mother's work is also related to the incidence of *stunting*; this is due to the mother's income, which can support child development because it can meet children's needs, such as nutritious food (Putri & Lestari, 2020).

This study, which was conducted on 60 respondents, showed that most (55%) were working mothers. The results of the *analysis of the covariance (ANCOVA*) test on job characteristics show that there is an influence between maternal age and maternal knowledge, attitudes, and actions ($p < 0.05$) on early detection of *stunting* risk. This is in line with the research by Mentari & Hermansyah (2019), which revealed that there is a link between the status of *stunting* events in children and working mothers.

The study also found that almost all mothers (91.7%) were able to get to a healthcare facility. The results of *the analysis of the covariance* (ANCOVA*) test on the characteristics of health service access show that there is an influence between maternal age and maternal knowledge, attitudes, and actions (p < 0.05) on early detection of* stunting risk. This is in line with research by Kamilah *et al.* (2022), which states that there is a link between access to health services and stunting toddlers. Access

to healthcare facilities is said to be easy because most mothers have the transportation equipment to go to service facilities, so mothers do not experience difficulties in terms of getting to healthcare facilities even though the distance travelled from home to healthcare facilities is quite far.

The study also found most mothers had more than 2 (55%) children. Analysis of the *Covariance Test (*ANCOVA) on the characteristics of the number of children also found that there was no influence of the number of children with maternal behavior in improving maternal behavior in the early detection of *stunting* risk. This is not in harmony with the theory that the number of children greatly affects the way a person receives information, because the more experience a mother has, the easier it is to pass on information to her.

The source of knowledge obtained from experience can be used as a means of obtaining the truth of knowledge by recalling the knowledge gained to solve problems faced in the past. Studies Nadiyah et al., (2014) this study finds that the number of children is not a factor that can affect the prevalence of stunting since it found no association between the number of children and the prevalence of stunting. Rahmandiani et al., (2019) found no correlation between the number of children and parity (the prevalence of stunting) in Hegarmanah Village, Jatinagor District, Sumedang Regency.

The effectiveness of the Audio Barcode Monitoring Book (Dicotobook) media in improving knowledge and attitudes of mothers about stunting risk detection using the Mann-Whitney test and Wilcoxon signed rank test resulted in a p-value of less than 0.05 and a 95% confidence level. Wahyurin et al., (2019) used brainstorming and audiovisual media to increase the knowledge of mothers who have stunted children. The findings indicate that both Dicotobook media and leaflets have an impact on changing maternal behavior in the early identification of stunting risk; however, Dicotobook media education is more successful in this regard than leaflet education. Maternal behavior, encompassing knowledge, attitudes, and actions, is a factor that can be influenced by media.

Mass media is useful because it makes it easier to understand information that is considered difficult. The knowledge, attitudes, and actions of mothers who have increased show success in promoting health through the media of Dicotobook. In addition, knowledge can lead to improved attitudes and actions. Knowledge, attitudes, and actions can experience an increase due to a person's motivation or intention to do something. This information is usually sourced from reading books, newspapers, magazines, even internet media, and video games.

Book media combined with audio circulating on the internet is one of the media that attracts mothers to obtain information. The media used in this study is Dicotobook media. Dicotobook media has advantages, including being easy to understand; mothers are not monotonous reading because many audios can be listened to *online and* offline, *and* there are animated videos that you can watch anytime and anywhere. The leaflet media is used to see the effectiveness of both media on maternal behavior in the early detection of stunting risk because both media are similar print media that both contain health information *about* stunting. As explained in research by Ihlasuyandi & Sudiyat (2022), there was no significant difference in effectiveness between the use of AVA media and leaflet media.

Dicotobook media, which is an educational book media that is combined with audio so that mothers, when reading, are not bored but can also listen to health rhymes,

stunting prevention education, and so on contained in the book, which can be listened to *online* and *offline*. Beginning with the Musdalifah et al., (2020) study, which found that there was a difference in the parents' knowledge before and after the test, a stunting detection module was provided. This was confirmed by the presence of a rata-rata difference between the pretest and posttest. The media's impact on health information is particularly significant when it comes to enhancing parents' ability to detect the risk of stunting (Wahyurin *et al*., 2019). The advantages of this Dicotobook media compared to leaflet media: Dicotobook media involves more sensory devices because, in addition to reading activities, mothers also have to listen to audio and watch videos so that two-way communication occurs between mothers and audio that must be listened to by mothers.

The implications of this study's findings regarding the implementation of Dicotobook suggest that this media can be an effective tool for improving maternal knowledge and attitudes related to early stunting detection. Dicotobook, as a digital educational tool, offers an alternative that is more engaging and interactive compared to print media, such as leaflets, which can enhance maternal involvement and understanding of the material. However, for the broader implementation of Dicotobook, several factors need to be considered, such as the readiness of technological infrastructure in various regions, including internet access and digital literacy among mothers.

