



EMPOWERING MOTHERS IN 'LEK ANAK NAGARI' THROUGH DIGITALIZATION: A CASE STUDY

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ABSTRACT

Indonesia is in fourth place with the largest number of children (85 million people). The standard for stunting cases set by the Ministry of Health is 14%. Jambi province, especially Muara Bungo district, has a stunting incidence rate of 14.4%, meaning that there are 0.4% of cases that exceed the standards set by the Ministry of Health. This research aims to examine the influence of maternal empowerment (knowledge, attitudes (parenting patterns), technological adaptation, nutritional innovation in preventing stunting in Tuo Lubuk Mengkuang hamlet, Jambi. This research uses a quantitative research design with a case study approach. Technique Data collection used observation, questionnaires and interviews. Data analysis used was univariate analysis and bivariate analysis (Dependent T-Test. There was no relationship = 0.449) on the incidence of stunting, and there was a significant relationship between parenting attitudes. $p=0.049$; $OR= -1.50$) and technology adaptation status ($p=0.041$; $OR= 1.38$), maternal education ($p= <0.001$) on the incidence of stunting. Assistance with technology adaptation, parenting style status, and education for mothers influence the incidence of stunting (not good nutritional status) in children in Tuo Lubuk Mengkuang Hamlet, Jambi.

Keywords: empowerment; children; mother; stunting; village

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INTRODUCTION

According to data from Unicef (2023), it is known that one third of Indonesia's population are children. This number is equivalent to around 85 million children and is the fourth largest number in the world. A healthy child is a child who is free from disturbances both in terms of physical/physical, spiritual/mental and social well-being and not just the absence of disease or weakness (WHO, 2023). The 2018 Global Nutrition Report reports that there are around 150.8 million (22%) stunted children under five in the world (Global Nutrition Report, 2018; Dewey Kathryn G, 2016). Stunting (stunt) is a condition where a toddler has a body length or height that is less than age (Ministry of Health of the Republic of Indonesia, 2016; Salamung et al, 2019). The World Health Organization (WHO) has determined five subregions for stunting prevalence, including Indonesia which is in the Southeast Asia region (36.4%). Based on the results of Riskesdas, it shows a decrease in the prevalence of stunting at the national level by 6.4% over a 5 year period (Ministry of Health of the Republic of Indonesia, 2018). The prevalence of stunted toddlers is higher in the 24-59 month age group, namely 31.9% (very short) and 62.2% (short) when compared to children under 24 months, namely 36.2% (very short) and 46.1% (short) (Republic of Indonesia Ministry of Health, 2019).

Determining stunting in children is carried out by measuring body length for children under 2 years and height for children over 2 years using anthropometric tools to assess children's nutritional adequacy (Voth-Gaeddert et al, 2018; Rusliani et al, 2022). Family is the first environment that children receive from their parents. Educating children in the family has a parenting style from father and mother who have the same important role (Suratri et al, 2023). Data from the Central Statistics Agency (BPS) in 2022 shows that 35.57% of women with the status of being mothers are actively working (BPS, 2023). Through the parenting style provided by parents, it will influence the child's entire development from cognitive, social emotional development, moral religious values, language and art in children and can also prevent stunting (Abdulla et al, 2022; Wibowo et al, 2023). Improving Human Development is stated in the RPJMN that targets stunting prevalence at 14% in 2024, just as in the RPJMD Bungo Regency also targets 14%.

Jambi Province achieved stunting case rates which fell from 24.4% (2021) to 21.6% (2022), then in 2021, the stunting rate also fell from 22.4% (2021) to 18.0% (2022). Meanwhile, in Bungo Regency, the prevalence of stunting fell from 22.9% (2021) to 14.4% (2022) (Bappeda, 2023). Even though it is known that the incidence of stunting in Muara Bungo district is decreasing, Indonesia's target for the incidence of stunting is only 14.0%, meaning that in Muara Bungo district there are still 0.4% of children who must be helped and provided with assistance so that the incidence of stunting in Muara Bungo district can be resolved. so that after we carry out research, it is hoped that the findings of this research can provide changes in knowledge, attitudes that have been designed in the form of providing education, counseling and sustainable empowerment to mothers in Tuo Lubuk Mengkuang Hamlet, Limbur District, Muara Bungo Regency, Jambi towards improvements, and nutritional innovation to prevent stunting.

