Regular Integrated Health Service Visit as a Dominant Factor of Stunting among Children Aged 6-23 Months in Bogor, Indonesia

Eunike Bunga Putriani*, Triyanti*, Trini Sudiarti*

*Community Nutrition Department, Faculty of Public Health, Universitas Indonesia

DOI: 10.29322/IJSRP.10.09.2020.p10528
http://dx.doi.org/10.29322/IJSRP.10.09.2020.p10528

Abstract- Stunting is defined as height-for-age Z-score (HAZ) that is below -2 SD of WHO's median growth standard for children. This study aims to determine the dominant factor of stunting in children aged 6-23 months in Babakan Madang District, Bogor Regency, West Java, Indonesia in 2019. This study is a secondary data analysis used a cross-sectional design, with a total sample of 283 children. The dependent variable used is stunting, while the independent variables are family income, maternal education level, maternal age on pregnancy, maternal height, colostrum feeding, age of introducing complementary foods, and integrated health service visit. The result showed that the prevalence of stunting reached 33,2 percent (included in the high category according to WHO classification). The result of bivariate analysis showed that there was a relationship between integrated health service visit and stunting. The result of multivariate analysis showed that regular integrated health service visit were the dominant factor in the incidence of stunting (OR: 2.102; 95% CI 1,268-3,486). Based on the results of study, suggestions for integrated health service is setting a regular time for integrated health service and routinely providing counselling related to nutrition and health for mother and child. Suggestions for the community is to participate actively in integrated health service activities. Suggestions for the other researchers is conducting research with a broader scope.

Index Terms- Children aged 6-23 months, regular visits to integrated health service, stunting

I. Introduction

Stunting is a delay in the growth of children caused by poor diet or recurrent infections. A child is said to be stunting if the indicator for height-for-age Z-score (HAZ) is below -2 Standard Deviation (SD) from the median growth standard of children belonging to the WHO [1].

Stunted children will have short and long term consequences. Short-term consequences include an increase in the incidence of morbidity and mortality; not optimal cognitive, motor, and language development, and increased health costs [2]. Meanwhile, the long-term consequences include learning capacity and performance that is less than optimal during school; shorter posture than normal people as an adult; an increased risk of metabolic disorders in adulthood, such as diabetes mellitus, obesity, stroke, and heart disease; decreased reproductive health; and not optimal work capacity and productivity [2].

In 2018, around 149 million children under five in the world were stunted [3]. In 2016, 87 million children in Asia were stunted [4]. In 2015, Indonesia had the highest stunting prevalence in ASEAN, 8.9 million children under five were stunted [5]. In 2013, the prevalence of stunting among children under five in Indonesia was 37.2 percent [6]. Meanwhile, in 2018 it decreased to 29.9 percent in children under two and 30.8 percent in children under five. This is a problem because the prevalence of stunting is considered as public health problem if the incidence is 20 percent or more [7].

Stunting can be caused by various things: maternal and home environmental factors, poor quality foods, inadequate complementary feeding practices, poor food and water safety, inadequate breastfeeding practices, and clinical and sub-clinical infections. These factors are influenced by indirect factors: political economy; health and healthcare; education; society and culture; agriculture and food systems; water, sanitation, and environment [2].

Integrated health service is a form of Community Based Health Efforts which are managed from, by, for, and with the community, in order to empower the community and provide easiness to the community in obtaining basic health services. Efforts to improve the role and function of integrated health service are not only the responsibility of the government, but all components in the community, including cadres (community members who work voluntarily). The role of cadres in organizing integrated health service is very big because cadres have responsibility to provide health information to the community and also motivate community to come to integrated health service and have the clean and healthy lifestyle behavior [8]. In its implementation, integrated health service has 5 table services: registration's table, height and weigh measuring's table, results recording's table, counseling and nutrition service's table for children and mother, and health service's table which includes health checks and worm medicine feeding [9]. Integrated health service activities have 5 main priority programs which include family planning, maternal and child health, nutrition, immunization, and overcoming diarrhea [10]. Integrated health service's cadres also providing education about exclusive breastfeeding and complementary feeding [11].

