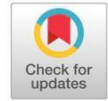


ORIGINAL RESEARCH

# The Role of Early Initiation of Breastfeeding for Successful Exclusive Breastfeeding among Working Mothers in Indonesia



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## Abstract

**Background:** Working mothers are often considered at risk for suboptimal exclusive breastfeeding (EBF) due to employment-related constraints. Early initiation of breastfeeding (EIBF) is widely recognized as a critical first step in optimal infant feeding; however, its specific contribution to sustained EBF among working mothers remains insufficiently quantified at the national level.

**Purpose:** This study examined the role of EIBF in achieving EBF among working mothers in Indonesia.

**Methods:** This secondary analysis used data from the 2022 Indonesian National Nutritional Status Survey, including 46,130 children aged 0–23 months born to working mothers. Exclusive breastfeeding was the outcome, with early initiation of breastfeeding as the main exposure. Seven covariates were examined: residence, maternal age, marital status, education, household wealth, antenatal care utilization, and child gender. Adjusted associations were estimated using binary logistic regression.

**Results:** The prevalence of EBF among working mothers was 40.4%, while 59.7% practiced EIBF. Working mothers who initiated breastfeeding within the first hour after birth were significantly more likely to achieve EBF than those who did not (AOR = 1.715; 95% CI: 1.706–1.724). All covariates showed significant associations with EBF.

**Conclusion:** EIBF emerged as the strongest determinant of EBF among working mothers in Indonesia, even after controlling for socioeconomic and health service factors. These findings provide robust national evidence supporting the integration of EIBF as a core strategy within maternal health services and workplace breastfeeding policies. However, maternal socioeconomic characteristics, health service utilization, and contextual factors also shape EBF practices, indicating the need for comprehensive multi-level strategies.

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## 1. Introduction

Breastfeeding provides one of the best strategies for a child's health and survival (World Health Organization, 2023). Successful breastfeeding is critical for children's development and growth (Alayón et al., 2022), and adequate nutrient intake during early life supports optimal outcomes (Jama et al., 2020). Babies should be exclusively breastfed, meaning they receive only breast milk during the first six months of life without additional foods or liquids, including water or formula, except for prescribed medicines, vitamins, or mineral supplements (Centers for Disease Control and Prevention, 2023; World Health Organization, 2023). An educated mother with a positive attitude may be essential for achieving successful exclusive breastfeeding (EBF) (Dukuzumuremyi et al., 2020; Laksono et al., 2021).

The positive effects of EBF for children can include a more nutritious diet, reduced hospital stays, improved absorption, healthy weight gain, lower body mass index, less adiposity, lower

total cholesterol value, improved cognitive development, and better behavior, as well as metabolic rate stability in children with metabolic disorders (Couto et al., 2020; Motee & Jeewon, 2014). EBF is the most effective way to minimize potential childhood complications such as high blood pressure, being overweight, gastroenteritis, and death (Motee & Jeewon, 2014). According to a study conducted in Spain, increasing EBF prevalence could result in significant revenue savings for the Spanish National Health System (Quesada et al., 2020). Other chronic conditions might be reduced by breastfeeding, including diabetes (type 1 and type 2), being overweight, hypertension, cardiovascular disease, hyperlipidemia, and some forms of cancer (Binns et al., 2016). EBF has also been shown to help prevent and reduce the risk of rotavirus infection in young children (Krawczyk et al., 2016).

In Indonesia, EBF coverage declined from 64.5% in 2008 to 52.2% in 2021 (Indonesian Ministry of Health Data and Information Center, 2021; Indonesian Ministry of Health [MoH], 2018), although it still exceeds the global average of 42% (Development Initiatives Poverty Research, 2020). Moreover, the timing of breastfeeding initiation varies worldwide, with a higher rate observed in high-income countries compared to low and middle-income nations (Victora et al., 2016). Most countries struggle to achieve EBF rates above 50%, as seen in Colombia at 43% and Kenya at 42% (Development Initiatives Poverty Research, 2020) (Finnie et al., 2020; Victora et al., 2016). While EBF rates in Indonesia currently meet the WHO target ( $\geq 50\%$ ), it is crucial to address the downward trend observed from 2018 to 2021 to prevent further declines in EBF rates in Indonesia (WHO & UNICEF, 2014). In addition to EBF, early initiation of breastfeeding (EIBF) also plays a critical role in improving breastfeeding outcomes and infant survival.

