
Exclusive Breastfeeding With Stunting

Astik Umiyah, Azizatul Hamidiyah*

Faculty of Health Science, Ibrahimy University, Indonesia

* azizatulhamidiyah@gmail.com

ABSTRACT

Indonesia ranks the 5th most stunting in the world. Stunting has long-term impacts both individually and socially, including reduced cognitive & physical development, lower productivity, and increased risk of degenerative diseases such as diabetes. Situbondo is also the district with the third rank of stunting cases in East Java. As of February 2019, Banyuputih Community Health Center has the highest stunting rate of toddler in Situbondo Regency, which is 42.7%, with details of 25.21 very short children and 17.49% short. The purpose of this study was to determine the relationship between exclusive breastfeeding and the incidence of stunting in toddler in the Banyuputih Health Center, Situbondo Regency. This research was a quantitative study with a cross-sectional design. The sample in the study was 274 toddlers in the Banyuputih Health Center working area with inclusion and exclusion criteria. The sampling technique used was proportional random sampling. This research instrument used an observation sheet in collecting the independent and dependent variables. Data analysis was performed using univariate and bivariate tests. The results showed that exclusive breastfeeding (Pvalue 0.025) was associated with the incidence of stunting in toddlers in the Banyuputih Community Health Center. From the OR value, it was obtained 2.451, meaning that children who did not receive exclusive breastfeeding had a chance to become stunted 2.451 times compared to children who received exclusive breastfeeding.

Keywords: Exclusive Breastfeeding, Toddlers, Stunting

Received August 27, 2020; Revised September 20, 2020; Accepted October 20, 2020



STRADA Jurnal Ilmiah Kesehatan, its website, and the articles published there in are licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

BACKGROUND

Stunting is a chronic nutritional problem in children, namely a short and very short body condition that exceeds the -2SD deficit which results in failure to reach a normal height according to the child's age (Proverawati & Wati, 2011). On the Global Nutrition Targets 2025, stunting is an incident that occurs globally, it is estimated that around 171 million to 314 million toddlers years of age are stunted and 90% of them are in countries in Africa and Asia. The Global Nutrition Report shows Indonesia is included in 17 countries out of 117 countries, which have three nutritional problems, namely stunting, wasting and overweight in under-five (WHO, 2014).

The impact of toddlers who experience stunting is not only having suboptimal growth, but also having difficulty achieving optimal physical and cognitive development, having a low level of intelligence, being more susceptible to disease (as adults they are at risk of faster metabolic disorders such as diabetes, hypertension), and decreased productivity. In the end, stunting will broadly inhibit economic growth, increase poverty and widen inequality (TNP2K, 2017).

Many factors cause stunting, one of which is exclusive breastfeeding is also a direct factor causing stunting (Stewart, et al., 2013). In southern Ethiopia, it showed that toddlers who did not receive exclusive breastfeeding for 6 months are at high risk of experiencing stunting (Fikadu, et al., 2014).

Based on Riskesdas (2018), the incidence of stunting in Indonesia is still high even though it has decreased in 2018 with a prevalence of 30.8% compared to 2013 (37.2%) and 2010 (35.6%). Where the prevalence of stunting was 30.8% in 2018 consisting of 11.5% very short and 19.3% short. With this number, Indonesia is in the 5th most stunting position in the world (this condition is only better than India, China, Nigeria, and Pakistan). Meanwhile, East Java is a province that has a high prevalence, namely 26.7%. (Directorate of Community Nutrition, Ministry of Health RI, 2017).

Situbondo District has a high and increasing prevalence of stunting. Situbondo is also the district with the third rank of stunting cases in East Java. Based on Monitoring Data on Nutritional Status of East Java Province in 2016, Situbondo Regency has a prevalence of toddlers with stunting of 23.0%, in 2017 it was 30.5% and as of February 2018, of 44,386 toddlers, 30.3% were recorded as having stunting.

Based on the results of interviews with the data and information section of the Situbondo District Health Office, it was stated that so far there was no special recording of stunting (TB / U) under five. Until 2018, only sufficient data on the Nutrition Status Monitoring Survey which is conducted by the Province every year. And only in 2019 the number of TB / U is recorded for stunting detection, even then only in the weighing month (February and August). So that there has been no specific analysis per Puskesmas / Subdistrict related to the stunting case in Situbondo until 2019.

