Journal of Health Sciences and Medical Development
VOL. 01, No. 01, p. 12-19
journal.iistr.org/index.php/HESMED
DOI: 10.56741/hesmed.v1i01.31

The Relationship of Parenting Feeding Paterns to The Occurrence of Undernutrition in Children Under Five

[1]Nurhamidah Octarya*, [1]Kurnia Dewiani, [1]Linda Yusanti, [1]Suriyati, [1]Novianti, [1]Linda Yulyani
Corresponding Author: * nrhamidahoctarya@gmail.com
[1] Faculty of Mathematics and Natural Science, University of Bengkulu, Bengkulu, Indonesia

ARTICLE INFO

Article history
Received 22 June 2022
Revised 17 July 2022
Accepted 23 July2022

Keywords
Children Under Five
Toddler
Parenting
Feeding Pattern
Malnutrition

ABSTRACT

Malnutrition can cause growth and development disorders and decreased concentration power. Poor food parenting is one of the factors causing malnutrition. This study aims to determine the relationship between eating parenting and malnutrition in children under five in Bengkulu City. This research design uses a cross-sectional approach. Further, the sample amounted to 53 respondents. The data sampling used a purposive sampling technique. Based on the results of univariate analysis of 53 respondents, there were 40 people (75.5%) who were <35 years old, 23 people (43.4%) who had a high school education, 30 people (56.6%) whose family income was 1.5 million, 37 people (69.8%) who do not work, 34 people (64.2%) who have a history of illness last six months, 49 people (92.5%) have a history of exclusive breastfeeding, 48 people (90.6%) who have a history of complete immunization, the majority of 35 people who have a poor diet (66.0%), the majority who have a Z-Score value is significantly less 34 people (64.2%). The results of the bivariate analysis test, which were reviewed statistically using Chi-Square analysis, showed a p-value = 0.741 > 0.05. It can be concluded that there is no significant relationship between parenting feeding patterns and the incidence of malnutrition in children under five with an OR value of 1.220, which means that mothers who have poor food parenting will be at risk of 1,220 times having toddlers with poor nutritional status.

This is an open-access article under the CC–BY-SA license.

Introduction

Undernutrition status is a nutritional disorder caused by two factors. The primary factor is when a person's food composition is wrong in quality or quantity, resulting from a lack of food supply, poverty, ignorance, bad eating habits or patterns, and so on. While secondary factors include all factors that can cause nutrients not to reach the body's cells after food is consumed [1].

The World Health Organization (WHO) reports that there are 49 million children under five years who experience a lack of healthy food, of which 68% are in Asia and 28% in Africa. Indonesia is one of the countries in the world with a very high incidence of hunger compared to the limit set by WHO. Undernutrition classification according to body weight per age, the figure reaches 17%. In fact, the WHO's threshold for the level of health is 10% [2].

Malnutrition in children under five will have a negative impact on growth, both physically and mentally, and will further hinder learning achievement in children. Other consequences of malnutrition, such as a decrease in endurance which will cause the loss of a healthy life span in toddlers, and will have an even more serious impact on malnutrition, such as the emergence of disability, high morbidity, and accelerated mortality in toddlers [3].Children under five can also be grouped into 2 important groups, specifically certain children aged 1–3 years (infants) and preschool children (3–5 years) [4].

There are several factors related to undernutrition, namely region, parental education, parental age, economy, age and sex of the child). These factors are factors for the occurrence of malnutrition with a p-value <0.05 [5]. In addition, there are several factors that are related to and affect undernourishment in children, one of which is the behavior of withholding food with the level of malnutrition in toddlers, especially how to behave with resistance to food [6]

Feeding parenting is a way or effort to control the amount and type of certain foods, for example maintaining health, nutritional status, preventing or helping to cure disease [1]. One of the things that affect the food consumption of young children is climate and parents. Climate and family are vital elements in toddler feeding parenting. What food sources he likes is a picture of the climate in which the toddler is located. A climate and family that provide an overview of good eating parenting will also create good results for toddlers [7]

According to data from the Bengkulu Provincial Health Office's annual report in 2020, the status of children under five who experienced malnutrition was 173 cases (2%) [8]. Data from the Bengkulu City Health Office in 2020 showed that there are five primary health centers that have the highest cases of malnutrition, the first is in the Beringin Raya Primary Health Center with 17 cases (1.5%), the second is Sawah Lebar Primary Health Center with 10 cases

(1.3%), the third Sukamerindu Primary Health Centers with 10 cases (0.8 %), the fourth Kampung Bali Primary Health Center with totaled 10 cases (1.6%), the fifth Penurunan Primary Health Center with 4 cases (0.5% [9]).