EIBF is associated with positive infant health outcomes and survival, linked to the provision of colostrum and the overall duration of breastfeeding (Smith et al., 2017; Victora et al., 2016). Regarding the important role of breastfeeding onset, a meta-analysis found that newborns who begin breastfeeding between 2 and 23 hours after birth face a 33% higher risk of mortality compared to those who start within the first hour (Smith et al., 2017). Moreover, among newborns initiating breastfeeding 24 hours or more post-birth, the risk doubles. Recent global reports indicate that most newborns worldwide experience delayed onset in breastfeeding initiation, with an estimated 78 million newborns in 2017 alone waiting over an hour to begin breastfeeding. Notably, rates of EIBF in Indonesia declined from 58.5% in 2001 to 48.6% in 2021 (Indonesian Ministry of Health Data and Information Center, 2021; Indonesian MoH, 2018).

Existing studies have predominantly focused on the association between maternal employment and EBF. However, this focus does not adequately address EIBF, an equally important indicator of optimal newborn feeding practices (Mohammed et al., 2023). In particular, the relationship between working mothers and EIBF warrants further examination. While maternal employment is well-established as a barrier to maintaining EBF, evidence on whether employment status influences EIBF is less consistent and remains insufficiently synthesized (Horwood et al., 2020). Some studies suggest that facility-based delivery environments and perinatal care practices shape EIBF more strongly than employment status, while others indicate that employment-related constraints (e.g., short maternity leave, workplace norms) may indirectly affect whether women are able to initiate breastfeeding early (Horwood et al., 2020; Naah et al., 2019). These mixed findings highlight the need to further examine EIBF as a key determinant of EBF, particularly among working mothers.

Additionally, breastfeeding practices are influenced by multiple maternal, socioeconomic, and healthcare-related factors. Each covariate, such as maternal age, education, mode of delivery, antenatal care utilization, place of delivery, parity, socioeconomic status, or infant characteristics, has been shown to be associated with EIBF and EBF in previous studies (Horwood et al., 2020; Naah et al., 2019; Ndum Okwen et al., 2022). Therefore, including these variables is essential to isolate the independent effect of EIBF on EBF and to ensure a robust analytical framework. This approach strengthens the validity of the multivariate analysis and aligns with established evidence on determinants of breastfeeding practices.

This study offers novel empirical evidence on breastfeeding practices among working mothers in Indonesia by examining the role of EIBF in achieving EBF using nationally representative data. Unlike prior studies, which are primarily descriptive (Hardiyani et al., 2024; Sulistyowati & Cahyati, 2025), this study positions EIBF as the primary exposure and EBF as the main outcome, and analyzes them using multivariable regression analysis, adjusting for socioeconomic and health service factors. The use of recent national survey data with a large

sample size enables population-level inference and provincial-level comparisons, providing policy-relevant insights that have not been previously documented for working mothers in Indonesia. Accordingly, this study aimed to examine the role of EIBF in EBF among working mothers in Indonesia.

## **2. Methods**

### *2.1. Research design*

The study used secondary data from the Indonesian National Nutritional Status Survey 2022, a nationally representative cross-sectional survey conducted by the Ministry of Health ([Health Development Policy Agency of Indonesian Ministry of Health, 2022](#)). This secondary analysis leveraged existing large-scale, high-quality data to examine the associations between early initiation of breastfeeding and exclusive breastfeeding among working mothers at the national level, which would be difficult to achieve through primary data collection due to resource and logistical constraints.

