

IMPACT OF MATERNAL KNOWLEDGE AND EMPLOYMENT ON EXCLUSIVE BREASTFEEDING IN BELU, EAST NUSA TENGGARA

Elisabet Br Sebayang¹⁾, Atika²⁾, Endyka Erye Frety³⁾, Mahendra Tri Arif Sampurna⁴⁾

Email: elisabet.sby@gmail.com¹⁾, atika@fk.unair.ac.id²⁾, endyka-erye-frety@fk.unair.ac.id³⁾, ahendra.tri@fk.unair.ac.id⁴⁾

^{1,2,3,4)} Midwifery Study Program, Faculty of Medicine, Airlangga University, Jl. Prof. DR. Moestopo No. 47, Pacar Kembang, Tambaksari District, Surabaya, East Java 60132

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Abstract

According to the Belu District Health Service, exclusive breastfeeding rates for babies aged 0-6 months at the Atapupu Community Health Center decreased in 2021. This research aims to determine the relationship between maternal knowledge, employment, and exclusive breastfeeding. The study uses a cross-sectional design. Data were collected from the Atapupu Health Center, Belu Regency, NTT (June-July 2022), involving 70 participants. This research employed a total sampling technique. Primary and secondary data were gathered using questionnaires, and the data were analyzed using the Chi-Square statistical test. Results from the univariate analysis indicated that regarding knowledge about exclusive breastfeeding, nearly 26 respondents (37.1%) had sufficient knowledge. In terms of mothers' employment, the majority worked as housewives, with 49 respondents (62.9%). Additionally, 42 respondents (60%) were more likely to practice exclusive breastfeeding. The Chi-Square test results showed a significant relationship between maternal knowledge and exclusive breastfeeding, with a p-value of 0.001 ($p < 0.05$) and an odds ratio (OR) of 0.6, indicating a relationship between knowledge and exclusive breastfeeding. Conversely, the relationship between maternal employment and exclusive breastfeeding yielded a p-value of 0.099 ($p > 0.05$), suggesting no significant relationship between employment and exclusive breastfeeding.

Keywords: Exclusive breastfeeding, Knowledge, Job

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Correspondence:

Atika. Program Studi Pendidikan Bidan, Fakultas Kedokteran Universitas Airlangga Surabaya, atika@fk.unair.ac.id

1. Introduction

Breastfeeding represents a critical investment in the future, enhancing the quality of human resources and contributing to economic growth. It provides every child an equitable opportunity to thrive and is associated with increased earnings in adulthood [1].

According to the World Health Organization (WHO), approximately 800,000 infant lives are saved annually due to breastfeeding. Furthermore,

breastfeeding significantly reduces the risk of breast cancer, preventing an estimated 20,000 maternal deaths each year. The WHO has set an ambitious target of achieving 50% exclusive breastfeeding rates for infants up to six months of age by 2025 [2]. Despite these benefits, the rate of exclusive breastfeeding in Indonesia remains low. The 2019 Basic Health Survey (RISKESDAS) reported exclusive breastfeeding coverage at 37.3%, which

increased slightly to 40% in the 2020 RISKESDAS, falling short of the WHO target of 50% [3].

Numerous factors influence these coverage outcomes, particularly a lack of maternal knowledge regarding the health benefits of breastfeeding and the impact of maternal employment on exclusive breastfeeding practices. Knowledge of exclusive breastfeeding is crucial for mothers' willingness and capacity to engage in this practice. Research indicates that mothers with adequate knowledge are significantly more likely to adhere to exclusive breastfeeding guidelines [4]. Moreover, employment status and working conditions can substantially affect a mother's breastfeeding ability. Working mothers often encounter limited time and insufficient facilities for breastfeeding or expressing milk during working hours [5]. The moderating role of employment is noteworthy, as maternal knowledge significantly impacts breastfeeding willingness among working mothers, whereas this relationship is not as pronounced among non-working mothers [6].

