



DESCRIPTION OF MALNUTRITION AND STUNTING IN PEDIATRIC PATIENT IN SAKURA WARD

Arda Yunita Subardi^{1*}, Yunilasari¹, Nur Nida Nitroh¹, Heru Komarudin², Nindya Rahmanida², Putri Rahmadani²

¹Bekasi Regency General Hospital, Jl. Raya Teuku Umar No.202, Wanasari, Bekasi, Jawa Barat 17520, Indonesia

²Varians Statistik Kesehatan, Jl Cipunagara No 99 Cipayung, Ciputat, Tangerang Selatan, 15411, Indonesia
*arda.ys_0804@gmail.com

ABSTRACT

Malnutrition and stunting conditions in pediatric patients undergoing hospitalization also contribute to the increase in morbidity, mortality, length of treatment, and health costs. This Study aims to identify the characteristics of children with severe malnutrition and stunting in the inpatient ward of RSUD Bekasi in 2023. A descriptive cross-sectional study conducted from January to December 2023 in the Sakura inpatient ward of RSUD Bekasi. Data were collected from a total sample 343 patients based on nutrition records and reports, including patients aged 0-18 years who were hospitalized during the period in 2023. The data were then analysed to determine the proportion of malnutrition and stunting based on age, length of stay, and medical diagnosis. The result show proportion of malnutrition and stunting is highest among patients aged 0-3 years (64.8%), a length of stay ≤ 7 days (64.8%) being far more common than those with a length of stay > 7 days (35.2%). Pediatric patients with malnutrition and stunting are in the medical diagnosis group of gastrointestinal disorders (28.6%), and respiratory disorders (20.9%). This indicates that patients with malnutrition and stunting require more attention improve their nutritional status and address complication to order to reduce the length of hospital stay.

Keywords: children; complication; gastrointestinal; hospital stay; medical

INTRODUCTION

Malnutrition refers to deficiencies in nutrient and/or energy intake (such as wasting, stunting, or underweight), vitamin or mineral deficiencies, overweight, obesity, and non-communicable diseases caused by an unhealth diet. Stunting, a condition related to past nutritional deficiencies, is considered a chronic form of malnutrition (Sutarto et al., 2018). One of the long-term consequences of stunting in children is the disruption of physical, cognitive, and mental development. Children who experience stunting before the age of five are likely to carry these effects into adulthood, and this condition is difficult to overcome. These children are also at higher risk of having offspring with low birth weight. (Apriluana & Fikawati, 2018). According to UNICEF, stunting in young children is a form of malnutrition that can also lead to reduce productivity, increased risk of degenerative diseases, and decreased cognitive abilities. (UNICEF et al., 2020).

Globally, sources such as UNICEF, WHO, and the World Bank Group reported that in 2020, 149.2 million children under five suffered from stunting, while 45.4 million were classified as underweight (UNICEF et al., 2021). According to WHO in 2022, an estimated 149 million children under five are stunted (too short for their age), and 45 million are underweight (too thin for their height) (WHO, 2024). Nearly half of all deaths among children under five are attributed to malnutrition (WHO, 2024). This issue is particularly prevalent in low- and middle-income countries. The developmental, economic, social, and medical impacts of malnutrition are significant and ongoing. In the short term, stunting can lead to delayed

psychomotor and cognitive development, higher healthcare costs, and the financial burden of caring for sick children. Children who experience stunting early in life are more likely to be stunted in adulthood and are at an increased risk of chronic diseases such as obesity, hypertension, kidney disorders, and diabetes mellitus (Stewart et al., 2013).

As per UNICEF's guidance, Indonesia prioritizes specific nutrition interventions over sensitive nutrition programs in addressing stunting. Efforts to tackle stunting in Indonesia need to emphasize the importance of adopting a multi-sectoral approach to improve nutrition. This approach should ensure that specific nutrition interventions address the direct causes of malnutrition, while sensitive nutrition programs tackle the underlying causes (UNICEF, 2018). Hospitals play a crucial role in specific nutrition interventions. The Bekasi District General Hospital (RSUD Bekasi), through the CANTINGMAS innovation as an effort to improve the quality of stunting management, has successfully been implemented with a good rating of over 80%. There are two aspects that require attention and strategic improvement efforts in order to enhance the quality of stunting or risk of stunting management, particularly at RSUD Bekasi: the availability of stunting management guidelines for PPA (healthcare providers) and the implementation of nursing care for stunting patients according to the established standards (Subardi et al., 2024). Monitoring the nutritional status of patients and providing education to their parents at the hospital has shown growth and development. The enthusiasm of the parents has helped improve the condition of patients with malnutrition and severe malnutrition who received nutritional interventions (Soumena, 2024). Therefore, as an early effort in monitoring the nutritional status of children at RSUD Bekasi, this study aims to identify the profile of children with severe malnutrition and stunting in the inpatient ward of RSUD Bekasi in 2023. This research has purpose to determine the profile of characteristics with severe malnutrition and stunting in the inpatient ward of RSUD Bekasi in 2023