### *2.2. Setting and samples*

The study included children aged 0-23 months whose mothers were employed, using data from the 2022 Indonesian National Nutritional Status Survey. Children under age two served as the unit of analysis, while mothers were considered respondents. The inclusion criteria were children aged 0-23 months whose mothers were classified as working at the time of the survey and who had complete data on exclusive breastfeeding status. The exclusion criteria included children with missing or incomplete information on key variables, including early initiation of breastfeeding and selected covariates (residence, maternal age, marital status, education, wealth status, antenatal care, and child gender). The survey employed a multistage cluster random sampling design to obtain a nationally representative weighted sample of 46,130 children.

### *2.3. Measurement and data collection*

This study used EBF practices among working mothers as the outcome variable. EBF was dichotomized as No = 0 and Yes = 1. Working mothers who reported feeding their babies anything other than breast milk were assigned “No = 0,” while those who reported not providing any food or liquid other than breast milk were assigned “Yes = 1” ([Terefe & Shitu, 2023](#)). The exposure variable was EIBF, defined as the initiation of breastfeeding within the first hour after birth, ensuring colostrum intake ([UNICEF & WHO, 2018](#)). EIBF was categorized as No = 0 and Yes = 1.

Seven control variables were included: type of residence, maternal age, marital status, education level, wealth status, antenatal care (ANC) utilization, and child gender. Residence was categorized as urban or rural. Maternal age was grouped into seven categories: <20, 20–24, 25–29, 30–34, 35–39, 40–44, and ≥45 years. Maternal education was classified as no formal education, elementary school, junior high school, senior high school, and college. Marital status was categorized as married or divorced/widowed. Moreover, ANC during pregnancy was categorized as “No” and “Yes,” while the child’s gender was classified as boy or girl.

This study estimated household wealth using wealth quintiles based on asset and goods ownership. When assigning scores, the study considered the number and variety of items in a household. The survey assessed housing characteristics and assets, such as bicycles, vehicles, and televisions, to determine wealth status. It also considered primary floor materials, sources of drinking water, and sanitation facilities. Principal component analysis was used to determine the score. The pooled household scores were used to calculate national wealth quintiles, which were divided into five groups, each representing 20% of the total population. Wealth status was categorized into five groups: poorest, poorer, middle, richer, and richest ([Wulandari et al., 2022](#)).

### *2.4. Data analysis*

The study employed the Chi-square test in the initial analysis and subsequently conducted a collinearity test to ensure there were no significant correlations among the independent variables. The final phase included a binary logistic regression analysis (enter method). Statistical significance was determined using a 95% confidence interval (CI) with a p-value < 0.05. All statistical analyses were performed using IBM SPSS Statistics version 26. Furthermore, ArcGIS 10.3 (ESRI Inc., Redlands, CA, USA) was used to generate a distribution map of EBF prevalence

in Indonesia. A shapefile containing administrative boundary polygons was obtained from Statistics Indonesia for this study.

