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Original Research Article

The Relationship between Maternal Anemia History and Exclusive Breastfeeding with Stunting Incidence in Infants 6-12 Months in West Kupang District

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Abstract: ***Background:*** Stunting in the infant can caused by a history of exclusive breastfeeding and report of anemia during pregnancy and can also affect growth in the first 1000 days of life. *Research Objective:* Research objective was to identify the relationship between the mother's history of anemia during pregnancy on the antenatal care examination and the history of exclusive breastfeeding given to infants aged 6-12 months with stunting in Kuanheun Village and Bolok Village. ***Method:*** The method is Cross-sectional. This research was assess in august-September 2022. The total number of respondents was 39 people. The inclusion criteria used; like to become research respondents, respondents who had toddlers aged 6-12 months in Kuanheun Village and Bolok Village, and respondents who brought Maternal and Child Health (MCH) books of the study subject. The data type used was the history of Antenatal Care (ANC) in the mother's MCH book and anthropometric measurements on the infant. ***Results:*** Spearman's rho test there was no significant association between the history of ANC K4 anemia and the incidence of stunting in infants 6-12 months p = 0.7 >0,05 and there was no significant association between the history of exclusive breastfeeding and the incidence of stunting in infants 6-12 months p = 0.1 >0,05. ***Conclusion:*** There is no relationship between the report of anemia in ANC K4 and the history of exclusive breastfeeding with the incidence of stunting in infants aged 6-12 months in Kuanheun Village and Bolok Village.

Keyword: Anemia, Exclusive Breastfeeding, Stunting, Pregnancy, and Infant.

INTRODUCTION

Humans will go through a process of growth and development when the baby is aged 0-12 months, they will experience very rapid physical growth.(Kementrian Kesehatan RI, 2019) Assuming the growth is unheeded by the fulfillment of good nutrition, there can be problems with the growth and development. One of the problems of baby growth and development is stunting. According to the World Health Organization (WHO), stunting is a growth and development disorder that children have due to malnutrition, recurrent infectious diseases, and inadequate psychosocial stimulation. Stunting is the result of chronic or sustained nutritional deficiencies (Lada *et al*., 2022; Scheffler *et al*., 2021; World Health Organization, n.d.)

According to the Studi Status Gizi Indonesia (SSGI), the prevalence of stunted babies in Indonesia in 2021 is 24.4%. By province, East Nusa Tenggara occupies the first position of stunting babies at 37.8%. In Kupang District, the prevalence of stunting babies is 40.4%. Assume that stunting is still one of the nutritional problems in children in Kupang (SSGI, 2021).

According to Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) data in 2021, the prevalence of stunted babies in Kuanheun Village is 46. The frequency of families at risk of stunting in Bolok is 367 families which 47 (13%) are low-risk families, 178 (48%) are medium-risk families also 142 (39%) are high-risk families stunted (BKKBN, 2021).

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It could assume that the problem of stunting in Kuanheun Village and Bolok Village, West Kupang District is still relatively intense.

Stunting can develop by various factors both during pregnancy and after the baby is born.

One of the risk factors for a baby to be stunted is anemia during pregnancy. That is because anemia can cause hypoxia in the fetal hepatic, thus, recessive hepatic protein synthesis. Which causes insulin-like growth factors (IGF)-I synthesized to be blocked. Regardless Insulin-like growth factors (IGF)-I are essential for infant growth because they are important mediators of growth hormone (GH) in linear development (Utama & Hilman, 2018).

In addition to anemia, exclusive breastfeeding also plays a crucial role in the risk of stunting in children. Breast milk contains IGF-I such mediator for Growth Hormone (GH). The prime function of GH is to increase linear growth so that with breast milk consumption, we can prevent stunting (Ballard & Morrow, 2013).

Based on the various presentations above, the author is interested in conducting a study entitled "The Relationship between Maternal Anemia History and Exclusive Breastfeeding with the Incidence of Stunting in Infants 6-12 Months in West Kupang District".

METHODOLOGY

Design, Location, and Time

This cross-sectional study was from August - September 2022. This study occurred in Kuanheun Village and Bolok Village, West Kupang District.