METHOD

This study is a descriptive cross-sectional study conducted from January to December 2023 in the Sakura inpatient ward of RSUD Bekasi. The accessible population consists of all pediatric patients admitted to the Sakura Ward of RSUD Bekasi during the period from January to December 2023. This study uses secondary data from the records and reports of the nutrition department at RSUD Bekasi. The inclusion criteria are pediatric patients aged 0-18 years who were hospitalized during the period from January to December 2023. The exclusion criterion is incomplete data. Sampling was carried out using a total sampling method. The data were then processed to determine the proportion of malnutrition and stunting based on age, length of stay, and medical diagnosis. The data were subsequently presented in narrative tables. This study has received ethical approval from the Research Ethics Committee of RSUD Bekasi with approval number: KP.11/8703/RSUD/2024.

RESULT

In this study, the total number of pediatric patients hospitalized in the Sakura Room of the Bekasi District General Hospital during the period of January to December was 343 children. The analysis results are shown in the table below:

Table 1.

Distribution of Proportions of Malnutrition and Stunting Based on Age of Pediatric Patients Hospitalized

Age	f	%
0-3 years old	59	64,8
>3 years old	32	35,2

Table 1 shows that most pediatric patients with malnutrition and stunting are in the age group of 0-3 years, with 59 children (64.8%), while pediatric patients in the age group of >3 years consist of 32 children (35.2%).

Table 2.

Distribution of Proportions of Malnutrition and Stunting Based on Length of Stay of Pediatric Patients Hospitalized

Length of Stay	f	%
≤7 days	59	64,8
>7 days	32	35,2

Table 2 shows that most pediatric patients with malnutrition and stunting are in the length of stay group of ≤7 days (64.8%), while pediatric patients with a length of stay >7 days consist of 32 children (35.2%).

Table 3.

Distribution of Proportions of Malnutrition and Stunting Based on Medical Diagnosis of Pediatric Patients Hospitalized

Medical Diagnosis	f	%
Gastrointestinal	26	28,6
Respiratory	19	20,9
Neurological	11	12,1
Pulmonary Tuberculosis (TB)	11	12,1
TB HIV	8	8,8
Infection	4	4,4
Malnutrition	2	2,2
HIV	2	2,2
Heart	2	2,2
Severe Anemia	1	1,1
Suspected Thalassemia Anemia	1	1,1
Observation of Febrile, DADRS	1	1,1
Others	3	3,3

Table 3 shows that the majority of pediatric patients with malnutrition and stunting are in the medical diagnosis group of gastrointestinal disorders, with 26 children (28.6%), and respiratory disorders, with 19 children (20.9%).

DISCUSSION

Based on the collected data, cases of pediatric patients with malnutrition and stunting are still found in the Sakura Room of the Bekasi District General Hospital. This condition indicates that pediatric patients with malnutrition and stunting at the Bekasi District General Hospital, a tertiary healthcare facility, are still unable to be managed at primary or secondary healthcare facilities, requiring further specialized care. Therefore, an effective and efficient management approach is needed at the tertiary healthcare facility, so that the prognosis of the patients can result in positive outcomes. The prognosis of patients with malnutrition and stunting can result in positive outcomes if detected early to receive quick and accurate nutritional interventions during the treatment process, thus reducing the duration of hospitalization (Komang et al., 2024). According to a study conducted by Yenni et al., (2024) improving the quality of nutritional services can help focus attention on hospital nutritional care, and the results show how rapid interventions can shorten the length of hospital stays. Therefore, both health and

economic outcomes among pediatric inpatients with malnutrition and stunting can be significantly improved through quality improvement interventions focusing on nutrition.

Moreover, according to a study conducted by Sidiartha (2016) pediatric patients who are hospitalized for more than a week have a 3.7 times higher risk of disease severity. This is because malnutrition can increase a child's vulnerability to nosocomial infections, and the situation of being away from the family environment can further reduce the child's appetite. Based on the results of a study conducted at the Bekasi District General Hospital, pediatric patients with malnutrition and stunting with a length of stay ≤ 7 days (64.8%) were far more common than those with a length of stay > 7 days (35.2%), with the highest occurrences found in gastrointestinal and respiratory disease groups. Non-infectious diseases in this study included chronic diseases that require long healing processes. On the other hand, a different result was found in a study Septiani et al., (2019) where in the Kenanga Room of Dr. Hasan Sadikin Hospital in Bandung, pediatric patients with malnutrition and stunting were more commonly found in patients with a length of stay > 7 days and were dominated by kidney, immunological, and infectious diseases. This proves that the type of disease can influence the nutritional status of pediatric patients and their healing process during hospitalization, which can eventually prolong the duration of hospitalization. Longer hospital stays can impose an economic burden due to the potential need for enhanced types of care for pediatric patients with malnutrition and stunting. Research by Beal et al (2018) states that the consequences of stunting in toddlers include increased morbidity and mortality. In stunted children, poor physical and cognitive development hinders the learning process, and there is also an increased risk of both non-communicable and infectious diseases in adulthood due to poor physical development. This, of course, will impact productivity and work ability, which will ultimately affect the economy, making stunting a serious problem that must be addressed immediately.

