

# The Relationship Between The Baby Led Weaning Method And The Incidence Of Choking In Infants

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## Abstract.

*Background: The Method Of Giving Mp-Asi That Can Be Given By Parents To Babies To Increase The Nutritional Adequacy Of Babies After Carrying Out Exclusive Breastfeeding For 6 Months Includes The Blw (Baby Led Weaning) Method. Giving Complementary Foods Through The Baby Led Weaning Method Is Also Widely Opposed Because Babies Are At Risk Of Choking. Purpose Of Writing: To Find Out The Relationship Between The Baby Led Weaning Method And Choking Incidents In Infants. Research Methods: This Type Of Quantitative Research With A Cross Sectional Study Design, The Sample In This Study Amounted To 72 People, The Chi Square Statistical Analysis Test. Results: There Is No Relationship Between The Baby Lead Weaning Method And Choking At Posyandu Kelapa Indah 7 With A P-Value Of 0.850 (A = 0.05). Conclusions And Suggestions: The Results Of This Study Are Expected To Increase Mothers' Knowledge And Understanding Of The Baby Lead Weaning Method As A New Method Of Giving Complementary Foods And To Reduce Mothers' Concerns About Choking Due To Blw.*

**Keywords:** Mpasi, Baby Lead Weaning and Choking.

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## I. INTRODUCTION

One of the welfare indicators of a country is seen from the Infant Mortality Rate (IMR). The new framework of the Sustainable Development Goals (SDGs) in which all countries must strive to reduce under-5 mortality to at least 25 per 1000 live births by 2030. The World Health Organization (WHO) and the United Nations of Children's Fund (UNICEF) in the global strategy of feeding infants and children state that prevention of infant mortality is by providing proper food, namely exclusive breastfeeding for 6 months of life and the introduction of safe and nutritious complementary foods (MPASI) at 6 months of age along with continued breastfeeding. up to the age of 2 years or more (WHO, 2020). According to UNICEF and WHO (2016) nutrition is a major factor in child mortality, disease and disability. Factors related to nutrition contribute around 45% of under-five deaths, including low birth weight, malnutrition, children who are not given breast milk (non-breastfeeding) and an unhealthy environment. Malnourished children have a higher risk of death from infectious diseases, such as diarrhoea, pneumonia and measles. Stunted growth in the fetus causes 12% of neonatal deaths, while stunting (shortness) and wasting (thinness) contribute 14% and 20.4% as causes of under-five deaths (Yesi, 2017). In Indonesia, stunting has increased dramatically in babies aged 6 months, where complementary foods are needed so that babies can meet their energy and nutritional needs. In the Framework of Action document: Indonesia Complementary Feeding, it is stated that the provision of complementary foods in Indonesia is still inadequate and inappropriate.

Proper complementary feeding, together with disease prevention and good care, can help children grow and develop optimally and prevent stunting or micronutrient deficiencies (Bappenas, Indonesian Ministry of Health, & UNICEF, 2019). Methods for giving MP-ASI that can be given by parents to babies to increase the nutritional adequacy of babies after carrying out exclusive breastfeeding for 6 months include the method recommended by WHO, namely Traditional Spoon Feeding or the BLW (Baby Led Weaning) method, which is a complementary feeding method that has been developing for the last 10-15 years which was introduced by Repley and Markett in 2005 in their book entitled *Baby Led Weaning: Essential Guide to Introducing Solid Foods and Helping your Baby to Grow Up a Happy and Confident Eater* (Salsabila, 2021). In New Zealand, the BLW (Baby Led Weaning) method of complementary feeding is recommended for mothers. Infants using the BLW (Baby Led Weaning) method were more likely to consume family foods ( $p = 0.018$ ), and less likely ( $p = 0.002$ ) to consume commercially prepared baby food compared to infants

using the WHO (Traditional Spoon Feeding) method (Cameron, 2013). In Indonesia, to be precise, at the Grape Posyandu, Umbulsari Village, Umbulsari District, Jember Regency, the effect of complementary feeding using the BLW (Baby Led Weaning) method on infant eating patterns has been studied.