Additionally, training on how to use Dicotobook is crucial to ensure that mothers can make optimal use of this tool. Wider implementation can be achieved by considering the availability of digital devices in communities and exploring potential partnerships with health institutions and government agencies to support the distribution and use of Dicotobook in different areas. In this way, Dicotobook can become an important part of public health programs aimed at increasing maternal knowledge about stunting and encouraging positive behavioral changes in stunting prevention efforts.

The limitation of this study is related to the relatively small sample size, consisting of only 60 breastfeeding mothers divided into two groups: the intervention group and the control group. This limited sample size may affect the generalizability of the study results, making them not fully representative of the breastfeeding population in the entire region. Additionally, the use of purposive sampling may introduce selection bias, as participants are chosen based on specific criteria, which could affect the representativeness of the sample.

Furthermore, the use of ANCOVA as a multivariate analysis method may be limited by uncontrolled confounding variables, even though these have been considered in the study, such as individual factors that may influence changes in maternal behavior but are not included in the analysis model. Another limitation is the potential barriers to using Dicotobook, such as digital literacy or limited internet access in rural areas. Therefore, future research should explore these challenges to better understand the extent to which Dicotobook can be implemented more widely in different contexts.

Based on these limitations, several suggestions for future researchers include: first, it is recommended to use a larger sample size to ensure the results are more representative and can be generalized to a broader population. Second, future studies could consider using a more random sampling technique, such as random sampling, to reduce potential selection bias and improve the representativeness of the sample. Third, to address the limitations in controlling for confounding variables, researchers are advised to conduct more in-depth measurements of individual factors that may influence behavioral changes and consider using more complex research designs, such as

randomization or statistical models that can control for a greater number of confounding variables.

By doing so, future studies could yield stronger findings that are more widely applicable. Future researchers should compare the Dicotobook with other digital or audiovisual tools, such as mobile apps or videos, rather than just with leaflet media. This comparison would provide a more comprehensive understanding of the effectiveness of Dicotobook as a digital educational tool and could help identify its unique advantages or limitations in comparison to other modern digital platforms. Such a comparison could offer valuable insights into how different types of media influence maternal behavior and learning outcomes, providing a more nuanced perspective on the effectiveness of digital interventions for health promotion.

CONCLUSION

The conclusion of the study was an increase in knowledge, attitudes, and actions of mothers before and after being given education through the media of Dicotobook and leaflets. The average knowledge, attitudes, and actions of mothers before and after being given education using Dicotobook media and leaflets almost all increased. *Diabetes education* media is more effective than education through leaflets in improving maternal behavior in the early detection of *stunting risk.*

There is an influence of maternal education, maternal occupation, and distance of health facilities on maternal behavior in early detection of stunting risk, and *there is no influence between maternal age and number of children in enhancing maternal behavior in early detection of* stunting risk. Dicotobook media is very suitable as an educational media and a driving factor for changes in health behavior, so this media can be used as a reference both in the academic field, puskesmas and by other researchers.

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REFERENCES

Ihlasuyandi, E., & Sudiyat, R. (2022). Efektivitas Media Ava dan Leaflet dalam Penyuluhan Tentang Tuberkulosis (TB) Paru Pada Kader Kesehatan. *Jurnal Riset Kesehatan Poltekkes Kemenkes Bandung, 14*(1), 134–141.

Kamilah, A., Ramadhaniah, Santi, T. D., & Biomed, M. (2022). Hubungan Akses Pelayanan Kesehatan, BBLR, Asi Eksklusif Dan Asupan Protein Dengan Kejadian Stunting Pada Balita Usia > 6-59 Bulan Di Wilayah Kerja PUSKESMAS Baitussalam Kecamatan Baitussalam Kabupaten Aceh Besar Tahun 2022. *Journal of Health and Medical Science, 1*(1), 171–177.

Kemenkes RI dan BPS. (2019). *Laporan Pelaksanaan Integrasi Susenas Maret 2019 dan SSGBI Tahun 2019*. Badan Pusat Statistik.

