

CORRELATION OF PARENTING STYLE AND INFECTIOUS DISEASE TOWARDS TODDLERS NUTRITIONAL STATUS IN SCAVENGER FAMILIES
Hubungan Pola Asuh dan Penyakit Infeksi dengan Status Gizi Anak Balita Pada Keluarga Pemulung

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ABSTRACT

Background: Toddler (below five years old children) period is imperative; it is also a critical period which determines their future. The data in 2013 revealed that 17% or 98 million children in the developing countries underwent nutrition deficiency. **Purpose:** The objective of the research was to discover the correlation of parenting style and infectious diseases towards nutrition status of scavengers' children at the Terjun Landfill, Medan Marelan Sub-district. **Methods:** The research undertaken a survey method with cross sectional design. The samples were 84 toddlers at Lingkungan I, Paya Pasir Village. The variables were parenting style and infectious diseases. The data were analyzed by using chi square test. **Results:** The result of the research showed that 45 children had good nutritional status, based on BB/U (Weight/Age), TB/U (Height/Age), and BB/TB (Weight/Height). Parenting style was assessed from three sub-variables: feeding pattern, health practice, and sanitation practice. It showed that the majority of the women had well parenting style, and there were two infectious diseases: diarrhea and ISPA (Acute Respiratory Tract Infection). The result of chi square test showed that there was no correlation between parenting style and toddler's nutritional status, but there was the correlation between infectious diseases and their nutritional status ($p=0.002$). It is recommended for women to not take their children to a landfill since children are prone to infection.

Keywords: *Balita, Care Pattern, Infectious Disease, Nutritional Status, Scavengers*

ABSTRAK

Latar Belakang: Masa balita merupakan masa yang sangat penting dari seluruh kehidupan manusia dan merupakan masa kritis yang menentukan kualitas hidup anak selanjutnya. Data menyebutkan bahwa pada tahun 2013, 17% atau 98 juta anak balita di negara berkembang mengalami kurang gizi. **Tujuan:** penelitian ini bertujuan untuk mengetahui hubungan pola asuh dan penyakit infeksi dengan status gizi balita pada keluarga pemulung di kawasan TPA sampah Terjun kelurahan Terjun kecamatan Medan Marelan. **Metode:** jenis penelitian ini adalah penelitian survei dengan desain cross sectional. Sampel dalam penelitian ini berjumlah 84 balita yang tinggal di lingkungan 1 kelurahan paya pasir. Variabel yang digunakan adalah pola asuh dan penyakit infeksi. Pengolahan data menggunakan uji *chi-square*. **Hasil:** hasil penelitian menunjukkan bahwa status gizi anak balita berdasarkan berat badan menurut umur (BB/U) sebanyak 69 orang (82,1%) berdasarkan tinggi badan menurut umur (TB/U) mayoritas normal yaitu sebanyak 64 orang (76,2%) dan berdasarkan berat badan menurut tinggi badan (BB/TB) mayoritas juga normal yaitu sebanyak 59 orang (70,3%). Hasil analisis terdapat hubungan pola asuh dalam hal pemberian makan berhubungan dengan status gizi balita berdasarkan berat badan menurut umur (BB/U) dengan $p=0,003$. Penyakit infeksi berhubungan dengan status gizi berdasarkan berat badan menurut umur (BB/U) dengan $p=0,003$ dan berdasarkan berat badan menurut tinggi badan (BB/TB) $p=0,023$. Disarankan kepada masyarakat memberikan makanan bergizi seimbang untuk anaknya agar tumbuh kembang anak optimal.

Kata Kunci: *Balita, Pola Asuh, Penyakit Infeksi, Status Gizi, Pemulung*

INTRODUCTION

The period of fastest growth and development in life occurs in preschooler age. Compared to the next age stage, it is also the most rapid period in terms of growth and development. Djaeni (2000) reveals that toddlers are the hope of the nation. Delays in giving attention, maintaining inadequate nutrition for them will reduce their potential value as a resource for community development and the national economy.

