

## The Influence of Household and Family Factors, Inadequate Complementary Feeding, Breastfeeding, and Infections on the Occurrence of Stunting in Toddlers

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### ABSTRACT

**Introduction:** Songgon Health Center is an area with the highest incidence of stunting in Banyuwangi Regency. Several factors can influence the occurrence of stunting in children. This study aims to determine the influence of household and family factors, inadequate complementary feeding, breastfeeding, and infections on the occurrence of stunting in toddlers years in the working area of Songgon Health Center, Banyuwangi Regency.

**Methods:** The study used a case-control approach with the entire population of children in the working area of Songgon Health Center as the population. The sample was obtained using cluster random sampling technique, resulting in 198 individuals (99 stunting cases and 99 controls). Data were collected using a questionnaire that had passed validity and reliability testing. The collected data were analyzed using univariate, bivariate used chi-square test, and multivariate used logistic regression analysis.

**Results:** The research results on stunting showed that the height of the mother did not significantly affect the occurrence of stunting as the p-value was  $0.060 > \alpha (0.05)$ . Pregnancy spacing did not significantly influence the occurrence of stunting as the p-value was  $0.166 > \alpha (0.05)$ . Birth weight significantly affected the occurrence of stunting as the p-value was  $0.003 < \alpha (0.05)$ . Family attitude did not significantly influence the occurrence of stunting as the p-value was  $1.000 > \alpha (0.05)$ . History of complementary feeding significantly influenced the occurrence of stunting as the p-value was  $0.043 < \alpha (0.05)$ . History of exclusive breastfeeding did not significantly affect the occurrence of stunting as the p-value was  $0.721 > \alpha (0.05)$ . History of infection significantly influenced the occurrence of stunting as the p-value was  $0.035 < \alpha (0.05)$ .

**Conclusion:** The strongest influence on the occurrence of stunting is the birth weight of the child.

**KEYWORDS:** Stunting, Influence, Toddlers.

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### INTRODUCTION

Malnutrition among toddlers is a prevalent issue globally, especially in developing countries, including Indonesia. Where Indonesia is one of the countries with a triple burden (stunting, wasting, and overweight). Nutritional deficiencies occurs since the baby is in the malnutrition womb and the early days after the baby is born, but the condition such as stunting appears after the baby is 2 years (1). The period between 36-59 months is crucial for a child's growth and development. Children aged 36-59 months are more

cooperative in communication than children aged below 36 months (2).

Based on data from UNICEF/WHO/World Bank and Estimates (2021), the global prevalence of stunting in 2020 was 22.0%, or 149.2 million children. Where in Asia is considered to be a home or place the majority of children under five suffer from malnutritions, with 79 million children (21.8%) suffering stunting. Meanwhile in Southeast Asia, there are 15.3 million children (27.4%) suffering from stunting (3). The World Health Organization (WHO) has set several provisions related to public health problems in each

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country and province for the prevalence of stunting not to exceed 20% of children under five who experience it. That is if the stunting prevalence of  $\leq 20\%$  falls into the acceptable standard category which is tolerated while nationally the stunting problem in Indonesia is classified as chronic because there are 27 provinces experiencing  $\geq 20\%$  stunting where the national prevalence of stunting is 24,4% (4). The prevalence of stunting in East Java province is 23.5% while the prevalence of stunting in Banyuwangi is 20,1% (4).

According to the latest data in February 2022, the working area of Songgon Health Center in Banyuwangi Regency has experienced an increasing number of stunting cases each year. In 2021, there were 355 stunted children (12.3%), and in 2022, the number increased to 505 children (17.4%).

Previous research conducted by (5) stated that 77.8% of children with low birth weight ( $< 2500\text{g}$ ) experience stunting. Another study conducted (6) it shows that there is a relationship between a history of infection and family income with the occurrence of stunting in children in UPTD Cogasong Health Center, Majalengka Regency.

The negative impacts of stunting in the short term are decreased brain intelligence, disrupted physical growth and development, and disruption of the body's metabolic systems. Long-term consequences include decreased cognitive abilities of children so they are unable to achieve their immune system is low so they often experience illness, they have a high risk of diabetes, obesity, heart failure, and disabilities in old age and low quality of work because they are unable to complete so that economic productivity is low (7).

