



An Analysis of Picky Eater Towards Growth and Motor Development at Kebasen District Health Centre

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Abstract

The risk of malnutrition is caused by several factors, one of which is food disruption (picky eaters). Picky Eater can be interpreted as a child with several criteria for eating behavior such as feeling full quickly, eating slowly, fussy and picky about food, lacking response and not enjoying eating. Picky eater's prevalence is quite high in the world, including Indonesia which was as much as 45.5% (2010), an increase of 77% in 2012 and 35.4% in 2016. Picky eater has a risk twice as big as being underweight at age 4, 5 years compared to nonpicky eater. Underweight will interfere motor development, intelligence, learning processes, susceptibility to infection, disease severity and mortality. The aim of the study was to analyze picky eater on toddler's motor growth and development in the Kebasen District Health Center. This type of research was analytic with cross sectional approach. The populations in this study were all toddlers aged 12-59 months who participated enrolled in the Kebasen District of Banyumas Regency, had growth chart and join with Maternal and Child Health Service (Posyandu). The samples were 101 respondents with clustering random sampling technique followed by simple random sampling. The Chi-Square test results show there is a picky eater effect on the growth of toddlers with p-value 0.034 <0.05; and there is the influence of picky eater on motor development p-value 0.024 <0.05. Picky Eater's conclusions affect the growth and development of toddlers' motor.

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INTRODUCTION

The child grows and develops since he was born until he reached adulthood. In infancy, child growth and development occurs very quickly. In order to achieve optimal growth and development, good nutritional support is needed (National Health and Medical Research Council, 2013; Davidson, 2018).

Infancy is an age group that is prone to nutrition and disease. Children under five with malnutrition can cause disturbances in physical and mental growth and development and it results the low quality of human resources (Khoeroh, 2017).

The risk of malnutrition is caused by several factors, including strict diet therapy, picky eaters such as difficulty receiving new foods and very slow chewing movements, limited food intake, nutritional knowledge of the parents and the influence of drugs. Picky Eater can be interpreted as a child with several criteria for eating behavior such as feeling full quickly, eating slowly, fussing and only choosing certain food, lacking response to food, and not enjoying the time - when eating (Cerdasari, et. Al., 2017).

Picky eater is a serious problem. Some studies show the prevalence of picky eater is quite high. Studies in America show that the prevalence of difficult eating in pre-school children related to picky eater include lack of food variation (58.1%), rejection of vegetables, fruit, meat and fish (55.8%), and preference for certain cooking methods of 51.2% (Shim et al., 2011).

According to age, the incidence of picky eater is significantly different at each age in toddlers (1-2 years, 21%; 2-3 years, 48%; 3-4 years, 72%). The incidence of picky eater in pre-school children (4-6 years) and schools (7-10 years) ranges from 60% to 74%. In Taiwan, the proportion of picky eater in both sexes is ale 61% and female 63%). The total percentage of children identified as picky eater is 62% (Chao, 2017).

In the Netherlands in the Cano et al. (2015) study, the highest prevalence of picky eater was at 3 years of age (27.6%) when compared to 1.5 and 6 years of age. The high incidence of picky eater in children was also shown by the study of Xue et al. (2015a) in China that is equal to 59.3%. The prevalence of picky eater also looks quite high in Indonesia, with prevalence of 45.5% (2010), increasing to 77% in 2012 and 35.4% of cases of picky eater in in 2016 (Imawati, 2010; Saraswati, 2012; Kesuma, 2016).

Children with picky eater can have long-term consequences on their growth and development because they get nutrients from limited food. Picky eater has 2 times greater risk of being underweight /malnourished (malnutrition + malnutrition) at 4.5 years of age compared to children who have never been picky eater. Underweight/ malnutrition (malnutrition + malnutrition) will disrupt motor development, intelligence, learning processes, be more susceptible to infection, increase disease severity, and increase mortality (Ekstein et al., 2010)

In 2017, Banyumas Regency was among the top 3 with the highest prevalence of malnutrition, which was 7.1% of cases in Central Java (Ministry of Health, 2017). Nutrition Status Monitoring Data of Bumiayu Regency in 2017, Kebasen District Health Center has various nutritional problems compared to other district exclusive breastfeeding coverage (5.6%), including the top 3 with the highest prevalence in toddlers Protein Energy Deficiency based on Weight/age (18.8%), including the 3 highest (very short + short) toddlers (32.5%) and the top five with the prevalence of wasting / thin (very thin + thin) based on the highest weight/height index (12.8) (District Health Office of Banyumas District, 2017).