Based on preliminary studies conducted in January 2023, the total number of infants aged 0-6 months in Belu Regency is 3,106, including 155 infants from the Atapupu Public Health Center (PHC). Among the 17 PHCs in Belu Regency, two have failed to meet the target of 60% coverage for exclusively breastfed infants under six months in 2022. Specifically, PHC Aululik achieved a coverage rate of only 50%, while PHC Atapupu reached 51.6%. Within these areas, coverage varies by village, with Dualaus Village reporting a notably low exclusive breastfeeding rate of 46.9%. Such low coverage rates can contribute to increased morbidity and mortality rates among infants due to heightened susceptibility to infectious diseases [7]. Consequently, promoting exclusive breastfeeding is essential to improving infant health outcomes [8].

Research indicates a strong correlation between a mother's

knowledge of breastfeeding and her likelihood of practicing exclusive breastfeeding. For instance, a study conducted in the Barong Tongkok area revealed a significant association between maternal knowledge and breastfeeding behaviors, with a p-value of 0.003, suggesting that enhanced knowledge correlates with improved breastfeeding practices [9]. Furthermore, the work environment significantly influences mothers' ability to maintain breastfeeding. In a study in Bandung Regency, the availability of workplace breastfeeding facilities was linked to better breastfeeding outcomes, with maternal knowledge and workplace support identified as critical factors [10].

In light of these findings, the researcher is interested in investigating "The Relationship Between Maternal Knowledge and Employment Status with Exclusive Breastfeeding Among Infants Aged 6-12 Months in Dualaus Village, Belu Regency, East Nusa Tenggara Province." The primary objective of this study is to analyze the relationship between maternal knowledge and employment status concerning exclusive breastfeeding practices among infants aged 6-12 months in this specific community.

2. Method

This study employs a cross-sectional approach with 70 respondents as the sample. The variables in this study include maternal knowledge, employment, and exclusive breastfeeding practices. The instruments utilized in this research are a knowledge questionnaire, a demographic data sheet, and an observation sheet for breastfeeding practices. The statistical analysis used is the Chi-Square test.

3. Results and Discussion

Table 1. Characteristics of Respondents

Characteristics	%	
	f	
Mother's Age (years old)		
< 20	5	7,1
20- 35	53	75,7

Characteristics	f	%
>35	12	17,1
Educational History		
Elementary School	11	15,7
Junior High School	13	18,6
High School	33	47,1
University	13	18,6
Baby's Age (month old)		
6	18	25,7
7	7	10
8	9	12,9
9	9	12,9
10	8	11,4
11	11	15,7
12	8	11,4
Parity		
Primiparous	30	42,9
Multiparous & Grandemultiparous	40	57,1
Knowledge		
Good	21	30,0
Sufficient	26	37,1
Poor	23	32,9
Employment		
Unemployed	49	70
Civil Servant	9	12,9
Pegawai swasta	7	10,0
Private sector employee	5	7,1
Breastfeeding		
Exclusive	28	40,0
Non-exclusive	42	60,0

Table 1 illustrates that most mothers fall within the age range of 20 to 35 years. This age cohort is consistent with existing literature, which identifies 20 to 35 years as the optimal age for childbirth. Studies indicate that maternal age at delivery is significantly correlated with various risks affecting both the child and the mother. Specifically, mothers who deliver before the age of 20 or after the age of 35 face heightened risks of delivering infants with adverse outcomes, potentially leading to increased neonatal morbidity and mortality (11,12). Childbirth at an age younger than 20 is frequently associated with the incomplete development of reproductive organs, while advanced maternal age (over 35) is

linked to a greater likelihood of degenerative diseases that may compromise pregnancy [11].

The educational background of the respondents reveals that nearly half of the mothers have attained a high school level of education. Research conducted in Indonesia indicates that a significant portion of the rural population, approximately 70%, concludes their formal education at the high school level, primarily due to various socio-economic factors and limited access to educational facilities [13]. This trend is further exacerbated by Indonesia's policy of 12 years of compulsory education, which may not adequately address the educational needs in remote areas [14].

Regarding infant age, a notable proportion of respondents reported having infants aged 6 months. Literature supports the assertion that exclusive breastfeeding for the first six months of life provides sufficient nutrition, fostering optimal growth and development. This practice has been associated with enhanced dental and gross motor development in infants aged 6 to 18 months, with statistically significant correlations identified in various studies [15]. The data further indicates that most mothers are multiparous, which aligns with research suggesting that multiparous women (those who have given birth more than once) are more inclined to breastfeed exclusively than primiparous women (first-time mothers). A systematic review encompassing multiple studies substantiates the consistent association between higher parity and increased rates of exclusive breastfeeding, emphasizing the role of experiential knowledge gained from previous childbirths [16].

