



The Association Between Exclusive Breastfeeding, Parenting Styles, and Picky Eating Behavior Among Preschool Children at State Kindergarten Pembina Meulaboh, West Aceh

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Track Record Article	Abstract
<p>Revised : 30 December 2025 Accepted : 27 May 2025 Published : 17 June 2025</p> <p>How to cite : Aishah, S. W., Mulyani, I., Harahap, L. A. H., & Marniati, M. (2025). The Association Between Exclusive Breastfeeding, Parenting Styles, and Picky Eating Behavior Among Preschool Children at State Kindergarten Pembina Meulaboh, West Aceh (2024). <i>Contagion : Scientific Periodical of Public Health and Coastal Health</i>, 7(1), 107–116.</p>	<p><i>Picky eating, also known as selective eating, is a common behavior observed in young children during their developmental years. It is characterized by a limited food variety and reluctance to try new food options, even when they are familiar or previously consumed. This study aims to examine the relationship between exclusive breastfeeding and parenting styles with picky eating behavior. Using a quantitative cross-sectional design, the research was conducted at State Kindergarten Pembina Meulaboh in August 2024. The study population consisted of 70 kindergarten children, with a total sampling technique yielding 64 participants. Data were analyzed using the chi-square test. The results indicated a significant relationship between the history of exclusive breastfeeding and picky eating behavior ($p = 0.022$; $OR = 1.192$). However, no significant association was found between parenting styles and picky eating ($p = 0.875$). Based on these findings, it is recommended that parents pay greater attention to food variety in children's diets to prevent boredom and encourage diverse eating habits.</i></p> <p>Keywords: <i>Exclusive Breastfeeding History, Parenting, Picky Eater</i></p>

INTRODUCTION

Preschool-age children, typically between 3 and 6 years old, are in a crucial developmental phase often referred to as the "golden age" of growth and learning. During this period, children begin to exhibit autonomy in selecting food, requesting meals, and eating independently (Bahagia & Rahayuningsih, 2018). At this stage, they also develop consumer-like behaviors, demonstrating the ability to choose and purchase foods based on their preferences (Nyanyi *et al.*, 2019). As a result, preschool-aged children may display varying degrees of food refusal influenced by their mood, which can contribute to the development of picky eating habits.

Picky eating, also known as selective eating, is a common behavior observed in young children during their developmental years. It is characterized by a limited variety in food choices and reluctance to try new foods, even when they are familiar or have been previously consumed (Taylor & Emmett, 2019).

Picky eating habits can lead to nutritional deficiencies that may hinder a child's growth and development. A study by Chao & Chang (2017) found that children who exhibit picky eating behaviors are more likely to experience stunted growth and frequent nutrient deficiencies compared to their non-picky counterparts (Feriani, 2022). The physical consequences of picky

eating may include gastrointestinal abnormalities, such as absorption disorders, which prevent proper nutrient intake (Nadya, 2019). In the long term, picky eating can contribute to delayed puberty and psychological disorders, including anxiety and depression (Wahyuningsih *et al.*, 2024). Additionally, cognitive effects may manifest as slower motor development, causing affected children to lag behind their peers in developmental milestones (Heryanto *et al.*, 2024). Overall, picky eating can have significant negative impacts on a child's physical, psychological, and cognitive development, highlighting the need for appropriate nutritional interventions (Nadya, 2019).

The prevalence of picky eating behavior among preschool children is notably high. A study in Singapore found that the highest proportion of picky eaters occurred among children aged 3–5 years, reaching 29.9% (Goh & Jacob, 2012). In Taiwan, the prevalence among children in the same age group was significantly higher at 72% (Chao & Chang, 2017). In Indonesia, the proportion of picky eaters among toddlers was recorded at 60.3% (Purnamasari, 2020). Additionally, a study by Nadhirah *et al.*, (2021) in Trueng, Muara Batu District, North Aceh Regency, reported a prevalence of 53.1%, with 26 preschool children classified as exhibiting picky eating behavior..

The prevalence of picky eating among preschool children aged 3–5 years is notably high, reaching 69.9% (Purnamasari & Adriani, 2020). Several factors contribute to picky eating behavior, including parenting style, parental eating habits, exclusive breastfeeding history, introduction of complementary foods (MP-ASI), as well as the child's psychological and physical condition (Lukitasari, 2020).

