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AN ANALYTICAL STUDY OF EXCLUSIVE BREASTFEEDING IN RELATION TO INFANT GROWTH AND DEVELOPMENT

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ABSTRACT

Background: Breastfeeding plays a crucial role in fulfilling the nutritional needs of infants for optimal growth and development. WHO recommends exclusive breastfeeding without adding other foods or drinks, for the first six months of a baby's life. Although the benefits of exclusive breastfeeding are widely known, exclusive breastfeeding is still not optimal. **Objective:** This purpose of this study to analyze the relationship between exclusive breastfeeding and the growth and development of infants aged 6-24 months at Puskesmas Palmerah. **Methods:** Using a cross-sectional design with a quantitative approach, this study involved 156 samples selected through consecutive non-probability sampling techniques and was conducted from January 2025 to February 2025. Data on the history of exclusive breastfeeding were collected through questionnaires, growth data were measured based on weight and height according to the WHO curve, and development was assessed using KPSP. Data analysis using the Chi-Square test. **Conclusion:** shows a significant relationship between exclusive breastfeeding and growth with p-value = 0.001 < 0.05 (based on weight-for-age), p-value = 0.006 < 0.05 (based on height-for-age), and p-value = 0.001 < 0.05 (based on weight-for-age). In addition, there's too a noteworthy relationship between elite breastfeeding and advancement with p-value = 0.000 (p<0.005). Thus, exclusive breastfeeding has a positive effect on infant growth and development. Efforts to increase the coverage of exclusive breastfeeding need to continue to be encouraged through education and support from health workers.

BACKGROUND

Providing breast milk is an important effort to fulfill the nutritional needs of babies for optimal growth and development. One study states that breastfeeding is regarded as the initial form of immunization, as it offers protection against both infectious and non-infectious diseases in children.(1) Exclusive breastfeeding is given for the first six months without adding other foods or drinks, except for medicines and vitamins if necessary.(1) The implementation of exclusive breastfeeding is still the focus of the Indonesian government in order to improve child growth and development, so that a healthy and intelligent next generation is formed.

The World Health Organization (WHO) 2021 detailed information on select breastfeeding universally, to be specific around 44% of babies matured 0-6 months around the world who gotten select breastfeeding amid the period 2015-2020, this has not come to the target for elite breastfeeding scope within the world, which is 50%. The target for national exclusive breastfeeding coverage is 80%,(2) but Indonesia's exclusive breastfeeding coverage in 2022 was recorded at only 67.96%, down from 69.7% in 2021, indicating the need for more intensive support for mothers about the importance of exclusive breastfeeding so that this coverage can increase.(3)

Babies who are 6 months old still get breast milk until they are 24 months old. During this period, babies will certainly get additional nutrition from complementary foods (MP-ASI), but breast milk remains an important source of nutrition. Lack of

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exclusive breastfeeding can cause various disorders in children's growth and development. The low rate of exclusive breastfeeding is influenced by various factors, both internal and external. Internal factors include the mother's physical health, the mother's psychological condition, and lactation problems. External factors include maternal knowledge about breastfeeding, family support, socio-cultural, and economic factors. This will certainly affect the child's future. Growth refers to an increase in body size and changes in structure that are quantitative, while development is more oriented towards psychomotor processes and is qualitative in nature.[3] Both processes are greatly influenced by genetic, nutritional and environmental factors.[4]

The first thousand days of life (counted from 270 days of pregnancy until the age of two years) is a golden period and is very sensitive to the growth and development of children.[5] This phase is a very critical phase in the effort to create quality human resources, where brain cells are experiencing optimal growth and development.[6] The baby's brain develops rapidly and forms the foundations of intelligence and behavior in the future. Babies who are not given enough nutrition will cause health problems. In the short term, nutritional deficiencies can lead to impaired brain development, reduced cognitive abilities, stunted physical growth, and disruptions in the body's metabolic processes. The long-term impact of nutritional problems is a decline in cognitive and learning outcomes, decreased body immunity and a high risk of degenerative diseases and disabilities in old age, and low economic productivity caused by uncompetitive work quality.[7] Adequate nutrition and early stimulation in this golden period are very important to ensure that babies grow optimally and reach their full potential. Therefore, nutritional intake during this period must be given great attention.