Efforts to prevent and address nutritional problems, including stunting, in the working area of Songgon Health Center, involve various activities such as posyandu (integrated health service posts), antenatal care and immunization, supplementary feeding for undernourished pregnant women and children, family planning services, iron supplementation for adolescent girls and pregnant women, deworming, maternal classes, nutrition-aware family activities, nutrition case management, counseling on exclusive breastfeeding and the golden four food groups, and the introduction of supplementary feeding at posyandu. Additionally, in 2020, the local health department conducted convergence activities to prevent stunting in collaboration with multiple sectors.

The researchers conducted a preliminary survey in April 2022 and interviews with nutrition health workers at Songgon Health Center, obtaining information that various efforts have been made to reduce the prevalence of stunting. However, the reality is that Songgon Health Center has the highest stunting cases in Banyuwangi Regency, reaching 17.4%. And so far, there has been no comprehensive study on stunting in the working area of Songgon Health Center. Considering the high prevalence of stunting among toddlers,

further research is needed to examine the influence of household and family factors, inadequate complementary feeding, breastfeeding, and infections on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center, Banyuwangi Regency.

## METHODS

This study is included in the analytical observational design with a case-control study approach. The research was conducted from February to April 2023 in the working area of Songgon Health Center, Banyuwangi Regency. The target population was all children who attended posyandu in the working area, totaling 3526 children. Based on sample size calculation using the Lameshow formula for stunting variable, a minimum sample size of 99 respondents was required in each group, resulting in a total sample size of 198 respondents.

The sampling technique used in this study was cluster random sampling. Data were collected through interviews using a validated and reliable questionnaire. Bivariate analysis to know the relationship between two variables using the chi-square test and multivariate analysis to know the relationship between several variables and their risk using logistic regression. Ethical clearance : This research has carried out an ethical test at the ethical committee for health research Faculty of Dentistry, Jember University, with certificate number 1849/UN25.8/KEPK/DL/2023.

## RESULTS AND DISCUSSION

The analysis results showed the frequency distribution of characteristics among families with stunted children, as presented in Table 1. The majority of mothers had a normal height (77.8%), and most mothers had a non-risk pregnancy spacing (92.9%). The majority of children had a normal birth weight (87.4%). Families exhibited a positive attitude (99.5%). Most children had a history of inadequate complementary feeding (59.1%). Nearly all children had a history of exclusive breastfeeding (80.3%). A significant proportion of children had no history of infection (66.2%).

**Table 1. Frequency Distribution of Respondent Characteristics Based on Stunting Incidence**

Variable	Frequency	%
<b>Stunting</b>		
Normal	99	50
Stunting	99	50
<b>Household and Family Factors</b>		
<b>Mother's height</b>		
Normal	154	77,8
Risk	44	22,2
Total	198	100
<b>Pregnancy Distance</b>		
No risk	184	92,9
Risk	14	7,1

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Total	198	100
<b>Birth Weight</b>		
Normal	173	87,4
BBLR	25	12,6
Total	198	100
<b>Family Attitudes</b>		
Positive Attitudes	197	99,5
Negative Attitudes	1	0,5
Total	198	100
<b>Inadequat Complementary Feeding</b>		
Appropriate	81	40,9
Less Precise	117	59,1
Total	198	100
<b>Breastfeeding</b>		
Exclusive Breastfeeding	159	80,3
Non Exclusive Breastfeeding	39	19,7
Total	198	100
<b>Infection</b>		
Never	131	66,2
Ever	67	33,8
Total	198	100

Bivariate analysis results on the influence of household and family factors, inadequate complementary feeding, breastfeeding, and infections on the occurrence of stunting can be seen in Table 2. The results show that among the variables, the proportion of mothers with a high-risk height is higher in the case group (28.3%) compared to the control group (16.2%). However, based on the results of bivariate analysis using chi-square test, the p-value obtained is  $0.060 > \alpha (0.05)$ , indicating that there is no significant influence of maternal height on the occurrence of stunting in children in the working area of Songgon Health Center.