This study aims to knowing the prevalence of stunting in children under two; knowing the relationship between family income, maternal education level, maternal age on pregnancy, maternal height, colostrum feeding, age of introducing complementary foods, and integrated health service visit with the incidence of stunting in children under two; and knowing the dominant factor of stunting in children under two in Babakan Madang District, Bogor Regency, West Java, Indonesia.

II. METHODS

This study used a cross-sectional design. The strengths of cross sectional design are relatively quick and inexpensive to conduct, data on all variables are only collected at one time point, and many findings can be used to create an in-depth research study, meanwhile the weaknesses are difficult to make a causal inference, associations identified might be difficult to interpret, and not good for studying rare diseases [12]. Researcher used secondary data: Nutrition and Health Survey for Babakan Madang Children Under Five in 2019. The independent variables in this study are family income, maternal education level, maternal age on pregnancy, maternal height, colostrum feeding, age of introducing complementary foods, and integrated health service visit.

The inclusion criteria were children aged 6-23 months who lived with the biological mother. If there are 2/more children aged 6-23 months in the family, then the youngest is chosen. Meanwhile, the exclusion criteria were children with mental disorders, physical disabilities, congenital diseases, and twins.

The complete data available who met the inclusion and exclusion criteria are 283 childrens. To find out whether the number of research samples have met the minimum requirements or not, it is necessary to calculate the value of the statistical power (1-β). Research in the public health sector must have a statistical power ≥80 percent. The calculation used the hypothesis test formula with a difference of 2 proportions to see a significant difference between the exposed and unexposed group to risk factors [13].

Data analysis was carried out in 3 stages: univariate, bivariate, and multivariate using SPSS 25.0 application. Univariate analysis was used to see the description of the frequency distribution of nutritional status based on the HAZ-score index, individual characteristics of children under two (age and sex), socioeconomic conditions (father and mother's job, family income, and father and mother's education level), maternal age on pregnancy, maternal height, colostrum feeding, age of introducing complementary foods, and integrated health service visit.

Bivariate analysis was used to see the difference in the proportion between family income, maternal education level, maternal age on pregnancy, maternal height, colostrum feeding, age of introducing complementary foods, and integrated health service visit for stunted and non-stunted children aged 6-23 months. Bivariate analysis used the chi square test with 2x2 cross tabulation. A risk analysis is performed using the Odds Ratio (OR) calculation. Bivariate analysis using 95 percent Confidence Interval (CI) with α: 0.05. P-value <0.05 is a cut-off that indicates statistical significance [14].

Multivariate analysis is used to see which independent variable has the greatest influence on stunting and whether the independent variable is related to the dependent variable is influenced by other variables or not. The test used is multiple logistic regression because both the dependent and independent variables are categorical and the dependent variable is dichotomous. Before conducting multivariate analysis, researcher selected independent variables using simple logistic regression test. If the bivariate analysis produces a p-value <0.25, the independent variable will enter the multivariate analysis stage. However, if there is an independent variable after the bivariate analysis results in a p-value> 0.25, but it is considered important in substance, the variable will enter the multivariate analysis stage. Then, the researcher reselected the independent variable with a p-value >0.05. The greater the OR value, the greater the independent variable affects the dependent variable.

HAZ-score index is categorized into stunting and non-stunting. Family income was categorized by Bogor Regency Minimum Wage into low (<Rp 3.760.000) and high (≥Rp 3.760.000). Maternal education was categorized into low (not in school, elementary, junior, and high school graduated) and high (Diploma 1/2/3 and Bachelor/Master). Maternal age on pregnancy was categorized into risk (≤19 and >35 years) and not at risk (20-35 years). Maternal height was categorized into short (<150 cm) and normal (≥150 cm). Colostrum feeding is categorized as not given and given. The age of introducing complementary foods was categorized into early (0-6 months of age) and normal (more than 6 months). Integrated health service visit was categorized as irregular (if only 1-5 visits) and regular (6 visits) in the last 6 months.

