

Picky eating and stunting in children aged 2 to 5 years in central Lampung, Indonesia

Yesi Nurmalasari¹, Deviani Utami², Brian Perkasa³

^{1,2,3}Study Program of Bachelor of Medicine, Faculty of Medicine-University of Malahayati
Email: yesinurmalasari.dr@gmail.com

Abstract

Background: The difficulty of feeding (picky eater) is the behavior of the child does not want to or refuses to eat, or have difficulty consuming food or drink with the type and quantity of suitable age physiologically (natural and unnatural), ranging from open his mouth without coercion, chew, swallow, until absorbed in digestion are good without coercion and without granting specific medications, vitamins and Picky eater able to be symptoms of child health detriment if the reply was not directly addressed. A picky eater can make a child's nutritional intake shortage that certainly further cause severe Stunting and is easily affected by the disease.

Purpose: Knowing correlation between toddler's picky eater and stunting on toddler in Central Lampung-Indonesia.

Methods: This study used a quantitative approach to the design of case- control. Sampling techniques using the formula slovin. Data analysis using the chi- square test.

Results: The statistical tests for non-parametric bivariate obtained the value of $p = 0.000$ picky eater relationship with stunting which means there is a significant correlation.

Conclusion: There is a relationship between picky eater with a stunting incident in Central Lampung Indonesia. Suggestion for government authority to be pay attention especially in compliance of the nutritional needs to toddler and health education to the parent about an essential nutrition for the toddler

Keywords: Picky eating; Stunting; Nutrition; Toddler

INTRODUCTION

Stunting is a condition of failure to thrive in children under five (toddlers under five years old) as a result of chronic malnutrition so that the child is too short for his age. stunting is based on the Body Length index by Age (BL/A) or Height by Age (BH/A) with a threshold (z-score) between -3 SD to <2 SD. Stunting in infants is influenced by several related factors, including maternal nutritional conditions during pregnancy, infant has a history on insufficient nutrition intake for long time so makes become malnutrition (Endah, Muhammad, & Neti, 2019; Ruaida, 2018; Sepitakasari, 2018).

Difficulty eating (picky eater) is the child's behavior unwilling or refusing to eat, or experiencing abnormalities in consuming food or drink with the type and amount according to age physiologically (natural and natural), which starts from opening his mouth without coercion, chewing, swallowing, until it is absorbed in the digestion

properly without coercion and without the provision of certain vitamins and drugs (Astuti, & Ayuningtias, 2018; Nadya, 2019; Suryadi, & Isnaeni, 2018).

In 2014 the Ministry of Health released a derivative of the 2013 research 2014 Public Health called the Development Index (IPKM). The 2014 IPKM examines the 2013 research data at the City District level for the prevalence of very short and short children under five, as follows, Regency West Lampung 34.60%, Tanggamus 39.66%, South Lampung 43.01%, East Lampung 43.17%. Central Lampung 52.68%, North Lampung 32.44%, Way Kanan 29.80%, Tulang Bawang 40.99%, Pesawaran 50.81%, Pringsewu 36.99%, Mesuji 43.43%, Tulang Bawang Barat 40.08%, Bandar Lampung, 44.59%, and Metro 47.34% (Lampung Provincial Government Health Department, 2016).

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RESEARCH METHODS

This study uses analytic observation methods with research design. study case control Data collection uses primary data and secondary data. Primary data taken included measurements of height (TB / U or PB / U) and using anthropometric tables assessing children's nutritional status. Secondary data were taken through questionnaires filled out by toddler's parent from Mataram Village Ilir, Seputih Sub-District, Surabaya, Central Lampung District. The in population this study

amounted to 463 with the prevalence of toddlers stunting 38.01% or 106, and the way of calculating samples for large sample research The population was calculated using the method Slovin, obtained a sample of 52 respondents for case group and 52 respondents for control group. While the sampling technique with purposive sampling method to all toddlers stunting who suffer from stunting until the required number of samples are met. The measuring instrument used in conducting research is to use 31 standardized questionnaires.