The problem raised in this study is the number of occurrences of undernutrition in children under five in the city of Bengkulu compared to other areas, so it is necessary to study the causes of undernutrition in children under five, one of which is feeding parenting to optimize the growth of children under five, which is monitored through the nutritional status of children under five. Therefore, the title of this research is "The Relationship between feeding parenting and undernutrition Incidence in children under five in Bengkulu City".

Literature Review

Feeding parenting plays an important role in the success of fulfilling balanced nutrition for children under five. Incorrect or inadequate feeding patterns will cause nutritional fulfillment in children under five to be not optimal and will have an impact on the nutritional status of these toddlers. There is a relationship between feeding parenting and the nutritional status of children under five in the Work Area of the Bulang Primary Health Center, Batam City (p-value 0.009 <0.05) [10]. The nutritional status of children under five who are undernutrition as many as 34 people (77.3%) have bad feeding parenting compared to respondents with good eating parenting above 15 people (41.7%). The statistical test shows that there is a relationship between feeding parenting and the incidence of undernutrition (p <0.05) [11].

The study in other research shows that of the 33 mothers who have children under five with poor nutritional status, most of the mothers (87.9%) are on a poor diet, while in the group of mothers who have toddlers with good nutritional status. Most of them also apply a poor feeding pattern (81.8%). The OR value is 1.6, which means that mothers who apply poor feeding parenting have a 1.6 times risk of having a toddler with less nutritional status than mothers who have good eating parenting. The results of the bivariate test obtained a p-value = 0.731, which means that there is no significant relationship between the feeding pattern applied by the mother and the nutritional status of the toddler. But there are other things that cause children to be malnourished, namely the mother's knowledge. Mothers need information on how to choose the right food elements for babies, proper and accurate cooking methods, and how to choose a proper food menu for the family. Therefore, mothers must seek information from both books and health workers [12].

The study conducted in same one shows that of the 33 mothers who have children under five with poor nutritional status, most of the mothers (87.9%) are on a poor diet, while in the group of mothers who have toddlers with good nutritional status. Most of them also

apply a poor feeding pattern (81.8%). The OR value is 1.6, which means that mothers who apply poor feeding parenting have a 1.6 times risk of having a toddler with less nutritional status than mothers who have good eating parenting. The results of the bivariate test obtained a p-value = 0.731, which means that there is no significant relationship between the feeding pattern applied by the mother and the nutritional status of the toddler. But there are other things that cause children to be malnourished, namely the mother's knowledge [12].

Methods

This study used a cross-sectional study design. This study aims to see the relationship between feeding parenting and the incidence of malnutrition in children under five in Bengkulu City. Feeding parenting as the independent variable and malnutrition as the dependent variable were collected at the same time using a questionnaire. The questionnaire used in this study was adopted and modified from Ref. [13] questionnaire. The questionnaire used has also been tested and is declared valid and reliable with a Cronbach alpha value of 0.963. The independent variables were seen from the history of exclusive breastfeeding, preparation of eating menus, food processing, food presentation, and feeding methods which were measured using a questionnaire. While the dependent variable is malnutrition as measured by weight, height, age and interpreted in Z-Score.

This research was conducted in five primary health centers in Bengkulu City, namely Beringin Raya primary health center, Sawah Lebar Primary health center, Sukamerindu primary health center, Kampung Bali primary health center, and Penurunan primary health center from February 2022 to March 2022. There were 53 respondents in this study who met the inclusion criteria (Mothers who have children under five with a history of undernutrition causing deficiencies and are willing to become respondents) and exclusion criteria (children who have hereditary diseases). This research has passed the ethical clearence test with No.073/UN25.1.14/KEPK/2022 from the Faculty of Nursing, University of Jember.

Results

Table 1 shows the characteristic of respondents. From the Table 2 can be seen that all the respondent are mothers who have children under five with undernutrition or extreme undernutrition. This classified based on *Z-score*. Of all the respondents only 35,8% that have higer education degree, not working (housewife), and almost half of the respondents also have income less than IDR 1.500.000. Majority of the respondents apply poor feeding pattern (66,0%), although if seen from breastfeeding history majority of the respondents have complete exclusive breastfeeding practice. Table 2 shows the relationship of parenting feeding patterns to the occurrence of undernutrition in children under five.