Sampling

The research respondents were selected using the probability sampling method. The total number of respondents used in this study was 39 people. The inclusion criteria used were want to become research respondents, respondents who had toddlers aged 6-12 months in Kuanheun Village and Bolok Village, and respondents who brought Maternal and Child Health (MCH) books of the study subject.

Data Collection

The research begins with providing explanations related to the study for respondents, after that, respondents will be carried out based on inclusion criteria, and the researchers will ask for the willingness of the respondents to participate in this study. Respondents will have interviewed by researchers and enumerators regarding respondent identities, infant identities, data during respondent pregnancies in the MCH book, and infant health data. After the interview, researchers will take anthropometric measurements using Onemed OD231B.

Data Analysis

The techniques of data analysis used are univariate and bivariate. Frequency distribution is used in univariate to analyze the characteristics of subjects and respondents. The Spearman's rho test is used in bivariate analysis to assess the relationship between the mother's history of anemia during pregnancy on the antenatal care examination and the history of exclusive breastfeeding given to infants aged 6-12 months with stunting in Kuanheun Village and Bolok Village. Analyses were using JASP (Jeffrey's Amazing Statistics Program) version 0.16.3.

RESULT AND DISCUSSION

Univariate Analysis

Characteristics of Respondents

The frequency distribution of respondents' characteristics based on socioeconomic conditions shows that most of the respondents are from Bolok Village (61.5%) also the majority of respondents occupy private houses (51.3%). Most of the respondents were out of work (79.5%) also the majority of the respondents had a family income that was less than the minimum wage (56.4%). This distribution also showed that most of the respondents were married (66.7%) and had a low level of education (79.5%). Table 1 shows the frequency distribution of characteristics based on socioeconomic conditions.

Table 1: Frequency distribution *characteristics of respondents based on socioeconomic conditions*

Characteristics of Respondents	Frequency (n) n=39	Percentage (%)
Research Location		
Kuanheun	15	38,5
Bolok	24	61,5
Status of Residence		
Rent house	1	2,6
Family house	18	46,2
Private house	20	51,3
Employment		
Employed	8	20,5
Unemployed	31	79,5
Family Income		
Less than minimum wage	22	56,4

Characteristics of Respondents	Frequency (n) n=39	Percentage (%)
More than minimum wage	17	43,6
Marital Status		
Not married	13	33,3
Married	26	66,7
Education Background		
Low (Primary school/ Junior high school/ Senior high school)	31	79,5
High (Diploma III/ Diploma IV/ Bachelor)	8	20,5

The frequency distribution of respondent characteristics based on maternal health during pregnancy shows that the majority of the age group of mothers while pregnant is 20-25 years (28.2%). It also showed that 43.6% of respondents experienced anemia during pregnancy also 20.5% of respondents experienced SEZ during pregnancy. Table 2 shows the frequency distribution of characteristics based on maternal health during pregnancy.

Table 2: Frequency distribution *characteristics of respondents based on maternal health during pregnancy*

Characteristics of Respondents	Frequency (n) n=39	Percentage (%)
Age During Pregnancy (year)		
< 20	5	12,8
20-25	11	28,2
26-30	10	25,6
31-35	7	17,9
> 35	6	15,4
History of Pregnancy Anemia		
Anemia	17	43,6
Normal	22	56,4
History of Maternal SEZ		
SEZ	8	20,5
Normal	31	79,5

Characteristics of Subjects

The frequency distribution of subject characteristics based on the baby's health condition showed that the majority gender of the subjects was female (56.4%) also the majority of the subjects' age groups were 9-12 months (59%). The frequency distribution of the characteristics of the baby's health condition also showed that the majority of subjects received exclusive breastfeeding (76.9%) also the majority of subjects received complementary food according to the recommended age (84.6%). Most subjects experienced infectious diseases in the last month (59%) and the distribution results showed that stunting events occurred in 10 study subjects (25.6%). Table 3 shows the frequency distribution of characteristics based on the baby's health condition.

