

Factors associated with the breastfeeding status of babies aged 0-7 days in Bengkulu City

Cantika Alya Dwy Febriani, Nopia Wati*, Eva Oktavidiati, Emi Kosvianti, Bintang Agustina Pratiwi

Study Program of Public Health, Universitas Muhammadiyah Bengkulu, Indonesia

*Corresponding author's email: nopiawati@umb.ac.id

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Abstract

Background: Bengkulu Province has 10 regencies/cities of which 9 regencies/cities experience fluctuating breastfeeding coverage, one city, Bengkulu City, has experienced a decline in exclusive breastfeeding coverage in the last 3 years by 60.5%, 60%, 43.66% (2020-2022). This study aims to identify the factors of maternal age, education, occupation, knowledge, attitude and self-efficacy associated with breastfeeding patterns of infants aged 0-7 days in Bengkulu City

Method: The method used was a quantitative-based study with an observational analytic descriptive approach and case control design. The study sample included 62 mothers with newborns aged between 0 to 7 days who live in Bengkulu City. The participants were divided into two groups: a case group consisting of 31 mothers who did not breastfeed in the first three days after delivery, and a control group consisting of 31 mothers who breastfed in the first three days after delivery. Data were collected through interviews and questionnaires and analyzed using the chi-square test

Results: The findings showed no significant association between maternal age $p=0.310$ (>0.005), education $p=1$ (>0.005), occupation $p=0.449$ (>0.005), knowledge $p=0.198$ (>0.005), attitude $p=1$ (>0.005), and maternal self-efficacy $p=0.779$ (>0.005) with breastfeeding status. This study emphasizes the need for special strategies and efforts to improve breastfeeding, in the Bengkulu City area.

Conclusion: In conclusion, this study found no significant association between the variables of maternal age, employment status, educational background, knowledge, attitude, and self-efficacy with exclusive breastfeeding practices. These results emphasise the importance of interventions that target not only knowledge, but also mother's attitudes and beliefs regarding breastfeeding, as well as providing appropriate support based on mothers' employment conditions and age to improve breastfeeding success rates.

Keywords: Breastfeeding Status, Breastmilk, Factors

INTRODUCTION

According to Westerfield and colleagues, breastmilk serves as the primary nutritional provider for infants, providing the full range of essential nutrients needed to promote growth and effectively support their developmental milestones (1). Breast milk only is fed for the first six months, with no additional consumption. Subsequently, complementary foods are introduced after six months alongside breastfeeding. In addition to its nutritional benefits, breast milk contains immune-boosting antibodies that help protect babies from infections while fostering a strong emotional connection between mother and child. Therefore, breastfeeding is an important component of health promotion efforts. After

giving birth, the mother's body undergoes significant hormonal changes, which is the main trigger for the start of the breast milk secretion process (2).

According to the World Health Organization (WHO), the international distribution of exclusive breastfeeding has not met the recommended targets that are essential for maintaining maternal and child health during the period 2015 to 2021, with only 47% of infants initiating breastfeeding within one hour of birth, which is well below the set target of 70%. In addition, the proportion of infants less than six months of age who are exclusively breastfed has increased to 48%, close to the *World Health Assembly* (WHA) goal of

reaching 50% by 2025. Although 70% of children continue to be breastfed for at least one year, this number decreases to 45.5% by the time the child is two years old, with global targets set at 80% in one year and 60% in two years. To achieve the 2030 target, national efforts need to be strengthened to support continued breastfeeding through education, policy and institutional support (3). Based on data, Indonesia is part of the East Asia and Pacific region with the lowest exclusive breastfeeding rate (4). According to the Ministry of Health's annual profile report, the percentage of infants aged 0-6 months receiving exclusive breastfeeding has decreased over the past three years. From 67,74% in 2019 to 66,1% in 2020, then continued to decline to 56,9% in 2021. Furthermore, the Director General of Public Health's annual report shows that the percentage of exclusively breastfed infants in 2022 reached 67,96%, exceeding the global target of 50% (5). In accordance with Presidential Regulation No. 72 of 2021 on the Acceleration of Stunting Reduction, the target of exclusive breastfeeding is 80% by 2024. Currently, there are only 10 provinces in Indonesia that have managed to exceed this figure. Bengkulu Province is among the 24 provinces that are still below the target, with exclusive breastfeeding coverage of only 64.02% (6).

Recent data from the Bengkulu Province health profile shows a downward trend in exclusive breastfeeding coverage over the past three years of 68,39% in 2020, 66,3% in 2021, and 64,41% in 2022. Based on the data, Bengkulu Province has 10 regencies/cities, and nine of them show fluctuating exclusive breastfeeding achievements. One city in Bengkulu experienced a decline in exclusive breastfeeding coverage of 60,5%, 60%, and 43,66% over the last three years (2020-2022) (7).

