



# Factors Affecting Stunting Incidence In Toddlers (12-59 Months) at Rumbai Bukit Health Center Pekanbaru City

Oktavia Dewi<sup>1\*</sup>, Erli Fanora<sup>2</sup>, Nurlisis Nurlisis<sup>3</sup>  
<sup>1), 2), 3)</sup> Universitas Hang Tuah Pekanbaru, Indonesia  
\*Email: [oktavia.dewi@htp.ac.id](mailto:oktavia.dewi@htp.ac.id)

## Abstract

In 2019 the Rumbai Bukit Public Health Center was the health center with the highest prevalence of stunting in Pekanbaru City at 38.8%; this is still above Indonesia's target of 14%. This study aims to analyze the factors associated with the incidence of stunting in children under five (12-59 months) in the working area of the Rumbai Bukit Public Health Center, Pekanbaru City, in 2021. This study is a cross-sectional study. The research sample was 161 mothers with children under five aged 12-59 months in the Rumbai Bukit Health Center working area. Data on stunting children were obtained from direct measurements. Data on knowledge, birth weight of children under five, exclusive breastfeeding, age of complementary feeding, immunization, parenting, economic status, and history of infectious diseases were collected through questionnaire interviews. Bivariate analysis was carried out with a chi-square test and multivariate with a multiple logistic regression test. The study found that 19.9% of children under five were stunted. A history of infectious disease was significantly related to stunting in children under five ( $p < 0.05$ ). Children under five who have infectious diseases have a 5.5 times chance of becoming stunted. It is recommended that MCH and Nutrition program holders work together to continue counseling about the importance of good parenting for children under five and increase basic immunization coverage to prevent infection during the COVID-19 pandemic.

8704

**Keywords:** Infectious Diseases, Rumbai Bukit Public Health Center, Stunting.

**DOI Number:** 10.14704/nq.2022.20.6.NQ22861

**NeuroQuantology 2022;20(6):8704-8713**

## INTRODUCTION

Toddlers (12-59 months) are often referred to as the "golden period" because this is an important period in the growth and development of children (Krisnana et al., 2019; Rufaída et al., 2020). One of the failures in growth and development during the golden period was stunting (Arini et al., 2020; Rohmawati, 2018). Stunting results from growth and development failure experienced by children due to inadequate nutritional intake for a long time, recurrent infectious diseases, and inadequate psychosocial stimulation (Surani & Sulistyowati, 2020). A child is said to be stunted if the z-score of body length per age (BL/A) and height per age

(H/A) is less than -2 SD (Ministry of Health of the Republic of Indonesia, 2020).

Stunting in children under five is caused directly (inadequate nutritional intake and infectious diseases) and indirectly (low maternal knowledge, not giving exclusive breast milk, early complementary food-breast milk, inadequate basic immunizations). Complete, unavailability of clean water, maternal parenting, and family economic status). Research conducted by (Carolin et al., 2021; Halim et al., 2021; Cahyati & Yuniastuti, 2019) states that there is a relationship between inadequate nutrition and a low family economy that can increase the risk of children becoming stunted. Following research conducted by (Jayanti et al., 2021;

[www.neuroquantology.com](http://www.neuroquantology.com)



Sari et al., 2017; Berwai et al., 2019), where the provision of Breast Milk is not exclusive, the provision of Complementary Food-Breast Milk is too fast; basic immunizations are not complete and poor parenting are factors that cause children to become stunted (Mitra et al., 2019; Mitra, Nurlis and Rany, 2022; Sariat al., 2022)

The failure of growth and development experienced by stunted children has a long-term impact (Kasmini & Cahyati, 2019; Novitasari & Wanda, 2020). Stunting that occurs before a child is two years old is an indication of a decline in cognitive abilities at a later age if it is not followed by adequate psychosocial stimulation so that it will have an impact on the academic ability or education of children in the future (Ryadinency et al., 2020; Wati et al., 2022). Education is often related to a person's economic level, where low income has a high risk of living in poverty. Furthermore, stunting, affecting Indonesia's human resources quality, can cause economic losses. Children stunted in childhood also increase the risk of experiencing non-communicable diseases (NCD) such as heart disease, DM, hypertension, and so on (Djaafar & Bungawati, 2021; Andika, 2021; Hadisuyitno & Riyadi, 2021).