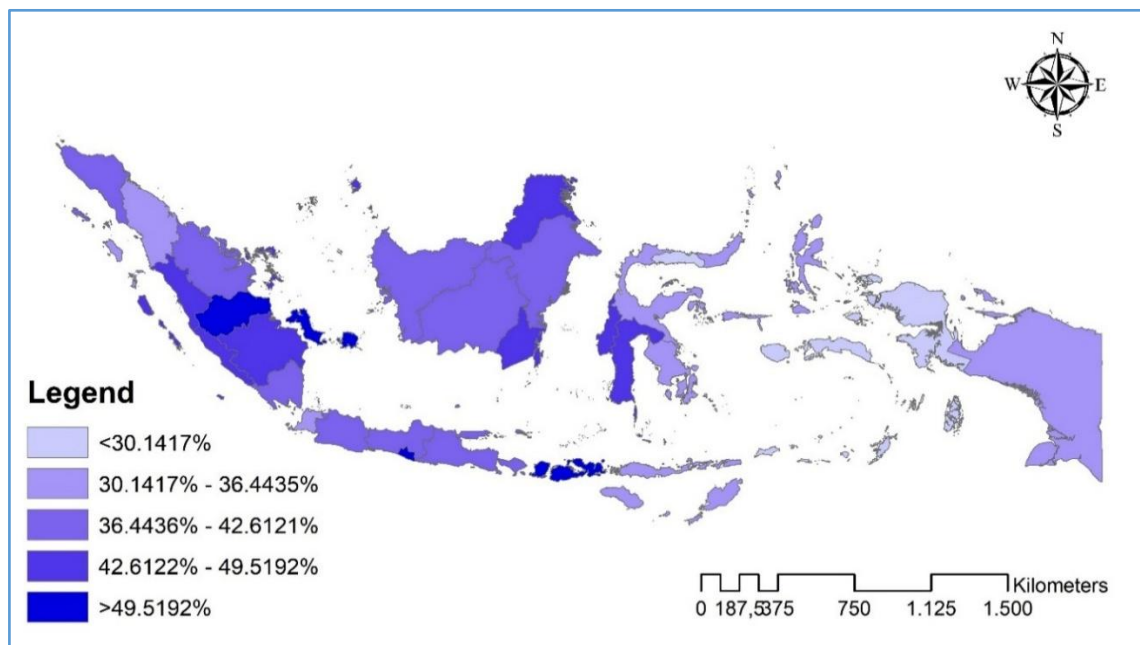
### 2.5. Ethical consideration

The study obtained secondary data from the 2022 Indonesian National Nutritional Status Survey. The National Ethics Commission determined that this study was exempt from ethical review. The Indonesian Ministry of Health collected the data for the National Nutritional Status Survey 2022 with written informed consent from all participants. Participants were required to sign a formal consent form to ensure the voluntary nature of participation and the confidentiality of the data collection process. The dataset is publicly available for academic purposes through the Indonesian Ministry of Health at: <https://layanandata.kemkes.go.id/>.

## 3. Results

### 3.1. Prevalence and geographic distribution of EBF and EIBF

According to the findings, the prevalence of EBF among working mothers in Indonesia was 40.4%, whereas that of EIBF was 59.7%. Moreover, Figures 1 and 2 present maps of the distribution of EBF and EIBF among working mothers across Indonesian provinces in 2022. The figures indicate a tendency for the proportion of EBF and EIBF to be lower in eastern Indonesia.