Data states that in 2013, 17% or 98 million toddlers in developing countries were malnourished. The highest prevalence is in South Asia at 30%, followed by West Africa at 21%, Oceania and East Africa at 19%, Southeast Asia and Central Africa at 16%, and South Africa at 12% (WHO, 2014).

Indonesia is also experiencing the problem of malnutrition in toddlers. The results of Basic Health Research in 2013 stated that nutritional disorders that often occur are the low nutritional status of toddlers. The prevalence of poor nutrition based on body weight according to age (W/W) is 13.5%, malnutrition is 5.7%. Furthermore, based on height according to age (H/A), poor nutrition leads to short 19.2%, very short 18%, thin (W/H) 6.8%, and very thin 5.3% (Ministry of Health, 2013).

The data also shows that the prevalence of anemia in children under five in Indonesia is quite high. Syaiful (2013) showed that the prevalence of anemia in children under five in Yogyakarta was 42.78%, while Apriyanti (2014) stated that the prevalence of anemia in children between 6 months to 59 months in Yogyakarta and Bantul Public Health Center was 32.2%.

The problem of malnutrition in toddlers remains high in North Sumatra. Data from the 2015 health profile has shown that malnutrition is a major nutritional problem in North Sumatra with a prevalence of 14.1%. Weighing data from 1,218,718 toddlers, there are 14,869 toddlers (1.22%) whose weight is below the red line (Indonesia's Ministry of Health, 2016).

Some of the key aspects of parenting style are personal hygiene and environmental sanitation. Those are factor that greatly affects the process of child development. The role of parents in helping the process of growth and development of children is to establish personal hygiene and environmental sanitation.

Indonesia, as a developing country with a population of 254.9 million people, remains experiencing problems related to environmental health that occur in big cities, one of which is in the Medan City.

One of the health problems in Medan City is related to waste. It is identified as one of the factors causing negative externalities to urban activities. In almost every place in Indonesia, the waste disposal system is undertaken by open dumping: waste is dumped or simply placed in a field or ravine without any further processing. Such disposal systems cause air, soil, and water pollution in addition to the land pollution which can also be a breeding ground for infectious disease agents. Human interaction with the environment is a natural process and taken place since the human was born until he died. This is since humans need the carrying capacity of environmental elements for their survival (Slamet, 2013).

The results of a preliminary survey conducted by researchers in the landfill area in Paya Pasir Village show that residents pay less attention to personal hygiene and sanitation patterns. This is exacerbated by the condition of the housing environment which is densely populated, slums, and limited clean water due to leachate infiltration from the waste landfill into residents' wells. Residents live in densely populated houses with their families with makeshift houses. Residents who work as scavengers also usually take their garbage home to be sorted and piled around the house, thus making the home environment unkempt. Poor home environmental conditions and habits that do not maintain personal hygiene can increase the risk of disease transmission.

The scavengers also often burn garbage so it will be at high risk for the occurrence of ARI. On the other hand, the area is prone to flooding, when it rains, there will be an inundated area. Children will take advantage of the situation to play and swim in the flooded area so it will be at risk for skin diseases. Disposal of household waste into ditches flows, which will risk the occurrence of infectious diseases such as DHF and diarrhea.

In addition to environmental sanitation problems that can cause infectious diseases, in general, the population in these neighborhoods has low education. A low level of education most likely determines or influences their way

of thinking which in turn will result in parenting style.

METHOD

This research used analytic observational with cross sectional design. This research was conducted in the area of the Waterfall Final Disposal Site (TPA), Paya Pasir Sub-district, Medan Marelan Sub-district in January 2018-October 2018. The sample in this research amounted to 84 toddlers from scavenger families with total population sampling. Data on the characteristics of the respondents (age, last education, and ethnicity) were obtained through interviews using a questionnaire.

Data on nutritional status were obtained by measuring the weight and height of toddlers. Measurements used scales and height measuring instruments, then adjusted in the 2010 Anthropometric Standards table set by the Indonesian Ministry of Health. Data on parenting and infectious diseases were obtained through a questionnaire that had been prepared by the researcher (Heriana, 2015).