Overall, maternal knowledge regarding breastfeeding appears to be evenly distributed across good, sufficient, and deficient categories. This finding is corroborated by a study conducted among postpartum mothers in a North Indian state, which revealed that only 11.5% possessed good breastfeeding knowledge, with the majority demonstrating an

inadequate understanding of breastfeeding practices [17].

The findings of this study indicate that a significant proportion of mothers were not engaged in formal employment. This observation aligns with existing research, which suggests that the dual responsibilities of work and family

management can create challenges in time management, emotional stress, and health issues, ultimately hindering mothers' ability to maintain employment [18]. Furthermore, the study revealed that breastfeeding practices among the respondents were predominantly non-exclusive.

Table 2: Analysis of the Relationship between the Level of Knowledge and Maternal Occupation with Exclusive Breastfeeding for Infants Aged 6-12 Months in Dualaus Village, Belu Regency, NTT (June-July 2023)

Variabel	Exclusive Breastfeeding				Total	P	OR
	Exclusive		Non-exclusive		Σ	%	Value
	n	%	n	%			
Knowledge Level							
Good	21	100,	0	0,0	21	100,0	<0,001 0,633
Sufficient	6	23,1	20	76,9	26	100,0	
Poor	1	4,3	22	95,7	23	100,0	
Total	28	40.0	42	60.0	70	100,0	
Employment							
Employed	12	57,1,	9	42,9	21	100,0	0,099 0,223
Unemployed	16	32,7	33	67,3	49	100,0	
Total	28	40.0	42	60.0	70	100,0	

Table 2 presents an analysis of the correlation between maternal knowledge and exclusive breastfeeding practices among a sample of 70 respondents in Dualaus Village, Belu Regency, East Nusa Tenggara. Among the mothers surveyed, 29 exhibited good knowledge of breastfeeding; within this subgroup, 20 mothers (69.0%) practiced exclusive breastfeeding, while 9 mothers (31.0%) did not adhere to this practice. In the group categorized as possessing sufficient knowledge, which comprised 28 mothers, only 5 (17.9%) engaged in exclusive breastfeeding, contrasting with 23 mothers (82.1%) who refrained from it. Lastly, of the 13 respondents identified with insufficient knowledge, 3 mothers (23.1%) practiced exclusive breastfeeding, whereas 10 mothers (76.9%) did not.

A Pearson Chi-square statistical test was employed to evaluate the relationship between the levels of

maternal knowledge and the practice of exclusive breastfeeding, with a significance threshold established at $\alpha = 0.05$. The statistical analysis yielded a p-value of 0.000 ($p < 0.05$), thereby indicating a statistically significant association between maternal knowledge and exclusive breastfeeding practices in the study population. These results suggest that enhanced maternal knowledge concerning breastfeeding is positively associated with the likelihood of adopting exclusive breastfeeding practices. The findings further emphasize the critical role of education and information dissemination in fostering awareness and promoting effective breastfeeding practices within this community. The contingency coefficient of 0.446 indicates a moderate strength of association between maternal knowledge and exclusive breastfeeding.

Additional comparative studies corroborate these findings. For instance,

research conducted in the Majalengka District similarly observed a significant association between maternal knowledge about breastfeeding and exclusive breastfeeding practices, also reporting a p-value of 0.000. This suggests that increased knowledge is correlated with higher rates of exclusive breastfeeding [19]. Conversely, a study conducted in West Java found no significant association between maternal knowledge of antenatal care and exclusive breastfeeding, indicating that other factors may also influence exclusive breastfeeding practices [20]. Furthermore, the involvement of fathers in promoting exclusive breastfeeding has been highlighted in a study from Lampung Timur, which identified a significant correlation between paternal knowledge and support and the success of exclusive breastfeeding. Specifically, the active participation of fathers in childcare and household responsibilities was found to positively influence exclusive breastfeeding practices, with p-values of 0.038 and 0.010, respectively [21].

