Utilization Menu Based on Food Local with Literacy Digital Against Handling Stunting

Juana Linda Simbolon[1], Emilia Silvana Sitompul[2]

[1,2] Politeknik Kesehatan Kementerian Kesehatan Medan, Indonesia

Email Correspondence: simbolonjuana@gmail.com

Abstract

Stunting is a condition of growth failure in toddlers that has lifelong impacts on their health, human resources, and economic growth. The results of the Indonesian Nutrition Status Survey (SSGI) show that the prevalence of stunting in Indonesia decreased from 24.4% in 2021 to 21.6% in 2022 . The target prevalence of stunting in Indonesia is 14% by 2024. The incidence of stunting in North Tapanuli is already chronic, with the prevalence of stunting increasing from 26.7% in 2021 to 27.4% in 2022. The selection of animal protein from local food sources with digital literacy is expected to accelerate the reduction of stunting. This study aims to analyze the effect of using a local food-based menu and applying digital literacy to increase the height of stunted children. This type of research is a quasi-experimental study using pre- and post-tests with a control group design in July-September in North Tapanuli Regency to compare the increase in height gain with local food. The sample consisted of 34 stunted children aged 12-60 months. Height measurements were taken every month after three months of intervention. Data were analyzed using a T-test with a 95% confidence level. This study showed that local food-based menus with digital literacy could increase the height of children aged 12-60 months p-value: was 0.014 <0.05. In the control group (without receiving local food-based menu intervention with digital literacy), there was no effect on increasing height p-value 0.125>0.05. The application of a local food-based menu with the use of digital literacy has an effect in increasing the height of children who are stunted, digital literacy can help parents access information, and educate families, through applications and social media so that this research is important, useful to introduce a new approach in handling stunting, namely combining local food with digital literacy.

Keyword: Utilization of Local Food, Digital Literacy, Handling Stunting

INTRODUCTION

The World Health Organization has set a global nutrition target to reduce the number of children under the age of 5 who experience stunting by 40% by 2025. This is one of the sustainable development goals (Shekar et al., 2017). The results of the Indonesian Nutrition Status Survey (SSGI) show that the prevalence of stunting decreased from 24.4% in 2021 to 21.6% in 2022 (a decrease of 2.8%). The target for stunting in Indonesia is 14% by 2024. The incidence of stunting in North Tapanuli Regency is already chronic, with a prevalence of 26.7% in 2021 increasing to 27.4% in 2022(Kementerian Kesehatan RI, 2022). According to electronic application for recording and reporting community-based nutrition in North Tapanuli in 2023, the number of stunted children aged 0-59 months is 985.

According to WHO and UNICEF, the definition of stunting describes a growth disorder that causes a child to be shorter than their peers. Growth during the first 1.000 days of life is

crucial for a child's optimal development and well-being. Prenatal factors, including inadequate diet during pregnancy, insufficient facilities, and infections, often result in growth patterns that contribute to stunting in later childhood (Campisi et al., 2017).

The factors causing or determinants of stunting from 89 studies indicate that the direct causes of stunting are dietary diversity, fertility decline, birth spacing, maternal height, birth weight, and diarrhea incidence, while the underlying factors are household income or assets index, parental education, especially maternal education. The determining factors include sanitation for feces disposal, clean water, vaccination coverage, antenatal visits, optimal breastfeeding practices, and household food security (Roediger et al., 2020).

The causes of stunting can also stem from household and family factors such as: 1. maternal factors like malnutrition during preconception, pregnancy, and childbirth, short stature, and teenage pregnancy; 2. household environment factors such as inadequate child stimulation and activities, poor sanitation and water supply, food insecurity, improper food allocation, and low caregiver education; 3. inadequate complementary feeding such as: a) poor micronutrient quality, low dietary diversity, b) low intake of animal-source foods, c) low nutritional and energy content; 4. inadequate feeding practices; 5. food and water safety; 6. inadequate breastfeeding practices. (Wirth et al., 2017).

The impact of stunting is divided into short-term and long-term effects. Short-term effects include disruptions in brain development, intelligence, physical growth, and body metabolism. Long-term effects include decreased cognitive abilities and learning achievements, reduced immune system function, increased risk of diabetes, obesity, heart disease, vascular diseases, and disabilities in old age. (Astarani et al., 2020).

