

HISTORY OF RISKY PREGNANCIES AND FAILURE OF EXCLUSIVE BREASTFEEDING IN INDONESIA

By Demsa Simbolon



HISTORY OF RISKY PREGNANCIES AND FAILURE OF EXCLUSIVE BREASTFEEDING IN INDONESIA

Demsa Simbolon^{1*}, Nur Mahdiyah Merly Yanti², Lisma Ningsih²

¹Jurusan Gizi Poltekkes Kemenkes Bengkulu, Jl. Indragiri 3 Padang Harapan, Kota Bengkulu

²Jurusan Promosi Kesehatan, Poltekkes Kemenkes Bengkulu, Jl. Indragiri 3 Padang Harapan, Kota Bengkulu

*Correspondence Author: demsa_ui03@yahoo.com

ARTICLE INFO

Article History:

Received : January 19, 2024

Accepted: March 06, 2024

Published: March 20, 2024

DOI:

[https://doi.org/10.26553/jikm.2023.14.3.332-](https://doi.org/10.26553/jikm.2023.14.3.332-348)

[348](https://doi.org/10.26553/jikm.2023.14.3.332-348)

Available online at

<http://ejournal.fkm.unsri.ac.id/index.php/jikm>

ABSTRACT

The coverage of exclusive breastfeeding for infants in Indonesia still needs to be higher compared to the national target (80%). Low coverage of exclusive breastfeeding is a risk factor for various nutritional problems in toddlers. The causes of failure of exclusive breastfeeding are multifactorial, including risky pregnancy. This study aims to determine the association of risky pregnancies with the failure of exclusive breastfeeding using national data from the 2017 Indonesian Health Demographic Survey (IDHS) with a cross-sectional design. The study sample that met the criteria was 6,689 mothers with children aged 6-23 months. The independent variable is risky pregnancy (parity, pregnancy spacing, age during pregnancy), and the dependent variable is the failure of exclusive breastfeeding. Data analysis using multivariate logistic regression. The results found that only 26.2% of exclusive breastfeeding practices. Risky pregnancy is associated with the failure of exclusive breastfeeding. Mothers with too much parity risked 1,195 times, mothers with primiparous parity risked 1,716 times, too close birth spacing risked 1,210 times, and too young mothers were 1,267 times more likely not to exclusively breastfeed in mothers who had normal pregnancies after controlling for the area of residence. It is necessary to improve health promotion programs to the public regarding the importance of offering exclusive breastfeeding to infants and improving fertility characteristics.

Keywords: failure of exclusive breastfeeding, parity, birth spacing, age during pregnancy

Introduction

Risky pregnant women, known as 4T (too young, too old, too close to pregnancy, and too many children), are pregnancies that endanger the safety of mothers and children. Every pregnancy has a risk of pregnancy complications and childbirth, but the risk is higher in mothers who have 4T problems.¹⁻⁴ It is estimated that about five to ten percent of pregnancies are categorized as high-risk pregnancies. Some research results prove that risky pregnancy can cause problems of miscarriage, bleeding, anemia, prolonged labor, hypertension in pregnancy, eclampsia, abnormalities in infants, and the death of infants and pregnant women.⁵⁻⁷

Breast milk is a single food that can meet the needs of growing babies up to at age of six months.⁸ Globally, WHO data in 2020 reported that during the period 2015-2020, only about 44% of infants aged 0-6 months worldwide received exclusive breastfeeding from 90% of the exclusive breastfeeding target.⁹ The low level of exclusive breastfeeding will impact the quality and vitality of the next generation. The problem of exclusive breastfeeding is still something that needs to be prioritized because it greatly affects the baby's growth and development. Based on the 2022 Indonesian Nutritional Status Survey (SSGI) report, exclusive breastfeeding coverage in Indonesia is only 16.7%, this figure has decreased compared to SSGI in 2021 with exclusive breastfeeding coverage of 48.2%.¹⁰ Exclusive breastfeeding coverage in Indonesia is very low and still very far from the national target of 60%.¹¹ The causes of failure of exclusive breastfeeding are multifactor among the risk factors of pregnancy.