III. RESULT

Table 1. Distribution of Children Under Two

Variable	Category	Frequency (n)	Percentage (%)
Nutritional status	Severely stunted	35	12,4
	Stunted	59	20,8
	Normal	169	59,7
	Tall	20	7,1
Age	6 months	25	8,8
	7-11 months	79	27,9
	12-23 months	179	63,3
Sex	Male	141	49,8
	Female	142	50,2
Father's job	Not working	1	0,4
	Government employee / Indonesian National Army / Indonesian Republic Police	3	1,1
	Private employee	66	23,3
	Trader / enterpreneur	76	26,9
	Labor / service	128	45,2
	Other	9	3,2
Mother's job	Not working	249	88,0
	Government employee / Indonesian National Army / Indonesian Republic	2	0,7

	Police		
	Private employee	2	0,7
	Trader / enterpreneur	17	6,0
	Labor / service	11	3,9
	Other	9	0,7
Family income	Low	188	66,4
	High	95	33,6
Father's education level	Low	270	95,4
	High	13	4,6
Mother's education level	Low	273	96,4
	High	10	3,6
Maternal age on pregnancy	Risk	73	25,8
	Not at risk	210	74,2
Maternal Height	Short	142	50,2
	Normal	141	49,8
Colostrum feeding	Not given	48	17,0
	Given	235	83,0
Age of introducing complementary foods	Early	198	70,0
	Normal	85	30,0
Integrated health service visit	Irregular	141	49,8
	Regular	142	50,2

The results of this study indicate that the prevalence of stunting is 33.2 percent, while the non-stunting is 66.8 percent. The mean ± SD index for HAZ-score was -1 ± 1.9.

The mean ± SD age of children is 13 ± 5.2 months. There are 49.5 percent boys and 50.5 percent girls.

The majority of fathers' job is labor/services (45.2%), while the majority of mother's job is not working (88%). The majority of family income is classified as low (66.4%). The majority of father and mother's education level is classified as low (father: 95.4%, mother: 96.4%).

The mean ± SD maternal age on pregnancy is 27 ± 6.3 years. The youngest age is 15 years, while the oldest is 47 years. The majority women pregnant at non-risk age (74.2%).

The mean ± SD maternal height is 149.8 ± 5.3 cm. The mother's lowest height is 129.5 cm, while the mother's highest height is 165.5 cm. The majority of maternal height is classified as low (50.2%).

The majority of children are given colostrum (83%). The fastest age of introducing complementary foods is 0-7 days, while the latest is more than 6 months. The mean ± SD age of introducing complementary foods is 4 ± 2.3 months. The majority of children are given early complementary foods (70%). The majority types of complementary foods is instant porridge (143 childrens), formula milk (89 childrens), mashed fruit (88 childrens), biscuits (68 childrens), and rice porridge (54 childrens).

There was 50.2 percent of children went to the integrated health service regularly, while 49.8 percent irregularly. The number of children who did not attend each month from November 2018-April 2019 respectively were 80 childrens (28.8%), 71 childrens (25.5%), 73 childrens (26.3%), 72 childrens (25 , 9%), 78 childrens (28.1%), and 93 childrens (33.5%). The reason for the majority of mothers irregularly visit integrated health service was because they forgot / didn't know the schedule of the integrated health service (59 mothers), the integrated health service was off (13 mothers), the mothers were busy (12 mothers), the children did not want to be weighed (10 mothers), the husband was not allowed mother and child to visit integrated health service (4 mothers), and the children had been taken to the midwife or puskesmas (4 mothers). The mean ± SD attendance of mothers and children at the integrated health service was 4 ± 2 times.

