

Educational Factors Affecting Stunting in Toddlers in West Sulawesi

**Muh. Syilfa Nooviar¹, Selvia Deviv²,
Amelia Firdausyah Dewi³, Muh. Rezki
Ardiansyah⁴, Putri⁵**

Institut Teknologi & Bisnis Nobel Indonesia
Email: syilfa@nobel.ac.id¹

Abstrak. Stunting is a condition of failure to thrive which will cause chronic nutritional problems and is characterized by a child's height being lower than the average age of the child. One of the risk factors for stunting is education. The purpose of this study was to determine the educational factors that influence the incidence of stunting in toddlers in Polewali Mandar Regency, West Sulawesi. The research method uses a combination of quantitative and qualitative approaches. Data collection was carried out through questionnaires and interviews. The sample in this study were 90 parents who had children aged 0 to 5 years, and health workers and teachers who were selected using a random sampling method. Quantitative research results Based on multivariate analysis there is a relationship between parents' education level, factors and family health knowledge on the incidence of stunting. The qualitative research results show that parents' education level and knowledge have a significant impact on children's nutrition. Health workers and teachers have an important role to play in providing education, but there are challenges that need to be overcome, especially with families that have low levels of education and strong cultural beliefs. In conclusion, the educational factors that influence stunting in Polewali Mandar district, West Sulawesi are the parents' education level factor and the family health education knowledge factor.

Keywords: Stunting, Education Level, Polewali Mandar, Education

INDONESIAN JOURNAL OF EDUCATIONAL STUDIES (IJES)

E-ISSN: 2621-6728

P-ISSN: 2621-671X

Submitted	: 09 July 2023
Revised	: 18 November 2023
Accepted	: 30 November 2023



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

INTRODUCTION

Stunting in children under five is a serious problem that is still a concern in Indonesia, including in West Sulawesi. Stunting can occur due to lack of adequate nutritional intake in children, both in terms of quality and quantity, as well as a lack of attention to diet and lifestyle healthy. Stunting can have a negative impact on a child's growth and brain development, as well can increase the risk of developing chronic diseases later in life (Sugiyanto & Sumarlan, 2020). Increase in stunting rates in children under five in West Sulawesi is a serious concern because West Sulawesi is one of them a province with a stunting rate that is still high. Stunting prevalence rate in West Sulawesi in children under five years of age it is 30.6%. This figure shows an increase of the stunting prevalence rate in 2018 was 29.6% (Soerachmad, 2020). Therefore, research on educational factors that influence stunting in West Sulawesi need to be investigated find out the cause of this problem.

This research aims to determine the factors education that contributes to stunting in children under five in West Sulawesi. The factors that influence stunting are very complex, including educational factors. In this context, research on educational factors that influence stunting in children toddlers in West Sulawesi is important to do (ISWAHYUDI, 2023). By knowing the factors education that influences stunting, it is hoped that intervention programs can be developed appropriate to reduce stunting rates in West Sulawesi.

Research on educational factors that influence stunting in children under five in West Sulawesi is also expected to contribute to the development of science and technology, and can be used as a reference for researchers or practitioners who are interested in stunting problem in children under five (Abas, 2021). Research on educational factors that influence stunting in West Sulawesi shows that stunting is still a significant public health problem in the region this Several previous studies have shown that educational factors such as Maternal education, health education, and nutritional knowledge contribute significantly to the incidence stunting.

However, further research is still needed to identify factors other education that influences stunting in this region. Some recent research has suggested that social and economic factors as well contributing to the incidence of stunting in West Sulawesi. For example, factors such as income family, socio economic status, and access to health and nutrition services are also necessary attention in efforts to prevent and treat stunting. Additionally, novelty in this research may include the use of digital technology and the latest data analysis in collecting and analyzing data. The use of digital technology can facilitate faster and more accurate data collection, while up-to-date data analysis can provide deeper insight into educational factors that influence stunting in West Sulawesi.