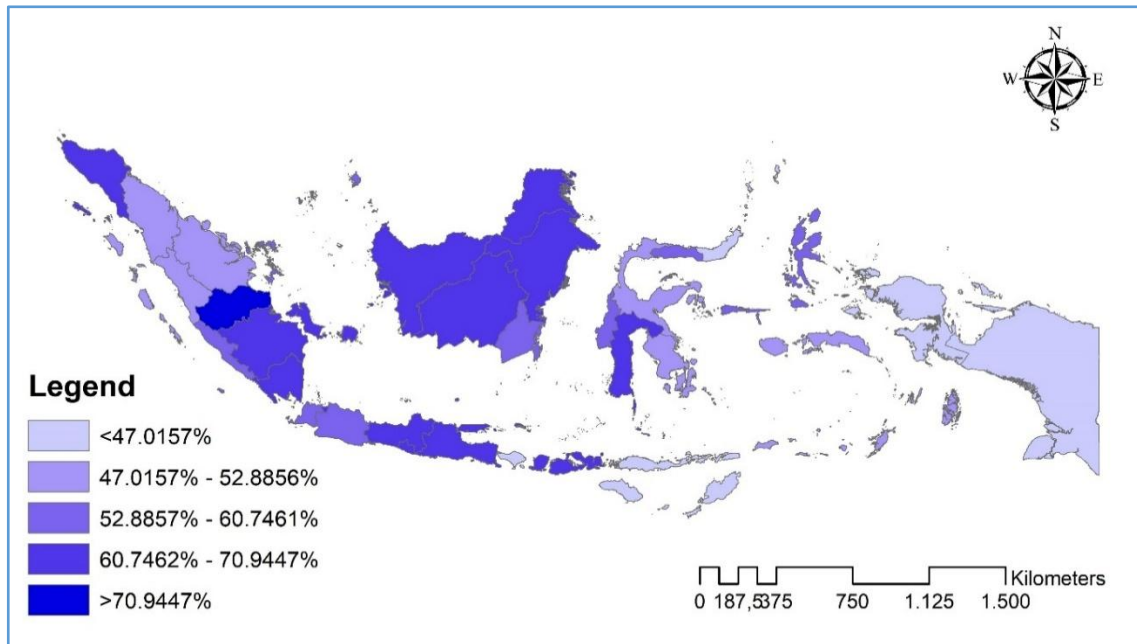


**Figure 1.** Distribution of exclusive breastfeeding (EBF) prevalence among working mothers across Indonesian provinces, 2022.

Source: Authors' own analysis

### 3.2. Characteristics of respondents and bivariate analysis

Table 1 presents the distribution of maternal characteristics and EBF in Indonesia. Working mothers who initiated breastfeeding early had an EBF proportion approximately 1.4 times higher than those who did not (45.7% vs. 32.6%). Higher EBF proportions were observed among mothers in rural areas (42.7%), those aged 30–40 years (41.8%), married women (40.5%), and those with higher education, particularly college graduates (42.2%). Furthermore, mothers in the richest wealth category (41.6%) and those who attended antenatal care (40.8%) also showed higher EBF proportions. In addition, female children had a slightly higher proportion of EBF than male children (41.0% vs. 39.9%).



**Figure 2.** EIBF percentage map among working moms by Indonesian provinces in 2022  
 Source: Authors' own analysis

**Table 1.** Descriptive statistics of working mothers' characteristics and EBF in Indonesia (n=46,130)

Working Mothers' Characteristics	Exclusive Breastfeeding (EBF)		p-value
	No (n=27,329)	Yes (n=18,801)	
Early Initiation of Breastfeeding (EIBF)			<0.001
No	67.4	32.6	
Yes	54.3	45.7	
Residence type			<0.001
Urban	61.1	38.9	
Rural	57.3	42.7	
Maternal age (in years)			<0.001
<20	66.2	33.8	
20-24	65.0	35.0	
25-29	58.5	41.5	
30-34	58.2	41.8	
35-39	59.7	40.3	
40-44	61.4	38.6	
>44	64.6	35.4	
Maternal Marital Status			<0.001
Married	59.5	40.5	
Divorced/Widowed	65.8%	34.2	
Maternal Education			<0.001
No formal education	70.1	29.9	
Primary School	59.3	40.7	
Junior High School	58.3	41.7	
Senior High School	61.8	38.2	
College	57.8	42.2	
Wealth status			<0.001
Poorest	60.4	39.6	
Poorer	59.9	40.1	
Middle	60.5	39.5	
Richer	59.8	40.2	
Richest	58.4	41.6	
Antenatal Care			<0.001
No	66.2	33.8	
Yes	59.2	40.8	
Child's Gender			<0.001
Male	60.1	39.9	
Female	59.0	41.0	

Note: Values are percentages.

### 3.3. Multicollinearity assessment

The subsequent evaluation employed collinearity testing. The results showed that tolerance values for all variables were greater than 0.10, while the variance inflation factor (VIF) values were below 10.00. These findings indicate that there was no evidence of multicollinearity among the independent variables. Therefore, no strong linear relationships were detected between two or more independent variables in the regression model.