METHOD

This research uses a quantitative research design with a case study approach. Case studies allow researchers to deepen their understanding of maternal empowerment through digitalization. Researchers will compare data before and after program implementation to assess and see the impact. The subjects of this research were mothers in Tuo Lubuk Mengkuang Hamlet, Jambi who had children under 5 years of age. The data collection technique that will be used is conducting a survey of mothers to measure their knowledge about child nutrition, child care, and the use of digital platforms, then conducting interviews with mothers and stakeholders to gain in-depth insight into maternal empowerment and behavior change and analyze digital data generated by the platform to measure maternal use and participation. The output of this research is that mothers are able and willing to innovate processed fish and other food products in varied and appropriate forms, with digital assistance. So that it can prevent and help reduce the prevalence of stunting,

RESULTS

From the research results, the characteristics of respondents were categorized based on the child's age, mother's age, child's height, child's weight, child's gender, child's nutritional status, and parenting style. From the results obtained, it is known that the frequency distribution of respondents' characteristics in Tuo Lubuk Mengkuang Hamlet, Limbur, Jambi is as follows:

Table 1.
Respondent characteristics (n= 30)

Respondent characteristics	Minimum	Maximum	Mean	f	%
Child Age	1	8	5.17		
Mother's Age	20	54	34.8		
Child's Height	75	129	108.9		
Child's Weight	8	26.5	17.2		
Mother's Education					
No school				4	13.3
Elementary School Equivalent				4	13.3
Middle School Equivalent				3	10.0
High School Equivalent				7	23.2
PT				12	40.0
Child's Gender					
Man				18	60.0
Woman				12	40.0
Child Nutritional Status					
Malnutrition				10	33.3
Good Nutrition				20	66.7
Parenting					
Authoritarian				9	30.0
Not Authoritarian				21	70.0

From the results of the descriptive univariate analysis as presented in table 1, it is known that the lowest age of children in this study was 1 year old, the highest age of children was 8 years old with the average age of children in this study being 5 years old. Meanwhile, the lowest maternal age is 20 years and the highest maternal age is 54 years with the average maternal age in this study being 34 years. Another variable is the child's height. It is known that the child's lowest height is 75 cm and the highest height is 129 cm, with the average child height being 108.9 cm. The lowest child's weight was 8kg, the highest was 26.5kg and the average child's weight was 17.2 kg.

The results of the univariate analysis of categories in table 1 can be explained that the majority of mothers' education is at tertiary level as many as 12 people (40%), followed by high school education status as many as 7 people (23.2%), elementary school level and no school (respondent condition 4 people (13.3%) had never studied and/or did not complete elementary school level and the remaining 3 people were from junior high school (10.0%). The gender variable of the child respondents is that the majority are 18 males (60%) and 12 females (40%). From the table it is also known that the majority of child respondents in this study had good nutrition, 20 people (66.7%) and the remaining 10 people had poor nutrition (33.3%). The variable parenting style of parents towards children also shows that the majority of respondents have a non-authoritarian parenting style, 21 people (70%) and the remaining 9 people (30%) have an authoritarian parenting style.