Tumiar and colleagues' preliminary study identified maternal self-efficacy, or a mother's belief in her ability to breastfeed effectively, as an important factor influencing exclusive breastfeeding success (8). According to research conducted Syafriani & Afiah said various factors such as age and educational

background were found to influence the level of knowledge of mothers in the health service area of Bangkinang City (9).

Preliminary research with 8 mothers who have just given birth found that there are still many mothers who say that on the third day their milk has just come out, and it turns out that many new mothers are less aware of the beginning of milk production and the right time to start breastfeeding, therefore on days 1-3 are very vulnerable to breastfeeding failure, because the milk has not come out and is caused by children who always cry.

In the previous explanation, this study was intended to examine the mother's age, education, occupation, knowledge, attitude and self-efficacy with the breastfeeding status of infants aged 0-7 days in Bengkulu City.

METHOD

This study used a quantitative approach. The type of quantitative research is research that applies observational analytic methods with a *case control* design (10). This study was conducted in Bengkulu City from May to August 2024, with a case control design based on observational analysis. The study population included 62 mothers with infants aged 0-7 days in Bengkulu City. The sample was divided into two groups: the case group included 31 mothers whose infants were not breastfed within the first three days after birth, while the control group consisted of 31 mothers whose infants were breastfed within the first three days, for a total of 62 mothers determined using *purposive sampling*. Data collection was conducted from the third trimester of pregnancy until the baby was 0-7 days old. Validity and reliability of data collection instruments were tested on 30 mothers.

In this study, data collection was carried out through a questionnaire that had gone through validity and reliability tests. This test aims to ensure the accuracy and consistency of respondents' answers to the statements submitted. The validity and reliability test process focused

on third trimester pregnant women who had just had their first child. To assess the effectiveness of the questionnaire prepared by the researcher, a validity test is required for each question. The calculation results obtained are then compared with the value in the r table; if the calculated $r \geq r$ table, then the question is declared valid.

Statistical analysis was conducted using univariate and bivariate methods, specifically using the chi-square test, to explore the relationship between variables such as maternal age, educational background, occupation, knowledge, attitude, and self-efficacy. The aim was to identify the main factors that influence early breastfeeding practices and provide actionable recommendations to improve breastfeeding rates in Bengkulu City

In this study, the variables used are divided into two categories, namely independent variables and dependent variables. The independent variables included maternal age, education, occupation, knowledge, attitude, and self-efficacy, while the dependent variable was breastfeeding status. The inclusion criteria in this study included pregnant women who were pregnant with their first child. The selection of this criterion was based on the fact that many expectant fathers and mothers still lacked an understanding of how to breastfeed and care for babies. The second inclusion criterion was children born alive. The reason for selecting this criterion was to obtain information on the status of breastfeeding after delivery until the baby was 7 days old. The third inclusion criterion was mothers who were willing to participate in the study until completion and were able to read. This was chosen to avoid loss of contact between the researcher and the respondent, and to ensure that the respondent could fill in the pre-test and post-test questionnaires correctly.

RESULTS

As presented in Table 1, the results of univariate analysis revealed a balance between maternal age 1:1, the mother's education level is high as many as 33 respondents (53,2%), the majority of

respondents who do not work as many as 38 respondents (61,3%), for a high level of maternal knowledge as many as 36 respondents (58,1%), attitudes also greatly affect the relationship of breastfeeding status where the majority of maternal attitudes are less supportive as many as 34 respondents (54,8%), and the majority of maternal self-efficacy has high self-efficacy as many as 32 respondents (51,6%), for breastfeeding status in infants between partial (not breastfeeding) and non-partial (breastfeeding) balanced as many as 31:31 respondents.

Table 1. Results of Univariate Analysis of Research Variables.

Variables	Frequenc y N=64	%
Mother's age		
<25 years>35 years	31	50%
20-35 years	31	50%
Mother's education		
Low	29	46,8%
High	33	53,2%
Mother's occupation		
Formal	9	14,5%
Informal	15	24,2%
Not working	38	61,3%
Mother's knowledge		
Low	26	41,9%
High	36	58,1%
Mother's attitude		
Support	28	45,2%
Less supportive	34	54,8%
Maternal self-efficacy		
Low	30	48,4%
High	32	51,6%
Breastfeeding status		
Partial	31	50%
Non-partial	31	50%

DISCUSSION

According to the Association of Indonesian Breastfeeding Mothers (AIMI), a mother's age has no direct impact on her ability to breastfeed. Instead, the frequency of breastfeeding plays a more important role in ensuring sufficient milk production. Regardless of a mother's age, exclusive

breastfeeding can be achieved with strong motivation, adherence to on-demand breastfeeding practices, and application of appropriate breastfeeding techniques(11) . This finding is consistent with the research data which showed a p value of 0,310

abovethe (Sig.) 0,005 level, suggesting that there is no significant correlation between maternal age and breastfeeding status for newborns aged 0-7 days in Bengkulu City.