### 3.4. Multivariate analysis of factors associated with EBF

Table 2 presents the results of the binary logistic regression. The findings indicate that working mothers who practiced EIBF had higher odds of exclusive breastfeeding compared to those who did not (AOR = 1.715; 95% CI: 1.706–1.724). Moreover, all seven control variables were significantly associated with EBF among working mothers in Indonesia. By residence, working mothers in rural areas had higher odds of EBF than those in urban areas (AOR = 1.208; 95% CI: 1.202–1.215).

**Table 2.** Binary logistic regression of exclusive breastfeeding among working mothers in Indonesia (n=46,130)

Predictors	Exclusive Breastfeeding			
	p-value	AOR	95% CI	
			Lower Bound	Upper Bound
Early initiation of breastfeeding: No (ref.)	-	-	-	-
Early initiation of breastfeeding: Yes	**<0.001	1.715	1.706	1.724
Residence: Urban (ref.)	-	-	-	-
Residence: Rural	**<0.001	1.208	1.202	1.215
Maternal age: <20 (ref.)	-	-	-	-
Maternal age: 20-24	*0.006	1.046	1.013	1.079
Maternal age: 25-29	**<0.001	1.334	1.293	1.375
Maternal age: 30-34	**<0.001	1.337	1.296	1.379
Maternal age: 35-39	**<0.001	1.263	1.224	1.302
Maternal age: 40-44	**<0.001	1.202	1.164	1.241
Maternal age: >44	0.131	1.030	0.991	1.070
Maternal Marital: Married	**<0.001	1.189	1.166	1.212
Maternal Marital: Divorced/Widowed (ref.)	-	-	-	-
Maternal Education: No formal education (ref.)	-	-	-	-
Maternal Education: Primary School	**<0.001	1.474	1.429	1.521
Maternal Education: Junior High School	**<0.001	1.539	1.492	1.588
Maternal Education: Senior High School	**<0.001	1.377	1.334	1.420
Maternal Education: College	**<0.001	1.536	1.489	1.585
Wealth: Poorer	*0.006	0.986	0.976	0.996
Wealth: Middle	**<0.001	0.968	0.958	0.977
Wealth: Richer	*0.001	0.983	0.974	0.993
Wealth: Richest	**<0.001	1.062	1.052	1.073
Wealth: Poorest (ref.)	-	-	-	-
Antenatal Care: No (ref.)	-	-	-	-
Antenatal Care: Yes	**<0.001	1.206	1.191	1.220
Child's Gender: Male (ref.)	-	-	-	-
Child's Gender: Female	**<0.001	1.050	1.044	1.055

Note: AOR: Adjusted Odds Ratio; CI: Confidence Interval; \* $p < 0.010$ ; \*\* $p < 0.001$ .

Table 2 indicates that four maternal characteristics, including maternal age, marital status, education level, and wealth status, were associated with EBF among working mothers in Indonesia. Based on antenatal care during pregnancy, working mothers who accessed antenatal care were 1.206 times more likely to achieve EBF (AOR = 1.206; 95% CI: 1.191–1.220). In addition,

by child gender, female children were 1.050 times more likely to achieve EBF than male children (AOR = 1.050; 95% CI: 1.044–1.055).

#### **4. Discussion**

This study provides a national-level quantification of EIBF's contribution to EBF among working mothers in Indonesia. The analysis demonstrates that EIBF independently and strongly predicts sustained EBF, even after adjusting for socioeconomic and health service factors. The multivariate analysis showed that mothers who practiced EIBF were significantly more likely to maintain EBF than those who did not. In addition, maternal characteristics, including age, marital status, education level, wealth status, along with residence, antenatal care, and the child's gender, were also associated with EBF. These findings highlight the multidimensional nature of breastfeeding behaviors among working mothers in Indonesia.