The results of the bivariate test analysis show that there is no significant relationship between the gender of the child and the incidence of stunting (not good nutritional status) ($p=0.429$), and from table 2 above it can be explained that the gender of the child can reduce the risk of stunting (status poor nutrition) is 0.69 times compared to male gender. Another variable, namely the attitude (parenting pattern) applied by parents, has a statistically significant relationship ($p=0.049$) and non-authoritarian parenting patterns (democratic, authoritative, permissive and neglectful) can reduce the risk of stunting (poor nutritional status) by 1.50 times compared to authoritarian parenting. Technology Adaptation Status, namely the mother's ability to use applications on a mobile phone, also has a statistically significant

relationship with the incidence of stunting (poor nutritional status) ($p= 0.041$), meaning that mothers are unable to use technology, especially in seeking additional information on health. can increase the incidence of stunting (poor nutritional status) by 1.38 times compared to mothers who are able to use technology. This is supported by the results of data processing on the maternal education variable which has a statistically significant relationship with stunting (poor nutritional status) ($p<0.001$). And the maternal age variable does not have a statistically significant relationship with the incidence of stunting (poor nutritional status) ($p=0.449$).

Table 2.
Bivariate Analysis

Independent Variable	Dependent Variable		OR	P Value
	Child Status			
	Poor Nutritional Status	Good Nutrition Status		
Child's Gender				
Man	5	13	-0.69	0.429
Woman	5	7		
Attitude (Parenting)				
Authoritarian	4	5	-1.50	0.049
Not Authoritarian	6	15		
Status of Technology Adaptation				
Unable	5	16	1.38	0.041
Capable	5	4		
Mother's Age				0.449
Mother's Education				
No school	4	12		<0.001
elementary school	4	7		
JUNIOR HIGH SCHOOL	2	1		
SENIOR HIGH SCHOOL	0	0		
Higher Education (PT)	0	0		

DISCUSSION

The research results show that authoritarian maternal parenting has a significant influence on the incidence of stunting (poor nutritional status). Maternal parenting is the mother's attitude in looking after and protecting the child. The mother's attitude plays a role in providing breast milk or providing complementary foods, telling her how to eat properly, providing foods with high nutritional value, skills in managing the portions of food consumed, preparing clean food, proper eating patterns, so that the nutritional content can be well received. by children. Good parenting is a very important factor to ensure optimal growth and development. This research is in line with previous research which states that there is a relationship between parenting styles and the incidence of stunting (Putri, 2020; Nurmallasari et al., 2020; Noorhasanah and Tauhidah, 2021; in Wibowo et al, 2023).

The results of other research also show that there is no statistically significant relationship between the child's gender and the incidence of stunting (poor nutritional status). The results of this study are in accordance with research by Nursyamsiyah et al, 2021 which states that there is no significant relationship between gender and the incidence of stunting in toddlers ($p=0.883$). This is in line with previous research conducted by Sulistyawati (2019). However, this research is not in line with previous research by Akombi, et al (2017) in Nigeria which showed that the incidence of stunting in toddlers was more common in boys. This condition is likely due to cultural factors in the country which reflect historical patterns of preferential treatment towards women. In addition, boys tend to be more physically active and expend more energy. This energy should be channeled to increase growth (Akombi et al., 2017).

Maternal education can influence the incidence of stunting. The possibility of stunting is higher in parents who have low education compared to parents who have higher education (Budiawan, 2018 in Wibowo et al, 2023).

Parental education can influence nutritional status, one of which is the incidence of stunting (Mumtaza QA, 2023). This is reinforced by research conducted by Rahayu A & Laily K, 2014 which states that the majority of toddlers who experience stunting have mothers with a low level of nutritional knowledge, 24 people (92.3%). Based on the results of statistical tests, the p-value was 0.288; This shows that there is no significant relationship between the level of maternal nutritional knowledge and the incidence of stunting in toddlers during the window of opportunity period. One of the factors that influences the incidence of stunting is the mother's education level. Housewives play a role in making food consumption decisions. Serving food to all household members is the main task of housewives. Therefore, the higher the education level of a housewife, the higher her ability to make household consumption decisions, especially to meet the nutritional needs of all family members (Arida et al, 2015 in Husnaniyah D et al, 2020). For families with a high level of education, it will be easier to receive health information, especially in the field of nutrition, so that they can increase their knowledge and be able to apply it in everyday life. If parents' education and knowledge are low, the result is that they are unable to choose and serve food to the family that meets the requirements for balanced nutrition, which can result in nutritional problems for the family. The level of parental education will influence parents' knowledge about parenting patterns, where inappropriate parenting patterns will increase the risk of stunting (Septamarini RG et al, 2019 in Jannah F, 2021).