RESEARCH RESULTS**Table 1. Comparing Nutritional Status of Toddlers (N=104)**

Status	Frequency (f)	Percentage (%)
Stunting		
24-36 (months)	19	18.0%
37-48 (months)	20	19.5%
49-59 (months)	13	12.5%
Normal		
24-36 (months)	17	16.5 %
37-48 (months)	21	20.0 %
49-59 (months)	14	13.5 %
Stunting		
Picky Eater	40	38.5 %
Nonrestrictive eater	12	11.5%
Normal		
Picky eater	5	5.0 %
Nonrestrictive eater	47	45.0 %

Table 1 show that a ages, toddlers stunting the largest group of is 37-48 months, and the most normal group of toddlers is 37-38. While the number of stunting toddlers and normal toddlers boys is more than girls.

Yesi Nurmalasari¹, Deviani Utami², Brian Perkasa³

Study Program of Bachelor of Medicine, Faculty of Medicine-University of Malahayati.

Email: yesinurmalasari.dr@gmail.com

Table 2. Relationship Between Nutritional Status and Eating Behaviors

Status	Toddlers				Total N	p-Value	OR (CI 95%)	
	Normal		Stunting					
	n	%	n	%				
Nonrestrictive eater	47	45.0	12	11.5	59	56.5	0,000	31.333
Picky Eater	5	5.0	40	38.5	45	43.5		(10.170- 96.537)
Total	52	50	52	50	104	100		

Table 2 it can be seen that toddlers who stunting are picky eaters. Many toddlers don't stunt. From the above table it can also be seen that there is a significant relationship between the incidence of Stunting with children picky eater because the test results Chi-square show the value of $p = 0,000$ and the test is chi-square said to be related if the value of $p < 0.05$. And the value is odds ratio 31,333, which means that the incidence of stunting is 31 times more risky for picky eaters than toddlers normal. Stunting is more male (39.5%). More prevalence of stunting in men is caused because men are more at risk of experiencing malnutrition due to more protein energy requirements in men (Aramico, Sudargo, & Susilo, 2016). Gender determines the size of energy needs a person's protein (Damayanti, Munuroh, & Farapti, 2017)

DISCUSSION

Characteristics of Respondents

Characteristics according to gender suffer most by as many as 27 toddler compared to women who number 25 toddler. This is consistent with the research of Roscha, et al (2013) who analyzed Riskesdas data stating that toddlers were stunting more male (39.5%) (Roscha, Putri, & Putri, 2013). The more prevalence of stunting in men is due to the fact that men are more at risk for malnutrition due to more energy requirements protein in men (Aramico, Sudargo, & Susilo, 2016; Setiawan, Machmud, & Masrul, 2018; Setyawati, 2018). Gender determines the size of a person's protein energy needs (Damayanti, Munuroh, & Farapti, 2017)

Stunting

From a sample of 52 respondents as a group of cases, and the results obtained showed that toddlers with a standard deviation of -3 elementary to < -2 elementary school with a short status of at most as many as 43 toddler (82, 7%) compared to the standard deviation < -3 with a very short status of 9 toddler (17.3%). This is because, stunting is a form of growth failure (growth faltering) due to accumulation of nutrients insufficiency prolonged ranging from pregnancy until the age of 24 months (Mitra, 2015).

The above results are also in accordance with the tendency of very short and prevalence short of the results of research 2007-2013 showing that, for prevalence very short, it tends to decrease from 18.8% (The Ministry of Health of the Republic of Indonesia, (2018).) to 18.0% (The Ministry of Health of the Republic of Indonesia, 2013), but for short there was a slight increase from 18.05% down to 17.1%, (The Ministry of Health of the Republic of Indonesia, 2013; Trihono, Tjandrarini, Irawati, Utami, & Nurlinawati, 2015).

Picky Eating and Stunting

Based on research showing that toddlers stunting more experience picky eater. Children are investments and hopes for the future of the nation that will become the next generation (Sudarsana, 2018). In the process of life, childhood is a phase in which the process of growth and development, so it is necessary to optimize development. Preschool age is 3 to 6 years, which is the golden period of a child in growth and development (Nurmalita, 2015). In generally, preschoolers are

Yesi Nurmalasari¹, Deviani Utami², Brian Perkasa³

Study Program of Bachelor of Medicine, Faculty of Medicine-University of Malahayati.