The limitations of this study include the fact that the researchers did not assess the nutritional status of pediatric patients upon discharge to evaluate their nutritional status at that time, which would provide insights into the management of malnutrition and stunting. This would also be helpful in detecting non-malnourished patients who later developed malnutrition while hospitalized. Additionally, this study did not collect data through biochemical tests, types of care classes, dietary history, or exclusive breastfeeding history, which could have resulted in different findings.

CONCLUSION

The results of this study show that the incidence of pediatric patients with malnutrition and stunting in the Sakura Room of the Bekasi District General Hospital is still quite high. The proportion of malnutrition and stunting is highest among patients aged 0-3 years, with 64.8%, while the proportion of malnutrition and stunting among patients aged > 3 years is 35.2%. Pediatric patients with malnutrition and stunting and a length of stay ≤ 7 days (64.8%) are far more common than those with a length of stay > 7 days (35.2%). Whether in the ≤ 7 days or > 7 days group, the highest proportion of pediatric patients with malnutrition and stunting was found in the gastrointestinal and respiratory disease groups. This indicates that patients with malnutrition and stunting require more attention related to improving their nutritional status, especially those accompanied by infections, by meeting energy needs to accelerate patient recovery, thus reducing the length of hospital stay. Future research should involve monitoring and evaluating the comprehensive management of pediatric patients with malnutrition and stunting according to established standards to avoid complications during hospitalization and

improve the quality of healthcare services.

REFERENCES

- Apriluana, G., & Fikawati, S. (2018). Analisis Faktor-Faktor Risiko terhadap Kejadian Stunting pada Balita (0-59 Bulan) di Negara Berkembang dan Asia Tenggara. *Media Penelitian Dan Pengembangan Kesehatan*, 28(4), 247–256. <https://doi.org/10.22435/mpk.v28i4.472>
- Komang, N., Apriastini, T., Putu, N., Adnyani, T., Selvyani, P. O., Hendra, K., Kedokteran, P., & Ganesha, U. P. (2024). Stunting : Faktor Risiko , Diagnosis , Tatalaksana , Dan. 4(1), 17–23.
- Septiani, S. R., Gurnida, D. A., & Wiramihardja, S. (2019). Gambaran Malnutrisi Pasien Anak di Ruang Rawat Inap Rumah Sakit Hasan Sadikin Bandung Periode Agustus 2019 Description of Paediatric Hospital Malnutrition in Inpatient Clinic. *Jurnal Sains Dan Kesehatan*, 5, 101–106.
- Sidiartha, I. G. L. (2016). Insidens Malnutrisi Rawat Inap pada Anak Balita di Rumah Sakit Umum Pusat Sanglah Denpasar. *Sari Pediatri*, 9(6), 381. <https://doi.org/10.14238/sp9.6.2008.381-85>
- Soumena, R. Z. (2024). Edukasi dan Pemantauan Pasien Gizi Buruk dengan Metode Home Visit Demi Mewujudkan Generasi Bebas Stunting. *Jurnal Pengabdian Masyarakat Kalesang*, 1(January), 1–8.
- Stewart, C. P., Iannotti, L., Dewey, K. G., Michaelsen, K. F., & Onyango, A. W. (2013). Contextualising complementary feeding in a broader framework for stunting prevention. *Maternal and Child Nutrition*, 9(S2), 27–45. <https://doi.org/10.1111/mcn.12088>
- Subardi, A. Y., Rizana, A., Komarudin, H., & Yuliana, R. (2024). Upaya Optimalisasi Program Nasional Penanganan Stunting di RSUD Kabupaten Bekasi. *Jurnal Cahaya Mandalika*.
- Sutarto, Mayasari, D., & Indriyani, R. (2018). Stunting, Faktor Resiko dan Pencegahannya. *Journal of Agromedicine*, 5(1), 540–545. <https://doi.org/10.1201/9781439810590-c34>
- UNICEF. (2018). Nutrition Capacity Assessment in Indonesia. In United Nations Children's Fund (UNICEF) Indonesia.
- UNICEF, WHO, & World Bank Group. (2020). Levels and trends in child malnutrition: Key Findings of the 2020 Edition of the Joint Child Malnutrition Estimates.
- UNICEF, WHO, & World Bank Group. (2021). Levels and trends in child malnutrition: key findings of the 2021 edition of the joint child malnutrition estimates.
- WHO. (2024). Malnutrition.
- Yenni, F., Purba, M. B. R., & Syauqy, A. (2024). The Relationship between Quality of Nutrition Care and Length of Hospitalization: a Literature Review. *Amerta Nutrition*, 8(1), 130–138. <https://doi.org/10.20473/amnt.v8i1.2024.130-138>