Based on the report for the weighing month of February 2019, the Banyuputih Puskesmas has the highest stunting rate of toddlers in Situbondo Regency, which is 42.7%, with details of 25.21 very short children and 17.49% short (Banyuputih Puskesmas, 2019).

Therefore, it is necessary to do research on the relationship between exclusive breastfeeding and the incidence of toddlers in the Banyuputih Health Center, Situbondo Regency.

The purpose of this study was to determine the relationship between exclusive breastfeeding and the incidence of stunting in toddlers in the Banyuputih Health Center, Situbondo Regency.

METHODS

This research was a quantitative study with a cross-sectional design. The research location was conducted in the Banyuputih Health Center, Situbondo Regency. The research was conducted for 10 months in 2020. The population in this study were all toddlers who were measured TB / U in the Banyuputih Health Center Work Area. The sample in the study was 274 toddlers in the Banyuputih Health Center working area with inclusion and exclusion criteria. The sample is calculated using a formula (Lemeshow, 1997) :

$$n = \frac{Z^2 \cdot \frac{1-\alpha}{2} \cdot P(1-P)N}{d^2(N-1) + Z^2 \cdot \frac{1-\alpha}{2} \cdot P(1-P)}$$

Inclusion Criteria,

1. Toddlers aged 0-59 months
2. Toddlers are included in the data where TB / U measurements are taken in the last weighing month
3. Toddlers have complete supporting data

Exclusion Criteria,

1. Incomplete supporting data

The sampling technique used was proportional random sampling. With the following proportions:

1. Banyuputih Village = (113/949) x 100 = 12 % x 274 = 33 Toddlers
2. Sumberejo Village = (310/949) x 100 = 33 % x 274 = 90 Toddlers
3. Sumberanyar Village = (328/949) x 100 = 34 % x 274 = 93 Toddlers
4. Sumberwaru Village = (199/949) x 100 = 21 % x 274 = 58 Toddlers

The instruments used in this study were observation sheets, supporting documents in the form of a cohort of toddlers, MCH Handbook, MCH and Nutrition reports. In this study, univariate and bivariate analyzes were carried out. Univariate analysis was performed on each variable from the research results by describing each variable by making a frequency distribution table. Bivariate analysis was conducted to see the relationship between each independent and dependent variable using the chi square test.

RESULT

The research results are as follows:

1. Univariate Analysis

Table 1. General description of stunting in the Banyuputih Community Health Center

No.	Inf	F	%
1	Normal	203	74
2	Stunting	71	26
Total		274	100

Based on Table 1, it showed that some of the children under five with stunting in the Banyuputih Health Center work area were 71 under-fives or 26%.

Table 2. Overview of Exclusive Breastfeeding for Toddlers in the Banyuputih Health Center Work Area

No.	Inf	F	%
1	Exclusive Breastfeeding	239	87
2	Not Exclusive Breastfeeding	35	13
Total		274	100

Based on Table 2, it showed that there are 35 toddlers who did not get exclusive breastfeeding or 13%.

2. Bivariate Analysis

Table 3. Relationship between Exclusive Breastfeeding and the Incidence of Stunting in The Banyuputih Community Health Center

No.	Inf	Status				Total		Pvalue	OR (95% CI)
		Normal N	%	Stunting N	%	N	%		
1	Exclusive Breastfeeding	183	77	56	0,025	239	100	0,025	2,451 (1,177-5,013)
2	Not Exclusive Breastfeeding	20	57	15	43	15	100		
Total		203	74	71	26	71	100		

Based on Table 3, it showed that the results of the exclusive breastfeeding statistical test obtained a value of Pvalue = 0.025 ($P \leq 0.05$), with a degree of significance α (5%), it could be concluded that the alternative hypothesis (H_a) was accepted or the null hypothesis (H_0) is rejected which showed a relationship between exclusive breastfeeding and the incidence of stunting. With an OR of 2.451, it meant that toddlers who did not receive exclusive breastfeeding are 2.451 times more likely to be stunted than toddlers who received exclusive breastfeeding.