This research is important to show the benefits of providing exclusive breastfeeding for child growth and development. The results of this study are expected to provide useful information for readers in improving the implementation of exclusive breastfeeding, so that it can contribute to improving the quality of children's health and reducing morbidity and mortality rates.

METHODS

Research Design

The research design used is *cross-sectional* with a quantitative approach. Data collection was only carried out at one time, so there were no repeated observations. The research was conducted at Puskesmas Palmerah from January to February 2025. The population of the study was infants aged 6-24 months who visited Puskesmas Palmerah, West Jakarta. The sampling technique was taken using the consecutive technique, where all infants aged 6-24 months who came to the Puskesmas Palmerah, West Jakarta who met the inclusion criteria. Inclusion Criteria in this study were Healthy babies aged 6-24 months and who were willing to participate. Babies with a history of prematurity were not allowed to participate in this study.

How Research Works

Data collection was conducted at the Puskesmas Palmerah. The researcher asked whether the mother/guardian was willing to participate in the study. If willing, the researcher will ask several questions about the history of exclusive breastfeeding using a questionnaire. Next, the baby's weight and height will be measured, and its development will be observed. Data was collected by direct interviews using a questionnaire with the mother/baby's guardian regarding the history of exclusive breastfeeding. Growth data such as weight and length are also assessed directly using baby weight and height measuring tools. After that it will be entered into the WHO growth charts to see the nutritional status. Assessment of infant development is observed directly using standard assessment methods, such as KPSP based on the infant's age.

Data analysis

Information investigation was carried out in 2 sorts, to be specific univariate and bivariate examination. Univariate investigation to see the dissemination of each variable within the frame of recurrence and rate. Bivariate investigation to see the relationship between two categorical factors. A commonly utilized strategy is the Chi-Square test. In case the probality value (p) within the Chi-Square test < 0.05 at that point there's a noteworthy relationship between the two factors.

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Ethical Approval

This research has passed the ethical review by the Health Research Ethics Commission (KEPK) of the Faculty of Medicine, Tarumanagara University with the number: 501/KEPK/FK UNTAR/XII/2024.

RESULTS

Respondent Characteristics

Table 1. Respondent Characteristics

Characteristics	Frequency	Percentage (%)
Age		
6-12	106	67.9
13-24	50	32.1
History of Exclusive Breastfeeding		
Exclusive breastfeeding	84	53.8
Non-exclusive breastfeeding	72	46.2
Nutritional Status Based on Weight-for-Age		
Severely underweight	2	1.3
Underweight	11	7.1
Normal weight	134	85.9
Risk of overweight	9	5.8
Nutritional Status Based on Height-for-Age		
Severely stunted	2	1.3
Stunted	15	9.6
Normal height	139	89.1
Tall	0	0
Nutritional Status Based on Weight-for-Height		
Severe malnutrition	2	1.3
Undernutrition	8	5.1
Good nutrition	119	76.3
Risk of overweight	19	12.2
Overweight	7	4.5
Obesity	1	0.6
Development Status		
Age-appropriate	134	85.9
Doubtful	20	12.8
Deviation	119	76.3

The results of the study conducted on 156 samples at Puskesmas Palmerah, the majority were aged 6 to 12 months. A total of 84 samples or 53.8 % of the total samples received exclusive breastfeeding. Based on the results of nutritional status measurements, it was obtained that 134 samples or 53.8 % of the total samples had normal body weight and as many as 139 samples or 89.1 % of the total samples have normal height. In addition, as many as 119 samples or 76.3 % of the total samples are classified as having good nutritional status. In terms of development, as many as 134 samples or 85.9 % of the total samples show development that is appropriate for age.