The mothers with a risk pregnancy distance is higher in the case group (10.1%) compared to the control group (4.0%). However, based on the results of bivariate analysis using the chi-square test, the p-value obtained is  $0.166 > \alpha (0.05)$ , indicating that there is no significant influence of pregnancy distance on the occurrence of stunting in children in the working area of Songgon Health Center.

The children with a history of low birth weight is found in the case group (20.2%) compared to the control group (5.1%). Based on the results of bivariate analysis using

the chi-square test, the p-value obtained is  $0.003 < \alpha (0.05)$ , rejecting the null hypothesis ( $H_0$ ) and indicating a significant influence of birth weight on the occurrence of stunting. The odds ratio calculation yielded a value of 4.759, indicating that children with a history of low birth weight are 4.7 times more likely to experience stunting compared to children with a normal birth weight.

Table 2 also explains that the majority of families have a positive attitude (99.5%). Based on the results of bivariate analysis using the chi-square test, the p-value obtained is  $1.000 > \alpha (0.05)$ , indicating that there is no significant influence of family attitude on the occurrence of stunting in children in the working area of Songgon Health Center.

The children with a history of inadequate complementary feeding is found in the case group (66.7%) compared to the control group (51.5%). Based on the results of bivariate analysis using the chi-square test, the p-value obtained is  $0.043 < \alpha (0.05)$ , rejecting the null hypothesis ( $H_0$ ) and indicating a significant influence of complementary feeding history on the occurrence of stunting. The odds ratio calculation yielded a value of 1.882, indicating that children with a history of inadequate complementary feeding are 1.8 times more likely to experience stunting compared to children with appropriate complementary feeding.

The children with a history of non-exclusive breastfeeding is slightly higher in the case group (21.2%) compared to the control group (18.2%). However, based on the results of bivariate analysis using the chi-square test, the p-value obtained is  $0.721 > \alpha (0.05)$ , indicating that there is no significant influence of exclusive breastfeeding history on the occurrence of stunting in children in the working area of Songgon Health Center.

The children with a history of infections is found in the case group (41.4%) compared to the control group (26.3%). Based on the results of bivariate analysis using the chi-square test, the p-value obtained is  $0.035 < \alpha (0.05)$ , rejecting the null hypothesis ( $H_0$ ) and indicating a significant influence of infection history on the occurrence of stunting. The odds ratio calculation yielded a value of 1.985, indicating that children with a history of infections in the past 3 months are 1.9 times more likely to experience stunting compared to children without a history of infections in the past 3 months.

**Table 2. The results of bivariate analysis on the influence of household and family factors, inadequate complementary feeding, breastfeeding, and infections on the occurrence of stunting in the working area of Songgon Health Center.**

Variable	Stunting Incidents				Total		p-value	OR (CI 95%)
	Normal		Stunting		n	%		
	N	%	N	%				
<b>Mother's height</b>								
Normal	83	83,8	71	71,7	154	77,8	0,060	-
Risk	16	16,2	28	28,3	44	22,2		

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Total	99	100	99	100	198	100		
<b>Pregnancy Distance</b>								
No risk	95	96,0	89	89,9	184	92,9	0,166	-
Risk	4	4,0	10	10,1	14	7,1		
Total	99	100	99	100	198	100		
<b>Birth Weight</b>								
Normal	94	94,9	79	79,8	173	87,4	0,003	4,759
Low Birth Weight Babies	5	5,1	20	20,2	25	12,6		(1,708-13,260)
Total	99	100	99	100	198	100		
<b>Family Attitudes</b>								
Positive Attitude	98	99,0	99	100	197	99,5		-
Negative Attitude	1	1,0	0	0,0	1	0,5	1,000	
Total	99	100	99	100	198	100		
<b>Complementary Feeding</b>								
Appropriate	48	48,5	33	33,3	81	40,9	0,043	1,882
Inappropriate	51	51,5	66	66,7	117	59,1		(1,060-3,343)
Total	99	100	99	100	198	100		
<b>Breastfeeding</b>								
Exclusive Breastfeeding	81	81,8	78	78,8	159	80,3	0,721	-
Non Exclusive Breastfeeding	18	18,2	21	21,1	39	19,7		
Total	99	100	99	100	198	100		
<b>Children Infection</b>								
Never	73	73,7	58	58,6	131	66,2	0,035	1,985
Ever	26	26,3	41	41,4	67	33,8		(1,089-3,617)
Total	99	100	99	100	198	100		