The results of this study were 22 baby respondents (81.5%) who had a good diet using the BLW (Baby Led Weaning) method (Jannah, 2016). The results of Townsend & Pitchford's research (2011) showed that there were differences in the BMI/BMI of infants using the BLW (Baby Led Weaning) and WHO (spoon feeding) methods. Underweight BMI was found in the BLW group with a percentage of 1.6% and obesity in the WHO (spoon feeding) group with a percentage of 12.7%. The results of another study showed that babies using the BLW (Baby Led Weaning) method were significantly fuller faster and less likely to be overweight compared to those who used the WHO (Traditional Spoon Feeding) method. With the comparative presentation of the BLW (Baby Led Weaning) group, 86.5% had normal weight, 8.1% were overweight and 5.4% were underweight, while those using the WHO method were 78.3% normal weight, 19.2% overweight and 2.5% underweight. A greater percentage of babies are overweight following the WHO approach (Brown & Lee, 2013). Giving complementary foods through the Baby Led Weaning method is also widely opposed because babies are at risk of choking. Two small studies by Cameron (2013) and Morrison (2016) indicate that there is a higher risk of choking in babies who receive Baby Led Weaning. The risk of choking is indeed very possible because parents cannot control the amount or size of food that enters their child's mouth. For this reason, parents who choose to use the Baby Led Weaning method are required to be extra vigilant.

IDAI (Indonesian Pediatrician Association) has not been able to recommend and prove Baby Led Weaning as a method of giving solids that is safe and better than the method recommended by WHO. According to the World Health Organization (WHO) in Salsabila (2021) in 2011 there were 17,537 cases of choking, 59.5% were caused by food, 31.4% were caused by foreign objects and 9.1% were caused by other or unknown causes. The data shows that most cases of choking are caused by food. The BLISS study (Baby-Led Introduction to SolidS, 2017) tries to reduce the risk of choking by modifying the BLW method, namely by following the general rules of feeding. Giving finger food like Baby Led Weaning can also be started when oromotor abilities (muscle movement systems in the area of the oral cavity) have developed. At least, the tongue can move right and left, namely at the age of 8 months, thereby reducing the risk of choking. In Indonesia there are many cases of choking but there is no statistical data on the incidence of choking (choking). Preliminary studies conducted by researchers at Posyandu Kelapa Indah 7 found that out of 10 mothers (with babies aged 6-24 months), 5 mothers did not know about giving complementary foods using the Baby Led Weaning method, 3 mothers already knew but had never practiced it for safety reasons, the length of time needed to eat and worried that the child would not be full, while 2 mothers already knew and practiced it, but still combined it with traditional methods for fear of choking and the baby could not finish the food quickly on time. Based on this, researchers are interested in conducting research with the title "The relationship between the baby led weaning method and the incidence of choking in infants".

## II. METHODS

This study uses a type of quantitative research with a cross sectional study design. In this study it was intended to determine the relationship between the baby led weaning method and the incidence of choking in infants. The population of this study were all infants aged 6-24 months who visited Posyandu Kelapa Indah 7 totaling 72 people. Statistical test using chi square.

## III. RESULT AND DISCUSSION

**Table 1.** Frequency Distribution of Baby Led Weaning in Infants at Posyandu Kelapa Indah 7 in 2023

Baby Led Weaning	F	%
Yes	21	29.2
No	51	70.8
Total	72	100

Based on the data in Table 5.1, it can be seen from the distribution of respondents that the majority of babies did not use the Baby Led Weaning method, as many as 51 people (70.8%).

**Table 2.** Choking Frequency Distribution in Infants at Posyandu Kelapa Indah 7 in 2023

Choking	F	%
No	68	94.4
Yes	4	5.6
Total	72	100

Based on the data in Table 5.2, the distribution of respondents shows that the majority of babies do not choke (choking) as many as 68 people (94.4%).

**Table 3.** The Relationship between the Baby Led Weaning Method and Choking Incidents In Babies at Posyandu Kelapa Indah 7 Year 2023

Choking	Baby Led Weaning						P Value
	Yes		No		Total		
	f	%	f	%	f	%	
No	20	27.8	48	66.7	68	94.4	0.850
Yes	1	1.4	3	4.2	4	5.6	
Total	21	29.2	51	70.8	72	100%	

Based on table 5.2 that of the 68 respondents (94.4%) who did not choke (choking), the majority did not carry out baby led weaning as many as 48 people (66.7%) and of the 4 respondents (5.6%) who experienced choking, the majority did not carry out baby led weaning as many as 3 people (4.2%). The results of statistical tests using the chi square test, obtained the results of calculating a p-value of  $0.850 > 0.05$ , so it can be concluded that there is no relationship between the baby led weaning method and the incidence of choking in infants at Posyandu Kelapa Indah 7 in 2023.