Table 3: Frequency distribution *characteristics of subjects based on the baby's health condition*

Characteristics of Subjects	Frequency (n) n=39	Percentage (%)
Gender		
Male	17	43,6
Female	22	56,4
Infant Age (month)		
6-8	16	41
9-12	23	59
History of Exclusive Breastfeeding		
Exclusively breastfed	30	76,9
Not exclusively breastfed	9	23,1
The Age of Feeding Complementary Foods		
Compliance	33	84,6
Incompliance	6	15,4
Infectious Diseases in infants in the last 1 month		
Exist	23	59
None	16	41
Stunting		
Stunting (Z-score height-for-age < -2,0)	10	25,6
Normal (Z-score height-for-age > -2,0)	29	74,4

Bivariate Analysis

The background of respondents based on stunting incidence is present in Table 4. This table shows the number of stunting incidences in the age group of mothers during pregnancy, maternal education, history of maternal anemia during pregnancy, history of maternal SEZ during pregnancy, infant gender, infant age, history of exclusive breastfeeding in infants, the age of feeding complementary foods, and history of infectious diseases in infants.

Table 4: Cross-tabulation of maternal and child characteristics with stunting incidence

Characteristics	Nutritional Status Height for Age (n=39)				Total	
	Normal		Stunting			
	n	%	n	%	N	%
Age During Pregnancy (year)						
< 20	4	80	1	20	5	100
20-25	7	63,6	4	36,4	11	100
26-30	7	70	3	30	10	100
31-35	6	85,7	1	14,3	7	100
> 35	5	83,3	1	16,7	6	100
Education Background						
Low	22	71	9	29	31	100
High	7	87,5	1	12,5	8	100
Family Income						
Less than minimum wage	14	63,6	8	36,4	22	100
More than minimum wage	15	88,2	2	11,8	17	100
History of Pregnancy Anemia						
Anemia	13	76,5	4	23,5	17	100
Normal	16	72,7	6	27,3	22	100
History of Maternal SEZ						
SEZ	7	87,5	1	12,5	8	100
Normal	22	71	9	29	31	100
Infant Gender						
Male	10	58,8	7	41,2	17	100
Female	19	86,4	3	13,6	22	100
Infant Age (month)						
6-8	13	81,3	3	18,8	16	100
9-12	16	69,6	7	30,4	23	100
History of Exclusive Breastfeeding						
Exclusively breastfed	24	80	6	20	30	100
Not exclusively breastfed	5	55,6	4	44,4	9	100
The Age of Feeding Complementary Foods						
Inappropriate	4	66,7	2	33,3	6	100
Appropriate	25	75,8	8	24,2	33	100
Infectious Diseases in infants in the last 1 month						
None	12	75	4	25	16	100
Exist	17	73,9	6	26,1	23	100

Cross-tabulation in Table 4 shows that most of the stunted babies have a mother with low education. The incidence of stunting is more extensive in male infants (41.2%) than in female infants (13.6%). Then based on the infants' age, the incidence of stunting is more in the age group of 6-8 months (18.8%) and the age group of 9-12 months (30.4%). Infants with a history of infection were more stunted (26.1%) than babies who did not have an infection history (25%).

Correlation of History Anemia in Mother During Pregnancy on The Antenatal Care Examination And History Of Exclusive Breastfeeding Given To Infants Aged 6-12 Months With Stunting In Kuanheun Village And Bolok Village

The correlation between a history of anemia in the mother during pregnancy in ANC K4 and a history of exclusive breastfeeding with stunting incidence in infants 6-12 months were analyzed using Spearman's rho tests.

Table 5: Spearman's rho test results on the relationship of history anemia during pregnancy to stunting

Nutritional Status Height for Age (n=39)	History of Anemia During Pregnancy (n = 39)				p [a]
	Normal		Anemia		
	n	%	n	%	
Normal	15	51,7	14	48,3	0,7*
Stunting	6	60	4	40	

[a] Spearman's rho Tests: *p > 0,05

Spearman's rho test results in Table 5 show that statistical test results are insignificant p = 0,7 (p > 0,05).

Table 6: Spearman's rho test results on the relationship of history exclusive breastfeeding to stunting

Nutritional Status Height for Age (n=39)	History of Exclusive Breastfeeding (n = 39)				p [a]
	Exclusively breastfed		Not exclusively breastfed		
	n	%	n	%	
Normal	24	82,8	5	17,2	0,1*
Stunting	6	60	4	40	

[a] Spearman's rho Tests: *p > 0,05

Spearman's rho test results in Table 6 show that statistical test results are insignificant p = 0,1 (p > 0,05).