WHO and UNICEF emphasize the use of local foods for children; proper eating behavior can affect a person's nutrition because nutritional adequacy is determined by the quantity and quality of food and beverages consumed. The more varied the types of food consumed, the easier it is to meet nutritional needs; therefore, consuming a diverse range of foods is one of the pillars of balanced nutrition guidelines (Kemenkes RI, 2023).

Local food is food produced in that place (a specific region/area) intended for both the economy and consumption. (Rauf & Lestari, 2009). The advantages of local food are evident from its availability and the ease of access to obtain it, making it more affordable for the community. Local foods such as fish, vegetables, and fruits are rich in the nutrients needed to support children's growth. Local foods are rich in carbohydrates, proteins, fats, and minerals, which are very beneficial for children. (Husnah et al., 2022). These fishery natural resources can be utilized to assist the government's efforts in increasing fish consumption to meet the

nutritional needs of infants and toddlers because fish are rich in protein and other energy sources that are essential in supporting the growth and development of toddlers. Traditional fish-based food processing, utilizing the abundant protein-rich fishery and livestock products, has become a solution to reduce the number of stunted children (Chaerunnimah et al., 2021;Yusnina et al., 2023; Asriani et al., 2019).

Digital literacy is necessary in the use of technology; it is one of the components in the learning environment. The application of digital literacy can make society much wiser in using and accessing technology, especially information and communication. Digital literacy has brought many benefits to society, such as expanding knowledge and enhancing critical thinking skills. (Retnowati et al., 2023).

Digital literacy can be defined as the ability to read and write in a digital context as an effort to understand, use, engage with, transform texts, and analyze information from various sources in digital form (Naufal, 2021; Kurnia et al., 2023). The benefits of digital literacy include: saving time, learning faster, making things safer, always obtaining the latest information, always being connected, or easily connecting with others without face-to-face interaction (Sumiati et al., 2020). Indonesian society in rural areas has existed and become familiar with digital communication technology to support activities in the health sector (Raharjo, 2022). The application of digital literacy can make the community much wiser in using and accessing technology, especially information and communication. Digital literacy has brought many benefits to the community, such as enhancing knowledge and critical thinking skills (Retnowati et al., 2023).

The background of this research problem is whether a menu based on local food with digital literacy can influence the height growth of children aged 12-60 months who are experiencing stunting.

METHODS

This research is a quasi-experimental study that uses a pre and post-test with a control group design to compare the increase in height with the utilization of a menu based on local food. The implementation of the research was conducted from June to October 2024 in North Tapanuli Regency. The population in this study consists of toddlers aged 12-60 months who are experiencing stunting, with a height-for-age z-score (HAZ) of < -2 SD.

The subjects in this study are divided into two groups: The first group (treatment) consists of stunted toddlers aged 12-60 months who are given a local food-based menu (tombur belut, tilapia soup, snakehead fish arsik, horbo milk, spinach, carrots, long beans). The second

group (control) consists of stunted toddlers aged 12-60 months who do not receive a local food-based menu and digital literacy. (mother was only given counseling on local food-based menus). The sample in this study consisted of mothers and toddlers aged 12-60 months, totaling 34 individuals (Sugiyono, 2016), with inclusion criteria being mothers who were willing to have their children as respondents. The exclusion criteria were mothers who were not willing to have their children as respondents and children who were in a state of illness. The sampling technique used is simple random sampling with the measuring instrument being a calibrated height meter. Data collection techniques include observation and interviews, with the interventions carried out as follows: a) the researcher conducts training for 5 village midwives living in the villages within the working area of the Siatas Barita and Hutabaginda health centers, and the Pahae Jae health center.

The role of the village midwives is to gather mothers with stunted toddlers to attend educational activities, local food processing training, distribute food, and monitor during the intervention activities to ensure the food is targeted and consumed, as well as the local food prepared by the mothers according to the provided menu and processed according to the video. b) the researcher conducts pre-tests on the height and weight of the toddlers who are respondents in the study. c) providing education to parents of toddlers about balanced nutrition, preparing local food. d) Training in processing local food ingredients such as porridge, eel stew, tilapia soup, snakehead fish arsik, horbo milk, spinach, carrots, long beans, etc.(by providing educational videos on local food processing practices). e) Toddlers aged 12-60 months in the treatment group will receive a menu based on local food, with meals provided 3 times a day for 7 consecutive days, along with a menu list for a total intervention duration of 90 days. The control group will not receive the local food intervention but will be monitored with standard food usually provided by the family, while still receiving education on balanced nutrition. e) Monitoring will be conducted weekly to ensure that mothers are providing local food to the toddlers, and every month after 30 days of intervention, height and weight measurements will be taken. Height measurements after the intervention will be conducted three times, namely in July, August, and September.