The study indicated that working mothers who initiated breastfeeding within the first hour after birth had substantially higher odds of achieving EBF. EIBF may promote successful EBF by facilitating early lactation, encouraging immediate skin-to-skin contact, and strengthening maternal confidence in breastfeeding. For working mothers, early initiation may compensate for reduced opportunities to breastfeed after returning to work. It is plausible that mothers who begin breastfeeding early experience improved milk production and stronger bonding, which increases their commitment to continue EBF. This finding aligns with global evidence showing that EIBF increases breastfeeding duration and enhances early colostrum intake (Smith et al., 2017; Victora et al., 2016). Similar associations have been reported in Turkey, where mothers who initiated breastfeeding early were more likely to continue EBF (Yilmaz et al., 2017). Conversely, a prior study has observed no significant effect (Cozma-Petruț et al., 2021), suggesting that contextual factors, such as baby-friendly facilities and postnatal support, may moderate this association.

The results showed that working mothers living in rural areas were more likely to practice EBF than those in urban settings. Rural work environments may be less restrictive and offer greater flexibility for breastfeeding compared to formal urban employment. Urban working mothers may face greater time constraints, structured work schedules, and less supportive workplace policies. Rural sociocultural norms may also encourage more traditional feeding practices, including EBF. Similar patterns have been reported in Indonesia and Ghana, where agricultural or informal occupations facilitated breastfeeding practices, while formal employment posed barriers (Abekah-Nkrumah et al., 2020; Wulandari & Laksono, 2020).

This study indicated that mothers aged 25–39 had higher odds of practicing EBF compared to younger mothers. Older working mothers may have greater breastfeeding experience, higher confidence, and more autonomy in decision-making. They may have more stable employment, allowing greater flexibility or better maternity support. Prior Indonesian and Ethiopian studies also indicate that maternal age positively influences EBF (Cross, 2022; Muluneh, 2023). However, contrasting evidence from South India found stronger EBF practices among younger mothers (Sankar et al., 2023), underscoring potential cultural and socioeconomic differences.

The findings of this study indicate that marital status, education, wealth, antenatal care attendance, and child gender were significantly associated with EBF among working mothers. Married working mothers were more likely to practice EBF, possibly reflecting the role of spousal support in reducing work-related stress and facilitating breastfeeding continuation. Emotional encouragement, shared childcare responsibilities, and financial stability may reduce the pressure to introduce formula prematurely. Evidence from Ethiopia shows that married women are more likely to maintain exclusive breastfeeding than unmarried mothers, partly due to stronger household support systems (Awoke & Mulatu, 2021; Mamo et al., 2020). In contrast, single mothers often face greater economic strain and time constraints, which may increase reliance on breast milk substitutes (Kandeel et al., 2018).

Maternal education was also positively associated with EBF. Educated mothers may have better health literacy, greater exposure to breastfeeding information, and improved capacity to interpret health messages. They may also feel more confident advocating for lactation breaks or workplace accommodations. Studies conducted in Indonesia, China, and Ethiopia consistently report that higher maternal education increases the likelihood of exclusive breastfeeding (Awoke & Mulatu, 2021; Laksono et al., 2021; Shi et al., 2021). These findings suggest that education enhances both knowledge and agency in sustaining recommended feeding practices.

Interestingly, mothers in the wealthiest category were more likely to achieve EBF, whereas those in the middle and richer groups had lower odds. One possible explanation is that the wealthiest mothers may have more flexible employment conditions, longer maternity leave, or access to supportive workplace environments. Meanwhile, middle-income mothers may face substantial work demands without comparable flexibility, leading them to introduce formula earlier for convenience. Research from Ethiopia reports a similar pattern: wealthier households achieve better breastfeeding outcomes, while middle-income households face structural barriers (Muluneh, 2023; Tsegaw et al., 2021). However, evidence from Bangladesh suggests that employment status can negatively influence EBF regardless of income level (Ahmed et al., 2022), indicating that workplace context may mediate the relationship between wealth and breastfeeding.