This study aims to examine the relationship between exclusive breastfeeding history and picky eating behavior, as well as the association between parenting practices and picky eating tendencies. Given the significant prevalence of picky eating in preschool-aged children, further research is needed to identify contributing factors and develop strategies to reduce its incidence.

METHODS

This study employed a quantitative research approach using a descriptive-analytical method and a cross-sectional design. In a cross-sectional study, variables are observed at a single point in time, meaning data on independent variables (parenting and exclusive breastfeeding) and dependent variables (picky eating behavior) were collected simultaneously (Harlan, 2018).

The research was conducted at State Kindergarten Pembina Meulaboh in August 2024. The study population consisted of preschool children enrolled at State Kindergarten Pembina Meulaboh. Based on an initial survey, the total population was 70 children. Sampling was conducted using the total sampling method with predefined inclusion criteria, yielding a final sample of 64 respondents.

The inclusion criteria for this study were mothers with children attending State Kindergarten Pembina Meulaboh, children in good health without infectious diseases, willingness of participants to respond, and the ability to communicate effectively. Exclusion criteria included children not enrolled at State Kindergarten Pembina Meulaboh, those diagnosed with hormonal disorders or chronic diseases, and parents or children who were not present at the research site during the study period.

The primary instrument used in this study was a questionnaire, including the Adult Eating Behaviour Questionnaire (AEBQ) to assess eating behaviors and the Child Eating Behaviour Questionnaire (CEBQ) to measure picky eating tendencies. The independent variables in this study were exclusive breastfeeding and parenting, while the dependent variable was picky eating behavior.

Data analysis involved univariate and bivariate statistical tests. The univariate analysis was used to describe the characteristics of each variable (independent and dependent) and to present the frequency distribution of parenting and exclusive breastfeeding in relation to picky eating behavior. Bivariate analysis, utilizing the chi-square test, was employed to examine the relationship between independent and dependent variables. Statistical analysis was performed using the Chi-Square test in the SPSS program.

The 2x2 table used in the chi-square test follows specific criteria: the expected frequency (E) for any given cell should not be less than 5 in more than 20% of the total cells, and no individual cell should have $E < 5$. If these requirements are not met, an alternative statistical test, the Fisher Exact test, is applied. In this study, the p-value was obtained from the Fisher Exact test results..

Picky eating behavior was measured using the Child Eating Behaviour Questionnaire (CEBQ), with classification based on food approach and food avoidance tendencies. A score of 0 indicated picky eating behavior (if total food avoidance exceeded food approach), while a score of 1 represented non-picky eating behavior (if total food avoidance was lower than food approach). For the exclusive breastfeeding variable, measurements were categorized as follows: 0 = not exclusively breastfed for six months, and 1 = exclusively breastfed for six

months. Parenting style was assessed using the Adult Eating Behaviour Questionnaire (AEBQ) and classified into three categories: authoritarian, permissive, and democratic parenting.

RESULTS

Characteristics Respondents

Characteristics of research subjects were obtained from univariate analysis.

Table 1. Characteristics of Respondents (n=64)

Characteristics	Frequency	Percentage
Child Age		
4 years	14	21.9
5 years	35	54.7
6 years	15	23.4
Gender		
Male	30	46.9
Female	34	53.1
Total	64	100.0

The table above indicates that the total number of respondents in this study was 64. Based on age distribution, the majority of children were five years old, accounting for 35 respondents (54.7%). Regarding gender, the majority were female, with 34 respondents (53.1%).

Frequency Distribution

Table 2. Univariate Analysis

Variable	Frequency	Percentage
Picky Eater		
Picky Eater	59	92.2
NonPicky Eater	5	7.8
Exclusive Breastfeeding		
No Exclusive Breastfeeding	33	51.6
Exclusive Breastfeeding	31	48.4
Parenting		
Authoritarian	2	3.1
Permissive	1	1.6
Democratic	61	95.3
Total	64	100.0

The table above presents the frequency distribution of picky eating behavior among preschool children, indicating that the majority—59 children (92.2%)—exhibited picky eating tendencies, while only 5 children (7.8%) were classified as non-picky eaters.

Regarding exclusive breastfeeding history, the distribution shows that 33 children (51.6%) received exclusive breastfeeding, whereas 31 children (48.4%) did not. In terms of parenting styles, the results reveal that most preschool children were raised with a democratic parenting approach, accounting for 61 children (95.3%). Meanwhile, 2 children (3.1%) were raised under an authoritarian parenting style, and 1 child (1.6%) was raised with a permissive

parenting approach.