Maternal age has a significant relationship with the incidence of stunting and children whose mothers are still teenagers have 8 times the risk of experiencing stunting compared to mothers who are old enough to conceive and give birth (Wemakor, A., et al. 2018 in Wanimbo et al, 2020)) . Similar research was presented by Yu, SH, et al. (2016), relatively young maternal age is closely related to growth failure in babies 0-11 months. Another research conducted by Mariani R et al (2021) shows that the results of research conducted by researchers show that the majority of toddlers who experience stunting are mothers aged 26-35 years, amounting to 55.4%.

Research conducted by Andarwulan S et al, 2020 shows that the application of technology influences the incidence of stunting in children. This is related to the use of technology such as YouTube, WhatsApp groups, and similar in seeking information and knowledge regarding the definition, factors and prevention of treatment for stunting in children. This is supported by research by Sukmawati S et al (2022) which states that the use of technology such as educational webinars conducted online can help mothers increase their knowledge of stunting prevention, this can be seen from the large number of respondents who responded in the form of questions related to stunting. Other research also states that there are three themes related to parents' adaptation experiences in efforts to eradicate stunting in the Gowa district, namely 1) mothers provide food based on the age of toddlers; 2) the mother's parenting style is based on the toddler's needs; 3) mothers maintain the health of toddlers. The ability of mothers to adapt to changes that occur in toddlers is very influential in efforts to eradicate stunting and has a huge role and influence on children's growth and development (Dewi I & Susi SS, 2023).

CONCLUSION

Empowering mothers in the 'Lek Anak Nagari' activity, especially assistance with technology adaptation, parenting style status, and education for mothers, influences the incidence of stunting (poor nutritional status) in children in Tuo Lubuk Mengkuang Hamlet, Jambi. Meanwhile, the child's gender and mother's age do not have a statistically significant influence on the incidence of stunting (not good nutritional status) in children in Tuo Lubuk Mengkuang Hamlet, Jambi.

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REFERENCES

- Abdulla, F., Rahman, A., & Hossain, M. M. (2023). Prevalence and risk predictors of childhood stunting in Bangladesh. *PLoS One*, 18(1), e0279901.
- Andarwulan, S., Iswati, R. S., Rihardini, T., & Anggraini, D. T. (2020). Penerapan Teknologi Deteksi Dini Stunting Sebagai Upaya Peningkatan Status Gizi Anak Di Kelurahan Siwalankerto Kecamatan Wonocolo Surabaya. *JURPIKAT (Jurnal Pengabdian Kepada Masyarakat)*, 1(3), 364-374.
- Atikah, R. (2014). Resiko Pendidikan Ibu terhadap Kejadian Stunting pada Anak 6-23 Bulan (Maternal Education as Risk Factor Stunting of Child 6-23 Months-old).
- Bappeda. Audit Kasus Stunting Tahun 2023 Kabupaten Muara Bungo, 2023. <https://bappeda.bungokab.go.id/download/file/AKS-I-2023-OK.docx>
- BPS. (2023). Jumlah Penduduk Menurut Jenis Kelamin (Jiwa), 2017-2019. Website: <https://bungokab.bps.go.id/indicator/12/182/1/jumlah-penduduk-menurut-jenis-kelamin.html>
- Dewey, K. G. (2016). Reducing stunting by improving maternal, infant and young child nutrition in regions such as South Asia: evidence, challenges and opportunities. *Maternal & child nutrition*, 12, 27-38.
- Global Nutrition Report—Country Nutrition Profiles. (2018). [Internet]. Available from: <https://globalnutritionreport.org/resources/nutrition-profiles/africa/eastern-africa/>
- Husnaniyah, D., Yulyanti, D., & Rudiansyah, R. (2020). Hubungan tingkat pendidikan ibu dengan kejadian stunting. *The Indonesian Journal of Health Science*, 12(1), 57-64.
- Jannah, F. (2022). *Hubungan tingkat pendidikan dan pengetahuan orang tua terhadap kejadian stunting pada balita di puskesmas kebayoran baru kota jakarta selatan* (Bachelor's thesis, Fakultas Kedokteran UIN Syarif Hidayatullah Jakarta).
- Kemenkes RI. (2016). Situasi Balita Pendek di Indonesia. Jakarta: Kementerian Kesehatan Republik Indonesia. <https://pusdatin.kemkes.go.id/resources/download/p-usdatin/infodatin/situasibalita-pendek-2016.pdf>
- Kemenkes RI. (2018). Hasil Riset Kesehatan Dasar Tahun 2018; 53(9):1689–99. 7.