**Table 3. The Results of Multivariate Analysis of effect of Household and Family Factors, Inadequate Complementary Feeding, Breastfeeding, and Infection on Stunting Incidents in the Area Of The Songgon Health Center.**

Variable	Sig	Exp(B)	95% C.I for EXP (B)	
			Lower	Upper
Birth Weight	0,004	4,539	1,601	12,874
Infections History	0,018	2,135	1,141	3,995
Complementary Feeding History	0,040	1,875	1,028	3,420

The result of multivariate analysis showed that birth weight ( $p$ -value = 0.004) is the most influential factor on the occurrence of stunting in the working area of Songgon Health Center. Children with low birth weight are at a 4.5 times greater risk of experiencing stunting compared to children born with normal birth weight.

### DISCUSSION

#### Mother's Height

Based on the results of this study, maternal height does not have an influence on the occurrence of stunting in children aged 3-5 years in the area of Songgon Health Center. This research is consistent with a study (8) stating that there is no relationship between maternal height and the occurrence of stunting in infants in the working area of Jambula Health Center. The study found that 68.4% of respondents with short maternal height had stunted children, while 31.6% of respondents with short maternal height did not have stunted children. This because short maternal height is caused by

nutritional issues experienced by the mothers, which may not directly affect the height of their children.

Research conducted by Kartikawati stated that genetic factors, such as maternal height, influence the occurrence of stunting in children. However, this does not apply if the parents' short stature is due to nutritional or pathological issues. Therefore, it does not have an impact on the height of the child.

According to the researcher's assumption, maternal height does not have an effect on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center because the majority of respondents in the case group have normal height. Both mothers with normal height and those at risk can have children who are not stunted if balanced with proper and nutritious feeding. Maternal height may be affected by pathological or nutritional issues not because genetic abnormalities on the chromosome.

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## Pregnancy Distance

Pregnancy Distance based on the results of this study, pregnancy spacing does not have an influence on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center. This finding is consistent with a study (9) stating that there is no relationship between pregnancy spacing and the occurrence of stunting during the COVID-19 pandemic.

Pregnancy distance can cause stunting because the spacing affects the parenting practices towards the child, The close spacing of pregnancies and parity affect the mother's hemoglobin levels. Low hemoglobin levels can disrupt fetal growth and development in the womb, which can lead to low birth weight (LBW) and subsequently affect the nutritional status of children aged 0-6 months (10).

According to the researcher's assumption, birth spacing does not affect on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center because the majority of mothers have only one child and there is no subsequent pregnancy spacing. Even if there is a short interval between two babies, if the family pays attention to and takes good care of their child with sufficient nutrition, it can result in healthy children. Conversely, mothers with long pregnancy spacing, if they fail to provide good parenting and adequate nutrition, can lead to malnutrition in their children (11).

## Birth Weight

Birth weight has an influence on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center. Children born with low birth weight are at risk of being short adults. This is because infants with low birth weight experience intrauterine growth retardation, which continues until the next age. This conditions causes slower growth and development in low birth weight infants compared to infants with normal birth weight (12)

This study is consistent with a research (13) that found a relationship between a history of low birth weight babies and the occurrence of stunting in infants in the coastal area of Bitung city, with an odds ratio (OR) of 6.8. Therefore, infants with a history of low birth weight are 6 times more likely to experience stunting compared to infants with normal birth weight. This is because the growth of babies in the womb already faces problems and has long-term consequences, affecting their future growth.

The relationship between birth weight and the occurrence of stunting in children is related to the presence of the mother as the responsible person for fetal growth. In addition to being related to the child's nutritional status, the mother's nutritional status also determines the infant's birth weight. The genetic potential of the mother, as measured by the mother's height, is passed on to the child is still in the womb. The interaction between the mother's genetic potential and the environment during pregnancy influences the size of

the infant's birth weight. As previously known, the effect of low birth weight on child health is the most relevant factor for child survival (Aisy & Lia, n.d.).