Bivariate Analysis

Relationship between Exclusive Breastfeeding History and Growth Based on Weight-for-Age

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Table 2. The Relationship between Exclusive Breastfeeding and Growth Based Weight-for-Age

History of exclusive breastfeeding	Growth based on weight-for-age										*p-value*
	Severely underweight		Underweight		Normal		Risk of overweight		Total		
	n	%	n	%	n	%	n	%	n	%	
Exclusive Breastfeeding	0	0.0	0	0.0	80	95.2	4	4.8	84	100	0.001
Non-Exclusive Breastfeeding	2	2.8	11	15.3	54	75.0	5	6.9	72	100	
Total	2	1.3	11	7.1	134	85.9	9	5.8	156	100	

The results of the analysis of exclusively breastfed babies showed that there were no babies categorized as underweight and severely underweight. There were 80 babies (95.2%) with normal weight, and there were 4 babies (4.8%) categorized as overweight. So, it can be concluded that most babies who receive exclusive breastfeeding have normal weight.

The results of the analysis of non-exclusively breastfed babies showed that 2 babies (2.8%) were categorized as severely stunted. Furthermore, 11 babies (15.3%) were categorized as underweight, 54 babies (75%) were categorized as normal, and 5 babies (6.9%) had possible risk of overweight. Based on the results of the analysis, it can be concluded that most babies who receive non-exclusive breastfeeding have a normal weight.

Weight-for-age growth and the history of exclusive breastfeeding are related, according to the Chi-Square test, which shows a p-value of less than 0.050.

Relationship between Exclusive Breastfeeding History and Growth Based on Height-for-Age

Table 3. Relationship between Exclusive Breastfeeding and Growth based on Height-for-Age

History of exclusive breastfeeding	Growth based on height-for-age								*p-value*
	Severely stunted		Stunted		Normal		Total		
	n	%	n	%	n	%	n	%	
Exclusive Breastfeeding	0	0.0	3	3.6	81	96.4	84	100	0.006
Non-Exclusive Breastfeeding	2	2.8	12	16.7	58	80.6	72	100	
Total	2	1.3	15	9.6	139	89.1	156	100	

The comes about of the examination of solely breastfed babies appeared that there were no babies categorized as severely stunted, there were 3 babies (3.6%) categorized as stunted, and 81 babies (96.4%) who had normal height. Based on the comes about of the examination, it can be concluded that most babies who gotten select breastfeeding had normal height.

The comes about of the examination of non-exclusively breastfed babies appeared that there 2 babies (2.8%) were categorized as severely stunted, 12 babies (16.7%) were categorized as stunted, and 58 babies (80.6%) had a normal height. Based on the comes about of the investigation, it can be concluded that most babies who gotten non-exclusive breastfeeding have normal stature.

The results of the Chi-Square test indicate that there is a correlation between growth based on height-for-age and the history of exclusive breastfeeding, since the p-value is less than 0.050.

Relationship between Exclusive Breastfeeding History and Growth Based on Weight-for-Height

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Table 4. Relationship between Exclusive Breastfeeding and Growth based on Weight-for-Height

History of exclusive breastfeeding	Growth based on weight-for-height														*p-value*
	Severely malnutrition		Under-nutrition		Normal		Risk of overweight		Over-weight		Obesity		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Exclusive Breastfeeding	0	0.0	0	0.0	73	86.9	10	11.9	1	1.2	0	0.0	84	100	0.001
Non-Exclusive Breastfeeding	2	2.8	8	11.1	46	63.9	9	12.5	6	8.3	1	1.4	72	100	
Total	2	1.3	8	5.1	119	76.3	19	12.2	7	4.5	1	0.6	156	100	

The results of the analysis on babies who received exclusive breastfeeding showed that there were no babies who had undernutrition and severe malnutrition, there were 73 babies (86.9%) who had good nutrition, 10 babies (11.9%) who had the possible risk of overweight, 1 baby (1.2%) who had overweight, and there were no babies who were categorized as obese. Based on the results of the analysis, it can be concluded that most babies who received exclusive breastfeeding have good nutrition.