Bivariate

Table 3. Bivariate Test Results of the Relationship between Exclusive Breastfeeding History and Picky Eater

History of Breastfeeding Exclusive	Picky Eater				Total		p-value	OR
	Picky eater		NonPicky Eater					
	n	%	n	%	N	%	0.022	1.192
No Exclusive	33	55.9	0	0.0	33	51.6		
Exclusive Breastfeeding	26	44.1	5	100	31	48.4		
Total	59	100	5	100	64	100		

The table above presents the bivariate analysis results, showing that 33 children (55.9%) who did not have a history of exclusive breastfeeding exhibited picky eating behavior. Meanwhile, 26 children (44.1%) who had a history of exclusive breastfeeding also displayed picky eating tendencies. Additionally, all five children (100%) with a history of exclusive breastfeeding did not exhibit picky eating behavior, with an odds ratio (OR) of 1.192.

Furthermore, the table indicates that the chi-square analysis examining the relationship between exclusive breastfeeding history and picky eating behavior among preschool children at TK Negeri Pembina Meulaboh yielded a p-value of 0.022 ($p < 0.05$). This result confirms that the alternative hypothesis (H_a) is accepted, while the null hypothesis (H_0) is rejected. Therefore, it can be concluded that there is a significant relationship between exclusive breastfeeding history and picky eating behavior in preschool children at TK Negeri Pembina Meulaboh.

Table 4. Results of Bivariate Test of Parenting Relationship with Picky Eater

Parenting	Picky Eater				Total		p-value
	Picky eater		NonPicky Eater				
	n	%	n	%	N	%	0.875
Authoritarian	2	3.4	0	0.0	2	3.1	
Permissive	1	1.7	0	0.0	1	1.6	
Democratic	56	94.9	5	100	61	95.3	
Total	59	100	5	100	64	100	

The table above presents the bivariate analysis results, indicating that 2 children (3.4%) who exhibited picky eating behavior were raised under an authoritarian parenting style, while 1 child (1.7%) with picky eating behavior was raised under a permissive parenting approach. Additionally, 56 children (94.9%) raised with a democratic parenting style displayed picky eating behavior, whereas all 5 children (100%) raised with a democratic parenting approach did not exhibit picky eating tendencies.

Furthermore, the chi-square analysis assessing the relationship between parenting style and picky eating behavior among preschool children at TK Negeri Pembina Meulaboh yielded a p-value of 0.875 ($p > 0.05$). This result confirms that the null hypothesis (H_0) is accepted, and the alternative hypothesis (H_a) is rejected. Therefore, it can be concluded that there is no significant relationship between parenting style and picky eating behavior in preschool children at TK Negeri Pembina Meulaboh.

DISCUSSION

Picky eating is defined as a behavior in which children refuse certain foods or display selective eating habits (Afifah *et al.*, 2022). Children who exhibit picky eating tendencies may struggle with eating or prefer only specific types of food. Eating difficulties are characterized by a child's refusal to eat or their inability to consume food and beverages in quantities appropriate for their physiological age. This includes challenges in voluntarily opening the mouth, chewing, swallowing, and properly absorbing nutrients in the digestive tract without coercion or reliance on supplements such as vitamins and medications (Nurhayati *et al.*, 2021). A child is considered a picky eater if they demonstrate behaviors such as rejecting unfamiliar foods, closing their mouth in refusal, or spitting out food. However, children are less likely to develop picky eating habits when parents do not accommodate all of their food preferences, as excessive indulgence can negatively impact their overall health (Rufaida *et al.*, 2018).

Breastfeeding plays a crucial role in supporting children's growth and development. Insufficient breastfeeding can lead to disruptions in growth and developmental processes, and exclusive breastfeeding has been shown to influence picky eating behavior in children (Suharsini & Windiyati, 2020).

The results of this study indicate that 33 children (55.9%) without a history of exclusive breastfeeding exhibited picky eating behavior, while 26 children (44.1%) with a history of exclusive breastfeeding also demonstrated picky eating tendencies. Additionally, all five children (100%) with a history of exclusive breastfeeding did not exhibit picky eating behavior.

The chi-square bivariate test yielded a p-value of 0.022 ($p < 0.05$), indicating statistical significance. As a result, the alternative hypothesis (H_a) was accepted, and the null hypothesis (H_0) was rejected, confirming a significant relationship between exclusive breastfeeding history and picky eating behavior in preschool children at State Kindergarten Pembina Meulaboh. Furthermore, the study calculated an odds ratio (OR) of 1.192, suggesting that children who were not exclusively breastfed were 1.192 times more likely to develop picky eating behaviors compared to those who were exclusively breastfed.