This research needs to continue to be developed by integrating interdisciplinary approaches and the latest technology in collecting and analyzing data. This is expected to be possible provide more comprehensive insight and more effective solutions in handling stunting in this region.

RESEARCH METHOD

The research method used is a combination of methods quantitative and qualitative (Parjaman & Akhmad, 2019). A quantitative method is used to measure the relationship between educational factors with stunting through data measured and analyzed statistically, while a qualitative method is used to gain a deeper understanding about these factors through interviews and observations (Indrawan & Jalilah, 2021). With the second combination This method is expected to provide a completer and more accurate picture of educational factors that influence stunting in West Sulawesi.

The sampling technique used was random sampling technique. Population This study included children aged 0-5 years in Polewali Mandar district, West Sulawesi province, while samples were taken from several randomly selected sub-districts. This research was conducted in Polewali Mandar Regency, West Sulawesi Province, Indonesia. The time for collecting this research starts from April 2023 to December 2023. This research used two data collection methods, namely filling out a questionnaire for quantitative data collection, and interviewing key Informan For qualitative data collection

For quantitative data collection, use a questionnaire survey as a data collection tool. Researchers used a questionnaire that was developed. This choice was based on the specific needs of the study and to ensure compliance with the conceptual framework, researchers believe that this approach improves the quality of the data and the relevance of the instruments to the research objectives. This survey was distributed to respondents consisting of housewife's households who have children aged 0-59 months and have received information about and education.

For qualitative data, researchers conduct in-depth interviews with several key informants, such as nutrition specialists, midwives, health workers and community leaders local. Apart from that, researchers will also carry out direct observations of children who experiencing early symptoms of stunting and the environment in which they live to gain understanding a more in-depth study of the influencing factors of education in West Sulawesi.

For quantitative data analysis, researchers used statistical analysis techniques such as tests linear regression and correlation test to determine the relationship between educational factors. Apart from that, researchers also carry out descriptive analysis to explain the characteristics of the population and the variables studied. For qualitative data analysis, researchers used theme analysis techniques to identify key themes emerging from interviews and observations. Next, researchers interpreted these themes to paint a deeper picture clear about the educational factors that influence West Sulawesi. All data has been collected from questionnaire surveys, interviews and observations were processed and analyzed using special software such as SPSS. Data analysis was performed continuously during the research process until valid and reliable results are obtained.

RESULT AND DISCUSSION

The implementation of this research used 2 research approaches, namely Quantitative and Qualitative research. To collect quantitative data, the researcher will use a questionnaire survey as a data collection tool. Before that, the researcher carries out an instrument validity test to assess whether or not the measurements and observations made in a study are valid. A questionnaire item is declared to have good validity if the calculated r value (Pearson correlation) is greater than the r table. In this study, with a total of 25 respondents and a significance level of 0.05, the r table was 0.380.

Table 1. Instrument Validity Test

Nomor Butir Pertanyaan	Nilai R Hitung	Nilai R Tabel	Keterangan Validasi
Pertanyaan 1	0,585	0,380	Valid
Pertanyaan 2	0,426	0,380	Valid
Pertanyaan 3	0,546	0,380	Valid
Pertanyaan 4	0,631	0,380	Valid
Pertanyaan 5	0,519	0,380	Valid
Pertanyaan 6	0,533	0,380	Valid
Pertanyaan 7	0,692	0,380	Valid
Pertanyaan 8	0,585	0,380	Valid
Pertanyaan 9	0,588	0,380	Valid
Pertanyaan 10	0,486	0,380	Valid
Pertanyaan 11	0,396	0,380	Valid
Pertanyaan 12	0,507	0,380	Valid
Pertanyaan 13	0,547	0,380	Valid
Pertanyaan 14	0,643	0,380	Valid
Pertanyaan 15	0,472	0,380	Valid

(Source: Primary data processed (2023))

Table 1 explains that of the 10 questions regarding stunting knowledge, all questionnaire items were declared valid, seen from the calculated r value $>$ r table.