DISCUSSION

This study aims to analyze the relationship between the history of anemia in mothers during pregnancy on the ANC K4 and the history of exclusive breastfeeding of stunting incidence in infants aged 6-12 months in Kuanheun Village and Bolok Village.

Correlation of History Anemia in Mother During Pregnancy on The Antenatal Care Examination And History Of Exclusive Breastfeeding Given To Infants Aged 6-12 Months With Stunting In Kuanheun Village And Bolok Village

Based on the spearman rho test p-value of 0.7, the study findings show an insignificant association between a history of anemia during pregnancy to stunting. Based on the spearman rho test p-value of 0.1, the study findings show an insignificant association between a history of exclusive breastfeeding to stunting.

The results of the distribution of respondent characteristics in Table 1 show that the majority of respondents are not working (79.5%) respondents are not working because respondents choose to be housewives. It proves that most of the respondents have much time to take care of the baby without the help of others due to this baby intake will depend heavily on the respondent. The distribution results in Table 1 also show that as many as 13 respondents (33.3%) are not married, which can impact the making of health insurance for babies. Based on Peraturan Pemerintah Nomor 82 Tahun 2018 concerning Health Insurance, babies must be registered with health insurance 28 days after birth, where one of the requirements to become a member of health insurance is to have a Family Card (Presiden RI, 2018). If the baby doesn't have health insurance, the baby does not get health service coverage. These can burden the family with a small income, and the management of diseases in babies is not necessarily good.

According to Nurmalasari *et al*., (2020), there is a significant correlation between stunting and maternal education and family income. Mothers play an important role in maintaining the nutritional needs of their family members. Therefore, the educational background will affect the mother's ability and knowledge regarding the value of balanced and quality nutrition so that knowledge can affect the incidence of stunting. Similarly, family income is related to the family's ability to meet the needs of food intake at home, and low family income can affect the quality and quantity of food (Nurmalasari *et al*., 2020). The cross-tabulation in Table 4 shows that stunting occurs in families with low education and family income (31% and 36.4%), and it will affect food intake and nutritional status in infants.

Cross-tabulation in Table 4 shows that 23.5% of respondents that develop anemia during pregnancy have a stunted baby. Based on Table 4, 12.5% of respondents with a history of SEZ during pregnancy have a stunting baby. Karjono *et al*., (2021) show that a history of anemia and a history of SEZ during pregnancy is one of the risk factors for stunting in babies each p-value of 0.001 and 0.029. The state of the SEZ during pregnancy can affect the growth of the fetus (Karjono & Erna D, 2021).

According to Syahruddin *et al*., (2022), stunted babies are more abundant in male babies (38.5%) than in female babies (33.3%). The gross motor development in male babies is faster than in women if the energy intake earned is slighter, and the chances of babies getting stunted will increase. In addition, the incidence of stunting also increases as babies aged. Those can be due to improper breastfeeding, and nutritional intake so that it cannot meet the baby's needs causing the baby's growth and development disrupted (Syahruddin *et al.*, 2022). Cross-tabulation in Table 4 shows that most stunted babies are male (41.2%).

Giving complementary food to babies aged > 6 months is very important to support the nutritional needs of babies. However, giving complementary food before six months can cause children not to get the appropriate nutrition needs. The cross-tabulation showed that two babies (33.3%) given complementary food before six months were stunted. Research by Prihutama *et al*., (2018) shows that giving complementary food before six months is one of the risk factors for stunting (Anggryni *et al*., 2021; Prihutama *et al*., 2018)

This study showed that six babies (26.1%) who had infections over the last month were stunted. Research by Wulandari *et al*., (2019) shows that infections in infants affect the incidence of stunting (Wulandari *et al*., 2019).

The results of the correlation test using Spearman's rho test in this study showed an insignificant relationship between the history of maternal anemia and the incidence of stunting in infants aged 6-12 months (p = 0.7). Similar to research by Astuti *et al*., (2021) which shows that there is no significant relationship between maternal anemia during pregnancy and the incidence of stunting in infants where a p-value = 0.321, this can be influenced because the majority of respondents do not experience anemia while pregnant (Astuti *et al.*, 2021).