In addition to knowledge, sociocultural factors significantly influence exclusive breastfeeding (EBF) practices. A study conducted in Lebaho Ulaq Village revealed a relationship between maternal knowledge and sociocultural awareness of EBF, with significant p-values indicating that cultural norms and practices can either support or hinder EBF [22]. While knowledge is undeniably essential, attitudes and family support also play critical roles. Research in Magetan found that although knowledge alone was not directly correlated with EBF, positive attitudes, and familial support—often shaped by knowledge—were essential for the success of exclusive breastfeeding.

Many mothers do not receive adequate breastfeeding education during pregnancy and childbirth in health facilities, resulting in a lack of understanding regarding the significant benefits of breast milk for infant health and development. Additionally, knowledge about the mechanisms of

breast milk production and secretion and the appropriate breastfeeding frequency is often insufficient. This knowledge gap can hinder mothers' abilities to employ proper breastfeeding techniques..

Furthermore, mothers are susceptible to misinformation and myths about breastfeeding from informal sources. A lack of understanding regarding the signs of hunger and satiety in infants who are exclusively breastfed can lead to feelings of hopelessness during challenging breastfeeding experiences. Many mothers may perceive bottle-feeding as easier than breastfeeding, and a lack of awareness about the importance of exclusive breastfeeding for at least the first six months can exacerbate this issue. Consequently, due to limited knowledge, mothers may be unaware of the health risks associated with not providing their infants with exclusive breast milk.

In a study involving 70 respondents, 21 were employed, comprising 12 mothers (57.1%) who practiced exclusive breastfeeding and nine mothers (42.9%) who did not. Among the 49 respondents who were not employed, 16 (32.7%) practiced exclusive breastfeeding, while 33 (67.3%) did not. Statistical analysis using the Chi-square test yielded a p-value of 0.099 ($p > 0.05$), indicating no significant relationship between employment status and exclusive breastfeeding practices in Dualaus Village, Belu Regency, NTT. This finding is further supported by a contingency coefficient of 0.223, suggesting a low strength of association between employment and exclusive breastfeeding.

Employment is generally associated with activities related to income generation, and working mothers often face time constraints that limit their ability to fulfill their breastfeeding responsibilities. A study indicated that many mothers opt to leave their jobs to care for their children, highlighting the challenges they face in balancing work and breastfeeding.

Several factors can lead to a mother not providing exclusive breastfeeding, even if she is not employed. First, medical issues such as insufficient milk production can arise from breast disorders or hormonal deficiencies that affect lactation. Second, high stress or fatigue levels in mothers can result in decreased oxygen levels and reduced letdown hormones, complicating the breastfeeding process. Additionally, nipple complications—such as fissures, surgical scars, or infections—can cause pain during breastfeeding, further discouraging exclusive breastfeeding practices.

Psychological factors, including postpartum depression and trauma, can also significantly impact a mother's willingness to breastfeed. Environmental influences, such as family dynamics, social media narratives, and peer pressure advocating for early complementary feeding, can further contribute to the decision not to breastfeed exclusively.

4. Conclusion

Research indicates a correlation between maternal employment and knowledge regarding exclusive breastfeeding practices. Mothers who possess a strong understanding of the importance of breast milk—particularly regarding its optimal nutritional content for infants, its protective effects against infections, and its long-term health benefits—are more likely to engage in exclusive breastfeeding. Furthermore, knowledge of proper breastfeeding techniques, strategies for managing potential challenges (such as pain or difficulties encountered during breastfeeding), and methods for expressing breast milk also contribute to successful breastfeeding outcomes.

Working mothers often face obstacles in allocating time and opportunities for direct breastfeeding. In many instances, they may feel compelled to resort to formula feeding due to difficulties in expressing breast milk or a lack of support within their work environments. However, mothers who

receive support from their workplaces—such as adequate maternity leave policies, facilities for expressing breast milk, and an overall supportive environment—are more likely to succeed in exclusively breastfeeding their infants. Additionally, flexible work arrangements that allow mothers to manage their schedules effectively play a significant role in facilitating successful breastfeeding.

Consequently, educational initiatives focused on breastfeeding, combined with policies that support breastfeeding mothers in the workplace, are crucial for enhancing exclusive breastfeeding rates. These efforts ultimately contribute to the health and well-being of infants, reinforcing the need for comprehensive support systems for breastfeeding mothers in both societal and workplace contexts.

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