Quantitative Test

Reliability test

This test was conducted to determine the consistency of the research instrument, whether the instrument can be trusted and remains consistent if the measurement is repeated. Instrument reliability is measured by knowing the value of Cornbach's alpha.

Tabel 2. Questionnaire Reliability test

Number of Questionnaire Questions	Cornbach's Alpha
15	0,554

(Source: Primary data processed (2023))

The table explains that the value of Cornbach's alpha on all questionnaire items is 0.554. The Cornbach's alpha value shows that all questionnaire items are reliable, so that the questionnaire can provide almost the same results if repeated data collection is carried out.

Univariate Analysis

This analysis was conducted to see the distribution of parental characteristics such as age, gender, occupation, education, and knowledge

Table 3. Frequency Distribution of Parental Characteristics

Variable	Category	Amount	Percentage
Age	17-25 Years	47	52 %
	26-35 Years	34	38 %
	36-45 Years	9	10%
Gender	Men	9	90%
	Woman	81	10%
Work	Work	28	31 %
	Doesn't Work	62	69 %
Education	Elementary School	4	4 %
	Junior High School	15	17 %
	Senior High School	59	66 %
	High School	12	13%
Knowledge	Good	58	64 %
	Enough	26	29%
	Not enough	6	7 %
Total		90	100%

(Source: Primary data processed (2023))

The table explains that the majority of respondents are in the Late Adolescent age group with an age range of 17-25 years as many as 47 people (52%), the adult group with an age range of 26-35 years as many as 34 people (38%), and the other respondents are the Late Adult group. with an age range of 36-45 years as many as 9 people (10%). The distribution of respondents based on gender shows that the majority of respondents are 81 women (90%) and 9 men (10%). A total of 62 people (69%) were respondents who did not work and 28 people (31%) were working respondents. The distribution of respondents based on education level shows that the majority of parents are at the upper secondary education level (SMA/Senior High School equivalent) as many as 59 people (70%), respondents with secondary education level (SMP/Equivalent) are 15 people (17%), respondents with higher education level there were 12 people (13%) and at primary level education there were 4 respondents (4%). The distribution based on parents' knowledge

shows that the majority have good knowledge, namely 58 people (64%), 26 people (29%) have sufficient knowledge and 6 people (7%) have poor knowledge.

Table 4. Frequency Distribution of Child Characteristics

Variabel	Category	Amount	Percentage
Ages	12 – 23 Months	19	21 %
	24 – 35 Months	35	39 %
	36 – 47 Months	22	24%
	48 – 59 Months	14	16%
Gender	Men	37	41%
	Woman	53	59%
Nutrition Status	Normal	69	77 %
	Stunting	21	23 %
Total		90	100%

(Source: Primary data processed (2023))

The table explains that 35 children (39%) were in the 24-35 month age group, 22 children (22.5%) were in the 36-47 month age group, 19 children (21%) were in the 12-23 month age group. months, and 14 children (16%) were in the age group 48-59 months. Most of the frequency of children's gender is female, namely 53 children (59%) and 37 children (41%) male. Distribution based on children's nutritional status, it is known that of the 80 research respondents, 69 children (77%) had normal nutritional status and 21 (23%) other children had stunting status.

Table 5. Frequency Distribution of Parental Education and Knowledge

Level of Education	Knowledge						Total
	Poor		Enough		Good		
	Amount	%	Amount	%	Amount	%	
Elementary School	3	75 %	1	25 %	0	0 %	4
Junior High School	11	73 %	4	27 %	0	0 %	15
Senior High School	2	3 %	17	29 %	40	68 %	59
High School	0	0 %	0	0	12	100 %	12
Total	16	17 %	22	24 %	52	58 %	90

(Source: Primary data processed (2023))

The table explains that the majority of parents are at upper secondary education level, 59 people, with 40 people in the good knowledge category (68%),

