

RISK FACTORS FOR STUNTING IN CHILDREN UNDER FIVE YEARS OLD IN THE WORKING AREA OF UPTD HEALTH CENTER IN TELUK KUANTAN

Riski Novera Yenita^{1,2}, Adha Ruwaida³

¹*Public Health Science, Al Insyirah School of Health Sciences Pekanbaru, Parit Indah Street Number 38, Pekanbaru, Riau, Indonesia*

²*Department of Environment Health, Riau of University, Pattimura, Pekanbaru, Riau, Indonesia*

³*Department of Midwifery, Al Insyirah School of Health Sciences Pekanbaru, Parit Indah Street Number 38, Pekanbaru, Riau, Indonesia*

Corresponding author's Email Address : qynas85@gmail.com

ABSTRACT

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition so that the child is too short for his age. The prevalence of stunting toddlers has increased from 2016 that is 27.5% to 29.6% in 2017. The prevalence of stunting is higher than the prevalence of malnutrition and bad 10.2%. The purpose of this study for the risk factors for stunting in children under five in the work area of UPTD Health Center in Kuantan Bay Health Center. This type of research is analytic research with cross sectional design. The population in this study were all toddlers aged 1-5 years, totaling 551 with a sample of 65 people. Data processing using computerization. Univariate and Bivariate analysis of data with the Chi-Square test. Statistical test results showed a relationship between nutritional status ($p = 0.002$), Antenatal Care visits ($p = 0.012$, $OR = 9,400$) and environmental sanitation ($p = 0.003$, $OR = 8,778$) with the incidence of stunting in infants. It is hoped that the puskesmas staff will work together with the community tokok through posyandu activities and cadres through toddlers posyandu to overcome the risk factors for stunting in toddlers.

Keywords: Stunting, Nutrition Status, Antenatal Care Visit, Environmental Sanitation

1. Introduction

The nutritional status of infants and toddlers is an indicator of the health and welfare of the people. The state of good and healthy nutrition in the toddler years is an important foundation for his health in the future. Malnutrition that occurs in toddlers can result in disruption of their growth and development. At this age the need for energy, protein, vitamins and minerals is quite high, so it needs serious attention from parents regarding food intake. Toddler age is an age that is very vulnerable to nutritional problems, including prone to stunting (UNICEF, 2012).

Short toddlers (stunting) can be seen if a toddler has measured his length or height, then compared with the standard, and the results are below normal. Short toddlers are toddlers with nutritional status based on length and height according to age when compared to the 2005 WHO standard, the Z-Score value is less than -2SD and categorized as very short if the Z-Score value is less than -3SD (Ministry of Health, 2016).

Stunting is a condition of failure to thrive in children under five as a result of chronic malnutrition so that the child is too short for his age. Malnutrition occurs since the baby is in the womb and in the early days after the baby is born, however, the condition of stunting only appears after the baby is 2 years old (National Team for the Acceleration of Poverty Reduction / TNPPK), 2017).

Stunting can start in the womb. The nutritional condition of pregnant women, even before pregnancy will determine fetal growth. Undernourished pregnant women are at risk of giving birth to babies with low birth weight, and this is a major cause of stunting. After birth, babies who are not properly breastfed will be at risk of suffering from various diseases due to insufficient and unhygienic diets (National Program for Community Empowerment, 2016).

Some of the factors that influence the occurrence of stunting in the community include direct and indirect causes. Direct causes include food intake, infectious diseases, birth weight, and genetics. While indirect causes include family food availability, nutritional parenting, maternal education, maternal knowledge. , the number of families, family income, environmental sanitation and utilization of health services. The quality of nutrient intake and exposure to infections are the main factors causing growth disorders in children under five (Almatsier, 2011).

In addition, the factors that cause stunting are multidimensional factors, including poor nutrition care practices, including a lack of knowledge of mothers about health and nutrition before and during pregnancy and after delivery (PERSAGI / Indonesian Nutritionist Association, 2018).

Antenatal care is the care given to pregnant women, during pregnancy periodically, followed by efforts to correct any abnormalities found in accordance with prescribed antenatal care guidelines. ANC (Antenatal Care) services are provided to pregnant women in accordance with

the MCH service guidelines, namely antenatal care examinations at least 4 times during pregnancy with the provision of 1 time in the first period, 1 time in the second period, and 2 times in the third period (MOH RI, 2013).