The research will be analyzed using Univariate Analysis to describe the frequency distribution of the research subjects' characteristics, and Bivariate Analysis using the T Test to compare the increase in height between the treatment group and the control group before and after the intervention.

RESULTS

Based on Table 1, the analysis of respondent characteristics by mother's age shows that generally, respondents are aged 20-35 years in both the intervention group (88.2%) and the control group (82.4%). In the intervention group, the majority of parities are greater than 2 (multiparity), with 9 respondents (52.9%), while in the control group, the majority have parities of 1-2, with 9 respondents (52.9%). The analysis of educational level characteristics shows that the majority of respondents have a secondary education level, with 12 people (70.6%) in the intervention group and 14 people (82.4%) in the control group. The characteristics of the respondents can be seen in Table 1 below:

Table 1. Distribution of Respondent Characteristics Based on Age Parity, Education, Early Intiation of Breastfeeding

	Group	
	Intervention group **n=17 %**	**Control group** **n=17%**
Age		
<25 years old >35	4 23,5 %	9 52,9 %
years old	13 76,5 %	8 47,1 %
25-35 years old		
Parity		
1-2	8 47,1 %	9 52,9 %
> 2	9 52,5 %	8 47,1 %
Education		
0-9 years old	5 29,4 %	6 35,3 %
> 9 year old	12 70,6 %	11 64,4 %
Early Intiation of		
Breastfeeding	9 52,9 %	5 29,4 %
Yes	8 47,1 %	12 70,6 %
No		

Bivariate analysis is used to analyze 2 variables, namely 1 independent variable and 1 dependent variable. Bivariate analysis in this study is to observe the difference in height after being given (getting a menu based on local food). The normality test of the data was conducted before the bivariate test on the intervention group and the control group to determine the data analysis test that would be used. The normality test of the data in this study used the Shapiro-Wilk test (sample <50). The results of the normality test can be seen in Table 2 as follows:

Table 2 Normality Test of Data (Shapiro-Wilk) in the Intervention Group and the Non-Intervention Group (control)

	Group	**Shapiro-Wilk**			
		Mean	**N**	**Std.def**	**Sig.**
Height	early intervention Juli	76,6	17	25,1	0,15
	control	85,07	17	28,0	0,70
Height	Intervention Agustus	77,45	17	25,1	0,18
	control	85,05	17	20,9	0,23

| Group | Shapiro-Wilk | | | |
	Mean	N	Std.def	Sig.
Height Intervention September	78,4	17	25,3	0,10
control	86,6	17	21,0	0,11

Based on Table 2, the results of the Shapiro Wilk Test analysis of the height variable distribution in the intervention and control groups at the beginning, July, August, and September showed p values ≥ 0.05, indicating that the data are normally distributed. Therefore, a parametric analysis test was conducted using the T.Test.

Table 3. The Effect of Local Food Provision with Digital Literacy on Height Improvement in the Intervention Group of Stunted Children Aged 12-60 Months

	Intervention group (n=17)	p -value
High measurement in Juli Mean ± SD	76,6 ± 25,1	
High measurement in Agustus mean± SD	77,45 ± 25,1	0,010
High measurement in September	78,4± 25,3	0,014

A local food-based menu combined with digital literacy significantly increases the height of toddlers aged 12-60 months. Independent T-Test results show significant differences in height for the intervention group, with p-values of 0.010 in August and 0.014 in September. The greatest growth was observed three months after the intervention.

Table 4. The Effect of Increased Height on the Control Group (without local food provision and digital literacy) Children Aged 1-5 Years with Stunting

	Intervention group(n=17)	p-value[b]
High measurement in Juli mean± SD	85,07± 28,0	
High measurement in Agustus mean± SD	85,5 ± 20,9	0,076
High measurement in September	86,06 ± 21,0	0,125

Based on Table 4, it can be seen that the group without the provision of local food and the application of digital literacy showed differences in the average height increase at the three measurement times. The results of the independent T-Test show no effect on the increase in height in the control group (which did not receive local food intervention), with a p-value of

0.076 in August measurements and 0.125 in September measurements, both greater than 0.05. The results of this study conclude that there is no effect on the increase in height of children aged 12-60 months without a local food-based menu with digital literacy.