17 people having sufficient knowledge (29%), and 2 people having poor knowledge (3%). A total of 15 parents were at the Junior Secondary level with 4 people (27%) in the sufficient knowledge category, and 11 people (73%) in the insufficient knowledge category. There were 12 parents with a high level of education, with 12 people in the good knowledge category (100%), and there were no highly educated parents in the poor and sufficient knowledge categories. And in basic education as many as 4 people with sufficient category as many as 1 person (25%) and with less category as many as 3 people (75%)

Bivariate Analysis

This analysis was conducted to see whether there is a relationship between the independent variable and the dependent variable. The independent variables used in this study were the level of education and knowledge of parents. Meanwhile, the dependent variable in this research is the incidence of stunting in toddlers. This study used the Chi-Square test, the results were declared significant if the p value was <0.05

The relationship between parental education level and the incidence of stunting

The relationship between parental education level and the incidence of stunting among toddlers in Kab. Polewali Mandar West Sulawesi, based on parental education and children's nutritional status as measured by the Z-score value of height for age (TB/U) when the child visits the Community Health Center or Posyandu. A complete explanation of the distribution of Chi-Square test analysis results will be described in table 5 below.

Table 6. Relationship between parents' education level and stunting

Level of Education	Nutrition Status				Total	P value
	Stunting		Normal			
	Amount	%	Amount	%		
Elementary School	3	75 %	1	25 %	4	0,0012
Junior High School	11	73 %	4	27 %	15	
Senior High School	7	12 %	52	88 %	59	
High School	0	0 %	12	100 %	12	
TOTAL	21	23 %	69	77 %	90	

Description: Chi-Square Test ($p < 0.05$)

(Source: Primary data processed (2023))

The Relationship between Parents' Knowledge Level and Stunting Incidents

The relationship between the level of parental knowledge and the incidence of stunting in toddlers in Kab. Polewali Mandar West Sulawesi is based on the total score of the research subjects from filling out the knowledge instrument questionnaire and the child's nutritional status as measured by the Z-score value of height for age (TB/U) when the child visited the Puskesmas or Posyandu. A complete explanation of the distribution of the results of the Chi-Square test analysis will be described in table 6 below.

Table 7. Relationship between parents' knowledge level and stunting

Knowledge	Nutrition Status				Total	P value
	Stunting		Normal			
	Amount	%	Amount	%		
Poor	15	93 %	1	7 %	16	0,0092
Enough	6	28 %	16	72 %	22	
Good	0	0 %	52	100 %	52	
TOTAL	21	23 %	69	77 %	90	

Description: Chi-Square Test ($p < 0.05$)

(Source: Primary data processed (2023))

The table explains the research results which show that the majority of parents' knowledge level is in the good knowledge level category, 39 of whom have stunted children, 11 (28.2%). Meanwhile, of the 28 parents who were included in the sufficient knowledge category, there were 14 people (50.0%) who had stunted children. There were 13 parents with less knowledge, of whom 10 (76.9%) had stunted children. The data obtained in this research resulted in a p value of 0.006 so that the p value < 0.05 indicates that there is a relationship between the level of parental knowledge and the incidence of stunting among toddlers in the district. Polewali Mandar, West Sulawesi

Multivariate Analysis

Multivariate analysis was carried out to see whether there was a mutual relationship between the independent variables and the dependent variable, using logistic regression analysis techniques. In the regression analysis technique used, the researcher will first look at the influence of all independent variables on the incidence of stunting. This can be seen in the Omnibus Test results in the table below.

Table 8. Omnibus Test Results of the Overall Effect of Independent Variables on the Dependent Variable

		Chi- Square	Df	sig
Step 1	Step	43.960	2	0,0028
	Block	43.960	2	0,0028
	Model	43.960	2	0,0028

(Source: Primary data processed (2023))

The table explains that the chi-square value is 43,960 with df 2 and the p value (probability) is 0.0028. Thus it is known that the p value <0.05 (significant). So it can be concluded that the independent variables used together have a significant effect on the incidence of stunting. Next, to find out how much the contribution of the dependent variable is explained by the independent variable, regression analysis is carried out.