Table 2. Results of Bivariate Analysis

Variable	Stunted		Non-stunted		Total		*p-value*
	n	%	n	%	n	%	
Mother's education level							0,505
Low	92	33,7	181	66,3	273	100,0	
High	2	20	8	80	10	100,0	
Maternal age on pregnancy							0,052
Risk	17	23,3	56	76,7	73	100,0	
Not at risk	77	36,7	133	63,3	210	100,0	
Maternal height							0,400
Short	51	35,9	91	64,1	142	100,0	
Normal	43	30,5	98	69,5	141	100,0	
Colostrum feeding							1,000
Not given	16	33,3	32	66,7	48	100,0	
Given	78	33,2	157	66,8	235	100,0	
Age of introducing complementary foods							0,840
Early	67	33,8	131		198	100,0	
Normal	27	31,8	58		85	100,0	
Integrated health service visit							**0,015***
Irregular	57	40,4	84		141	100,0	
Regular	37	26,1	105		142	100,0	

**p-value* indicates a relationship (*p-value* <0,05)

There was a relationship between the integrated health service visit and the incidence of stunting (p-value <0.05). Meanwhile, other independent variables have no relationship with the incidence of stunting (p-value >0.05). Although it does not have a relationship, there is a tendency that the incidence of stunting is higher in children with low family income, low levels of maternal education, and low maternal height.

Table 3. Bivariate Selection

Variable	*p-value*
Family income	0,778
Mother's education	0,505
Maternal age on pregnancy	**0,052***
Maternal height	0,400
Colostrum feeding	1,000
Age of introducing complementary foods	0,840
Integrated health service visit	**0,015***

**p-value* <0,25

Based on table 3, it can be concluded that the independent variables selected to be continued to the multivariate modeling stage (variables with p-value <0.25) are maternal age on pregnancy and integrated health service visit. However, maternal height and colostrum feeding were included in the multivariate modeling because they were important substances related to the main causes of stunting. Maternal height is one of the direct causes of stunting, where short mother have an inadequate anatomical and metabolic system, such as lower glucose levels and decreased protein and energy reserves, which can lead to IUGR and then stunting [15]. Meanwhile, colostrum contain nutrients and antibodies that are important in preventing infection and nutritional problems, where infection is one of the direct causes of stunting [16].

Colostrum feeding is the variable with the highest p-value, so that variable is excluded first. After removing these variables, a change in the OR of other variables was obtained <10 percent, then the colostrum feeding variable was permanently removed. The variable with the second highest p-value is maternal height. After removing that variable, the OR changes in other variables was <10 percent, then the variable maternal height is permanently removed. The variable with the third highest p-value is the maternal age on pregnancy. After removing that variable, a change in the OR of other variables <10 percent, so that variable is permanently removed.

Table 4. Results of the Final Modeling of Multiple Logistic Regression Analysis

Variable	Coef B	*p-value*	OR	95% CI
Integrated health service visit	0,743	0,004	2,102	1,268-3,486

After removing three variables in the order of the p-value from the largest, it can be concluded that no confounding variable was found because there were no variables that has a change in OR more than 10 percent. In table 4, it can be stated that regular integrated health service visit are the dominant factor because it has a significant p-value, the greatest OR, and the only variable left in the final modeling. Children who are irregularly visit integrated health service were 2.1 times more risky to experience stunting than children who are regularly visit integrated health service.

IV. DISCUSSION

The prevalence of stunting in this study is 33.2%. When compared with the prevalence of Indonesia (29.9%), the prevalence of stunting in this study is much higher [17]. According to the cut-off classification public health problems for stunting, this prevalence is in the high category [7]. This high prevalence of stunting indicates that it needs immediate treatment and prevention so that the prevalence of stunting does not increase.