## Discussion

### Overview of the Baby Lead Weaning Method

The description of giving MPASI using the baby led weaning method to 72 respondents shows that the majority did not use the Baby Led Weaning method as many as 51 people (70.8%). These results are not in accordance with research by Jannah (2016) which revealed that as many as 22 baby respondents (81.5%) who had a good diet used the BLW (Baby Led Weaning) method. Research conducted by Susmarini (2019) revealed that almost half of babies who use baby-led weaning feed themselves on 90% of their meal schedule, while 80% of babies with traditional methods are fed. The practice of self-feeding in the other half of the baby-led weaning group varied from 10 to 75% of the entire feeding schedule. Baby-led weaning is a new method of introducing complementary foods with the characteristic of the baby putting food into his mouth himself. Over the last decade, the number of mothers using this method has increased in several countries, including Indonesia. However, until now the practice of the baby-led weaning method in Indonesia has not been studied. Baby Led Weaning is a weaning method for toddlers.

Baby Led Weaning, also commonly referred to as weaning complementary foods, is an alternative approach to introducing complementary foods for infants which emphasizes that babies eat themselves instead of feeding adults. BLW places more emphasis on the method of feeding, but the concept of the food given is still in accordance with the weaning system in general (Cameron, 2012). Harjanti (2019) in his research revealed that not many mothers know about the BLW method. Most mothers prefer to provide MP-ASI with conventional methods, namely by feeding their children. The mother is worried that by applying the BLW method the child's food intake will be less because food is only used for playing, messy, choking, and vomiting. However, mothers also admit that there are benefits by applying the BLW method, namely overcoming eating difficulties and being able to stimulate their motor skills. Mothers who apply the BLW method admit that they still combine the BLW method with conventional methods and the BLW method. According to the assumptions of the researchers, mothers who try to apply the BLW method experience a longer process than feeding their children. In the BLW method where children eat alone in the learning process they will drop more food and contaminate the whole body so that the mother needs time and energy to clean it and make food again because she is worried that the food consumed is not enough.

### Description of Choking Events (Choking) in Infants

The majority of choking incidents were in the category not as many as 68 people (94.4%). In this study, there were still 4 (1.0%) babies who experienced choking. These results are in accordance with (Cameron, 2012) In his research entitled "Healthcare Professionals and Mothers Knowledge of Attits to And Experiences With, Baby-Led Weaning" it was found that 30% of mothers who did the baby led weaning method on their babies experienced choking once. Fangupo et all (2016) in their research on A Baby-led Approach to Eating Solids and the Risk of Choking. In mothers of 129 infants aged 6-12 months. Information is given to carry out the Baby Led Weaning method using a questionnaire about the incidence and frequency of choking. Then Grouped into control (traditional) with Baby Led Weaning.

Then differentiate the incidence, frequency, and causes of choking in infants based on the questionnaire. The results of the study stated that 23% of the sample experienced choking due to food and 35% at the age of 6 months. However, there was no difference in choking risk between the BLW and traditional modifications. Two small studies by Cameron (2013) and Morrison (2016) in their research indicate that there is a higher risk of choking in babies who receive Baby Led Weaning. The risk of choking is indeed very possible because parents cannot control the amount or size of food that enters their child's mouth. For this reason, parents who choose to use the Baby Led Weaning method are required to be extra vigilant. Giving complementary foods using the Baby Led Weaning method besides having benefits in stimulating oral motor development, there is also a high risk of choking in infants. The occurrence of choking is related to the developmental abilities possessed by the baby and the form of food at the beginning of the introduction of complementary foods (Salsabila, 2021).

### The Relationship between the Baby Led Weaning Method and Choking Incidents

The results of the bivariate analysis showed that there was no significant relationship between the baby led weaning method and the incidence of choking in infants ( $p$  value = 0.850). Likewise research conducted by Brittany J Morison et al. year (2015) found that there was no significant difference in the number of people who experienced choking on the baby led weaning method ( $p=0.172$ ). Lack of knowledge about the BLW method is the reason why mothers do not carry out BLW. Most babies who are still in the weaning period have eaten independently or BLW. The implementation of BLW is not based on special knowledge about BLW, but only applies independent feeding to babies based on past experience or hereditary. Knowledge about BLW is not widely known by mothers who have babies at weaning age and in the oral phase (Saheni, 2015). Giving MP-ASI with the BLW method is still controversial due to concerns about insufficient energy and iron intake and the risk of choking. In Indonesia, there is a community of mothers who apply the BLW method, although the government and WHO have not issued official recommendations regarding the provision of MP-ASI using this BLW method (Harjanti, 2019).

## IV. CONCLUSION

1. The majority of baby lead weaning methods are in the no category, namely 51 people (70.8%).
2. The majority of choking events were in the no category, namely 68 people (94.4%).
3. There is no relationship between the baby lead weaning method and choking at Posyandu Kelapa Indah 7 with a  $p$ -value of 0.850 ( $\alpha = 0.05$ ).

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