

Initial Age of Giving complementary feeding with Weight for Age (W/U) in Children aged 12-24 Months

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Abstract: The purpose of this study was to analyze the relationship between the initial age of complementary feeding and the nutritional status of children aged 12-24 months. This type of research is quantitative with an observational analytic approach with a cross-sectional research design. The study was conducted in the village of Padanglampe, Pangkep Regency. The population is all young children aged 12-24 months, the sample is 70 people, and the total sampling technique is used. Nutritional status data were collected by measuring body weight using a scale and anthropometry using Microtoice to measure TB. The data were processed using the SPSS program and analyzed univariately to determine the frequency distribution, and bivariate analysis using the chi-square test. The results of the bivariate analysis showed that there was no effect between the initial age of complementary feeding and the nutritional status of children under five with a p-value = of 1,000. The research suggests that mothers under five should pay attention to the beginning of giving complementary feeding by WHO recommendations, namely 6 months because when babies are 6 months and older their digestive systems are relatively perfect and ready to receive solid food.

1 INTRODUCTION

The nutritional status of children under five is the nutritional state of children under five after 0-59 months caused by a balance between the intake of nutrients from food and the needs of nutrients used in the body's metabolism. Toddlers are one of the most vulnerable age groups to suffer from nutritional problems.

The World Health Organization (WHO) stated that based on data in the world, more than 49 million toddlers were underweight and nearly 17 million toddlers were very thin and more than 40 million toddlers were obese in 2018. The largest regions experiencing malnutrition are Africa and Asia. The prevalence of underweight (62%), and obesity (47%) remained the highest regions in 2018 (UNICEF/WHO/World Bank Joint Child Malnutrition Estimates, 2021).

Based on the results of the Basic Health Research (Riskasdas) in 2018, nationally, children under five who experienced malnutrition and malnutrition reached 17.7%, consisting of 13.8% of children

suffering from malnutrition and 3.9% of children suffering from malnutrition (Kemenkes RI, 2018). One of the causes of malnutrition in infants 12-24 months is the provision of food, namely exclusive breastfeeding and inadequate complementary feeding.

In Indonesia, stunting in infants aged 6 months has increased dramatically, where complementary foods are needed by infants to meet their energy and nutritional needs. Provision of appropriate complementary foods, accompanied by disease prevention and good care, can help children grow and develop optimally and prevent stunting or micronutrient deficiencies (Kementerian Kesehatan RI et al., 2019).

Based on data from the Indonesian Framework of Action Complementary Feeding, it is stated that the provision of complementary feeding to infants is still not appropriate and adequate. More than 40% of infants in Indonesia receive complementary foods too soon, which is under 6 months (Kementerian Kesehatan RI et al., 2019).

If complementary feeding is not given at the age of 6 months or if it is given incorrectly, the child's growth will be disrupted (Bhandari & Chowdhury, 2016). Giving early complementary feeding to infants with low nutritional and energy content or unhygienic food can cause children to be malnourished and infected, and the child's body resistance to disease is low (Kemenkes RI, 2014).

Complementary feeding given before the age of 6 months can also be said to be a failure in exclusive breastfeeding. Giving the right Complementary feeding can help the baby's growth optimally.

Several studies have shown that children under the age of 6 months who receive Complementary feeding have an increased risk of 3,509 times experiencing poor nutritional status. Early Complementary feeding is given because the mother is working, breast milk does not come out and the mother thinks her child is crying because he is hungry, he is not given food (Subandary et al., 2015).

Another study said that there was a relationship between the age of complementary feeding and the prevalence of infectious diseases. Complementary feeding given at the age of less than 6 months has a 1.6 times higher risk of infectious disease than infants aged more than six months (Nur, Abidah & Nelly, 2014). The purpose of this study was to analyze the relationship between the initial age of giving complementary feeding and the nutritional status of children aged 12-24 months.

2 METHODS

The type of research used is quantitative with an observational analytic approach with a cross-sectional research design, namely, to determine the variables that are thought to have an effect at the same time, namely the influence of the practice of giving complementary feeding to nutritional status. The research was conducted in Padanglampe Village, Pangkep Regency. The population is all toddlers aged 12-24 months and the sample is 70 people with a total sampling technique of. Collecting data on nutritional status by measuring Anthropometry using Weight Scale to measure weight and Microtoice to measure height. Data from the questionnaire will be processed using the SPSS program. Univariate analysis to determine the frequency distribution, bivariate analysis using chi-square test.