Table 9. Model Summary of Regression Analysis

	b	Sig	95 % CI for Odds Ratio	
			Lower	Upper
Constant	-23.262	0.997		
Education	1.569	0.026	1.204	19.129
Knowledge	20.664	0.997	0	

R² = 0,004 (Hosmer & Lemeshow) 0,185 (Cox & Snell) 0,391 (Nagelkerke)

(Source: Primary data processed (2023))

R² results showed that the R² value was 0.391 or 39.1%. This shows that these two variables contribute 39.1% to the incidence of stunting, while the remaining 61.9% is influenced by other variables outside this research. Next, to see which variables have a significant impact in influencing the incidence of stunting, this can be done if the R² is significant (Hosmer & Lemeshow) where the R² is 0.004. Researchers can also see the magnitude and direction of each variable, which is explained by the far left column (b)

Based on Table 8, the regression equation is produced as follows: Stunting Incidence = -23.262 – 1.569 (Level of education) – 20.664 (Level of knowledge) From the equation above, it can be seen that of all the independent variables, there are no variables that have a significant impact on the dependent variable. The regression results of each variable are as follows. Education level has a regression coefficient of 1.569 with a value of p = 0.026 (p < 0.05). This means that the level of parental education has a statistically significant relationship with the incidence of stunting. This is in line with research conducted by Semba (Semba RD, 2008) which states that parental education is significantly related to the incidence of stunting

with a value of $p = 0.001$ and $OR = 0.97$, which means that a low level of parental education has a risk of 0.97 times for toddlers experiencing stunting. The results of this study are inversely proportional to research conducted by Windi (Hapsari W, 2018) which stated that the educational level of parents was not significantly related to the incidence of stunting. The level of parental education is basic for achieving good toddler nutrition.

The level of parental education is related to the ease with which parents receive information about nutrition and health. Parents with higher education are expected to be able to implement positive attitudes in meeting children's nutritional needs. It is feared that parents with low education will not be able to provide nutritional intake according to their children's needs. (Lestari W, 2014) This is supported by the results of this study, although it did not show a significant relationship between the education level of parents and the incidence of stunting, it was found that 14 toddlers who were stunted had parents with primary and secondary education levels. The educational background of parents, both father and mother, has an important role in the nutritional status of toddlers. Increased parental education will have an impact on investment in quality human resources, because with good parental education the nutritional status of toddlers will increase and, in the end, can help increase educational opportunities for their toddlers as the basic capital for increasing quality human resources

The level of knowledge has a regression coefficient of $R^2 = 0.004$ with a value of $p = 0.997$ ($p > 0.05$). This means that the level of parental knowledge has no statistically significant relationship to the incidence of stunting. The results of this study are inversely proportional to research conducted by Windi (Hapsari W, 2018) which stated that there was a significant relationship between parental knowledge and the incidence of stunting in toddlers with $p = 0.027$ and $OR = 3.80$ which means that a low level of parental knowledge has 3.8 times greater risk than parents who have a high level of knowledge. The results of this study are in line with research conducted by Raudhotun (Roudhotun N., 2012) which stated that there was no relationship between parental knowledge and the incidence of stunting. The intake of nutrients consumed by toddlers every day depends on their parents, especially mothers. Mothers with a good level of knowledge are likely to apply their knowledge in caring for their children, especially in providing food that is in accordance with the nutrition needed by children, so that children do not experience a lack of food intake. (Lailatul M, Ni'mah. C, 2015) In this study on the problem of stunting the better the level of parental knowledge, the less the percentage of stunting. Knowledge is very closely related to education, it can be assumed that with a higher level of education, someone will have better knowledge. (Notoatmodjo S., 2012) a lower level of education does not guarantee that parents do not have good knowledge of their child's nutrition. The existence of

high curiosity can influence parents in obtaining information about proper nutritional intake for the growth and development of children.(Rakhmawati NZ., 2014) Parental knowledge is key in household governance, this will influence parents' attitudes in choosing food ingredients that will be consumed by the family. Therefore, sufficient basic knowledge about nutrition and health without being followed by attitudes, skills, and a willingness to act cannot bring about changes in improving child nutrition.(Salimar S, Kartono D, 2013)