DISCUSSION

The results of the chi square statistical test showed that the value of Pvalue = 0.025 ($P \leq 0.05$), with a degree of significance α (5%) indicating a relationship between exclusive breastfeeding and the incidence of stunting. The better exclusive breastfeeding, which was done by the mother for her child, was linear with the nutritional status of the child. Likewise, the less exclusive breastfeeding, the worse the child's nutritional status (stunting). This study also showed an OR value of 2.451, meaning that children who did not receive exclusive breastfeeding were 2.451 times more likely to be stunted than toddlers who received exclusive breastfeeding.

The results of this study were in accordance as according to Fikadu, et al (2014), Ni'mah & Siti (2015), Rosalina, et al (2015), Mawaddah (2018), Irawan (2018), Indrawati (2018), Handayani, et al (2019), and Sampe, et al (2020) that there was a relationship between exclusive breastfeeding and the incidence of stunting.

This study was also linear with the theory that exclusive breastfeeding affects changes in nutritional status, namely short nutritional status due to the function of breast milk containing immunoglobulin (Anugraheni, 2012). Toddlers who get full exclusive breastfeeding for 6 months can increase immunity, intelligence and children's development, besides that they can prevent infectious diseases and reduce the risk of

nutritional problems (Nirwana, 2014). This is because breast milk is the best food for babies because it contains all the nutrients in an ideal ratio and contains immune power (Nugroho, 2014).

Although there was a significant relationship between exclusive breastfeeding and the incidence of stunting, the quality of exclusive breastfeeding also needs special attention. Several other studies have shown that there was no relationship between exclusive breastfeeding and the incidence of stunting due to the low nutritional intake of breastfeeding mothers which ultimately affects the quality of breast milk given. Several other studies have shown that the total nutritional intake of breastfeeding mothers was lower than the nutritional intake during pregnancy. Even though the nutritional intake of breastfeeding mothers is an important point that needs to be a concern in efforts to overcome stunting because toddlers who receive exclusive breastfeeding do not get other nutritional intake apart from their mother's milk (Paramashanti et al., 2016).

Based on these theories and facts, the researcher considers the importance of exclusive breastfeeding in preventing stunting by not only focusing on the period of exclusive breastfeeding but on aspects of the quality of breastfeeding, in this case the nutritional intake of breastfeeding mothers.

CONCLUSION

The conclusion of this study showed that there was a relationship between exclusive breastfeeding (Pvalue 0.025), with the incidence of stunting. So that exclusive breastfeeding needs to get special attention not only in the period of giving it but on the quality of exclusive breastfeeding itself, starting from the nutritional intake of breastfeeding mothers. Given that some research showed a decrease in the nutritional intake of breastfeeding mothers compared to pregnancy.

ACKNOWLEDGMENTS

The author would like to express gratitude to the Banyuputih Health Center, all the extended families of the Faculty of Health Sciences, Ibrahimy University and Respondents and all parties who helped the completion of this research. In addition, the author would like to express special gratitude to Ristek-BRIN who has funded this Beginner Lecturer Research (PDP).

REFERENCES

- ACC/SCN, 2000. *4th Report - The World Nutrition Situation: Nutrition throughout the Life Cycle*, Geneva: s.n.
- Almatsier, S., 2009. *Prinsip Dasar Ilmu Gizi*. Jakarta: Gramedia.
- Bhutta, Z. et.al., 2013. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet Lond. Engl.. Lancet Nutrition Interventions Review Group, Maternal and Child Nutrition Study Group*, Volume 328, p. 452–477.
- Bishwakarma, R., 2011. *Spacial Inequality in Children Nutrition in Nepal : Implication of Regional Context and Individual /Household Composition*, United State: Dissertation University of Maryland Colleged Park US.
- Direktorat Gizi Masyarakat Kemenkes RI, 2016. *Buku Saku Pemantauan Status Gizi Tahun 2017*. Jakarta: Kemenkes RI
- Direktorat Gizi Masyarakat Kemenkes RI, 2017. *Buku Saku Pemantauan Status Gizi Tahun 2017*. Jakarta: Kemenkes RI.