Based on WHO data in 2018, it was stated that Indonesia was in third place with the highest prevalence of stunting in the South-East Asian Region (SEAR) after Timor Leste (50.2%) and India (38.4%), which was 30.8% (Ministry of Health). RI, 2018). In 2019, based on SGGBI data, the national stunting prevalence was 27.7%. In 2019, the incidence of stunting in Riau Province was 24.0%, and in Pekanbaru City was 17.8%. The Rumbai Bukit Health Center is the health center with the highest stunting incidence in Pekanbaru City in 2019 with 38.8%, and this is still above the WHO target (20%), Indonesia (14%) and Pekanbaru City (18%).

Based on the initial survey by searching data and interviews with nutrition program holders of puskesmas and mothers who have stunting toddlers in the working area of the Rumbai Bukit Health Center, Pekanbaru City, it was found that the high incidence of stunting was because the child's

basic immunization target had not been achieved, there were still many mothers who did not provide breast milk exclusively, giving Complementary Food-Breast Milk too early, mother's knowledge about nutrition and stunting is still low, and the family's economic status is low. From the description above and considering the still high prevalence of stunting in children under five and now, stunting is also one of the government's focuses; therefore, the researcher wants to know more about "Factors Affecting Stunting Incidence in Toddlers (12-59 Months) in the Region. Rumbai Bukit Public Health Center Pekanbaru City in 2021".

## METHOD

The type of research used in this research is quantitative analytic observational with a cross-sectional research design. The research was carried out at the Rumbai Bukit Health Center, located at Jalan Sri Palas, Rumbai Bukit Village, Rumbai District, Pekanbaru City, Riau Province. The time of study was carried out from August to September 2021. The population in this study were all children under five registered at the Rumbai Bukit Health Center from March to May 2021, totaling 1,131 children under five. The sampling technique was random sampling through systematic random sampling, with a total sample of 161 respondents, namely mothers who have children under five aged 12-59 months. Data were collected by measuring the height of children under five using a multifunctional measurement tool and distributing questionnaires. The analysis carried out was univariate, bivariate, and multivariate. This research has passed the ethical test 402/KEPK/STIKes-HTP/VIII/2021.

## RESULT AND DISCUSSION

Based on the data collected below, the frequency distribution of the characteristics of the research respondents is presented; the data is presented based on age, maternal age during pregnancy, education level, type of work, and gender of children under five. The data on the distribution of the characteristics of the respondents are presented in the following table 1:



**Table 1.** Frequency Distribution of Respondents' Characteristics

No	Characteristics	Frequency	Percentage (%)
1	<b>Mother's Age</b>		
	< 20 year	2	1.2
	20-34 year	109	67.7
	35-39 year	30	18.6
	> 40 year	20	12.4
<b>Total</b>		161	100
2	<b>Mother's Age When Pregnant</b>		
	At risk		
	< 20 year	15	9.3
	> 35 year	20	12.4
	No Risk (20-35 years old)	126	78.3
<b>Total</b>		161	100
3	<b>Education</b>		
	<b>Low</b>	<b>63</b>	<b>39.1</b>
	No school	2	1.2
	Elementary School	19	11.8
	Middle School	42	26.1
	<b>High</b>	<b>98</b>	<b>60.8</b>
	High School	68	42.2
	College	30	18.6
<b>Total</b>		161	100
4	<b>Work</b>		
	Civil Servants/Teachers	8	5.0
	Private	7	4.3
	Self-employed	9	5.6
	Farmer	4	2.5
	Housewife	133	82.6
	<b>Total</b>	161	100
5	<b>Gender of Toddlers</b>		
	Female	76	47.2
	Male	85	52.8
	<b>Total</b>	161	100

Source: data proceed

Based on the characteristics of the respondents shown in table 1, 109 respondents (67.7%) were aged 20-34 years, the age when pregnant was not at risk was 126 respondents (78.3%), and the average education of mothers who had children under five aged 12-34 59 months who are in the

working area of the Rumbai Bukit Health Center are 98 people with high education (60.8%), the average worker is Housewife as many as 133 people (82.6%) and the sex of the children under five is mostly male, namely 85 children toddlers (52.8%).