In addition, hemoglobin examination during pregnancy in this study used the Sahli method. The Sahli method is common in primary health facilities. The Sahli method is a method of estimating hemoglobin levels that is subjective because the results based on the accuracy of the examiner's eyes. Research by Purba *et al*., (2019) shows that the sensitivity and specificity value of the Sahli method as a screening tool is quite high (61.53% and 75%) but further examination using the Cyanmethemoglobin method is still needed to check hemoglobin levels (E. M. Purba & Nurazizah, 2019; E. Purba & Nurazizah, 2019).

The results of this study are different from the research of Meikawati et al. (2021) shows that there is a significant relationship between the status of maternal anemia to stunting events and mothers with a history of anemia during pregnancy at 17 times greater risk of having a stunted baby with a p-value = 0.032 and an OR value = 17,067. Maternal anemia during pregnancy can affect fetal growth and development, resulting in the fetus being born with chronic malnutrition conditions that can lead to stunting (Meikawati *et al*., 2021).

The results of the correlation test using Spearman's rho test in this study showed an insignificant relationship between the history of exclusive breastfeeding and the incidence of stunting in infants aged 6-12 months (p = 0.1). The results of this study are similar to research conducted by Nurdin et al. (2019) shows that there is an insignificant relationship between the history of exclusive breastfeeding and the incidence of stunting where the p-value = 0.842 (Nurdin & Katili, 2019). The result is also similar with Dayuningsih et al. (2020) shows that there is an insignificant relationship between the history of exclusive breastfeeding and stunting incidence with p-value = 0.728 (Dayuningsih *et al*., 2020). The results in this study are different with the research of Nugraheni *et al*., (2020) shows that there is a significant relationship between the history of exclusive breastfeeding to stunting events with a value of p = 0.006. Breast milk consists of proteins, carbohydrates, fats, and micronutrients. The composition of nutrients in breast milk is very suitable for children's growth and development to be more optimal (Nugraheni *et al*., 2020).

The history of exclusive breastfeeding and the incidence of stunting in infants who do not have a meaningful relationship is likely due to other factors that influence the incidence of stunting. A UNICEF scheme in 2020 showed that the causes of malnutrition divide into direct causes and indirect causes. The immediate cause includes inadequate intake of nutrients and infectious diseases. Indirect causes include household food security, inadequate food preparation and feeding practices, unhealthy home environments, and inadequate health services (UNICEF, 2021).

Babies over six months not just need breast milk to meet nutritional needs for growth and development, but it also requires a variety of complementary foods high in macronutrients and micronutrients. Inadequate complementary foods will cause the baby to lack the nutrients needed for growth and development (Suwartini *et al.*, 2020). In addition, parenting can also affect the incidence of stunting in children. Research by Dayuningsih et al. (2020) shows that feeding patterns affect the incidence of stunting and babies who obtain poor parenting patterns are at a six times greater risk of suffering from stunting with a p-value = 0.000 and an OR value = 6,496. The mother's parenting pattern consists of breastfeeding and complementary food, healthy eating, providing nutritious food, and controlling the size of the portion spent by the child. Good parenting patterns can improve a child's nutritional status (Dayuningsih *et al*., 2020). In addition to complementary foods and maternal care patterns, infectious diseases can also affect the incidence of stunting. This study shows that most stunted babies have a history of infection in the last month. Research by Setiawan et al. (2018) shows there is a significant relationship between the average duration of infectious diseases (URI or diarrhea) and the value of p = 0.001. Diarrhea can cause impaired nutrient absorption during diarrhea and URI can cause increased metabolic needs and impaired food absorption during illness (Setiawan *et al.*, 2018).

The research limitation First, The accuracy of data on anemia during pregnancy can only be determined by the office. Second, the accuracy level of the Sahli method based on the examiner's eyes. Third, this study did not test other factors that may influence the incidence of stunting in infants, including the history of SEZ during pregnancy, history of infection in the baby, maternal care patterns, and feeding of complementary foods.

CONCLUSION

In this study, almost half respondents had a history of maternal anemia during pregnancy. Most subjects had exclusive breastfeeding. The incidence of stunting in Kuanheun Village and Bolok Village is not quite much. Furthermore, there is an insignificant relationship between the history of maternal anemia and exclusive breastfeeding with the incidence of stunting in infants aged 6-12 months. Although there still needs more research with a different closure.