The results of the analysis of babies who received non-exclusive breastfeeding showed that there were 2 babies (2.8%) who had severe malnutrition, as many as 8 babies (11.1%) were categorized as undernutrition, 46 babies (63.9%) were categorized as normal, 9 babies (12.5%) have possible risk of overweight, 6 babies (8.3%) have overweight, and there is a baby (1.4%) is categorized as obese. Based on the results of the analysis, it can be concluded that the majority of babies who receive non-exclusive breastfeeding have good nutrition.

The results of the Chi-Square test indicate that there is a correlation between the history of exclusive breastfeeding and growth based on weight-for-height, with the p-value being 0.001 and being less than 0.050 (0.001 < 0.050).

The Relationship between Exclusive Breastfeeding History and Development

Table 5. The relationship between exclusive breastfeeding and development

History of Exclusive Breastfeeding	Development								*p-value*
	Age-appropriate		Doubtful		Deviations		Total		
	n	%	n	%	n	%	n	%	
Exclusive Breastfeeding	83	98.8	1	1.2	0	0.0	84	100	0,000
Non Exclusive Breastfeeding	51	70.8	19	26.4	2	2.8	72	100	
Total	134	85.9	20	12.8	2	1.3	156	100	

The results of the analysis on babies who received exclusive breastfeeding showed that there were 83 babies (98.8%) had age-appropriate development, 1 baby (1.2%) had doubtful development, and there were no babies who had the possibility of deviations in their development. Based on the results of the analysis, it can be concluded that most babies who received exclusive breastfeeding have age-appropriate development.

The results of the analysis on infants who received non-exclusive breastfeeding showed that 51 babies (70.8%) had age-appropriate development, 19 babies (26.4%) were categorized as having doubtful development, and 2 babies (2.8%) had possible deviations in their development. Based on the results of the analysis, it can be concluded that most babies who received non-exclusive breastfeeding had age-appropriate development.

According to the results of data processing, there is a relationship between exclusive breastfeeding and development, as evidenced by the p-value <0.050 in Chi-Square test.

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DISCUSSION

Frequency Distribution of Exclusive Breastfeeding

Infants aged 6–24 months undergo rapid physical and cognitive development. Between 6–12 months, they begin sitting independently, crawling, and attempting to stand or walk with assistance. By 12–18 months, most can walk unaided, climb stairs with help, and some begin to run. At 18–24 months, they typically master walking and running, can jump, kick a ball, and start balancing on one leg. Cognitively, infants aged 6–12 months begin recognizing simple words and babbling; by 12–18 months, they start speaking single words and understanding basic instructions. At 18–24 months, they begin forming simple sentences and show improved language comprehension. It is important to acknowledge that each infant develops at a different pace, and optimal growth can only be achieved through appropriate stimulation and consistent support from caregivers.[8]

Among the total sample, 84 infants (53.8%) at Puskesmas Palmerah received exclusive breastfeeding during their first six months, reflecting adherence to World Health Organization (WHO) guidelines and indicating that over half of the local infant population benefited from recommended feeding practices. A total of 72 infants (46.2%) did not receive exclusive breastfeeding, presenting a significant challenge to improving infant health. Contributing factors identified include limited maternal education, early return to work, and physical or psychological barriers to breast milk production.

The comes about of this consider on elite breastfeeding are in line with investigate conducted by Hardinigsih et al. in 2020. In this think about, 71.9% of the full test gotten elite breastfeeding.[6] Research conducted by Kebo et al. (2021) also reported that the majority of samples or 76.1% received exclusive breastfeeding.[10]

Relationship between Exclusive Breastfeeding and Growth Based on Weight-for-Age

The frequency distribution of infant growth status based on weight-for-age indicates that 85.9% of babies exhibit normal weight, reflecting generally optimal growth. However, a minority experience abnormal weight due to factors such as socioeconomic conditions, inadequate nutrition, and limited parental knowledge. Supporting this, Vadlistyo et al. (2024) found that among their sample, 22.4% suffered from severe malnutrition, 15.5% were underweight, and only 62.1% had normal weight, underscoring persistent nutritional challenges despite overall positive trends.[11]

The results of the analysis of the relationship between the history of exclusive breastfeeding and growth based on weight-for-age show that most babies (95.2%) with normal growth as measured by weight according to age are babies who are exclusively breastfed. The balanced composition of breast milk between carbohydrates, lipids and proteins is a causal factor in the large number of babies with normal growth rates as measured by weight-for-age.[13] If babies are given Exclusive breastfeeding means that all the necessary nutrients will be obtained, so that the baby can grow optimally according to his age.