These findings align with research conducted by Fertycia *et al.*, (2022) which identified a similar association between exclusive breastfeeding history and the incidence of picky eating in toddler-aged children at the Payung Sekaki Health Center, Pekanbaru City. Their study reported a p-value of 0.000 (< 0.005), leading to the rejection of H_0 and acceptance of H_a .

The results further support the premise that children who are not exclusively breastfed may develop picky eating behavior due to their limited exposure to diverse flavors in breast milk, potentially influencing their food preferences. Similarly, a study by Fauziah (2022) found a significant relationship between breastfeeding and picky eating behavior among preschool children in Sukarasa Village, Darma District, Kuningan Regency, with a p-value of 0.000 (< 0.05), confirming H_a acceptance and H_0 rejection. Another study by Novika et al. (2024) also identified a significant association between exclusive breastfeeding and picky eating behavior at Trisula Kindergarten in Bagansiapiapi, with a p-value of 0.03 (< 0.05), supporting H_a acceptance and H_0 rejection.

A study by Marlina *et al.*, (2020) found a significant relationship between exclusive breastfeeding and picky eating behavior in preschool children at An-Namiroh Kindergarten, Pekanbaru City, with a p-value of 0.008 (< 0.005), indicating that H_a was accepted and H_0 was rejected. Additionally, the study reported that respondents who were not exclusively breastfed had a threefold higher risk of developing picky eating behavior compared to those who received exclusive breastfeeding.

Parenting styles play a crucial role in shaping children's eating habits, as inappropriate parenting and feeding practices can contribute to picky eating tendencies. Effective parent-child interaction is essential in fostering healthy eating behaviors. Interaction is a complementary relationship between parents and children, especially during early childhood, when parental influence is most significant. Positive parent-child interactions contribute to the development of a well-rounded personality (Idhayanti *et al.*, 2022).

The findings of this study revealed that children with authoritarian parenting exhibited picky eating behavior in 2 cases (3.4%), while those with permissive parenting displayed picky eating tendencies in 1 case (1.7%). In contrast, 56 children (94.9%) raised under democratic parenting exhibited picky eating behavior, while all 5 children (100%) raised with democratic parenting did not display picky eating tendencies.

The chi-square analysis assessing the relationship between parenting style and picky eating behavior in preschool children at State Kindergarten Pembina Meulaboh yielded a p-value of 0.875 ($p > 0.05$). This result confirms that H_0 was accepted and H_a was rejected,

indicating no significant relationship between parenting style and picky eating behavior in this population.

The study also highlights that most parents in the sample practiced democratic parenting, which may have contributed to the lack of variability in parenting styles within the dataset. While democratic parenting emphasizes guidance without coercion, excessive parental permissiveness within this approach may have influenced the findings, leading to the observed lack of association between parenting style and picky eating behavior at State Kindergarten Pembina Meulaboh.

These findings align with research conducted by Pangestuti & Prameswari (2021), which found no significant relationship between parenting style and picky eating behavior in preschool children at AlKamilah IT Kindergarten, Semarang ($p = 0.997 > 0.005$). Similarly, a study by Rufaida & Lestari (2018), reported no significant association between parenting style and picky eating behavior in children aged 3–6 years in Sumberaji Hamlet, Karangjeruk Village, Jatirejo District, Mojokerto Regency ($p = 0.401 > 0.005$), further supporting the rejection of H_a and acceptance of H_0 .

CONCLUSIONS

The results of this study indicate a significant relationship between exclusive breastfeeding history and picky eating behavior in preschool children at Kindergarten Pembina Meulaboh. Children who were not exclusively breastfed were found to be 1.192 times more likely to develop picky eating tendencies compared to those who received exclusive breastfeeding. However, the study found no significant association between parenting style and picky eating behavior in preschool children at the same institution.

Based on these findings, it is recommended that parents pay closer attention to the variety of their children's meals to prevent boredom with food choices. Additionally, parents should actively engage with their children, dedicate more time to mealtime interactions, and set positive examples of healthy eating habits to encourage balanced nutritional behaviors. For healthcare professionals, this study serves as a valuable resource for guiding educational outreach and counseling efforts aimed at assisting parents in managing and addressing picky eating behavior in young children.

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