Based on the background and limited research on picky eater in children in Indonesia, especially in the Kebasen District Health Center in Banyumas Regency, the researchers were interested in conducting research to analyze whether picky eater had an

effect on toddler motor growth and development in Kebasen District, Banyumas Regency.

METHOD

The type of research was analytic with cross sectional approach through survey methods using instruments in the form of the Child Eating Behavior Questionnaire Questionnaire (CBEQ), Pre-development Screening Questionnaire (Kuesioner Pra Skrining Perkembangan (KPSP)) and observation sheet. The populations in this study were all toddlers aged 12-59 months who were enrolled in the Kebasen Subdistrict of Banyumas Regency, toddlers who had Grow Charts and toddlers who actively came to the Maternal and Child Health Services in amount of 3201 toddlers. The sample size in this study was calculated using the Lameshow formula, which obtained a number of 101 respondents. The sampling technique in this study used cluster random sampling followed by simple random sampling.

The variables in this study consisted of independent variables, namely picky eater, and dependent variables, namely the growth of toddlers, such as; body weight and height of toddlers and motoric development of toddlers including fine motor and gross motoric. This study used bivariate analysis techniques (chi square).

RESULT AND DISCUSSION

The results of the analysis of Picky Eater's analysis of toddler motor growth and development, with a sample of 101 respondents is as follows:

Univariate Analysis

Table 1. Frequency distribution based on the characteristics of infants at Kebasen District Health Centre

Category	Frequency n = 101	Percentage (%)
Sex		
Female	45	44.6
Male	56	55.4
Age		
< 3 y.o (< 36 months)	68	67.3
> 3 y.o (> 36 months)	33	32.7
Picky eater Behaviour		
<i>Picky eater</i>	60	59.4
<i>Non picky eater</i>	41	40.6
Toddler Growth		
Baik	75	74.3
Kurang	13	12.9
Buruk	13	12.9
Motor Development		
Normal	80	79.2
<i>Suspect</i>	21	20.8

Based on Table 1.1 shows that the characteristics of the toddlers of respondents in the Kebasen District Health Center based on the sex of toddlers, there were 45 respondents (44.6%) female and male were 56 respondents (55.4%). Based on age category, 68 respondents (67.3%) were toddlers with age <3 years (<36 months) and 33 respondents (32.7%) aged > 3 years (> 36 months).

It can be seen that from 101 respondents there were 60 respondents (59.4%) with Picky Eater. A total of 41 respondents were toddlers with non picky eater behavior (40.6%). In the table, it was also known that toddlers with good growth were 75 respondents (74.3%). Toddlers with less and worse growth are equal with total 13 respondents (12.9%). In addition, the results of the study revealed that from 101 respondents, 80 respondents were toddlers with normal motor development (79.2%). While the remaining 21 respondents were toddlers whose

motor development was included in the suspect category (20.8%).

Bivariate Analysis

Table 2. Effect of *picky eater* on toddler growth

Picky eater	Toddler's Growth						Total	p-value
	Good		Less		Poor			
	f	%	f	%	f	%	f	%
Non picky eater	36	87.8	2	4.9	3	7.3	41	100,0
Picky eater	39	65	11	18.3	10	16.7	60	100,0
Total	75	74.3	13	12.9	13	12.9	101	100,0

Chi square test analysis results obtained ρ -value = 0.034 $< \alpha$ (0.05) which showed that there was influence of picky eater influence on the growth of toddlers in the working area of Kebasen Health Center.

The data from the study showed that 60 respondents experienced picky eater, of which 39 were respondents with toddler growth in good category (65%). In the growth of toddlers in less categories were 11 respondents (18.3%), as well as toddlers with a poor category were 10 respondents (16.7%). This shows that the majority of toddler respondents experienced picky eater and 21 respondents (35%) experienced underweight. The results of this study had the incidence of picky eater which was not much different from previous studies, namely 54% in China and 52.4% in Indonesia (Xue, et al., 2015a; Hardianti, 2018). In the study of Purwanti, et al. (2016) and Xue, et al. (2015b) stated that picky eater is one of the risks for children to experience malnutrition because picky eater tends to have a low food intake, if the quality of food intake is low then it will have an effect like inadequate certain nutrients which later results in nutritional status. This is also in line with the research conducted by Pratiwi (2015) where underweight is closely related to the provision of poor food intake and low eating quality.