Based on the bivariate analysis, it was found that there was no relationship between family income and stunting, which was indicated by p-value < 0.05. However, there is a tendency for stunting to occur in low income families. The results of this study is in line with research conducted on children under five in China that there was no relationship between GDP per capita and stunting [18]. This is possible because families with high income do not allocate their income for nutritious food materials, so that both low and high income families have many children who are stunted. However, high income does not mean increasing consumption of nutrients the body needs. Families with high incomes will actually increase the opportunity to choose food ingredients and increase the consumption of foods they like, even though these foods are not rich in nutrients [19].

Based on the bivariate analysis, it was found that there was no relationship between maternal education level and stunting, which was indicated by p-value < 0.05. However, there is a tendency for stunting to occur in families with a low level of maternal education. The result is contrary to the study in children aged 0-42 months in Nairobi, Africa that maternal education is a strong predictor of child stunting [20]. No relationship between maternal education level and stunting in this study is possible because mother's education level is not a direct cause of stunting [2]. HAZ-score represents a past nutritional history, so regardless of maternal education level, if the baby is already undernourished, it can lead to stunting. The researcher tried to analyze the variables between maternal education level and mother's job. The result showed that 40 percent of mothers with higher education have job, so that mothers is possible not directly care for their children and pay less attention to the children's nutritional status. In addition, behavior is not only influenced by the education level, but also by socio-economic, socio-cultural and environmental factors.

Based on the bivariate analysis, it was found that there was no relationship between maternal age on pregnancy and stunting, which was indicated by p-value < 0.05. However, there is a tendency for stunting to occur in pregnant women at non-risk age. The result is contrary to the study in children under five in Tamale Metropolis, Ghana that children of teenage mothers were 8 times more likely to be stunted than children of adult mothers [21]. The researcher tried to analyze between maternal age on pregnancy and integrated health service visit variables. The result showed that most mothers with risky ages regularly brought their children to the integrated health service than mothers with not at risk age. If children are not routinely taken to the integrated health service, their body's growth and development is not well monitored, so they can become stunted and are not given immediate treatment. In addition, if the mother does not regularly go to the integrated health service, the mother will have less knowledge of good nutrition for her child.

Based on the bivariate analysis, it was found that there was no relationship between maternal height and stunting, which was indicated by p-value < 0.05. However, there is a tendency for stunting to occur in mothers with short stature. The result is contrary to the study in infants ages 6-12 months in San Juan Comalapa, Guatemala that maternal height was associated with stunting at both 6 and 12 months [22]. No relationship between maternal height and stunting is possible because the cause of stunting is not only genetic, but there are other factors.

Based on the bivariate analysis, it was found that there was no

relationship between colostrum feeding and stunting, which was indicated by p-value < 0.05. Mothers who did not gave colostrum and who gave colostrum tended to experience stunting. The result is contrary to the study in children aged 6-59 months in Afambo District, Northeast Ethiopia that colostrum feeding was associated with the three indicators of child under nutrition (stunting, underweight, and wasting) [16].

Based on the bivariate analysis, it was found that there was no relationship between the age of introducing complementary foods and stunting, which was indicated by p-value < 0.05. However, there is a tendency for stunting to occur in childrens who are given early complementary foods. The result of this study is in line with research conducted on children aged 6-23 months in Tamang Community, Ambhanjyang, Nepal that there was no significant relationship between complementary feeding practices and nutritional status of child [23].

Based on the bivariate analysis, it was found that there was a relationship integrated health service visit and stunting, which was indicated by p-value < 0.05. There was a tendency for stunting to occur in children who did not regularly attend the integrated health service. The researcher tried to analyze age of introducing complementary foods and colostrum feeding to the integrated health service visit variable, but the result did not show a significant relation. Maybe, other integrated health service roles, such as monitoring routine weight and height measurements, immunization, supplementary feeding, vitamin A capsule feeding, nutrition and health education related to mother and children (exclude education about the age of introducing complementary foods and colostrum feeding) went well, so children who regularly attended the integrated health service were less risk to experience stunting.