**Table2.** Frequency Distribution of Dependent Variable and Independent Variable

No	Dependent Variable	Frequency(n= 161)	Percentage (100%)
1	<b>Stunting in Toddlers</b>		
	Stunting	32	19.9
	Normal	129	80.1
	<b>Independent Variable</b>	<b>Frequency</b>	<b>Percentage %</b>
1	<b>Knowledge</b>		
	Lack	90	55.9
	Good	71	44.1
2	<b>Toddler Birth Weight</b>		
	Low Birth Weight Babies	12	7.5
	No Low Birth Weight Babies	149	92.5
3	<b>Exclusive Breast Milk</b>		
	No Exclusive Breast Milk	116	72.0
	Exclusive Breast Milk + Breast Milk pre dominant	45	28.0
4	<b>Age of Complementary Food-Breast Milk</b>		
	Age < 6 month	58	36.0
	Age ≥ 6 month	103	64.0
5	<b>Immunization Equipment</b>		
	Incomplete	78	48.4
	Complete	83	51.6
6	<b>Parenting</b>		
	Not good	71	44.1
	Good	90	55.9
7	<b>Economic Status</b>		
	Low	83	51.6
	High	78	48.4
8	<b>History of Infectious Diseases</b>		
	Exist	83	51.6
	Doesn't exist	78	48.4

8707

Source: data proceed

Tabel 2 menunjukkan bahwa dari 161 responden, terdapat 32 (19,9%) orang anak balita yang stunting dan 129 (80,1%) orang anak balita yang memiliki panjang badan dan tinggi badan yang normal. Sedangkan untuk variabel independen dari 161 responden yang diteliti didapatkan bahwa ibu balita yang memiliki pengetahuan kurang sebanyak 90 (55,9%) orang, anak balita yang lahir dengan BBLR sebanyak 12 (7,5%) orang, yang tidak

mendapat ASI eksklusif sebanyak 116 (72,0%) orang anak balita, terdapat 58 (36,0%) anak balita yang diberikan MP-ASI sebelum usia anak 6 bulan, terdapat 78 (48,4%) orang anak balita yang dasarnya tidak lengkap, terdapat 71 (44,1%) orang anak balita yang memiliki pola asuh kurang baik, terdapat 83 (51,6%) keluarga anak balita yang memiliki status ekonomi rendah, dan terdapat 83 (51,6%) orang anak balita memiliki riwayat



penyakit infeksi dalam 1 bulan terakhir.

**Table 3.**Effect of Independent Variables on Stunting Incidence in Toddlers Age 12-59 Months

No	Variable	Incidence of stunting in toddlers			P value	POR (95% CI)
		Stunting	Normal	Total		
		F(%)	F(%)	F(%)		
1	<b>Knowledge</b>					
	Lack	24 (26.7)	66 (73.3)	90 (100)	<b>0.015</b>	2.864 (1.198-6.845)
	Good	8 (11.3)	63 (88.7)	71 (100)		
2	<b>Infant Birth Weight</b>					
	Low Birth Weight Babies	3 (25.0)	9 (75.0)	12 (100)	0.644	1.379 (0.351-5.418)
	Low Birth Weight Babies	29 (19.5)	120 (80.5)	149 (100)		
3	<b>Exclusive Breast Milk</b>					
	No Exclusive Breast Milk	28 (24.1)	88 (75.9)	116 (100)	<b>0.030</b>	3.261 (1.073-9.909)
	Exclusive Breast Milk	4 (8.9)	41 (91.1)	45 (100)		
4	<b>Age of Complementary Food-Breast Milk</b>					
	Age < 6 month	14 (24.1)	44 (75.9)	58 (100)	0.309	1.503 (0.684-3.303)
	Age ≥ 6 months	18 (17.5)	85 (82.5)	103 (100)		
5	<b>Immunization Equipment</b>					
	Incomplete	15 (19.2)	63 (90.8)	78 (100)	0.842	0.924 (0.426-2.007)
	Complete	17 (20.5)	66 (79.5)	83 (100)		
6	<b>Parenting</b>					
	Not Good	16 (22.5)	55 (77.5)	71 (100)	0.453	1.345 (0.619-2.923)
	Good	16 (17.8)	74 (82.2)	90 (100)		
7	<b>Economic Status</b>					
	Low	17 (20.5)	66 (79.5)	83 (100)	0.842	1.082 (0.498-2.349)
	High	15 (19.2)	63 (80.8)	78 (100)		
8	<b>History of Infectious Diseases</b>					
	Exist	26 (31.3)	57 (68.7)	83 (100)	<b>0.000</b>	5.474 (2.110-14.200)
	Doesn't Exist	6 (7.7)	72 (92.3)	78 (100)		

Source: data proceed

Table 3 shows that of the eight independent variables, three have a significant effect (p-value <0.05) on the incidence of stunting in children under five aged 12-59 months, namely the mother's knowledge variable, exclusive

breast milk, and a history of infectious diseases. Meanwhile, five variables do not affect the incidence of stunting in children aged 12-59 months or significant values (p-value > 0.05), namely the variable birth weight of children under five, the age of



giving Complementary Food-Breast Milk, completeness of immunization, parenting

and economic status.