- Kemenkes RI. (2019). Hasil Riset Dasar Tahun 2018. Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI
- Marlani, R., Neherta, M., & Deswita, D. (2021). Gambaran karakteristik ibu yang mempengaruhi kejadian stunting balita usia 24-59 bulan di Puskesmas Talang Banjar Kota Jambi. *Jurnal Ilmiah Universitas Batanghari Jambi*, 21(3), 1370-1373.
- Mumtaza, Q. A. (2023). *HUBUNGAN TINGKAT PENDIDIKAN IBU DENGAN KEJADIAN STUNTING (Studi Observasional Analitik pada Anak Usia 0-2 Tahun di Wilayah Kerja Puskesmas Jaken, Kabupaten Pati Periode September-November 2022)* (Doctoral dissertation, Universitas Islam Sultan Agung Semarang).
- Rusliani, N., Hidayani, W. R., & Sulistyoningasih, H. (2022). Literature review: faktor-faktor yang berhubungan dengan kejadian stunting pada balita. *Buletin ilmu kebidanan dan keperawatan*, 1(01), 32-40.
- Salamung, N., Haryanto, J., & Sustini, F. (2019). Faktor-faktor yang berhubungan dengan perilaku pencegahan stunting pada saat ibu hamil di Wilayah Kerja Puskesmas Kabupaten Bondowoso. *Jurnal Penelitian Kesehatan" SUARA FORIKES"(Journal of Health Research" Forikes Voice")*, 10(4), 264-269.
- Sukmawati, S., Nurhakim, F., Mamuroh, L., & Mediani, H. S. (2022). Edukasi Kesehatan Melalui Media Sosial dan Webinar tentang Upaya Pencegahan Stunting. *Kumawula: Jurnal Pengabdian Kepada Masyarakat*, 5(3), 614-620.
- Suratri, M. A. L., Putro, G., Rachmat, B., Nurhayati, Ristrini, Pracoyo, N. E., ... & Raharni. (2023). Risk factors for stunting among children under five years in the province of East Nusa Tenggara (NTT), Indonesia. *International Journal of Environmental Research and Public Health*, 20(2), 1640.
- Voth-Gaeddert, L. E., Stoker, M., Cornell, D., & Oerther, D. B. (2018). What causes childhood stunting among children of San Vicente, Guatemala: Employing complimentary, system-analysis approaches. *International journal of hygiene and environmental health*, 221(3), 391-399.
- WHO. (2017). Global Nutrition Monitoring Framework. Operational Guidance for Tracking Progress in Meeting Targets for 2025.; <http://apps.who.int/iris/handle/10665/259904/9789241513609-eng.pdf;jsessionid=82B0843-3379C3E3E69B3F8D4F2690C34?sequence=1> Awww.who.int/nutrition
- WHO. (2023). Leadership Dialogue on Food Systems for People's Nutrition and Health. <https://www.who.int/news/item/28-07-2023-leadership-dialogue-on-food-systems-for-people-s-nutrition-and-health>
- Wibowo, D. P., Irmawati, S., Tristiyanti, D., Normila, N., & Sutriyawan, A. (2023). Hubungan Pola Asuh Ibu dan Pola Pemberian Makanan terhadap Kejadian Stunting. *JIKES (Jurnal Ilmu Kesehatan)*, 6(2), 116-121.