The dominant factor in the incidence of stunting is integrated health service visit, with highest OR value: 2.102 (95% CI: 1.268-3.486). These results indicate that if the child irregularly attend the integrated health service every month, will 2.102 times more risky to experience stunting than children who regularly visit integrated health service.

Activities in integrated health service include Tetanus Toxoid vaccine for pregnant women, vitamin A feeding, complete immunization to babies that are carried out to prevent infection in mothers and babies, which are one of the direct causes of stunting. Integrated health service's cadres also provide education about balanced nutrition food for pregnant women can prevent mothers from malnutrition during pregnancy. Education about exclusive breastfeeding and adequate complementary foods for children is also related to the direct causes of stunting. In addition, routine weighing and measuring body length at the integrated health service can certainly monitor the child's growth, so that if a child is at risk or is already experiencing stunting, further action can be given by the community health center (who is the supervisor of integrated health service). Then, integrated health service has activities to check pregnant women's health. This is a good activity for preventing stunting.

V. CONCLUSION

The prevalence of stunting among children aged 6-23 months in this study is in the high category (33.2%). There is a relationship between the variable integrated health service visit with the incidence of stunting, while there is no relationship between other variables with the incidence of stunting. The dominant factor is integrated health service visit. Children who were irregularly visit integrated health service were 2.102 times more likely to experience stunting than children who were regularly visit integrated health service. Suggestion for integrated health service is to set a regular time each month, so that mothers of children can easily remember the schedule. Then, it is hoped that the integrated health service will routinely provide counseling regarding the importance of immunization, healthy food and the appropriate number of portions for pregnant and lactating women, exclusive breastfeeding, and the starting age of complementary feeding, including sufficient types and amounts of complementary foods for infants and toddlers according to their age. The next suggestion is to improve the integrated health service's function so that it runs well, mobilizing cadres to receive training about stunting: its causes, impacts, and ways to prevent and treat stunting. Cadres also need to clarify the socio-cultural myths circulating in society. In addition, cadres are expected to be able to make home visits to pregnant women, mothers of infants and toddlers who do not regularly attend integrated health service and encourage them to attend in next month.

REFERENCES

[1] WHO, *Nutrition Landscape Information System (NLIS) Country Profile Indicators: Interpretation Guide*. Geneva: WHO Press, 2010.
[2] C. P. Stewart, L. Iannotti, K. G. Dewey, K. F. Michaelsen, and A. W. Onyango, "Contextualising Complementary Feeding in a Broader Framework for Stunting Prevention," *Matern. Child Nutr.*, vol. 9, no. 2, pp. 27–45, 2013.
[3] UNICEF, WHO, and World Bank Group, "Levels and Trends in Child Malnutrition," 2019.
[4] WHO, *Reducing Stunting in Children: Equity Considerations for Achieving the Global Nutrition Targets 2025*. Geneva, 2018.
[5] ASEAN, UNICEF, and WHO, *Regional Report on Nutrition Security in ASEAN, Volume 2*. Bangkok: UNICEF, 2016.
[6] Kemenkes RI, "Riset Kesehatan Dasar (RISKESDAS) 2013," *Lap. Nas. 2013*, pp. 1–384, 2013, doi: 1 Desember 2013.
[7] WHO, "Physical Status: The Use and Interpretation of Anthropometry," Geneva, 1995.
[8] Kemenkes RI, *Buku Pegangan Kader Posyandu*. Jakarta, 2012.
[9] Kemenkes RI, "Warta Kesmas Edisi 2: Cegah Stunting Itu Penting," 2018.
[10] R. A. D. Sartika, "Analisis Pemanfaatan Program Pelayanan Kesehatan Status Gizi Balita," *J. Kesehat. Masy. Nas.*, vol. 5, no. 2, pp. 76–83, 2010.
[11] I. Norcahyanti, A. N. W. Pratama, and D. K. Pratoko, "Upaya Pencegahan Stunting dengan Optimalisasi Peran Posyandu Melalui Program Kemitraan Masyarakat," *J. Pengabdi. Masy.*, vol. 3, no. 2, pp. 73–80, 2019.
[12] X. Wang and Z. Cheng, "Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations," *CHEST J.*, vol. 158, no. 1, pp. 65–71, 2020.
[13] Lemeshow *et al.*, *Adequacy of Sample Size in Health Studies*. Chicester: Wiley, 1990.
[14] C. Andrade, "The P Value and Statistical Significance:

Misunderstandings, Explanations, Challenges, and Alternatives," *Indian J. Psychol. Med.*, vol. 41, no. 3, pp. 210–215, 2019.
[15] B. Sinha, S. Taneja, R. Chowdhury, S. Mazmuder, T. Rongsen-Chandola, and R. P. Upadhyay, "Low Birth Weight Infants Born to Short-Stature Mothers are at Additional Risk of Stunting and Poor Growth Velocity: Evidence from Secondary Data Analyses," *Matern. Child Nutr.*, vol. 9, no. 2, pp. 1–9, 2018.
[16] M. L. Liben, T. Abuhay, and Y. Haile, "The Role of Colostrum Feeding on the Nutritional Status of Preschool Children in Afambo District, Northeast Ethiopia: Descriptive Cross Sectional Study," *Eur. J. Clin. Biomed. Sci.*, vol. 2, no. 6, pp. 87–91, 2016.
[17] Kemenkes RI, "Laporan Nasional RISKESDAS 2018," 2018.
[18] L. Wu, Z. Yang, S. Yin, M. Zhu, and H. Gao, "The Relationship between Socioeconomic Development and Malnutrition in Children Younger than 5 Years in China during the Period 1990 to 2010," *Asia Pac. J. Clin. Nutr.*, vol. 24, no. 4, pp. 665–673, 2015.
[19] I. A. Ibrahim and R. Faramita, "Hubungan Faktor Sosial Ekonomi Keluarga dengan Kejadian Stunting Anak Usia 24-59 Bulan di Wilayah Kerja Puskesmas Barombong Kota Makassar Tahun 2014," *Al-Sihah Public Heal. Sci. J.*, vol. 6, no. 2, pp. 63–75, 2014.
[20] B. A. Abuya, J. Ciera, and E. Kimani-Murage, "Effect of Mother's Education on Child's Nutritional Status in the Slums of Nairobi," *BMC Pediatr.*, vol. 12, no. 80, pp. 1–10, 2012.
[21] A. Wemakor, H. Garti, T. Azongo, H. Garti, and A. Atosona, "Young Maternal Age is a Risk Factor for Child Undernutrition in Tamale Metropolis, Ghana," *BMC Reaearch Notes*, vol. 11, no. 877, pp. 1–5, 2018.
[22] K. Hambidge, M. Mazariegos, M. Kindem, L. Wright, C. Cristobal-Perez, and L. Juarez-Garcia, "Infant Stunting is Associated with Short Maternal Stature," *J. Pediatr. Gastroenterol. Nutr.*, vol. 54, no. 1, pp. 117–119, 2012.
[23] P. Pokharel, A. Adhikari, P. Lamsal, and R. Adhikari, "Effect of Complementary Feeding Practices and Nutritional Status of Children (6-23 Months) in Tamang Community, Ambhanjyang VDC of Makwanpur," *Janaki Med. Coll. J. Med. Sci.*, vol. 5, no. 1, pp. 22–32, 2017.

AUTHORS

First Author – Eunike Bunga Putriani, Department of Community Nutrition, Faculty of Public Health, Universitas Indonesia, eunikebungaputriani@gmail.com
Second Author – Triyanti, Department of Community Nutrition, Faculty of Public Health, Universitas Indonesia, triyantigizi@gmail.com
Third Author – Trini Sudiarti, Department of Community Nutrition, Faculty of Public Health, Universitas Indonesia, trini.fkmui@gmail.com