The questionnaire test was conducted at the TPA STM Hilir Deli Serdang Sub-District, the number of respondents was 20 people. This location was chosen because it has almost the same characteristics as the Waterfall landfill, Medan Marelan District. A total of 31 questions were given to respondents, and all of

the questions were valid, provided that r count > r table.

It measured using the indicators of BB/U, TB/U and BB/TB, based on the standard from the Ministry of Health in 2010, the measurement results obtained were then interpreted using the WHO-Anthro 2005 software. For BW/U divided into overweight, normal, and undernourished less. For TB/U, it was divided into Short, Normal, and Tall while for BB/Tb, it was divided into Thin, Fat, and Normal.

Parenting questions were divided into 3 domains, namely feeding patterns, hygiene practices and health practices. The feeding pattern was divided into 5, based on age, namely 0-6 months, 7-12 months, 13-24 months, 25-36 months, and >36 months. Environmental hygiene and sanitation practices were not divided by age.

Questions about infectious diseases include 2 things, namely diarrhea and ARI. Nutritional status was divided into 3, namely, based on the index of body weight according to age (W/W), height according to age (H/A) and weight according to height (W/H) using the 2010 Ministry of Health standard.

RESULT

1. Relationship between Parenting Patterns and Nutritional Status of Toddlers

Table 1. Relationship between Feeding Practices and Nutritional Status by Weight/Age

Practical of Feed Given	Weight based on Age					Total		p	
	weih	Normal	More	%	n	%	n		
Poor	n	%	n	45,5	2	18,2	11	100	0,001
	4	36,4	5	87,7	7	6,8	73	100	

Table 1 showed that p = 0.001, this means that there was a relationship between feeding

patterns and body weight according to age (W/A).

2. Relationship between Infectious Diseases and Nutritional Status of Toddlers

Table 2. Relationship of Infectious Diseases with Nutritional Status Based on Weight by Age (W/W)

Infection Disease	Weight based on Age					Total		p	
	Less	Normal	More	%	n	%	n		
Yes	n	%	n	68,4	4	10,5	38	100	0,003
	8	21,1	26	93,5	3	6,5	46	100	

Table 2 showed that there was a relationship between infectious diseases and the nutritional status of children under five, especially in the index for measuring body weight according to age (W/A) with $p = 0.003$. It was found that from 38 children under five who experienced infectious diarrheal diseases and ARI (45.5%) there were 8 people (21.1%) who experienced

malnutrition, 26 people (68.4%) were normal and 4 people (10.5%) over nutrition, while for toddlers who did not experience infectious diseases. There were 46 people (54.4%) as many as 43 toddlers (93.5%) whose nutritional status was normal as seen from the weight index according to age (W/U).

Table 3. Relationship of Infectious Diseases with Nutritional Status Based on Weight According to Body Height

Infection Disease	Weight based on Body Height					Total		p	
	Thin n	Normal %	Fat n	%	N	%	n		
Yes	3	7,9	21	82,6	7	15,2	46	100	0,023

Table 3 showed that the p value = 0.023. It was found that from 38 children under five who had infectious diarrheal diseases and ARI (45.5%). There were 3 people (7.9%) who were thin, 21 people (55.3%) normal, and 14 people (36.8%) obese,

while for toddlers who did not experience infectious diseases. There were 46 people (54.4%) as many as 38 toddlers (82.6%) whose nutritional status was normal, 1 person (2.2%) was thin, and there were 7 people (15, 2%) fat).

DISCUSSION

1. Relationship between Parenting Pattern and Nutritional Status of Toddlers in Scavenger Family.

Parenting is the ability of families and communities to provide time, attention and family support for children so that they can grow and develop well physically and mentally. Good care or parenting patterns of mothers for children is very important, because it will affect the process of growth and development of toddlers.