- Fikadu, T., Assegid, S. & Dube, L., 2014. Factor Associated with Stunting Among Children Age 24 to 59 month in Meskan District, Gurage Zone, South Ethiopia : A Case Control Study. *BMC Public Health*, 14(800).
- Kementrian Kesehatan RI, 2010. *Riset Kesehatan Dasar*, Jakarta: Badan Penelitian dan Pengembangan Kemenkes RI.
- Kementrian Kesehatan RI, 2013. *Riset Kesehatan Dasar*, Jakarta: Badan Penelitian dan Pengembangan Kemenkes RI.
- Lemeshow, 1997. *Besar Sampel dalam Penelitian Kesehatan*. Yogyakarta: UGM.
- Lestari, W. M. A. R. Z., 2014. Faktor risiko stunting pada anak umur 6-24 bulan di kecamatan Penanggalan kota Subulussalam provinsi Aceh. *J. GIZI Indonesia*, Volume 3, p. 126–134.
- Meilyasari, F. & Isnawati, M., 2014. Faktor Risiko Terjadinya Stunting pada Bayi Usia 12 Bulan di Desa Purwokerto Kecamatan Patebon Kabupaten Kendal. *Journal of Nutrition College*, 3(2), pp. 16-25.
- Muchina, E. & Waithaka, P., 2010. Relationship between breastfeeding practices and nutritional status of children aged 0-24 months in Nairobi, Kenya.. *Afr. J. Food Agric. Nutr. Dev.*.
- Nadiyah, N. B. D. M. D., 2014. Faktor Risiko Stunting Pada Anak Usia 0—23 Bulan Di Provinsi Bali, Jawa Barat, Dan Nusa Tenggara Timur. *J. Gizi Dan Pangan* , Volume 9.
- Nasikhah, R. & Margawati, A., 2012. Faktor Risiko Kejadian Stunting pada Balita Usia 24-36 Bulan di Kecamatan Semarang Timur. *Journal of Nutrition College*, 1(1).
- Ni'mah, K. & Siti, R., 2015. Faktor yang Berhubungan dengan Kejadian Stunting. *Media Gizi Indonesia*, 10(1), pp. 13-19.
- Oktarina, Z. S. T., 2014. Faktor Risiko Stunting Pada Balita (24—59). *J. Gizi Dan Pangan*, Volume 8.
- Paudel, R. et al., 2012. Risk Factors for Stunting among Children : An COmmunity Based Case Control Study in Nepal. *Kahmandu University Medical Journal*, 10(3), pp. 18-24.
- Pratiwi, P., 2013. *Panjang lahir sebagai faktor dominan kejadian stunting pada balita usia 12-26 bulan di Desa Talagamuya Kabupaten Karawang tahun 2013*, Tesis, Depok: Universitas Indonesia, Fakultas Kesehatan Masyarakat..
- Proverawati, A. & Wati, E., 2011. *Ilmu Gizi untuk Keperawatan dan Gizi Kesehatan*. Yogyakarta: Nuha Medika.
- Pusdatin Kementrian Kesehatan RI, 2018. *Situasi Balita Pendek (Stunting) di Indonesia*, Jakarta: Buletin Jendela Data dan Informasi Kesehatan.
- Puskesmas Banyuputih, 2019. *Laporan Bulanan*, Situbondo: Puskesmas Banyuputih.
- Rosmanindar, E., 2013. *Asupan protein sebagai faktor dominan terjadinya stunting pada anak 7-36 bulan di wilayah Puskesmas Pancoran Mas kota Depok tahun 2013*, Tesis, Depok: Universitas Indonesia, Fakultas Kesehatan Masyarakat..
- Stewart, C. et al., 2013. Contextualising complementary feeding in a broader framework for stunting prevention. *Maternal and Child Nutrition*, 9(2), pp. 27-45.
- TNP2K, 2017. *100 Kabupaten/Kota Prioritas untuk Intervensi Anak Kerdil (Stunting)*. Jakarta: Sekretariat Wakil Presiden Indonesia.
- WHO, 2014. *Global Nutrition Targets 2025: Breastfeeding Policy Brief*. [Online] Available at: http://www.who.int/nutrition/publications/globaltarget2025_policybrief_breastfeeding/en/

WHO, 2014. *WHA Global Nutrition Targets 2025: Stunting Policy Brief*. s.l.:World.