The impact of low birth weight babies continues from one generation to the next. Children born with low birth weight (LBW) will have reduced anthropometric measurements in adulthood. For female born with low birth weight are at a higher risk of becoming stunted mothers, so they will tend to give birth to low birth weight babies like their mothers. The babies born to these stunted mothers will also become stunted females in adulthood, thus perpetuating the same cycle. Additionally, infants born with low birth weight struggle to catch up with the expected weight gain corresponding to their age (5).

From the results of the study in the table above, the obtained odds ratio value is 4.759, meaning that infants born with low birth weight are 4.7 times more likely to experience stunting compared to infants born with normal birth weight.

## Family Attitudes

Family attitudes do not have an influence on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center. This finding is consistent with a study (15) stating that there is no relationship between family attitudes and the occurrence of stunting in the Lembang Rante, Nanggala district of North Toraja Regency.

Attitude is a predisposition to a behavior but still remains as a closed reaction, not an open reaction like behavior, attitude represents an individual's readiness to react, and the exhibited reactions can vary depending on the object as a perception (16).

According to the researcher's assumption, there is no influence of family attitudes on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center because almost all respondents have positive attitudes. This explains that family attitudes are not the cause of a high risk of stunting. It can be observed that mothers with stunted children and mothers with non-stunted children have positive attitudes towards their children. Therefore, family attitudes that lead to stunting or non-stunting depend on open reactions, such as behaviors or concrete actions taken by the family towards the child (such as providing balanced nutrition), rather than attitudes as closed reactions that are not directly observable but can only be interpreted.

## The history of Complementary Feeding

The history of Complementary Feeding has an influence on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center. This study is consistent with a study by (17) which states that there is a relationship between giving of complementary feeding to the occurrence of stunting in Temuroso Village, Guntur District, Demak Regency, with the result that the occuracy of giving complementary feeding is not good for children are



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3.26 times more at risk of stunting compared to children with proper complementary feeding.

Complementary feeding, is food that, is given at the same time as breastfeeding for aged 6-23 months because breast milk is not sufficient to meet the nutritional needs of children at that age (18). Proper complementary feeding should meet certain requirements, including appropriate timing (timely), adequate, meaning it contains macronutrients and micronutrients, and safety in terms of texture and frequency of feeding (17)

Giving complementary feeding too early can cause digestive problems in infants because their digestive system is not yet ready for solid food. In addition to not be given too early, complementary feeding should not be given too late. Delayed in giving complementary feeding will result in inadequate nutrition for the child (18).

The accuracy in giving complementary feeding, including timing, type or composition, texture, and frequency, greatly influences the risk of stunting. Where 1,000-day period of child growth, is greatly influenced by adequate intake even though in the first 6 months the infants needs have been met by exclusive breastfeeding but in the next phase complementary feeding also plays a crucial role. This is supported by a study (19) that explains that early or delayed (>6 months) in giving complementary feeding affects the risk of stunting, with a significance value of 0.000, meaning that complementary feeding should be right to children at the exact age of 6 months, neither more nor less.

From the results of the study in the table above, the obtained Odds ratio value is 1.882, which means that children with a history of inadequate complementary feeding are 1.8 times more likely to experience stunting compared to children with a proper history of complementary feeding.

### Exclusive Breastfeeding History

The history of exclusive breastfeeding does not have an influence on the occurrence of stunting. This explains that exclusive breastfeeding is not a significant risk factor for stunting, as can be seen from almost all respondents in this study who provided exclusive breastfeeding, indicating that the history of exclusive breastfeeding is not a causal factor for stunting in the working area of Songgon Health Center.

This study is consistent with (20), which states that there is no relationship between exclusive breastfeeding and the occurrence of stunting in Temuroso Village, Guntur District, Demak Regency. Breast milk is the ideal food for newborns up to 6 months old because it contains essential nutrients for the growth and development of infants. Exclusive breastfeeding can meet all the nutritional needs of infants from birth to 6 months, directly affecting the nutritional intake. If infants do not receive exclusive breastfeeding, the child's nutritional needs are not met optimally, which can cause a risk of stunting (18).