A good feeding pattern will affect good food intake, where food intake is related to nutritional status. The pattern of feeding is related to nutritional status based on body weight for age because this study used a cross sectional design so that when measuring body weight coincided with filling out questionnaires for parenting variables. Weight by age only looks at the current nutritional status without looking at the history of previous nutritional status. Good parenting can be a support for nutritional status. The results of this study showed that there were no infants aged 0-6 months who were malnourished, this was apparently influenced by good feeding from the mother, infants aged 0-6 months received breast milk and colostrum. Toddlers aged 7-12 months as a whole are given filter porridge with a mixture of vegetables and fruit,

in this case it only explains how to give it without looking at the amount and frequency of eating this can affect the nutritional status of toddlers at that age, and there is 1 toddler who have poor nutritional status.

Research from Fazrina (2016) states that there is no relationship between maternal parenting and the nutritional status of children under five in the Seruway plantation village, Seruway district, Aceh Tamiang district. Parenting patterns of mothers with nutritional status of toddler (W/A and H/A) in Seruway Plantation Village. This is in line with Pratiwi's research (2017) which states that there is no relationship between psychosocial parenting and nutritional status in the working area of the starfruit health center. This is contrary to the opinion of Engle (1997), good psychosocial stimulation is related to children's health so that it can indirectly affect the nutritional status of children. The quality of this psychosocial parenting pattern itself depends on the circumstances of the family, community and environment. However, nutritional status is not solely influenced by psychosocial parenting. There are many other factors that affect the nutritional status of children under five such as economic factors, family education, and others.

2. Relationship between Infection Diseases and Nutritional Status of Toddlers in Scavenger Family.

Measurement of nutritional status in this study used 3 categories, namely weight for age, height for age and weight for height. From the 3 measurements, there were 2 of the measurements that were related, namely infection diseases with weight according to age (W/A) $p = 0.003$ and infection diseases with weight according to height (W/H) $p = 0.023$, while height by age was not related $p = 0.778$.

The results of this study are in line with the research conducted by Handayani (2017) which explains that there is a significant relationship between infection diseases and nutritional status in children under five. Simanjuntak's research (2016) found that there was a relationship between health status and nutritional status of children under five in Environment 1 Landfill Area, Paya Pasir District.

Infection diseases in children will affect the child's appetite decrease which is a clinical symptom of a disease, so that the child's food intake will decrease. If a decrease in food intake occurs for a long time and is accompanied by vomiting and diarrhea, the child will also experience a loss of nutrients and fluids. This condition will have an impact on the child's weight loss so that changes in the nutritional status of children who previously had an infection disease have good nutritional status, become undernourished, even if the condition is not managed properly the child will experience malnutrition.

The results of observations in the field, when it rains, floods often occur because the flow of water in the ditch is not smooth. This results in the development of viruses or bacteria that cause infection diseases, such as diarrhea and ARI. These two infection diseases which are generally experienced by toddler in the landfill area plunge. In addition, the habit of residents who often burn garbage can exacerbate ARI experienced by toddler in the environment.

Environmental conditions that are not good will cause the nutritional status of toddler be less. Manampiring's research (2014) showed that there are differences in the picture of the nutritional status of toddler who live around the landfill area with those who do not live in the landfill area. Malnourished and undernourished toddler are more likely to be

found in villages close to the landfill area. Malnutrition status experienced by toddler in the landfill area in the District of Medan Marelan can be caused by a history of infection diseases which is a serious problem that must be faced by the mother herself. The results of the interview concluded that toddlers had experienced ARI. In addition, they also experience infections in the digestive tract that trigger ARI. All diseases that have been experienced by toddlers can also be caused by bacterial factors caused by unhygienic food sources and environmental sanitation. A history of this infection disease can increase the number of toddler suffering from malnutrition, both now and in the future.

CONCLUSION

The results of this study concluded that there was a relationship between feeding patterns and nutritional status of toddler based on weight for age, and infection diseases with nutritional status based on weight for age.

SUGGESTION

It is recommended to the community to provide balanced nutritious food for their children so that the child's growth and development is optimal, because toddlerhood is an important period in life, which if it is not optimal, it will interfere the process of growth and development in the next phase.

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