Manggala, A. K., Kenwa, K. W. M., Kenwa, M. M. L., Sakti, A. A. G. D. P. J., & Sawitri, A. A. S. (2018). Risk factors of stunting in children aged 24-59 months. *Paediatrica Indonesiana*, *58*(5), 205–212. https://doi.org/10.14238/pi58.5.2018.205-12

Mardihani, P. W., & Husain, F. (2021). Pengetahuan Ibu Tentang Stunting Pada Anak Balita Di Wilayah Pesisir Desa Sekuro Kecamatan Mlonggo Kabupaten Jepara. *Journal.Unnes.Ac.Id*, *10*(November), 219–230. https://journal.unnes.ac.id/sju/index.php/solidarity/article/view/51915

Masita, Marwati, B., & Puspita, E. (2018). Pola Asuh Ibu dan Status Gizi Balita di Kabupaten Jember. *Quality Jurnal Kesehatan*, *9*(1), 1–41. https://doi.org/10.37036/ahnj.v8i2.357

Damayanti, M. (2019). Upaya Peningkatan Pengetahuan Ibu Hamil Melalui Pemanfaatan Buku Kia Di Wilayah Kerja Puskesmas Kota Tanjungpinang. *Pengabdian Kepada Masyarakat*, *1*(2), 1–23.

Mentari, S., & Hermansyah, A. (2019). Faktor-Faktor Yang Berhubungan Dengan Status Stunting Anak Usia 24-59 Bulan Di Wilayah Kerja Upk Puskesmas Siantan Hulu. *Pontianak Nutrition Journal (PNJ)*, *1*(1), 1. https://doi.org/10.30602/pnj.v1i1.275

Musdalifah, Sanda Manapa, E., Ahmad, M., Nontji, W., Soraya Riu, D., & Hidayanti, H. (2020). Pengembangan Modul Deteksi Risiko Stunting Terhadap Pengetahuan Ibu Hamil Development of Stunting Risk Detection Module on Pregnant Mother Knowledge. *Jurnal Ilmiah Kebidanan*, *7*(2), 62–75.

Nadiyah, Briawan, D., & Martianto, D. (2014). Faktor Risiko Stunting Pada Anak Usia 0 — 23 Bulan Di Provinsi Bali, Jawa Barat, Dan Nusa Tenggara Timur. *Jurnal Gizi Dan Pangan*, *9*(2), 125–132.

Olsa, E. D., Sulastri, D., & Anas, E. (2017). Hubungan Sikap dan Pengetahuan Ibu Terhadap Kejadian Stunting pada Anak Baru Masuk Sekolah Dasar di Kecamanatan Nanggalo. *Jurnal Kesehatan Andalas*, *6*(3), 523–529. https://doi.org/10.25077/jka.v6i3.733

Rahmandiani, R. D., Astuti, S., Susanti, A. I., Handayani, D. S., & Didah. (2019). Hubungan Pengetahuan Ibu Balita Tentang Stunting Dengan Karakteristik Ibu dan Sumber Informasi di Desa Hegarmanah Kecamatan Jatinangor Kabupaten Sumedang. *Jsk*, *5*(2), 74–80. http://jurnal.unpad.ac.id/jsk_ikm/article/view/25661/0

Rezky, J. (2020). *Efektivitas Media Promosi Kesehatan Gigi Dan Mulut Terhadap Tingkat Pengetahuan Anak Usia 6-12 Tahun*. Skripsi. Universitas Muhammadiyah Surakarta. Surakarta

Ruswati, Leksono, A. W., Prameswary, D. K., Pembajeng, G. S., Inayah, Felix, J., Dini, M. S. A., Rahmadina, N., Hadayna, S., Aprilia, T. R., Hermawati, E., & Ashanty. (2021). Risiko Penyebab Kejadian Stunting pada Anak. *Jurnal Pengabdian Kesehatan Masyarakat*, *1*(2), 34–38.

Stephenson, T. J., & Schiff, W. J. (2019). *Human nutrition science for healthy living*

(2nd Editio). New York: McGraw-Hill

Sukirno, R. S. H. (2019). Kesabaran Ibu Merawat Bayi Berat Lahir Rendah (BBLR). *Journal of Psychological Perspective*, *1*(1), 1–14. https://doi.org/10.47679/jopp.1132019

Sumiarti, W. (2021). *P*ola Asuh Ibu Yang Memiliki Balita Stunting Di Wilayah Kerja Puskesmas Babatan Kabupaten Seluma. *Skripsi*. Poltekkes Kemenkes Bengkulu. Bengkulu

United Nations Children's Fund (UNICEF). (2020). S*ituasi Anak di Indonesia - Tren, peluang, dan Tantangan dalam Memenuhi Hak-Hak Anak*. In Unicef Indonesia.

Wahyurin, I. W., Nur Aqmarina, A., Rahmah, H. A., Hasanah, A. U., Nataly, C., & Silaen, B. (2019). Pengaruh edukasi stunting menggunakan metode brainstorming dan audiovisual terhadap pengetahuan ibu dengan anak stunting. *Ilmu Gizi Indonesia*, *02*(02), 141–146. ilgi.respati.ac.id