**Table 4.** Multiple Logistics Regression Multivariate Test Results

Variable	P value	OR	95% CI. For OR	
			Lower	Upper
Knowledge	0.079	2.339	0.907	6.037
Exclusive Breast Milk	0.088	3.027	0.850	10.783
Age of Complementary Food-Breast Milk	0.272	0.568	0.207	1.557
Immunization Equipment	0.412	0.688	0.282	1.679
<b>History of Infectious Diseases</b>	<b>0.001</b>	<b>5.537</b>	<b>1.976</b>	<b>15.514</b>
Omnibus Test = 0.000		Nagelkerke R Square = 0.209		

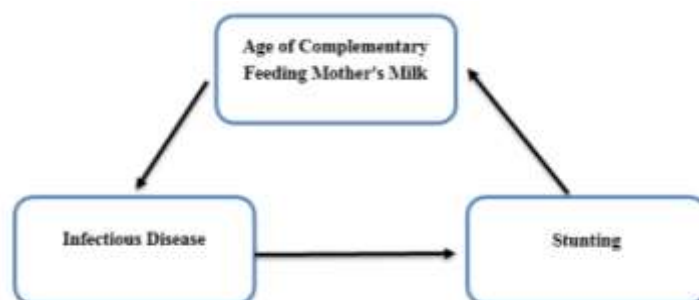
Source: data proceed

In table 4, there is one variable that has a p-value <0.05, namely the variable history of infectious diseases with a p-value of 0.001 and (OR = 5.537), meaning that children under five who have a history of infectious diseases have a five times risk of becoming stunted compared to children under five with no history of infection. There is a significant relationship between a history of infectious disease and the incidence of stunting in children under five. Infectious diseases are one of the direct causes of stunting in children (Fadjriah et al., 2021); it is estimated that 25% of stunting in children under five is caused by infectious diseases such as diarrhea and ARI (Silas et al., 2018; Suryanegara & Wijaya, 2021). Infectious diseases suffered by children are caused by a lack of nutritional intake and are also influenced by children not getting Breast

Milk exclusively, and the age of giving Complementary Food-Breast Milk is too early (Firdausya & Hardini, 2020; Mutiarasari et al., 2020).

8709

Children who are malnourished will have a low immune system, so they will be more susceptible to infectious diseases, where long-lasting infectious diseases can affect the growth and cognitive development of children (Damanik et al., 2020; Triana & Haniyah, 2020). Infectious diseases in children are also influenced by parenting patterns, especially among mothers (Pradnyawati et al., 2019). Mother's behavior in caring for and meeting the nutritional intake needed by children will affect children's health in the future; children with good maternal parenting will have good nutritional status, and vice versa (Zacarias et al., 2020).



**Figure 1.** Effect of age for giving complementary food-breast milk and infectious diseases on stunting

This study is in line with research conducted by (Yunitasari et al., 2020; Maliku et al., 2020), which states that children under five with a history of infectious diseases have

a six times risk of becoming stunted. Another supporting research is research conducted by (Tasrifah, 2021; Dranesia et al., 2019), which states that children with a history of infectious



diseases have a four times risk of becoming stunted compared to children who do not have a history of infectious diseases. There is a significant relationship between infectious diseases suffered by children and the incidence of stunting (Tangkonoo et al., 2021; Aini et al., 2020).

This study also found that most of the stunted children were given complimentary food-breast milk early, which was also influenced by poor parenting; according to the results of the study that there are still many children under five who like to snack outside, so children often eat leftovers. Breast Milk is an ideal food for children from birth, there are many benefits contained in Breast Milk both in terms of nutrition, for children's immunity and can reduce the economic burden of parents (Nainggolan et al., 2020; Anshori et al., 2020).