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able to feed themselves. Children experience psychological development into toddlers who are more independent, autonomous, and can better express their emotions (Khaironi, 2018; Widodo, 2018).

Picky eater is a condition where the child chooses food or only wants to consume the same food (Afritayeni, 2017). Picky eater occurs due to lack of variety of foods introduced to children. This is a common symptom in preschool children, but if it lasts for a relatively long time can result in a child lacking energy and nutrients (Damayanti, Munuroh, & Farapti, 2017). Complaints about the difficulty of eating become a problem that is often expressed by parents when bringing their children to the doctor. Children with a picky eater limit some foods such as fruit, vegetables and meat (Bachrens, 2018).

Nutritional Status and Eating Behaviors

Relationship between the child a picky eater with the incidence of stunting in Table 2, show that the percentage of children under five suffering stunting and did not experience stunting with child picky eater and not picky eater that is equal to 88.9%: 11.1%. Then from the Chi Square data analysis test with a level 90% confidence obtained p value of 0,000 with a significant level ($p < 0.05$) which indicates that there is a relationship between children picky eater and the incidence of stunting in infants, which means H_0 is rejected.

Stunting in toddlers needs special attention because it can hamper children's physical and mental development (Maywita, 2018). Stunting is associated with increased health and death risks and stunted motor and mental growth and development (Apidianti, & Yunita, 2018). Under five from suffering stunting risk reduction of intellectual abilities, productivity and an increased risk of degenerative diseases in the future. This is because stunting children also tend to be more susceptible to infectious diseases (Ningrum, & Utami, 2017). Based on research, picky eaters occur at 2.5 to 4.5 years of age and are twice as likely to have a low weight stage 4.5 years of age than children who are not picky eaters. In addition, children who are picky eaters (picky eating) for a long time will experience disorders growth marked

by weight and height less or difficulty to increase weight. In addition picky eaters which are marked by intake of limited food variations also cause growth and development Slow (Dubois, Kyvik, Girard, Tokuda, Pérusse, Hjelmberg, & Martin, 2012; Savage, Mitchell, Smiciklas-Wright, Downs, & Birch, 2008).

Picky eater is a behavior where children are very choosy in terms of food, so they do not get a balanced menu which includes vegetables, fruits, rice and only wants to consume sweet foods only (Putri, & Muniroh, 2019). Children with a picky eater for a long time will experience growth disorders which are characterized by underweight and height or difficulty in gaining weight and can cause stunting ((Dubois, Kyvik, Girard, Tokuda, Pérusse, Hjelmberg, & Martin, 2012). Stunting is an assessment of nutritional status based on indicators of body length by age (PB / U) or height by age (TB / U) where the results of anthropometric measurements show Z- Score < -2 SD to -3 SD (short / stunted) and < -3 elementary schools (very short /severe stunted) (The Ministry of Health of the Republic of Indonesia, 2016).

From this study there were respondents who did not experience stunting but often experienced picky eater. This is caused by factors other that can cause picky eaters in infants such as age, breast feeding, regular administration of vitamin A, air pollution, socio - economic, immunization density in the home and parenting patterns of parents. In addition, there were also respondents who experienced stunting but did not experience picky eater. This may occur because of the possibility of parenting parents were good but lacking social skills although toddler stunting, or it could be because they already get complete immunization so that they have immunity.

CONCLUSION

It is known that the frequency distribution of toddlers stunting who experience picky is higher. There is a relationship between picky eater with a stunting incident in Central Lampung Indonesia. Suggestion for government authority to be pay attention especially in compliance of the nutritional needs to toddler and health education to

Yesi Nurmalasari¹, Deviani Utami², Brian Perkasa³

Study Program of Bachelor of Medicine, Faculty of Medicine-University of Malahayati.

Email: yesinurmalasari.dr@gmail.com

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the parent about an essential nutrition for the toddler

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