According to the researchers' assumption, there is no influence between the history of exclusive breastfeeding and the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center, not only because almost all respondents provided exclusive breastfeeding to their children but also supported by the data on the coverage of exclusive breastfeeding in the working area of Songgon Health Center, which is already good at 87.5%. Thus, mothers of infants have understood the benefits of exclusive breastfeeding through activities to increase the coverage of exclusive breastfeeding programs in the working area of Songgon Health Center, such as counseling or socialization activities conducted by village midwives during integrated health posts.

### History of infant infection.

The history of infant infection has an influence on the occurrence of stunting in children aged 3-5 years in the working area of Songgon Health Center. This study is consistent with (21), which states that there is a relationship between the history of infectious diseases and the occurrence of stunting in children at the Cipadung Health Center in Bandung. Infectious diseases can worsen the nutritional standard, and conversely, nutrition can worsen the condition of the baby and child's body in combating infectious diseases. Even if the disease does not deplete energy reserves, if it lasts long enough, it can interfere with the growth and development of children by reducing appetite (22).

Infectious diseases are a direct factor causing stunting. Therefore, good handling of children with infectious diseases can help improve nutrition by paying attention to food intake for the child. Common infectious diseases in children such as worm infections, respiratory tract infections, diarrhea, and other diseases are closely related to the quality of basic health services, especially immunization, the quality of a clean environment, and healthy behavior (6).

From the results of the study in the table above, the obtained Odds ratio value is 1.989, which means that children who have experienced an infection in the last 3 months have a 1.9 times higher chance of experiencing stunting compared to children who have not experienced an infection in the last 3 months.

### CONCLUSION

Based on the results and discussions of the study on the influence of Household and Family Factors, Inadequate Complementary Feeding, Breastfeeding, and Infection in Children Aged 3-5 Years in the Working Area of Songgon Health Center, Banyuwangi Regency, the following conclusions can be drawn:

1. Birth weight has an influence on the occurrence of stunting in children.
2. The history of complementary feeding has an influence on the occurrence of stunting in children.

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3. The history of childhood infectious diseases has an influence on the occurrence of stunting in children.
4. The most significant influence on the occurrence of stunting is birth weight in children.