Among infants who received non-exclusive breastfeeding, the majority exhibited normal growth in terms of height; however, this proportion was lower than the 75% observed among exclusively breastfed infants. Notably, none of the exclusively breastfed infants were classified as undernourished or severely malnourished. In contrast, 15.3% of non-exclusively breastfed infants were identified as undernourished, and 2.8% as severely malnourished. This disparity may be attributed to the absence of continuous breast milk intake up to six months in the non-exclusive group, as exclusive breastfeeding during this critical period has been shown to positively influence infant growth and nutritional status.[17]

The results of this study support the study initiated by Vadlistyo et al. (2024), where the results of the study revealed that exclusive breastfeeding was significantly related to toddler weight, in the study it was found that babies with normal growth based on weight according to their age were babies who were exclusively breastfed with a percentage of 94.4%, while most babies who had a weight categorized as severely underweight and underweight were babies with non-exclusive breastfeeding.[8] In other studies , it was found that there was a significant relationship between exclusive breastfeeding and the growth of babies aged 6-12 months, where as many as 97.76% babies who were exclusively breastfed had normal growth according to weight-for-age.[18]

This study produced findings, opinions, and perspectives that differed from the study conducted by Yanti et al. (2022) which revealed that the infant

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growth rate was not influenced by exclusive breastfeeding, the absence of influence could occur due to other factors that have an influence on the infant growth rate such as prenatal and postnatal environmental factors, hormonal factors, and genetic factors.[19]

Relationship between Exclusive Breastfeeding and Growth Based on Height-for-Age

The distribution of children's growth status based on height-for-age reveals that the majority exhibit normal growth, with 89.1% categorized as having normal height, while 9.6% were stunted and 1.3% severely stunted. The findings of this study align with those reported by Efniyanti et al. (2023), who similarly observed that the majority of respondents fell within the normal height category. Specifically, their research identified 20% of participants as severely stunted, 26.7% as stunted, 50% as having normal height, and 3.3% as tall.[9] Vadlistyo et al. (2024) also presented the results of their study, that 69% of the total sample was dominated by the normal height category.

The results of the test of the relationship between the history of exclusive breastfeeding and infant growth based on height showed that the majority of infants (96.4%) with normal height were infants who were exclusively breastfed. In expansion to the adjust of breast drain composition within the shape of carbohydrates, lipids, and proteins, the expansive number of babies with typical stature after accepting elite breastfeeding can be caused by the great microbes contained in breast drain and are useful for child development.[16] A study,[17] found that bacteria contained in breast milk such as actinobacteria and bifdobacterium spp. showed a significant influence on infant height, so that exclusive breastfeeding can be a causal factor in the large number of babies who have normal height growth according to their age.

In babies with non-exclusive breastfeeding, it is known that most babies grow with normal height, but the percentage is below the number of infants with a history of exclusive breastfeeding, which is 80.6%. If the group with exclusive breastfeeding is known to have no infants with severely stunted condition, in infants with non-exclusive breastfeeding it is known that there are 2.8 % of infants with severely stunted condition. Breast milk is a complex fluid that contains nutrients for infants where the nutritional components in breast milk consist of micro and macro nutrients needed during the infant's growth period.[18] Infants who are not exclusively breastfed may lack essential macro and micronutrients, potentially leading to suboptimal height for their age. The 96.4% figure suggests that public health measures such as breastfeeding education and regular growth monitoring have positively influenced infant development.