Pregnancy examination aims to identify or identify problems that arise during pregnancy, so that health during pregnancy can be maintained and the most important thing is that the mother is in the best possible state at the time of delivery. The relationship between the frequency of antenatal care and the incidence of LBW is that the less frequency of antenatal care, the higher the risk of getting LBW by 1.5–5 times. Low birth weight has the potential to become stunting (Anonymous, 2013).

Stunting prevalence data for children under five collected by the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in Southeast Asia / South-East Asia Regional (SEAR). The average prevalence of stunting under five in Indonesia in 2005-2017 is 36.4% (Data and Information Center, Ministry of Health of the Republic of Indonesia 2018).

The incidence of stunting (short) under five is a major nutritional problem facing Indonesia. Based on Nutritional Status Monitoring (PSG) data for the last three years, stunting has the highest prevalence compared to other nutritional problems such as malnutrition, thinness, and obesity. The prevalence of stunting under five has increased from 2016, namely (27,5%) to (29,6%) in 2017. The prevalence of stunting is higher than the prevalence rate of malnutrition and malnutrition of (10,2%) (RIKESDAS, 2018).

In Riau Province, the nutritional status of children under five TB / U shows that children are short (very short and short) by (27,4%) (RIKESDAS, 2018). A preliminary study conducted by researchers at the Health Office of the Kuantan Singingi Regency in 2018, obtained data on 1584 toddlers with stunting in 25 Puskesmas in Kuantan Singingi Regency. In 2019 (January - August) in Kuantan Singingi Regency, there were 402 children under five with stunting, where the Teluk Kuantan Puskesmas had the most stunting children out of 24 other Puskesmas, there were 100 stunting children under five. Based on these data, it can be concluded that there are still

many toddlers with stunting conditions in Kuantan Singingi Regency, especially in the working area of the Teluk Kuatan Health Center.

2.DISCUSSION

Based on the results of the analysis of the relationship between nutritional status and the incidence of stunting, it was obtained from 3 respondents who experienced malnutrition, there were 2 people (66,7%) who experienced stunting and of the 14 respondents who experienced malnutrition there were 10 people (71,4%).) respondents are stunted. The results of statistical tests obtained p value = 0,002 ($p < 0,05$), it can be concluded that there is a significant relationship between nutritional status and the incidence of stunting in children under five.

According to the theory, nutritional status is one of the factors that can cause stunting. Nutritional status is a condition caused by a balance status between the amount of nutrient intake or the amount of food (nutrients) consumed and the amount of nutrients needed by the body, which is a reflection of the measure of the fulfillment of nutritional needs which can be measured in part by anthropometry or biochemistry clinically. (Ministry of Health RI, 2012). In developing countries, the nutritional status of pre-pregnant women and pregnant women will have an impact on the birth of Intrauterine Growth Restriction (IUGR) children. This condition is almost partly related to the nutritional status of mothers, pre-pregnant women who are not in accordance with their height or are short, and weight gain is not suitable as they should be (Kemenko Kesra, 2012).

Based on the results of research conducted by Margawati (2018) regarding maternal knowledge, diet and nutritional status in stunting toddlers aged 1-5 years, it is stated that 2,8% of toddlers are very thin, 11,1% thin, 80,6% normal and 5,6% fat. The results of statistical tests obtained p value 0,015, it can be concluded that there is a significant relationship between nutritional status and the incidence of stunting in children under five.

Researchers assume that one of the factors that can cause stunting is nutritional status. In this study, there is a relationship between nutritional status and the incidence of stunting. In the field, some mothers of toddlers provide malnutrition to their children, the mothers of these toddlers do not pay attention to their diet and nutritional intake. Malnutrition in children can affect children's brain development and experience stunting.

Based on the results of the analysis of the relationship between Antenatal Care visits and the incidence of stunting, it was obtained from 19 respondents whose Antenatal Care visits were insufficient, there were 14 people (73,7%) who experienced stunting and of the 46 respondents whose Antenatal Care visits were good there were 4 people (8,7%) respondents experienced stunting. The results of statistical tests obtained p value = 0,012 ($p < 0,05$), it can be concluded that there is a significant relationship between ANC visits and the incidence of stunting in children under five. The results of the analysis also showed that the OR value = 9,400, meaning that mothers whose antenatal care visits were not good had a 9,400 times greater chance of experiencing stunting compared to mothers whose antenatal care visits were good.