### REFERENCES

- I. TNP2K. Panduan Konvergensi Program/Kegiatan Percepatan Pencegahan Stunting [Internet]. Tim Nasional Percepatan Penanggulangan Kemiskinan; 2018. Available from: files/42/2018 - Panduan Konvergensi Program/Kegiatan Percepatan Pe.pdf
- II. Komalasari. Pengaruh Media Busybook Dalam Pengenalan Identitas Gender Untuk Anak Usia 4-5. 2023;6.
- III. UNICEF. Levels and Trends In Child Malnutrition [Internet]. 2021. Available from: files/134/\_pdf
- IV. SSGI. Hasil Studi Status Gizi Indonesia (SSGI) Tingkat Nasional, Provinsi, Kabupaten/Kota Tahun 2021 [Internet]. Kementerian Kesehatan Republik Indonesia; 2021. Available from: files/88/2021 - Hasil Studi Status Gizi Indonesia (SSGI) Tingkat N.pdf
- V. Rohmawati W, Sarmin NH, Lestari DR, Sila A, Anisa Wulandari B. Relationship Between Birth Weight and Stunting Incidence in Toddlers at Langara Health Center, Konawe Island. *Journal of Sciences and Health (JSH)*. 2022;2(1).
- VI. Natalia L ED. Perbedaan Pemberian Asi Eksklusif, Status Sosial Ekonomi, Riwayat Penyakit Ispa Pada Balita Stunting Dan Non Stunting. 2020;
- VII. Hutabarat GA. Hubungan Pengetahuan, Pendidikan, Dan Pola Asuh Pemberian Makan Terhadap Kejadian Stunting Pada Balita Usia 36-59 Bulan Di Puskesmas Sigompul. [Jambi]: Universitas Jambi; 2021.
- VIII. Dahlan. Hubungan Pengetahuan, Tinggi Badan Ibu Dan Sanitasi Lingkungan Dengan Kejadian Stunting Pada Baduta Di Wilayah Kerja Puskesmas Perawatan Jambula. 2022;
- IX. Wahyu A, Ginting L, Sinaga ND. Jumlah Anak, Jarak Kelahiran Anak dan Peran Ayah dengan Kejadian Stunting Selama Pandemi COVID-19. *Jurnal Keperawatan Silampari* [Internet]. 2022 Nov29;6(1):535-43. Available from: <https://journal.ipm2kpe.or.id/index.php/JKS/article/view/4554>
- X. Rufaida, Raharjo AM, Handoko A. Hubungan Faktor Keluarga dan Rumah Tangga dengan Kejadian Stunting pada Balita di Tiga The Correlation of Family and Household Factors on The Incidence of Stuntingon Toddlers in Three Villages Sumberbaru Health Center Work Area of Jember. Vol. 6, *Journal of Agromedicine and Medical Sciences*. 2020.
- XI. Ramadhaniah. Determinan Kejadian Stunting pada Balita Usia 24-59 Bulan di Puskesmas Grogong-Grogong Kabupaten Pidie, 2019. 2022;
- XII. Adriani, Wirjatmadi. Peranan Gizi Dalam Siklus Kehidupan. Pertama. Adriani Merryana, editor. Vol. 3. Jakarta: Prenadamedia Group ; 2016.
- XIII. Sanggelorang Y, Rumayar AA, Mariana D. Faktor yang Berhubungan dengan Stunting pada Balita di Wilayah Pesisir Kota Bitung. 2022;4(1):26-31. Available from: <https://doi.org/10.35801/jpai.4.1.2022.43608>
- XIV. Aisy RR, Lia K. Hubungan Riwayat Persalinan dan Riwayat Bblr dengan Kejadian Stunting pada Anak: Literature Review. Vol. 3.
- XV. Ambali. Hubungan Pengetahuan dan Sikap Terhadap Pencegahan Stunting Di Lembang Rante Kecamatan Nanggala Kabupaten Toraja Utara TAHUN 2021. 2022;
- XVI. Notoatmodjo S. Metodologi Penelitian Kesehatan. Jakarta: PT Rineka Cipta; 2018.
- XVII. Astuti Y, Hudaya I, Handayani RD. Faktor-Faktor Yang Memengaruhi Kejadian Stunting Di Desa Temuroso Kecamatan Guntur Kabupaten Demak. *Jurnal Kesehatan Ed* [Internet]. 2023;14(2). Available from: <https://ejurnal.biges.ac.id/index.php/kesehatan/>
- XVIII. Septikasari M. Status Gizi Anak Dan Faktor Yang Memengaruhi. 1st ed. Septikasari Majestika, editor. UNY Press; 2018.
- XIX. Yoshua P N, Agung Rahmadi F, Hardaningsih G. Pemberian Makanan Pendamping Asi Dini Sebagai Faktor Risiko Kejadian Stunting Pada Anak Usia 2-3 Tahun. 2018;7(2):1419-30.
- XX. Astuti Y, Hudaya I, Handayani RD. Faktor-Faktor Yang Memengaruhi Kejadian Stunting Di Desa Temuroso Kecamatan Guntur Kabupaten Demak. *Jurnal Kesehatan Edisi* [Internet]. 2023;14(2). Available from: <https://ejurnal.biges.ac.id/index.php/kesehatan/>
- XXI. Eldrian F, Karinda M, Setianto R, Arbitya Dewi B, Handayani Gusmira Y, Studi Pendidikan Dokter P, et al. Hubungan Riwayat Penyakit Infeksi Dengan Kejadian Stunting Pada Balita di Puskesmas Cipadung Kota Bandung Relationship of History of Infectious Diseases with the Incidence of Stunting in Toddlers at the Cipadung Health Center, Bandung City. 2023.
- XXII. Lineleyan SC, Mamujaja P, Munthe D, Program ), Ilmu S, Masyarakat K. Hubungan Pola Asuh Ibu Dengan Kejadian Stunting Anak Usia 24-59 Bulan Di Wilayah Kerja Puskesmas Motoboi Kecil Kota Kotamobagu. 2021.