Mothers who attended at least one antenatal care visit had higher odds of EBF. Antenatal care provides opportunities for counseling on early initiation, positioning, and the benefits of exclusive breastfeeding. Mothers who attend ANC may also be more engaged with formal health services and therefore more likely to receive postpartum guidance. Studies from Ethiopia and Indonesia show that ANC attendance significantly improves exclusive breastfeeding practice through structured counseling and reinforcement of health messages (Suryani et al., 2019; Tariku et al., 2017).

Finally, female infants were slightly more likely to receive EBF. Cultural perceptions regarding infant feeding needs may contribute to this difference. In some communities, male infants are perceived as requiring more nutrition, prompting earlier introduction of complementary foods. Research in Malawi and Nigeria found higher EBF prevalence among girls (Agho et al., 2011; Salim & Stones, 2020), while evidence from Kenya suggests that boys are more likely to receive early complementary feeding (Seidu, 2013). These patterns imply that gender norms may subtly influence maternal feeding decisions.

Overall, the findings of this study suggest that social support, educational empowerment, economic conditions, health service engagement, and cultural norms interact to shape exclusive breastfeeding practices among working mothers. These findings underscore the need for integrated, multisectoral strategies that address both individual and structural barriers to support optimal breastfeeding practices.

## **5. Implications and limitations**

The findings of this study have important implications for nursing practice, particularly in maternal and child health services. Nurses play a critical role in promoting early initiation of breastfeeding (EIBF) and sustaining exclusive breastfeeding (EBF) through antenatal education, immediate postpartum support, and continuous counseling. Strengthening nurses' capacity to provide evidence-based breastfeeding guidance, facilitate early skin-to-skin contact, and support lactation management may improve EBF outcomes among working mothers. In addition, nurses in community and workplace health settings can contribute by advocating for breastfeeding-friendly environments, including lactation support programs and education for working mothers. These efforts are essential to integrate EIBF and EBF promotion into routine nursing care and public health strategies.

This study has several methodological limitations. First, the cross-sectional design limits the ability to establish causal relationships between variables, allowing only the identification of associations. Second, the use of secondary data limits the analysis to variables available in the dataset, thereby excluding several potentially relevant factors, such as birth order, parity, family support, maternal knowledge, and workplace conditions. Third, the reliance on self-reported data may introduce recall bias, particularly in reporting breastfeeding practices. Finally, cases with missing or incomplete data were excluded from the analysis, which may affect the generalizability of the results.

## **6. Conclusion**

Overall, the findings indicate that early initiation of breastfeeding is the strongest predictor of exclusive breastfeeding among working mothers, while maternal age, marital status, education, wealth, residence, antenatal care utilization, and child's gender also contribute to variations in practice. These results suggest that breastfeeding behavior is shaped by interconnected individual, household, and structural factors rather than a single determinant. In practice, this

underscores the importance of reinforcing early initiation within routine maternity care through consistent skin-to-skin contact, strengthened counseling during antenatal and postpartum services, and adherence to Baby-Friendly Hospital standards. At the same time, supportive workplace policies, including adequate maternity leave, flexible breaks, and accessible lactation spaces, together with community-based education and family support, are essential to sustain exclusive breastfeeding among working mothers.

For future research, studies could explore additional determinants not captured in this dataset, such as family support, workplace culture, childcare arrangements, maternal mental health, and infant feeding knowledge. Longitudinal designs may be valuable for clarifying causal pathways among EIBF, workplace conditions, maternal attitudes, and sustained EBF practices. Investigating sector- and occupation-specific barriers among working mothers would also provide deeper insights to inform targeted policy interventions.

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### **Author contribution**

SS contributed to the study's conceptualization and design, as well as the drafting, editing, and proofreading of the manuscript. ADL, MS, HDK, contributed to drafting, data analysis, editing, and proofreading of the manuscript. NR and RWW contributed to drafting, editing, and proofreading. All authors contributed to the critical review of the manuscript.

### **Conflict of interest**

The authors declare that they have no competing interests.

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### **Declaration of Generative AI in Scientific Writing**

The authors declare that no generative AI or AI-assisted technologies were used in the writing of this manuscript.

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