According to theory, one of the factors that can influence the incidence of stunting is Antenatal Care visits. Antenatal Care Visit is a visit of a pregnant woman to a midwife or doctor as early as possible since she is pregnant to keep the mother healthy during pregnancy, childbirth and postpartum and to keep the baby born healthy, monitor the possibility of pregnancy risks, and plan optimal management of pregnancy.

Antenatal care visits can affect the incidence of stunting. In the field, most mothers under five consider that they do not need to have an Antenatal Care visit because they think that an Antenatal Care visit does not cause stunting. Researchers provide knowledge to mothers who are pregnant to routinely conduct Antenatal Care visits during pregnancy at the Puskesmas to prevent babies born from not being stunted.

This research is in line with the results of research conducted by Amini Aulia (2016) on "The Relationship between Antenatal Care Visits (ANC) and the incidence of stunting in toddlers aged 12-59 months in North Lombok Regency, NTB Province" where the results of her research on

Antenatal Care visits with the incidence of stunting for children aged 12-59 months with an OR value of 2,284 (p-value $0,021 < 0,05$ and 95% CI 1,124-4,639).

Researchers assume that mothers of toddlers consider that they do not need to go to Antenatal Care visits because they think that Antenatal Care visits do not cause stunting of children under five. The connection between Antenatal Care visits and stunting is that if the mother visits Antenatal Care regularly, problems in pregnancy can be detected early, one of which is malnutrition, if you do an Antenatal Care visit, health workers can provide counseling about fulfilling nutrition during pregnancy which can prevent stunting. in the child who will be born.

Based on the results of the analysis of the relationship between environmental sanitation and the incidence of stunting, it was obtained from 2.25 respondents who had environmental sanitation that did not meet the requirements, there were 16 people (64%) who experienced stunting and of the 40 respondents who had environmental sanitation fulfilled the requirements there were 2 people (5%) respondents experienced stunting.

The results of statistical tests obtained p value = 0,003 ($p < 0,05$), it can be concluded that there is a significant relationship between environmental sanitation and the incidence of stunting in children under five. The results of the analysis also showed that the OR = 8,778, meaning that environmental sanitation that did not meet the requirements had a 8,778 times chance of causing stunting compared to environmental sanitation that met the requirements.

According to the theory, environmental factors are very important factors in determining whether or not a child's potential is achieved. A good environment will allow the child's growth and development to run as well as possible according to certain norms. Meanwhile, an unfavorable environment will hamper children's growth and development (Maryunani, 2010).

Most of the normal height of children has good environmental conditions while stunting children have poor environmental conditions. This indicates the need for a mother to pay attention to the child's environmental conditions so that children can explore themselves safely because of the comfortable environment. Such as disposing of garbage in its place, making SPAL at home, cleaning water reservoirs and providing latrines in the house and so on. Because all these things

will damage the environmental conditions where the children will later play and explore themselves (Rahmayana et al, 2014).

This study is in line with Oktavia's research (2016) which shows that there is a significant relationship between toddlers who have poor environmental sanitation and the incidence of stunting in toddlers. This study proves that poor environmental sanitation is related to the incidence of stunting in toddlers.

Another research that is in line with this research is research conducted by Rahayu Beauty (2019) which shows that there is a significant relationship between environmental sanitation and the incidence of stunting with a p value $< 0,05$. Researchers assume that, in this study, there is a relationship between environmental sanitation and the incidence of stunting. Environmental factors are very important factors in determining whether or not a child's potential is achieved, a good environment will allow the child's growth and development to run as well as possible otherwise an unfavorable environment will hinder the child's growth and development.

3. CONCLUSION

- a. Most of the respondents (72,3%) did not experience stunting, (73,8%) with good nutritional status, (70,8%) visited Antenatal Care in the good category and (61,5%) had environmental sanitation that met the requirements.
- b. There is a relationship between nutritional status and the incidence of stunting with p value = 0,002.
- c. There is a relationship between Antenatal Care visits and the incidence of stunting with p value = 0,012 and OR = 9,40.
- d. There is a relationship between environmental sanitation and the incidence of stunting with p value = 0,003 and OR = 8,778.