Table.2. Relationship between age, education, labor, knowledge, attitude and self-efficacy of mothers with breastfeeding status

Variables	Breastfeeding Status				P-value
	Partial		Non-partial		
	F	%	F	%	
Mother's age					
<25 years	18	29%	13	21%	0,310
>35 years	13	21%	18	29%	
Mother's education					
Low	14	22,6%	15	24,2%	1
High	17	27,4%	16	25,8%	
Mother's occupation					
Formal	6	9,7%	3	4,8%	0,449
Informal	6	9,7%	9	14,5%	
Not working	19	30,6%	19	30,6%	
Mother's knowledge					
Low	16	25,8%	10	16,1%	0,198
High	15	24,2%	21	33,9%	
Mother's attitude					
Less supportive	14	22,6%	14	22,6%	1
Support	17	27,4%	17	27,4%	
Maternal self-efficacy					
Low	16	25,8%	14	22,6%	0,799
High	15	24,2%	17	27,4%	

According to the results of the bivariate analysis in Table 2, the education level of respondents with high education was 53,2%. Educational attainment has a significant influence on breastfeeding practices, because highly educated mothers are usually more receptive to adopting new ideas compared to those who are less educated. In accordance with the theory presented by Notoadmodjo in Okawary's study (12), states that education has an impact on changes in individual health behavior, which begins with the delivery of health information (12). A previous study conducted in Nigeria stated that low maternal education was the only factor associated with breastfeeding (13).

Among the study participants, 61,3% were unemployed. Statistical analysis yielded a p-value of 0,449 (>0,005), evidencing the absence of a significant correlation between maternal employment status and breastfeeding practices for newborns aged 0-7 days in Bengkulu City. Contrary to this finding, Syafira and Afiah identified a significant correlation between mothers' employment status and breastfeeding practices (9). This study is not in line because there are several differences, namely the results of the significant relationship are not the same, the number of respondents is not the same, the research location is not related to Syafira & Afiah's research. Nora and Jurohtun

reported that working mothers are less committed to exclusive breastfeeding, whereas housewives show a high tendency to successfully practice exclusive breastfeeding. Housewives often allocate a significant amount of time to childcare activities, prioritize their child's well-being, and enable consistent exclusive breastfeeding practices (14)(15).

The results of the data analysis between the relationship between knowledge and breastfeeding status showed that mothers with high knowledge were 58,1% of respondents who breastfed 33,9%. The chi-square analysis of maternal knowledge and breastfeeding practices for infants aged 0-7 days in Bengkulu City showed a p value of 0,198 ($>0,005$), indicating no significant relevance. These findings contradict research by Haurissa and colleagues, who identified a positive correlation between maternal knowledge and exclusive breastfeeding practices (16). The reason for the discrepancy is due to differences in research location, sample differences, and Haurissa and colleagues' research examined the relationship between maternal knowledge of breastfeeding and the likelihood of exclusive breastfeeding while my research only examined the breastfeeding status of infants aged 0-7 days.

The results of the data analysis of maternal attitudes that support breastfeeding were 27,4% of respondents, and a p value of 1 ($>0,005$) was obtained, which supports the null hypothesis (H_0) and rejects the alternative hypothesis (H_1), indicating the absence of a significant correlation between maternal attitudes on breastfeeding status in newborns aged 0-7 days in Bengkulu City. This study is in line with the findings of Haurissa et al., who also reported no significant relationship between maternal attitudes and exclusive breastfeeding behavior (16).

Self-efficacy refers to self-efficacy about their ability to perform tasks and achieve desired outcomes effectively. High levels of self-efficacy among breastfeeding mothers contribute significantly to increased

motivation and ability to achieve breastfeeding goals (17). Based on the data presented in Table 2, 51,6% of respondents showed high levels of self-efficacy. The chi-square test resulted in a p-value of 0,799 ($>0,005$), indicating there was no significant relationship between maternal self-efficacy and breastfeeding practices among infants aged 0-7 days in Bengkulu City. These results contradict Rahmadani and Sutrisna's research which found a significant correlation between maternal self-efficacy and exclusive breastfeeding practices in the Kandang Community Health Center service area of Bengkulu City (18).

Of the following factors, maternal age, education, occupation, knowledge, attitude and self-efficacy were found to have no significant relationship with infant breastfeeding status in Bengkulu City.

CONCLUSIONS

In conclusion, this study found no significant association between the variables of maternal age, employment status, educational background, knowledge, attitude, and self-efficacy with exclusive breastfeeding practices. These results emphasize the importance of interventions that target not only knowledge, but also mothers' attitudes and beliefs regarding breastfeeding, as well as providing appropriate support based on mothers' employment conditions and age to improve breastfeeding success rates.

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