The results of this analysis are in accordance with the results of the research by Vadlistyo and Suyami, which revealed that there is a real relationship between the history of exclusive breastfeeding and infant growth as measured by height for age, where as many as 95% of babies who have a history of exclusive breastfeeding experience normal height growth, while in the group with a history of non-exclusive breastfeeding there are as many as 80% of infants with height that is categorized as stunted.[11]

Relationship between Exclusive Breastfeeding and Growth Based on Weight-for-Height

The study found that 76.3% of infants were well-nourished, indicating generally appropriate growth. However, some showed deviations from normal nutritional status, warranting continued attention to prevent future complications. These findings align with Iskandar et al. (2020), who reported 96.3% of infants with good nutrition and 3.7% at risk of overweight.[10] These findings are consistent with Efniyanti et al. (2023), who reported 70% of respondents in the good nutrition category.[9] Both studies suggest that adequate dietary intake, regular growth monitoring, and maternal knowledge have been effectively contributing to positive nutritional outcomes.

The results of the test of the relationship between the history of exclusive breastfeeding and growth based on weight-for-height showed that most babies (86.9%) with good nutrition as measured by weight for height were babies who were exclusively breastfed. The analysis that has been carried out also revealed that there were no babies who had severe malnutrition, undernutrition status, or obesity. Breast milk is the most perfect food with complete nutritional content and is needed by the baby's body, breast milk also contains the essential amino acid B12 binding protein needed by babies.[8] Giving breast milk exclusively to babies aged 0 to 6 months can affect the

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growth and development of babies, so that babies with exclusive breast milk tend to have good nutrition because the intake of important nutrients is met and is very much needed by the baby's body.[19]

Meanwhile, babies who receive non-exclusive breastfeeding also have growth based on weight to height that is categorized as good nutrition, but the percentage is lower than babies who receive exclusive breastfeeding. In the group of infants with a history of exclusive breastfeeding, there were no infants with malnutrition, undernutrition, or obesity. However, in the group of infants with non-exclusive breastfeeding, it was found that there were 11.1% of infants with undernutrition, 2.8% of infants with severe malnutrition, and 1.4% of infants with obesity. This can happen because infants with non-exclusive breastfeeding do not get the essential nutrients they really need. In fact, providing exclusive breastfeeding can provide all the essential nutrients needed to optimize physical growth.

The results of this analysis are in line with other research,[10] which revealed that there was a significant relationship between growth based on baby's weight and height of providing exclusive breastfeeding.

In contrast to the study conducted by Efniyanti et al. (2022) where the study found that although the majority of children with good nutritional status as seen from weight-for-age were children who were given exclusive breastfeeding with a percentage of 70%, the results of testing using *the Spearman correlation* revealed that there was no significant relationship between exclusive breastfeeding and the nutritional status of toddlers, one of which was seen from the weight-for-age indicator.[12]

The Relationship between Exclusive Breastfeeding and Infant Development

The distribution of child development by age indicates that 85.9% of children have reached age-appropriate milestones, reflecting the strong influence of chronological age. However, some cases of developmental disorders, such as autism and speech delay, were observed often linked to parental practices like excessive gadget use, which limits children's social interaction. These results align with Mukhlis (2019), who reported 96.7% of children with age-appropriate development,[11] and are supported by Rinandar et al. (2024), with 84.2% showing similar outcomes.[15] The distribution not only reflects overall developmental progress but also serves as an early detection tool for potential disorders, emphasizing the importance of regular monitoring to enable timely intervention.

The results of the analysis show that the majority of children with a history of exclusive breastfeeding have development categorized age-appropriate with a presentation of 98.8 % and there are no babies who have the possibility of experiencing deviations in their growth period. This can happen because breast milk contains bioactive compounds that play an important role especially at critical points when the central nervous system, gastrointestinal and immune are maturing.[13] When babies have a smaller chance of experiencing disease, then the baby's development will be more optimal according to their age.