REFERENCES

- Abbas, A.K., Lichtman, A.H., Pillai, S., (2012). Cellular and Immunology, Seventh Edition, Elsevier Saunders, Philadelphia.
- Aridiyah, F.O., Nina R., & Mury R. (2015). Faktor-faktor yang Mempengaruhi Kejadian Stunting pada Anak Balita di Wilayah Pedesaan dan Perkotaan (The Factors Affecting Stunting on Toddlers in Rural and Urban Areas), e-Jurnal Pustaka Kesehatan, vol. 3 no. 1 Januari.
- Aritonang, I. (2011). Menilai Status Gizi untuk Mencapai Sehat Optimal. Yogyakarta: Leutika.
- Aulia, A. (2016). Hubungan Kunjungan Antenatal Care (ANC) dengan Kejadian Stunting Pada Balita Usia 12-59 Bulan Di Kabupaten Lombok Utara Provinsi NTB. Dari <http://digilib.unisayogya.ac.id/2381/1/Naskah%20Publikasi.pdf>. Diakses pada tanggal 17 Agustus 2019.
- Kementrian Bidang Koordinator Kesejahteraan Rakyat. (2012). Kerangka Kebijakan Gerakan Sadar Gizi Dalam Rangka Seribu Hari Pertama Kehidupan (1000 HPK). Jakarta: Kemenko Kesejahteraan Rakyat.
- Keputusan Menteri Kesehatan Republik Indonesia, (2016). Nomor 1995/Menkes/SK/XII/2010 Tentang Standar Antropometri Penilaian Status Gizi Anak.
- Keputusan Menteri Kesehatan Republik Indonesia, (2018). Buku Kesehatan Ibu dan Anak. Jakarta: Kementerian Kesehatan RI.
- Margawati. (2018). Pengetahuan Ibu, Pola Makan dan Status Gizi Pada Balita Stunting Usia 1 – 5 Tahun. Naskah Publikasi
- Pantaleon, M. G. (2015). Stunting berhubungan dengan perkembangan motoric anak di Kecamatan Sedayu, Bantul, Yogyakarta Stunting associated with children motoric development in Sedayu Sub district, Bantul, Yogyakarta, 10 Maria Goreti Pantaleon, Hamam Hadi, Indria Laksmi Gamayanti Jurnal Gizi Dan Dietetik Indonesia Vol. 3, No. 1, Januari.
- Putra, O. (2015). Pengaruh BBLR Terhadap Kejadian Stunting Pada Anak Usia 12-60 Bulan Di Wilayah Kerja Puskesmas Pauh Pada Tahun 2015, Karya Ilmiah Publikasi, Andalas, Padang, Sumatera Barat.

- Priyono, D.I.P., Sulistiyani, &Ratnawati, L.Y. (2015). Determinan Kejadian Stunting pada Anak Balita Usia 12-36 Bulan di Wilayah Kerja Puskesmas Randu agung Kabupaten Lumajang (Determinants of Stunting among Children Aged 12-36 months in Community Health CenterofRanduagung , Lumajang district), e-Jurnal Pustaka Kesehatan, vol 3 No. 2 Mei.
- Rahayu, B., Darmawan S. (2019). Hubungan Karakteristik Balita, Orang Tua, Higiene dan Sanitasi Lingkungan terhadap Stunting Pada Balita, e-Jurnal Pustaka Kesehatan, Vol 1, No. 1, April.
- Ramayulis.R. (2018).Stop Stunting. Jakarta: Penebar Swadaya Grup.
- Riskesdas Riau. (2018). Pokok-pokok Hasil Riset Kesehatan Dasar Provinsi Riau Rikesdas 2018.Vol.7.
- Setiawan. 2018. Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Anak Usia 24 – 59 Bulan di Puskesmas Suldomulyo. ISSN (5637 – 3671)
- Unicef. (2012). Children in an Urban Word.The State of World’s Children 2012.<http://doi.org/10.1111/j.1365-2008.02198.x>.
- WHO.(2010). Nutrition Landscape Information System (NLIS).Country Profile Indicator.Interpretation Guide.Diaksesmelaluihttp://www.who.int/nutrition/nlis_interpretation_guide.pdf.2012. Maternal and child nutrition. Issue Briefs: Unicef. Oktober 2012.