Qualitative Test

For qualitative data, researchers conducted interviews with key informants to support the results of quantitative data, in this case Health Workers and Teachers. Interviews were conducted using an interview instrument where the questions were grouped into several themes, the themes used can be seen in the following table

Table 10. Interview Theme Groups

Theme	Theme Group
Theme 1	Parental Education and Knowledge Level
Theme 2	The Role of Health Workers and Teachers in Parental Education
Theme 3	Challenges Related to Education and Knowledge
Theme 4	The Need for Continuing Education
Theme 5	Collaboration between the Education and Health Sectors

(Source: Primary data processed (2023))

Qualitative Test: The Effect of Level of Education and Knowledge on Stunting

Theme 1: Level of Education and Knowledge of Parents

- Health Workers (HW): Many health workers report that parents with higher levels of education tend to have better knowledge about children's nutrition. They are often more aware of the importance of providing balanced and nutritious food to their children.
- Teacher (T): The teachers also noted that the educational level of the parents significantly influenced their knowledge of children's nutrition. More educated parents are more open to information provided by schools and teachers.

Theme 2: The Role of Health Workers and Teachers in Parent Education

- Health Workers (HW): Health workers regard themselves as the main source of information for parents. They feel responsible for providing knowledge

about children's nutrition during visits to clinics. However, they also noted that parents should actively seek information and ask questions.

Teachers (T): recognize their important role in educating parents through parent meetings at school. They strive to provide information about healthy eating and provide advice to parents.

Theme 3: Challenges Related to Education and Knowledge

Health Workers (HW): Health workers identified several challenges related to education and knowledge, including different languages and low literacy levels in some parents. They also mentioned that people often hold traditional beliefs about food and nutrition that may not always correspond to scientific knowledge.

Teachers (T): experience similar challenges, especially with parents who may not have a high level of education. They note that changing established eating habits in families can be difficult.

Theme 4: The Need for Continuing Education

Health Workers (HW): Health professionals highlight the importance of continuing education for parents, especially in the form of workshops or community education sessions. They believe that with ongoing education, parents can increase their knowledge and make better changes in their children's diets.

Teachers (T): also see continuing education as the key to improving parental knowledge. They would like to see more community education programs available to parents outside of school.

Theme 5: Collaboration between Education and Health Sectors

Health Workers (HW): Health workers and teachers recognize that collaboration between the education and health sectors is very important in overcoming the problem of stunting. They mentioned the need for cooperation in developing health education programs in schools and nutrition education programs in child health services.

The results of data processing show that the level of education and knowledge of parents has a significant impact on children's nutrition. Health workers and teachers play an important role in providing education, but there are challenges that need to be overcome, especially with families who have low levels of education and strong cultural beliefs. Sustainable education is one of the solutions proposed to increase parental knowledge and reduce cases of stunting in children.

Parental education and knowledge play a key role in overcoming the problem of stunting. Health workers and teachers play an important role in providing education, but challenges such as cultural beliefs and low levels of education still need to be overcome. Sustainable education, modeling positive

behavior, and collaboration between the education and health sectors are some of the solutions proposed to address this problem and ensure children grow up healthy and of good quality.

CONCLUSION

As a conclusion from the results of quantitative and qualitative data processing, it can be concluded that the educational factors that influence stunting in the Polewali Mandar district, West Sulawesi are the education level of the baby's parents and the family health education knowledge factor. Researchers realize that there are actually many other factors that might influence the incidence of stunting, such as the influence of family culture, family economic conditions, etc. The researcher hopes that the results of this research can be a reference for suggestions for further policy making by relevant stakeholders, and can be a reference for further research.