Xue, et al. (2015a) stated that picky eater children experienced weight loss during the first 2 years (weight according to age), where children with picky eater had lower body weight compared to children with non-picky eater and the effect would be increasingly apparent if the child has experienced picky eater with a long duration. It can be said that children with picky eater significantly experience growth disorders.

Most of the respondents in had eating problems (picky eater), this is according to the assumption of researchers because parents of toddlers do not provide food with a variety of patterns so that mothers have difficulty in feeding children. Parents have a big role in providing and determine varieties of food to their children, it can help parents to introduce their children to new foods, and the child will more easily receive various kinds of food (Gugusheff et al., 2013; Nasir & Nasir, 2015; Karaki, et al., 2016). In addition, it was found that the child more often refused to eat so that the mother gave only some types of food that her child liked. In line with Northstone's (2013) study where 75% of picky eater refused to eat in the first year of their life and continued until the age of two, when it is continued, it will be followed by less weight so that the child will experience growth disorders characterized by weight and height lack or difficulty in increasing body weight.

According to Supariasa's theory (2014), that lack of food intake in children can cause children to experience nutritional deficiencies so that children's growth will be hampered and less optimal.

Table 3. The effect of *picky eater* toward toddlers' motor development.

Picky eater	Toddler's Development		Motor Suspect		Total		p-value
	Normal				f	%	
	F	%	f	%	f	%	
Non picky eater	37	90.2	4	9.8	41	10	0.024
Picky eater	43	71.7	17	28.3	60	10	
Total	80	79	21	20.8	101	10	

Chi square test analysis results obtained p -value = 0.024 $< \alpha$ (0.05) which shows the influence of picky eater on toddler motor development at Kebasan District Health Centre. This is in accordance with the findings of Chao and Chang (2017) which states that there is a difference in the quality of the development of picky eater children with non-picky eater children, whereas in picky eater children have lower development quality compared to nonpicky eater children. Children who have problems with their eating habits (picky eater) have the delays of quality development

The data from the study showed that as many as 60 respondents who are picky eater, most of them were toddlers with normal measurement results for their motor development, namely 43 respondents (71.7%). For the category suspect in the largest motoric development of children in children who have picky eater behavior are 17 respondents (28.3%). This is consistent with the results of research from Kusumaningtyas (2016) where most children's motor development with normal categories is 65% motoric development of children with suspect categories of 35%.

Physical development for children involves two important motor coordination areas, namely gross motor and fine motoric (Aghnaita, 2017). Child motor development is

described by activities that are affected by muscle movement, where such activities include contraction and relaxation. In carrying out muscle activity requires energy obtained from adequate and balanced nutrition (Timuda, 2014).

The balance between nutritional intake and activity of respondents is described in nutritional status. Children with picky eater behavior will get nutrients from a limited variety of foods, thus potentially experiencing malnutrition. In accordance with Supariasa's theory (2014), where the nutritional state is influenced by food consumption factors and health factors, one of the food consumption factors is influenced by the child's diet pattern. It is different with in nutritional status of children who have different effects on each child's development, if balanced nutrition is not consumed, fulfilled, the achievement of growth and development of children, especially good motor development will be hampered (Hanani, 2016; Insani, 2015).

CONCLUSION AND SUGGESTION

Based on the results of the research and discussion, it can be concluded that picky eater has a significant influence on the growth and motor development of toddlers in the Kebasan District Health Centre with p value $< \alpha$ (0.05).

The community, especially parents have to pay attention to healthy lifestyle patterns, especially related to factors that can prevent picky eater in efforts to increase prevention of picky eater in children, such as knowing that the problem of difficult eating in children needs to be overcome by variations on food according to nutritional content needed by children so that it can support child development optimally. Banyumas District Health Institution is expected to provide a comprehensive socialization of information to all levels of society related to factors that can cause picky eater, it can be prevented by the importance of regulating diet pattern and making tips to overcome children difficult to eat by making a list of interesting nutritious

foods that can increase the appetite of children. As well as for further researchers are expected to carry out further longitudinal research, where there is a need for the development of further research problems which will later provide more detailed information on the risk factor of the eater so that this research is more useful for the community.

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