DISCUSIÓN

The results of this study conclude that the intervention group, which received a menu based on local foods (local foods such as Dali nihorbo, Mujahir fish soup, tombur catfish, and Arsik snakehead fish) along with the application of digital literacy, significantly increased the height of toddlers aged 12-60 months, with the most significant measurement occurring three months after being given local food. The p-value for the August measurement was $0.010 < 0.05$ and for the September measurement was $0.014 < 0.05$. The results of this study show that in the control group (without a menu based on local foods and digital literacy), there was no increase in height, with the p-value for the August measurement being $0.076 > 0.05$ and for the September measurement being $0.125 > 0.05$.

The results of this study are consistent with the research by (Yusnina Maisyaroh et al., 2023), which states that dali nihorbo can be used as one of the interventions to improve nutritional intake in toddlers. Dali ni horbo is produced from buffalo milk processed in a traditional way. This food comes from the Tapanuli Utara region and is very much liked by toddlers. The content of dali ni horbo or buffalo milk includes fat around 7-8%, protein around 4.2-4.6%, and minerals such as calcium (Ca) around 92%, iron (Fe) around 38%, and phosphorus (P) around 118%. Additionally, the vitamin A content in buffalo milk is higher compared to cow's milk, and its cholesterol level is lower, at only about 0.65 mg/g compared to cow's milk, which has a fat content of 4%, protein 3.5%, and minerals 3.14 mg/g (Chaerunnimah et al., 2021). Mentioned in their research that snakehead fish has a fairly high nutritional value and can be an alternative for meeting the nutritional needs of toddlers. The snakehead fish contains various important vitamins and minerals, such as vitamin A, phosphorus, and calcium, which are essential for bone health. Toddlers who are given fish will benefit from an increase in their height because fish, which is a source of protein, is very much needed by toddlers during their growth period. Sufficient nutrient intake for toddlers during their growth period is the first step in preventing stunting. Toddlers often refuse or even dislike the provision of fish due to its distinctive aroma and smell; however, if it is prepared attractively, varied, and served well, it will increase the child's appetite.

Arsik snakehead fish is a local dish given by researchers to stunted toddlers and can serve as an alternative food source to meet the protein and fat needs of toddlers. The use of arsik

snakehead fish in nutritional intervention programs for stunted toddlers not only provides a source of protein and essential nutrients but also supports dietary diversity, which can enhance children's engagement in consuming healthy foods. By integrating this product into children's diets, it is expected to help meet their daily nutritional needs, promote growth, and significantly reduce the risk of stunting.

In their research Sofais et al., (2019), on the utilization of local food to help reduce stunting rates, it was found that local food could be used as one of the alternatives to lower the incidence of stunting, such as various types of freshwater fish like eel, which is rich in energy content of 330 kcal per 100 grams, abundant in vitamin A, calcium, phosphorus, fatty acids, omega-3, DHA, and vitamin D. This fish is processed into soup, making it easy for toddlers to digest and not disrupting their digestive system. With the proper processing to preserve its nutritional content, it can be a positive factor in reducing the incidence of stunting and improving the nutritional status of toddlers. Additionally, its abundant resources make it very affordable for various segments of society, so this local food is expected to be a suitable alternative for reducing the incidence of stunting.

The strategy to enhance the understanding of mothers with stunted toddlers in this study is by providing literacy in the form of a leaflet containing a varied and diverse weekly menu of local food and videos on food preparation, which include mujair fish soup, tombur catfish, arsik snakehead fish, and arsik dali nihorbo. The distribution of these materials has been proven to positively impact the increase in toddlers' height. The results of this study are consistent with the findings of (Retnowati et al., 2023) which state that stunting education for the community through literacy is a means or strategy to enhance knowledge and skills related to stunting issues in local food processing for the community, especially mothers, which can be achieved through various models or methods such as providing educational websites.

The research results Devie et al., (2023), also mention that through digital literacy education, there was a difference before and after the intervention, where there was an increase in community knowledge about the potential of local food to meet children's nutritional needs. The nutrition literacy improvement program is important to continue in order to enhance public knowledge in preventing stunting.