Table 1. Characteristic of Respondents

Characteristics		N (53)	%
Age	<35 years old	40	75,5%
	≥35 years old	13	24,5%
Education Level	Elementary School	6	11,3%
	Junior High School	5	9,4%
	Senior High School	23	43,4%
	Higher Education	19	35,8%
Family Income	< IDR 1.500.000	23	43,4%
	≥ IDR 1.500.000	30	56,6%
Employment Status	No	37	69,8%
	Yes	16	30,2%
Diseases History (last six months)	No	19	35,8%
	Yes	34	64,2%
Exclusive Breastfeeding	< 6 months old	4	7,5%
	≥ 6 months old	49	92,5%
Basic immunization	Not Complete	5	9,4%
	Complete	48	90,6%
Feeding Pattern	poor	35	66,0%
	good	18	44,0%
Nutritional Status	Extreme under nutrition	34	64,2%
	Under Nutrition	19	35,8%

Source: Primary data

Table 2. The Relationship between Feeding Pattern and Nutrition Status

Parenting feeding Pattern	Under Nutrition Status (Z-Score)				Total	*p-value*	*OR*
	Extreme Undernutrition status		Undernutrition				
	N	%	N	%			
Poor	23	65,7%	12	34,3%	35	0,741	1,220
Good	11	61,1%	7	38,9%	18		

Source: *primary data*

Table 2 shows that majority of the respondents who have poor feeding pattern are having extreme undernutrition based on Z-score (65,7%). Respondents who applied good parenting feeding pattern in this study also have high number of extreme undernutrition (61,1%). *Chi-Square* analysis shows that there is no relationship between parenting feeding pattern with undernutriton status in children underfive in Bengkulu City.

Discussion

Based on the Z-Score value of children under five in this study, the majority of children under five in this study have very low Z-Score values (extreme undernutrition), from 53 people there are 34 children under-five (64.2%). Based on the mother's education in this study, it is known that most mothers only completed education up to high school. In addition, the majority of respondents in this study are housewives and do not work. In this study, it is known that there are still quite a lot of mothers with family incomes <IDR. 1,500,000 per month. According Ref. [14], education is one of the factors for an individual to have an important role in receiving

or not receiving data and information from other people, and the experience gained. Mother's knowledge is one of the causes of under-nutrition in toddlers because the lack of mother's information causes poor child development and causes malnutrition [14].

The results of the bivariate analysis of the relationship between parenting feeding patterns and the incidence of undernutrition in children under five showed that there was no significant relationship between parenting feeding patterns on the incidence of undernutrition in toddlers in Bengkulu City. Although the OR value is 1.220 which means that mothers who applied poor feeding patterns will be at risk 1.220 times of having children under five with undernutrition.

This study is in line with Ref. [12] that there is no significant relationship between the eating pattern applied by the mother and the nutritional status of children under five. But there are other things that cause children to be undernutrition, such as the mother's knowledge. The lack of information/knowledge of the mother causes poor child development and malnutrition in her child. Mothers need information on how to choose the right food for babies, how to cook properly and accurately, and how to choose a proper food menu for the family. Therefore, mothers must seek information from both books and health workers [12].

This study is also in line with Ref. [15] that feeding parenting does not affect the nutritional status of children under five. The results showed that 70% of children under five had normal nutritional status from mothers who applied a controlled feeding pattern and 15% of children under five had poor nutritional status with the same eating pattern. This can be caused by other factors, namely specific diseases that cannot be transmitted and infections that cannot be overcome, lack of food security in the family, for example, the lack of ability to meet the food needs of all relatives, both in quantity and nutrition [15]. In addition, according to Ref. [16] this can also happen because children have a difficult habit of eating and only choose certain foods that they like.

Conclusion

Based on the results of this study, it can be concluded that there is no significant relationship between parenting feeding patterns and the incidence of undernutrition in children under five.

Conflict of Interest

There is no conflict of interest in this study.

References

[1] Riamah and D. Erlita, "Hubungan Pola Makan dengan Status Gizi Pada Anak Usia 3-5 Tahun," *Ensiklopedia of Journal*, vol. 2, no. 2, pp. 203–209, 2020, [Online]. Available: http://jurnal.ensiklopediaku.org

[2] WHO, "Level and Trends In Child Malnutrition," New York, 2019.

[3] I. P. R. Agustiawan and J. Pitoyo, "Hubungan Frekuensi Kunjungan ke Posyandu dengan Status Gizi Balita di Posyandu," vol. 2, no. 1, pp. 9–16, 2020, [Online]. Available: https://www.ojsstikesbanyuwangi.com/index.php/PHJ

[4] D. D. Pritasari and Lestari NT, *Bahan Ajar Giz, Gizi dalam Daur Kehidupan*, 1st ed. 2017.