## CONCLUSION

Based on the results of the study, it was found that one variable that was significantly related to the incidence of stunting in children under five (12-59 months) in the working area of the Rumbai Bukit Public Health Center, Pekanbaru City, was a history of infectious diseases. It is hoped that the puskesmas will continue to collaborate across sectors for nutrition and MCH program holders to counsel couples of childbearing age about reproductive health and the importance of 1000 HPK in efforts to prevent stunting from an early age.

## ACKNOWLEDGEMENT

The researcher would like to thank the enumerators who provided a lot of assistance during the research, to the Rumbai Bukit Health Center who had given permission for researchers to conduct research and provided the data that researchers needed, and to the supervisors and examiners who had helped a lot in the process of completing this research.

## REFERENCES

Aini, Q., Suhita, B. M., & Anggraini, N. A. (2020). Analysis of Factors that Influence the stunting event in toddlers in public health

center Gandusari Blitar district. *Journal for Quality in Public Health*, 4(1), 242-247.

Andika, F. (2021). The Analysis of Stunting Incidence Factors in Toddlers Aged 23-59 Months in the Work Area of the Padang Tiji Community Health Center, Pidie Regency, 2020. *International Journal of Science, Technology & Management*, 2(3), 642-649.

Anshori, L. M., Sutrisna, B., & Fikawati, S. (2020). Relationship Energy and Protein Intake with the Incidence of Stunting among Toddler Aged (25-60 months) in Mangkung village, District of Central Lombok. *Indian J Public Health*, 11(3), 1593-1598.

Ariati, N. N., Padmiari, I. A. E., Sugiani, P. P. S., & Suarni, N. N. (2018). Description of Nutritional Status and the Incidence of Stunting Children in Early Childhood Education Programs in Bali-Indonesia. *Bali Medical Journal (Bali Med J) 2018, Volume 7, Number 3*, 7(3), 723-726.

Arini, D., Nursalam, N., Mahmudah, M., & Faradilah, I. (2020). The Incidence of Stunting, the Frequency/Duration of Diarrhea and Acute Respiratory Infection in toddlers. *Journal of Public Health Research*, 9(2), jphr-2020.

Berawi, K. N., Hidayati, M. N., Perdami, R. R. W., Susantiningsih, T., & Maskoen, A. M. (2019). Decreasing Zinc Levels in Stunting Toddlers in Lampung Province, Indonesia. *Biomedical and Pharmacology Journal*, 12(1), 239-244.

Cahyati, W. H., & Yuniastuti, A. (2019). The disparity of Risk Factors Stunting on Toddlers in the Coast and the Mountain Areas of Sinjai, South Sulawesi. *Public Health Perspective Journal*, 4(3).

Carolin, B. T., Siauta, J. A., Amamah, N., & Novelia, S. (2021). Analysis of Stunting among Toddlers at Mauk Health Centre Tangerang Regency. *Nursing and Health Sciences Journal (NHS)*, 1(2), 118-124.

Cumming, O., & Cairncross, S. (2016). Can Water, Sanitation, and Hygiene Help Eliminate Stunting? Current Evidence and Policy Implications. *Maternal and Child Nutrition*, 12(1), 91-105.

Damanik, S. M., Wanda, D., & Hayati, H. (2020). Feeding Practices for Toddlers with



Stunting in Jakarta: A case study. *Pediatric Reports*, 12(s1), 8695.

Danaei, G., Andrews, K. G., Sudfeld, C. R., Fink, G., McCoy, D. C., Peet, E., Sania, A., Fawzi, M. C. S., Ezzati, M., Fawzi, W. W. (2016). Risk Factors for Childhood Stunting in 137 Developing Countries: A Comparative Risk Assessment Analysis at Global, Regional, and Country Levels. *PLoS Medicine*, 13(11), pp. 1–18.

Djaafar, T., & Bungawati, A. (2021, April). Factors related to the incidence of stunting in Nupabomba and Guntarano Villages, Tanantovea District, Donggala Regency. In *IOP Conference Series: Earth and Environmental Science* (Vol. 755, No. 1, p. 012035). IOP Publishing.

Dranesia, A., Wanda, D., & Hayati, H. (2019). Pressure to Eat is the Most Determinant Factor of Stunting in Children under 5 Years of Age in Kerinci Region, Indonesia. *Enfermeria Clínica*, 29, 81-86.

Fadjriah, R. N., Rusdianto, R., Herman, H., & Vidyanto, V. (2021). Factors Associated with Stunting in Toddlers in Tikson Raya Public Health Center Work Area. *Open Access Macedonian Journal of Medical Sciences*, 9(E), 1207-1212.