The results of this study indicate that there is an increase in the height of toddlers aged 12-60 months who experienced stunting after being given local food interventions. These findings are consistent with previous research conducted by Sofais et al., (2019), which also noted an increase in the height of toddlers aged 12-24 months after receiving weaning treatment using local food wisdom. This research strengthens the evidence that local food-based

interventions are effective in addressing stunting, and also highlights the importance of education related to the processing of local food ingredients in efforts to improve children's nutritional status.

The positive implications of local food with digital literacy show a significant positive impact on children's health, especially in addressing stunting. The abundant availability of local food also offers benefits to the community, especially those in rural areas. Mothers with stunted toddlers who have received training can educate about things they did not know before, which can later be implemented independently regarding the processing of local food ingredients that can maximize local food processing, so that toddlers can enjoy the benefits of local food with proper processing. The educational videos provided can also serve as a learning medium so that the methods of processing local food can be applied. This intervention not only focuses on physical growth but also on the future health of children; the nutritional content in local food will benefit toddlers' bodies, giving them strong immunity and reducing the risk of disease.

The success of this local food utilization program can also serve as a model for other regions, encouraging the use of local foods and empowering communities to learn how to process local foods so they can make good use of them. The acceptance of local food by the community will also be faster because local food is relatively inexpensive and easy to obtain (Meilasari & Adisasmito, 2024). In addressing stunting in North Tapanuli Regency, it is necessary to maintain nutritional adequacy by utilizing locally available nutrient-dense foods and paying attention to the quality and completeness of nutrients or the diversity of food types consumed. The potential of diverse aquatic fish resources needs to be optimized through varied processing and presentation. through education and innovation that can be applied by mothers, such as processing mujair fish soup, gabus arsik with added vegetables, then arsik dali ni horbo, and also tombur catfish.

CONCLUSIONS

Based on the research results and discussion, the conclusion is a menu based on local food with digital literacy can truly increase the height of children aged 12-60 months, with the most significant increase measured 90 days after being given local food.

The utilization of local food with digital literacy is effective in increasing the height of stunted toddlers, making it an effective solution, especially in rural and remote areas. The government can contribute by integrating the results of this research into programs or policies at the regional or national level through budget allocation, the development of local food programs as part of the national stunting intervention supported by digital literacy, such as

intensifying outreach by distributing educational videos, e-books, and leaflets, thereby facilitating and bringing closer access to information technology accurately and quickly related to local food processing and varied menus to urban and rural areas, which is beneficial for all layers of society.

REFERENCE

Asriani, A., Santoso, J., & Listyarini, S. (2019). Nilai gizi konsentrat protein ikan lele dumbo (Clarias gariepenus) ukuran jumbo. *Jurnal Kelautan Dan Perikanan Terapan (JKPT)*, *1*(2), 77–86.

Astarani, K., Poernomo, D. I. S. H., Idris, D. N. T., & Oktavia, A. R. (2020). Prevention of stunting through health education in parents of pre-school children. *STRADA Jurnal Ilmiah Kesehatan*, *9*(1), 70–77.

Campisi, S. C., Cherian, A. M., & Bhutta, Z. A. (2017). World perspective on the epidemiology of stunting between 1990 and 2015. *Hormone Research in Paediatrics*, *88*(1), 70–78. https://doi.org/10.1159/000462972

Chaerunnimah, C., Amir, A., Lestari, R. S., & Adam, A. (2021). Analisis Zat Gizi dan Organoleptik Olahan Sosis Ikan Gabus sebagai Pangan Alternatif Mencegah Stunting. *Jurnal Kesehatan Manarang*, *7*(2), 130. https://doi.org/10.33490/jkm.v7i2.552

Devie, M. P., Mardani, F. A., Damayanti, R. F., Ashidhiqie, A., Akhyar, R. F., Wahdah, N. A., Tauriestya, F. A., Miratmaka, D. T., Yongki, M., Sugesta, I., Noza, D. E., Jember, U., Kalimantan, J., No, T., Timur, K., Jember, K., Timur, J., & Pos, K. (2023). *Penguatan Literasi Gizi untuk Pencegahan Stunting di Desa Jurangsapi Strengthening Nutritional Literacy for Stunting Prevention in Jurangsapi Village balita yang diakibatkan kekurangan gizi , sehingga anak tidak tumbuh seperti pada yang mencerminkan perke*. *8*(1), 79–92.