3 RESULTS

Table 1. Distribution of Respondents Based on Characteristics

Variable	n	%
Sex of infant		
Male	33	47.1
Female	37	52.9
Maternal's Occupation		
Yes	20	29
No	50	72
Maternal's education level		
High	28	40
Low	42	60
Parent's Income Level		
≥ MSE	8	11.4
< MSE	62	88.6
Nutritional status		
Normal	67	95.7
More Risk	3	4.3
Early Age of Complementary feeding		
Appropriate	20	28.6
inappropriate	50	71.4
Total	70	100

Source: Primary data

Based on table 1 shows that there are 33 male children under five (47.1%) and 37 female children under five (52.9%). There are 20 maternal's Occupation (29%) and 50 Not maternal's Occupation (72%). The lowest level of maternal education is 42 people (60%) and the least high is 28 people (40%). Parent's income level MSE is 8 people (11.4%) and those < MSE are 62 people (88.6%). Normal Toddler Nutritional Status is 67 Toddlers (95.7%) and Nutritional Status To Over-Risk Toddler is 3 Toddlers (4.3%). The initial age for proper breastfeeding is 20 toddlers (28.6%) and the inappropriate age is 50 toddlers (71.4%).

Table 2. The Effect of Early Age of Complementary Breastfeeding on the Nutritional Status of Toddlers Age 12-24 months in Padanglampe Village, Pangkep Regency

Early Age of Complementary Breastfeeding	Nutritional status				Total	p- value
	Normal		More Risk			
	n	%	n	%	n	%
Appropriate	19	95.0	1	5.0	20	100
Inappropriate	48	96.0	2	4.0	50	100
Total	67	95.7	3	4.3	70	100

Source: Primary data

Table 2 shows that the initial age of giving complementary feeding that is appropriate with normal status is 19 toddlers (95%) and those who are at more risk are 1 toddler (5.0%), while the initial age of giving inappropriate complementary feeding with normal nutritional status is 48 Toddlers (96.0%) and 2 under fives (4.0%) at risk. The results of the bivariate analysis showed that there was no effect between the initial age of complementary feeding and the nutritional status of children under five with p -value = 1,000.

4 DISCUSSIONS

Complementary Foods for Mother's Milk (MP-ASI) are foods or drinks containing nutrients that are given to infants or children who are more than 6 months old to meet the nutritional needs other than breast milk. This is because breast milk is only able to meet two-thirds of the baby's needs at the age of 6-9 months, and at the age of 9-12 months it meets half of the baby's needs.

The results of the bivariate analysis showed that there was no effect between the initial age of complementary feeding and the nutritional status of children under five with p -value = 1,000, this was due to the number of toddlers who had normal nutritional status more than those at greater risk. Although it does not show a statistical effect, the early age of giving MP-ASI correctly has normal nutritional status as much as 95% of toddlers and the early age of giving MP-ASI that is not right has more risky nutritional status as much as 4.0% of toddlers.

Giving MP-ASI before the age of 6 months is often associated with increased fat content and body weight. For this reason, delaying complementary feeding until the age of 6 months can protect against overnutrition in later life. Several protein-breaking enzymes such as pepsin, lipase, and amylase, as well as gastric acid, will only be fully produced when the baby is 6 months old (E.Shils, 1999). An American study revealed that babies who get solid food before the age of 4 months tend to be fatter. One of the study's authors from the Children's Hospital Boston said that following the right guidelines can reduce the risk of childhood over nutrition (Christian et al., 2015).

In addition, it is possible that in this study infants with normal nutritional status were given complementary foods only a few times and not

continuously. Therefore, breastfeeding is more dominant than complementary feeding to infants, so it does not have much effect on the baby's growth.

The results of this study are in line with Rama's research showing that of the 40 people who were given MP ASI early, 6 people (15.0%) had short PB/U nutritional status and 34 people (85.0%). Meanwhile, children who are not early/appropriate MP ASI have nutritional status in the short category of 5 people (25.0%) and not short 15 people (75.0%). Statistical test results obtained p value = 0.273 (0.05). This means that there is no relationship between early complementary feeding and the nutritional status of PB/U in Ratu Samban District, Bengkulu City (Sariy et al., 2018).

The results of this study are not in line with the study in Padang which showed that there was a significant relationship between the age of complementary feeding and the nutritional status (BB/TB index) of children aged 1-3 years in the city of Padang in 2012 ($p=0.001$). This relationship shows that if children are given MP-ASI according to a schedule, it will result in better child growth and development than children who are given early MP-ASI (Lestari et al., 2014). This is because when a baby is 6 months old and above, his digestive system is relatively perfect and ready to accept solid food.

5 CONCLUSIONS

There is no effect between the Early Age of Complementary Feeding and the nutritional status of Toddlers aged 12-24 months with p -value = 1,000. Mothers of toddlers should pay attention to the beginning of giving complementary feeding in accordance with WHO recommendations, which is 6 months because by the time the baby is 6 months old and over, his digestive system is relatively perfect and ready to receive solid food.

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