Firdausya, T. J., & Hardini, D. S. (2020). The Correlation between Mothers' Breastfeeding Pattern and Stunting among Toddlers. *Nursing Journal*, 6(2).

Hadisuyitno, J., & Riyadi, B. D. (2021). Determinant Factors of Stunting Events of Toddlers in Batu City Indonesia. *Systematic Reviews in Pharmacy*, 12(1), 231-234.

Halim, F., Ermiaati, E., & Sari, E. A. (2021). Factors of stunting in toddlers: A literature review. *Journal of nursing care*, 4(1).

Sari, I. Et Al. (2022) 'Implementasi Promosi Kesehatan Dalam Program Stunting Di Upt Puskesmas Pelangiran Kabupaten Indragiri Hilir Tahun 2021', 4(2), Pp. 183–191.

Jayanti, R., Yanuaringsih, G. P., Olivia, N., Jundapri, K., Ariandini, S., & Munir, R. (2021). Determinants of Stunting in Indonesian Toddlers. *Indian Journal of Forensic Medicine & Toxicology*, 15(3).

Kasmini, O. W., & Cahyati, W. H. (2019). The Effect of Knowledge and Parenting on Stunting of Toddlers in Muna Barat, South

East Sulawesi. *Public Health Perspective Journal*, 4(2).

Kragel, E. A., Merz, A., Flood, D. M. N., Haven, K. E. (2020). Risk Factors for Stunting in Children Under the Age of 5 in Rural Guatemalan Highlands. *Annals of Global Health*, 86(1), pp. 1–5. DOI: 10.5334/aogh.2433.

Krisnana, I., Pratiwi, I. N., & Cahyadi, A. (2020). The relationship between socio-economic factors and parenting styles with the incidence of stunting in children. *Systematic Reviews in Pharmacy*, 11(5), 738-743.

Maliku, A. R., Tulak, G. T., & Maja, A. S. A. (2020). The Correlation between Exclusive Breastfeeding with Stunting Incident in Toddlers in the Bastem Utara Public Health Care. *Some Health Sciences Journal*, 1(1), 29-36.

Mitra, M. Et Al. (2019) 'Meningkatkan Status Gizi Balita Melalui Praktek Pengolahan Makanan Pendamping Asi Buatan Sendiri', *Jurnal Pengabdian Kepada Masyarakat 'Dinamisia'*, 3(2), Pp. 208–213.

Mitra, M., Nurlisis, N. And Rany, N. (2022) 'Edukasi Online Tentang Persiapan Laktasi Ketika Hamil Untuk Keberhasilan Asi Eksklusif Dan Pencegahan Stunting Empowerment : Jurnal Pengabdian Masyarakat', *Empowerment : Jurnal Pengabdian Masyarakat*, 1, Pp. 475–481.

Mutiarasari, D., Arsin, A. A., Hadju, V., Mallongi, A., Nur, R., Amri, I., & Faris, A. (2020). Determinants of the Incidence of Stunting in the Working Area of Kinovaro Sigi Health Center. *Enfermeria Clínica*, 30, 246-252.

Mutiarasari, D., Miranti, M., Fitriana, Y., Pakaya, D., Sari, P., Bohari, B., & Hadju, V. (2021). A Determinant Analysis of Stunting Prevalence on Under 5-Year-Old Children to Establish Stunting Management Policy. *Open Access Macedonian Journal of Medical Sciences*, 9(B), 79-84.

Nainggolan, R., Aritonang, E. Y., & Sudaryati, E. (2020). Relationship of Child Individual Factors with Stunting Incidence in Children Aged 24-36 Months at Serdang Bedagai District. *Britain International of Exact Sciences (BloEx) Journal*, 2(1), 436-441.