[5] S. M. J. Rahman *et al.*, "Investigate the risk factors of stunting, wasting, and underweight among under-five Bangladeshi children and its prediction based on machine learning approach," *PLoS ONE*, vol. 16, no. 6 June 2021, Jun. 2021, doi: 10.1371/journal.pone.0253172.

[6] J. Kurnia, Marlenywati, and A. Ridha, "Faktor-Faktor Risiko yang Berhubungan dengan Kejadian Gizi Buruk dan Kurang Pada Balita," *Jurnal Kesehatan Masyarakat Khatulistiwa*, 2019, [Online]. Available: http://openjurnal.unmuhpnk.ac.id/index.php?journal=jkmk&page=index

[7] R. Damayanti, "Pengaruh Pengetahuan Ibu tentang Gizi dan Pola Pemberian Makan Terhadap Kejadian Gizi Kurang pada Balita di Wilayah Kerja Puskesmas Gajahan Surakata," 2017.

[8] Dinas Kesehatan Provinsi Bengkulu, "Laporan Tahunan Dinas Kesehatan Provinsi Bengkulu," Bengkulu, 2020.

[9] Dinas Kesehatan, "Profil Kesehatan Kota Bengkulu," Bengkulu, 2020.

[10] M. R. Putri, "Hubungan Pola Asuh Orangtua dengan Status Gizi pada Balita di Wilayah Kerja Puskesmas Bulang Kota Batam," *Jurnal Bidan Komunitas*, vol. 11, no. 2, pp. 107–116, [Online]. Available: http://ejournal.helvetia.ac.id/index.php/jbk

[11] T. Handayani, A. Nurfianti, P. Studi Ilmu Keperawatan, F. Kedokteran, U. Tanjungpura, and J. H. Hadari Nawawi, "Hubungan Antara Pola Asuh Orang Tua terhadap Status Gizi Balita di UPK Puskesmas Siantan Hulu."

[12] K. Pibriyanti, "Faktor yang Berhubungan dengan Kejadian Gizi Kurang pada Anak Balita," *Jurnal Kesehatan Global*, vol. 5, no. 1, pp. 10–18, 2022.

[13] N. W. S. Asih, "Gambaran Pola Asuh terhadap Status Gizi Balita di Desa Tangkup, Kecamatan Sidemen, Kabupaten Karangasem," Fakultas Kedokteran Universitas Udayana, 2015. Accessed: Jul. 23, 2022. [Online]. Available: https://sukarsa.unud.ac.id/repositori/skripsi?nim=0902005161

[14] B. Irianti, "Faktor- Faktor yang Menyebabkan Status Gizi Kurang pada Balita di Wilayah Kerja Puskesmas Sail Pekanbaru Tahun 2016," *Midwifery Journal: Jurnal Kebidanan UM. Mataram*, vol. 3, no. 2, p. 95, Sep. 2018, doi: 10.31764/mj.v3i2.478.

[15] L. R. Anggono and A. Nurrahima, "Hubungan Pola Asuh Makan dengan Status Gizi Anak Balita dari Ibu Pengrajin Bambu di Desa Kebonsari Kecamatan Borobudur Kabupaten Magelang," *Jurnal Keperawatan Komunitas*, vol. 3, no. 1, pp. 1–6, 2015.

[16] A. Sukandar, "Hubungan Pola Asuh dan Tingkat Pengetahuan Ibu Tentang Pedoman Umum Gizi Seimbang dengan Status Gizi Balita di Desa Gumpang Kec. Kartasura," 2020.

Authors



Nurhamidah Octarya is a final year student of Diploma 3 of midwifery program of University of Bengkulu. Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia. (email: nrhamidahoctarya@gmail.com).



Kurnia Dewiani is a lecturer of Midwifery Program, Faculty of Mathematics and Natural Science, University of Bengkulu, Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia. She is also works as Head of Quality Assurance Unit, Faculty of Mathematics and Natural Sciences (email: kdewiani@unib.ac.id).



Linda Yusanti is a lecturer of Midwifery Program, Faculty of Mathematics and Natural Science, University of Bengkulu, Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia (email: lyusanti@unib.ac.id).



Suriyati is a lecturer of Midwifery Program, Faculty of Mathematics and Natural Science, University of Bengkulu, Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia (email: suriyati@unib.ac.id).



Novianti is a lecturer of Midwifery Program, Faculty of Mathematics and Natural Science, University of Bengkulu, Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia (email: novianti@unib.ac.id).



Linda Yulyani is a lecturer of Midwifery Program, Faculty of Mathematics and Natural Science, University of Bengkulu, Jalan Indragiri No 4, Padang Harapan, Bengkulu 38225, Indonesia (email: linda.yulyani13@unib.ac.id).