REFERENCES

- Anggryni, M., Mardiah, W., Hermayanti, Y., Rakhmawati, W., Ramdhanie, G. G., & Mediani, H. S. (2021). Faktor Pemberian Nutrisi Masa Golden Age dengan Kejadian Stunting pada Balita di Negara Berkembang. *Jurnal Obsesi*, *5*(2), 1764–1776. https://doi.org/10.31004/obsesi.v5i2.967
- Astuti, R., Martini, N., Gondodiputro, S., Wijaya, M., & Mandiri, A. (2021). Risiko Faktor Ibu Terhadap Kejadian Stunting. *Jurnal Kebidanan Malahayati*, *7*(4), 9. https://doi.org/10.33024
- Ballard, O., & Morrow, A. L. (2013). Human Milk Composition. *Pediatric Clinics of North America*, *60*(1), 49–74. https://doi.org/10.1016/j.pcl.2012.10.002
- BKKBN. (2021). *Keluarga Beresiko Stunting Provinsi NTT*.
- Dayuningsih, Permatasari, T., & Supriyatna, N. (2020). Pengaruh Pola Asuh Pembrian Makan Terhadap Kejadian Stunting Pada Balita. *Jurnal Kesehatan Masyarakat Andalas*, *14*(2), 3–11. https://doi.org/10.24893/jkma.v14i2.527
- Karjono, M., & Erna D, L. (2021). Anemia Dan Kurang Energi Kronik (KEK) Sebagai Faktor Resiko Terjadinya Stunting Di Wilayah Kerja UPT BLUD Puskesmas Senaru Kabupaten Lombok Utara. *Jurnal Ilmiah Sangkereang*, *8*(1), 76–79.
- Kementrian Kesehatan RI. (2019). *Pedoman Pelaksanaan Stimulasi, Deteksi dan lntervensi Dini Tumbuh Kembang Anak di Tingkat Pelayanan Kesehatan Dasar*. https://www.bidannusantara.com/admin/dist/file/Pedoman-SDISTK-di-Puskesmas-2019.pdf
- Lada, C. O., Buntoro, I. F., & Nurina, R. L. (2022). APLIKASI AKUAPONIK PADA KELUARGA DENGAN BALITA STUNTING DI KABUPATEN KUPANG. *Media Tropika: Jurnal Pengabdian Masyarakat*, *2*(1), 28–34.
- Meikawati, W., Rahayu, D. P. K., & Purwanti, I. A. (2021). Berat Badan Lahir Rendah Dan Anemia Ibu Sebagai Prediktor Stunting Pada Anak Usia 12–24 Bulan Di Wilayah Puskesmas Genuk Kota Semarang. *Media Gizi Mikro Indonesia*, *13*(1), 37–50. https://doi.org/10.22435/mgmi.v13i1.5207
- Nugraheni, D., Nuryanto, N., Panunggal, B., & Syauqy, A. (2020). Asi Eksklusif Dan Asupan Energi Berhubungan Dengan Kejadian Stunting Pada Usia 6 – 24 Bulan Di Jawa Tengah. *Journal of Nutrition College*, *9*(2), 8. http://ejournal3.undip.ac.id/index.php/jnc/
- Nurdin, S. S. I., & Katili, D. N. O. (2019). Faktor Risiko Balita Pendek (Stunting) Di Kabupaten Gorontalo. *Jurnal Antara Kebidanan*, *2*(4), 272–282. http://www.ojs.abdinusantara.ac.id/index.php/antarakebidanan/article/view/101
- Nurmalasari, Y., Anggunan, A., & Febriany, T. W. (2020). Hubungan Tingkat Pendidikan Ibu Dan Pendapatan Keluarga Dengan Kejadian Stunting Pada Anak Usia 6-59 Bulan. *Jurnal Kebidanan Malahayati*, *6*(2), 7. https://doi.org/10.33024/jkm.v6i2.2409
- Presiden RI. (2018). *Peraturan Presiden Repunlik Indonesia Nomor 82 Tahun 2018 tentang Jaminan Kesehatan*.
- Prihutama, N. Y., Rahmadi, F. A., & Hardaningsih, G. (2018). Pemberian Makanan Pendamping Asi Dini Sebagai Faktor Risiko Kejadian Stunting Pada Anak Usia 2-3 Tahun. *Diponegoro Medical Journal (Jurnal Kedokteran Diponegoro)*, *7*(2), 12. http://ejournal3.undip.ac.id/index.php/medico
- Purba, E. M., & Nurazizah. (2019). Pengaruh Validitas Dan Reliabilitas Metode Sahli Terhadap Metode Cyanmethemoglobin Sebagai Alat Skrining Anemia di Wilayah Kerja Puskesmas Sialang Buah Kabupaten Serdang Bedagai Tahun 2019. *Seminar Nasional Teknologi Informasi Komputer dan Sains 2019*, *1*(1), 391–399.
- Purba, E., & Nurazizah. (2019). Prevalensi Anemia Pada Ibu Hamil dengan Menggunakan Metode Sahli dan Metode Cyanmethemoglobin. *Excellent Midwifery Journal*, *2*(2), 9.
- Scheffler, C., Hermanussen, M., Soegianto, S. D. P., Homalessy, A. V., Touw, S. Y., Angi, S. I., Ariyani, Q. S., Suryanto, T., Matulessy, G. K. I., Fransiskus, T., Safira, A. V. C., Puteri, M. N., Rahmani, R., Ndaparoka, D. N., Payong, M. K. E., Indrajati, Y. D., Purba, R. K. H., Manubulu, R. M., Julia, M., & Pulungan, A. B. (2021). Stunting as a synonym of social disadvantage and poor parental education. *International Journal of Environmental Research and Public Health*, *18*(3), 1–13. https://doi.org/10.3390/ijerph18031350
- Setiawan, E., Machmud, R., & Masrul, M. (2018). Faktor-Faktor yang Berhubungan dengan Kejadian Stunting pada Anak Usia 24-59 Bulan di Wilayah