- Novitasari, P. D., & Wanda, D. (2020). Maternal Feeding Practice and its Relationship with Stunting in Children. *Pediatric Reports*, 12(s1), 8698.
- Nuryanti, E., & Cipto, A. T. N. (2020). The Influence of Zinc Supplement in Feeding Patterns on the Incidence of Stunted in the Toddler. *Systematic Reviews in Pharmacy*, 11(5), 680-682.
- Pradnyawati, L. G., Kartinawati, K. T., & Juwita, D. A. P. R. (2019). Parenting Pattern of Feeding in Stunting Toddlers at the Working Area of Tegallalang I Primary Health Centre. *Journal of Community Empowerment for Health*, 2(2), 208-216.
- Rohmawati, N. (2018). Risk Factors Stunting Incidence in Children Aged 6-36 Months in Jember Regency. *UNEJ e-Proceeding*, 128-136.
- Rufaida, F. D., Raharjo, A. M., & Handoko, A. (2020). The Correlation of Family and Household Factors on The Incidence of Stunting on Toddlers in Three Villages Sumberbaru Health Center Work Area of Jember. *Journal of Agromedicine and Medical Sciences*, 6(1), 1-6.
- Ryadinency, R., Suwandi, N., & Patmawati, T. A. (2020). Analysis of Determinant Factors in Stunting Children in Palopo, Indonesia. *Journal Wetenskap Health*, 1(2), 77-82.
- Sari, A., Mambang, M., Putri, K. S. C. E., Haryono, I. A., Lestari, Y. P., & Sari, M. Y. (2017, December). Factors Affecting The Stunting Case: A Retrospective Study on Children In Banjarmasin. In *2nd Sari Mulia International Conference on Health and Sciences 2017 (SMICHS 2017)–One Health to Address the Problem of Tropical Infectious Diseases in Indonesia* (pp. 21-29). Atlantis Press.
- Silas, L., Rantetampang, A. L., Tingginehe, R., & Mallongi, A. (2018). The Factors Affecting Stunting Child under Five Years in Sub Province Mimika. *Education*, 13(87), 13.
- Simanjuntak, B. Y., Haya, M., Suryani, D., Khomsan, A., & Ahmad, C. A. (2019). Maternal knowledge, attitude, and practices about traditional food feeding with stunting and wasting of toddlers in farmer families. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*, 14(2), 58-64.
- Surani, E., & Susilowati, E. (2020). The Relationship Between Fulfilment of Basic Needs with the Incidence of Stunting In Toddlers. *Jurnal Ners*, 15(1), 26-30.
- Suryanegara, W., & Wija, I. B. E. U. (2021). The Relationship of Knowledge, Attitudes, and Practices of Fe Tablet Consumption of Mothers with Toddlers with Stunting Incidences in Cilembu Village, Sumedang Regency in 2019. *Journal of Drug Delivery and Therapeutics*, 11(4), 74-80.
- Tasyrifah, G. M. (2021). Literature Review: Causes of Stunting in Toddlers. *Muhammadiyah International Public Health and Medicine Proceeding*, 1(1), 339-346.
- Tongkonoo, I., Solang, M., & Baderan, D. W. K. (2021). The Relationship of Social, Economic, And Environmental Factors with Stunting Occurrence in Toddlers. *Jamba Journal of Health Sciences and Research*, 3(2), 256-276.
- Triana, N. Y., & Haniyah, S. (2020, February). Relationship of Exclusive Breastfeeding, Complementary Feeding and Nutritional Intake with Stunting in Children in Karanglewas Health Center. In *1st International Conference on Community Health (ICCH 2019)* (pp. 74-78). Atlantis Press.
- Walker, C. L. F., Lamberti, L, Adair, L, Guerrant, R. L, Lescano, A. G, Martorell, R, Pinkerton, R. C, Black, R. E. (2012). Does childhood Diarrhea Influence Cognition Beyond the Diarrhea-Stunting Pathway?. *PLoS ONE* 2012;7(10).
- Wati, K., Kartini, A., & Rahfiludin, M. Z. (2022). Determinant Factors: Literature Review Study on Stunting Incidence in Toddlers. *International Journal of Health, Education & Social (IJHES)*, 5(2), 8-20.
- Yunitasari, E., Rahayu, M., & Kurnia, I. D. (2020). The Effects of Lecture, Brainstorming, Demonstration (CBD) to Mother's Knowledge, Attitude, and Behavior about Stunting Prevention on Toddler. *Sys Rev Pharm* 2020; 11 (6): 2032-2037 *A Multifaceted Review-Journal in the Field of Pharmacy*, 11(6), 2032-2037.
- Zacarias Latupeirissa, I., Razak, A., Arifin, M. A., Zulkifli, A., Abadi, M. Y., & Mallongi, A. (2020). Analysis Risk Factors of Stunting Incidence on Toddlers in the Porto Haria



Public Health Center Working Area. *Prof.(Dr)*  
*RK Sharma, 20(4), 41199.*