Husnah, H., Sakdiah, S., Anam, A. K., Husna, A., & Mardhatillah, G. (2022). Peran Makanan Lokal dalam Penurunan Stunting. *Jurnal Kedokteran Nanggroe Medika*, *5*(3), 47–53.

Kemenkes RI. (2023). Prevalensi Stunting di Indonesia. In *Encyclopedia of Teacher Education*. https://doi.org/10.1007/978-981-16-8679-5_300056

Kementerian Kesehatan RI. (2022). Hasil Survei Status Gizi Indonesia (SSGI) 2022. *Kemenkes*, 1–150.

Kurnia, A., & Cempaka, L. (2023). Literasi Digital Bagi Pelajar: Bijak Bermedia Sosial Dan Cerdas Memanfaatkan Media Massa (Studi Kasus Konten Makanan Di Smk Merah Putih Bekasi). *Jurnal Pengabdian Masyarakat Multidisiplin*, *6*(3), 287–299. https://doi.org/10.36341/jpm.v6i3.3089

Meilasari, N., & Adisasmito, W. (2024). Upaya Percepatan Penurunan Stunting Melalui Pemberian Makanan Tambahan (PMT) Pangan Lokal: Systematic Review. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, *7*(3), 630–636.

Naufal, H. A. (2021). Literasi Digital. *Perspektif*, *1*(2), 195–202. https://doi.org/10.53947/perspekt.v1i2.32

Raharjo, T. (2022). *Seabad Sumberejo*. Pandiva Buku.

Rauf, A. W., & Lestari, M. S. (2009). Pemanfaatan komoditas pangan lokal sebagai sumber pangan alternatif di Papua. *Jurnal Penelitian Dan Pengembangan Pertanian*, *28*(2), 178897.

Retnowati, Y., Katili, A. S., Solang, M., Santoso, B., Pangalo, P., Hadi, N. S., Biologi, P., Gorontalo, U. N., Habibie, J. I. B. J., Bolango, B., Informatika, P. T., Gorontalo, U. I., Nadjamuddin, J. A., Keperawatan, P., & Kesehatan, P. (2023). *Strategi Literasi Stunting*

bagi Masyarakat menggunakan Platform Media Berbasis Website. *7*(2), 43–46.

Roediger, R., Taylor Hendrixson, D., & Manary, M. J. (2020). A roadmap to reduce stunting. *American Journal of Clinical Nutrition*, *112*, 773S-776S. https://doi.org/10.1093/ajcn/nqaa205

Shekar, M., Kakietek, J., D'Alimonte, M. R., Rogers, H. E., Eberwein, J. D., Akuoku, J. K., Pereira, A., Soe-Lin, S., & Hecht, R. (2017). Reaching the global target to reduce stunting: An investment framework. *Health Policy and Planning*, *32*(5), 657–668. https://doi.org/10.1093/heapol/czw184

Sofais, D. A. R., Sianipar, B. K., & Darmawansyah, D. (2019). Pengaruh Kearifan Pangan Lokal Suku Rejang terhadap Penanganan Stunting Baduta di Bengkulu Utara. *Jurnal Keperawatan Silampari*, *3*(1), 201–210. https://doi.org/10.31539/jks.v3i1.772

Sugiyono. (2016). *Statistika Untuk Penelitian*. CV Alfabeta.

Sumiati, E., & Wijonarko. (2020). Manfaat Literasi Digital Bagi Masyarakat dan Sektor Pendidikan pada Saat Pandemi Covid-19. *Buletin Perpustakaan Universitas Islam Indonesia*, *3*(2), 65–80. https://journal.uii.ac.id/Buletin-Perpustakaan/article/view/17799

Wirth, J. P., Rohner, F., Petry, N., Onyango, A. W., Matji, J., Bailes, A., de Onis, M., & Woodruff, B. A. (2017). Assessment of the WHO Stunting Framework using Ethiopia as a case study. *Maternal and Child Nutrition*, *13*(2), 1–16. https://doi.org/10.1111/mcn.12310

Yusnina Maisyaroh, Mastiur Napitupulu, Anto J. Hadi, & Adi Antoni. (2023). Pengembangan Pangan Lokal Dali Horbo sebagai Makanan Pendamping untuk Mengatasi Balita Stunting di Kabupaten Tapanuli Utara. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, *6*(10), 2074–2080. https://doi.org/10.56338/mppki.v6i10.4210