Testing of data on infants with a history of non-exclusive breastfeeding shows that although most infants have age-appropriate development, which is 70.8%, this figure is lower than infants with a history of exclusive breastfeeding. In addition, in infants with a history of non-exclusive breastfeeding, it is known that there are 2.8% of infants who have the possibility of deviations in their development. This can happen because the child does not receive early stimulation, whereas according to Sabur and Afriani,[19] immediately breastfeeding a baby after birth for up to 6 months and continuing until the baby reaches 24 months is early stimulation in child growth and development. In addition, breast milk is a rich and complex fluid composed of proteins, fats, carbohydrates, and various bioactive components that support an infant's growth, immune system, and nutritional needs. Among these components are immunoglobulins, lactoferrin, human milk oligosaccharides, lysozyme, white blood cells, cytokines, hormones, and beneficial microbiota. So, when a baby receives exclusive breastfeeding for up to 6 months, micro and macro nutrients can be optimally absorbed by the baby's body.[21]

The results of this analysis are in accordance with the results of the study by Afrida, et. al. (2024) which stated that there is a positive relationship between exclusive breastfeeding (EBF) and infant development. These results strengthen the argument about development, where infants who are exclusively breastfed have good motor skills, and this motor skill is a measure of infant development. In

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another study, it was found that exclusive breastfeeding has a significant effect on children's motor development as measured using KPSP, where it was found that 95.7% of children with good motor development got exclusive results, while in children who received non-exclusive breastfeeding, the opposite happened, namely the majority of their motor development was categorized as lacking.[22]

Yanti et al. (2022), in the results of their study stated a different opinion from the results of this study, the results of their analysis showed that the *p-value* was 0.911 which means that there is no influence between the history of babies receiving exclusive breastfeeding and the level of baby development. The correlation coefficient range is known to be 0.025 which indicates that the relationship formed is very small and the possibility of an influence between giving exclusive breastfeeding and the level of baby development can be ignored.[19]

CONCLUSION

Based on the research results, it can be concluded that :

Exclusive breastfeeding for infants aged 6-24 months at Puskesmas Palmerah with the results of 84 infants (53.8%) receiving exclusive breastfeeding, while 72 infants (46.2%) receiving non-exclusive breastfeeding. Growth status based on infant weight-for-age with the results of 2 infants (1.3%) having categorized as severely underweight, 11 infants (7.1%) having categorized as underweight, 134 infants (85.9%) having categorized as normal weight, and 9 infants (5.8%) having categorized as possible risk of overweight. In addition, the growth status based on infant height-for-age was also known with the results of 2 infants (1.3%) being categorized as severely stunted, 15 infants (9.6%) being categorized as stunted, 139 infants (89.1%) as the majority, being categorized as normal height, and no infants being categorized as tall. Meanwhile, the growth status of infants based on weight-for-height shows that there are 2 infants (1.3%) with severe malnutrition, 8 infants (5.1%) with undernutrition, 119 infants (75.3%) with good nutrition, 19 infants (12.2%) with a possible risk of overweight, 7 infants (4.5%) with overweight, and 1 infant (0.6%) is categorized as obese.

The developmental status of infants aged 6-24 months at Puskesmas Palmerah with the results of 134 infants (85.9%) categorized as age-appropriate development, 20 infants (12.8%) had doubtful development, and 2 infants (1.3%) of the study sample had the possibility of deviations in their development. Research shows that exclusive breastfeeding is significantly associated with the growth of infants aged 6 to 24 months at Puskesmas Palmerah. This is evidenced by the results of the Chi-Square test, namely p-value = 0.001 < 0.05 (based on weight-for-age), p-value = 0.006 <0.05 (based on height-for-age), and p-value = 0.001 <0.05 (based on weight-for-height). Apart from that, there is also a significant relationship between exclusive breastfeeding and the development of infants aged 6-24 months at Puskesmas Palmerah with a p-value = 0.000 (p<0.005).

Information regarding exclusive breastfeeding was based on maternal self-reports, which may have introduced recall bias and affected data accuracy. Additionally, other factors influencing growth and development, such as child stimulation, were not examined in depth. The study was conducted at a single health center, limiting the generalizability of the findings. Researchers also encountered challenges in meeting the required sample size, as infants aged 6–24 months were only present in significant numbers on specific days. Nevertheless, these challenges were successfully addressed by the research team.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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