Kerja Puskesmas Andalas Kecamatan Padang Timur Kota Padang Tahun 2018. *Jurnal Kesehatan Andalas*, *7*(2), 275. https://doi.org/10.25077/jka.v7i2.813

- SSGI. (2021). Buku saku hasil studi status gizi indonesia (SSGI) tingkat nasional, provinsi, dan kabupaten/kota tahun 2021. In *Kementerian Kesehatan RI*.
- Suwartini, I., Hati, F. S., & Paramashanti, B. A. (2020). Riwayat ASI Eksklusif dan Stunting pada Anak Usia 24-59 Bulan di Kecamatan Pajangan dan Pleret, Kabupaten Bantul. *Media Gizi Pangan Universitas Alma Ata*, *27*(2), 37–43. https://doi.org/10.32382/mgp.v27i2.1642
- Syahruddin, A. N., Ningsih, N. A., & Menge, F. (2022). Hubungan Kejadian Stunting dengan Perkembangan Anak Usia 6-23 Bulan. *Jurnal Ilmu Kesehatan*, *15*(4), 6. https://doi.org/10.33860/jik.v15i4.733
- UNICEF. (2021). Conceptual Framework on Maternal and Child Nutrition. *Nutrition and Child Development Section, Programme Group 3 United Nations Plaza New York, NY 10017, USA*, 2–3. www.unicef.org/nutrition
- Utama, I. B. ., & Hilman, L. P. (2018). Anemia Defisiensi Besi pada Ibu Hamil dan Stunting. *Medical Journal of the Christian University of Indonesia*, *34*(3), 144–149. https://doi.org/https://doi.org/10.33541/mkvol34iss2pp60
- World Health Organization. (n.d.). *Malnutrition*. Diambil 3 Mei 2022, dari https://www.who.int/health-topics/malnutrition#tab=tab_1
- Wulandari, Rahayu, F., & Darmawansyah. (2019). Hubungan Sanitasi Lingkungan Dan Riwayat Penyakit Infeksi Dengan Kejadian Stunting Di Wilayah Kerja Puskesmas Kerkap Kabupaten Bengkulu Utara. *Jurnal Ilmiah*, *14*(2), 8. https://doi.org/10.36085/avicenna.v14i02.374

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