REFERENCES

- Abas, N. S. (2021). Gambaran Tingkat Pengetahuan Dan Pola Asuh Ibu Pada Anak Balita Stunting Umur 2-5 Tahun Di Wilayah Kerja Puskesmas Rahia Kecamatan Gu Kabupaten Buton Tengah [PhD Thesis]. Poltekkes Kemenkes Kendari.
- Hapsari W. (2018). Hubungan Pendapatan Keluarga, Pengetahuan Ibu Tentang Gizi, Tinggi Badan Orang Tua, dan Tingkat Pendidikan Ayah dengan Kejadian Stunting pada Anak Umur 12-59 Bulan [Internet]. Muhammadiyah Surakarta; 2018. Available from: [Http://eprints.ums.ac.id/58665/1/NASKAH_PUBLIKASI_WINDI.pdf](http://eprints.ums.ac.id/58665/1/NASKAH_PUBLIKASI_WINDI.pdf).
- Indrawan, D., & Jalilah, S. R. (2021). Metode Kombinasi/Campuran Bentuk Integrasi Dalam Penelitian. *Jurnal Studi Guru Dan Pembelajaran*, 4(3), 735–739.
- ISWAHYUDI, I. A. R. (2023). Faktor-Faktor Yang Berhubungan Dengan Kejadian Stunting Di Wilayah Kerja Puskesmas Pataruman I Kota Banjar [PhD Thesis]. Universitas Siliwangi.
- Lailatul M, Ni'mah. C. (2015). Hubungan Tingkat Pendidikan, Tingkat Pengetahuan dan Pola Asuh Ibu dengan Wasting dan Stunting pada Balita Keluarga Miskin. *Media Gizi Indones*. 2015;10(2015):84–90.
- Lestari W. (2014). Risk factors for stunting in children aged 6-24 months in the sub-district of Penanggalan, Subulussalam, Aceh Province. *J Gizi Indones (The Indones J Nutr* [Internet]. 2014;3(1):37–45. Available from: [Https://ejournal.undip.ac.id/index.php/jgi/article/view/8752/7081](https://ejournal.undip.ac.id/index.php/jgi/article/view/8752/7081).
- Notoatmodjo S. (2012). Promosi kesehatan dan perilaku kesehatan. 2012.
- Parjaman, T., & Akhmad, D. (2019). Pendekatan Penelitian Kombinasi: Sebagai “Jalan Tengah” Atas Dikotomi Kuantitatif-Kualitatif. *Moderat: Jurnal Ilmiah Ilmu Pemerintahan*, 5(4), 530–548.

- Rakhmawati NZ. (2014). Hubungan Pengetahuan dan Sikap Ibu dengan Perilaku Pemberian Makanan Anak Usia 12-24 Bulan. *J Nutr Coll*. 2014;4:43–50.
- Roudhotun N. (2012). Faktor Risiko Kejadian Stunting Pada Balita Usia 24-36 48 Bulan Di Kecamatan Semarang Timur. *J Nutr Coll [Internet]*. 2012;1:176– 84. Available from: <https://media.neliti.com/media/publications/185431-IDfaktor-risiko-kejadian-stunting-pada-bal.pdf>.
- Salimar S, Kartono D. (2013). Stunting anak usia sekolah di Indonesia menurut karakteristik keluarga. *Nutr Food Res*. 2013;36(2):121– 6.
- Semba RD. (2008). Effect of parental formal education on risk of child stunting in Indonesia and Bangladesh: A cross-sectional study. *Lancet (London, England)*. 2008 Jan;371(9609):322–8.
- Soerachmad, Y. (2020). Faktor Resiko Sanitasi Lingkungan Rumah Tangga Dengan Kejadian Stunting Pada Balita Di Puskesmas Wonomulyo Kecamatan Wonomulyo Kabupaten Polewali Mandar Sulawesi Barat Tahun 2019 [PhD Thesis]. Universitas Muslim Indonesia.
- Sugiyanto, S., & Sumarlan, S. (2020). Analisa Faktor Yang Berhubungan Dengan Stunting Pada Balita Usia 25-60 Bulan. *Jurnal Kesehatan Perintis*, 7(2), 9–20.