A study in Yogyakarta reported that there is a relationship between maternal age and exclusive breastfeeding, mothers aged less than 20 years and over 35 years (68.6%) do not provide exclusive breastfeeding.¹⁰ However, the results of research in the working area of the Sudiang Health Center found no relationship between maternal age and exclusive breastfeeding.¹² Likewise, research at the Katobengke Health Center found no relationship between age during childbirth and exclusive breastfeeding.¹⁴

The results of research Village, Rawamerta District, found that exclusive breastfeeding was higher (54.8%) in children with a pregnancy gap of more than 2 years, and there was a significant relationship between the distance between exclusive breastfeeding and exclusive breastfeeding.¹⁵ The results of a study in Deli Serdang Regency found that only 10% of mothers provided exclusive breastfeeding with a pregnancy gap of less than 2 years. The higher the mother's birth distance, the greater the mother's chance to provide exclusive breastfeeding because milk production is higher in mothers whose delivery distance is rare than in mothers giving birth with close pregnancy distances.¹⁶ The results of research at the Sleman Health Center found that the pregnancy distance was too close to the last child, most mothers did not provide exclusive breastfeeding (67.5%), but there was no significant relationship between the distance of pregnancy and exclusive breastfeeding.⁸

The results of research at the Posyandu in Nganjuk, East Java, found that mothers with a parity of more than 3 children were 2.47 times more likely to provide exclusive breastfeeding. Exclusive breastfeeding is lower in primiparous mothers.¹⁷ The results of a study in North Kalimantan found that mothers with multiparity provided more exclusive breastfeeding than primiparous parity.^{15,18,19} The results of a study in North Kalimantan found that mothers with multiparity provided more exclusive breastfeeding than primiparous parity.²⁰ Likewise, the results of the study found that exclusive breastfeeding was higher in mothers with primiparous parity than multipara, although the relationship was not significant.³ Research at Buhi Samosir Health Center found no parity relationship with exclusive breastfeeding.²¹ The controversial results of the study point to the need for further analysis of national data to prove the relationship between too much parity with the failure of exclusive breastfeeding.

The results of previous studies have examined many factors that cause the failure of exclusive breastfeeding. However, minimal research results identify the association of risky pregnancies with the failure of exclusive breastfeeding. There are still very limited research results that link risky pregnancies with failure to exclusively breastfeed using national data and multivariate analyses. However, previous studies have generally been conducted in a small area, with a limited sample, using only bivariate analysis, and the results of the study are still controversial. This study aims to study the relationship between risky pregnancies and failure of exclusive breastfeeding using national survey data.

Methods

This study used secondary data from the 2017 Indonesian Health Demographic Survey (IDHS) with a cross-sectional approach. The study population was all women of childbearing age (15-49 years) who had children aged 6-23 months in Indonesia. The study sample was women of childbearing age (15-49 years) with the birth of the last child within 2 years before the 2017 IDHS survey who met the inclusion criteria, namely mothers who gave birth to children aged 6-23 months, children living with parents, complete data available for all variables. The sampling technique of this study follows the sampling process of the 2017 IDHS. The 2017 IDHS sampling design is designed to present national and provincial-level estimates. The 2017 IDHS sample covers 1,970 Census Blocks (BS) in urban and rural areas in Indonesia. The sample frame uses BS master samples from the results of the 2010 population census (SP2010). While the household selection sample framework uses a list of ordinary households generated from the update of selected BS households. Of the 49,627 women of childbearing age (WUS), 34,199 WUS had given birth, selected by WUS who had given birth to children in the last 2 years, so the number of samples that met the criteria was 6,689 mothers.²²

The independent variable is pregnancy risk measured from the variables of pregnancy spacing, age at childbirth, and parity. Pregnancy with 4T is a pregnancy too young, maternal age < 16 years, pregnancy and childbirth too old, maternal age > 35 years, too close a distance between pregnancy or delivery <2 years and too many children (children over 4) are included in risky pregnancies.^{1,4}The dependent variable is exclusive breastfeeding and the confounding potential variables are maternal education, maternal occupation, marital status, desire to have children, gender, birth weight of the baby, area of residence, and socio-economy. The data collection instrument using questionnaires developed for the implementation of the Health Demographic Survey used in various countries including Indonesia, has gone through a trial process so that it is declared valid and reliable.

Data analysis used univariate analysis to describe each variable, and bivariate analysis to describe exclusive breastfeeding practices according to family, mother, and child characteristics using the Chi-Square test. Multivariate analysis used multiple logistic regression tests to obtain a model of the relationship between risky pregnancy and failure of exclusive breastfeeding. The implementation of IDHS activities in 2017 received research ethics approval from the ICF (*International Classification of Functioning*) Institute Review Board with ICF Project No. 132989.0.000. This research received research ethics approval from the Health Research Ethics Commission of the PoltekkesKemenkesBengkulu with an Ethical Feasibility Number (*Ethical Clearance*) KEPK.M/021/05/2021.

Results

Table 1 shows that there are more families in urban areas (50.7%) than rural (49.3%). Based on the socioeconomic characteristics of the family, most families include middle socioeconomic (20.5%) and poor (36.4%). Based on maternal age characteristics, almost all mothers over 20 years old (97.4%). Based on the characteristics of maternal education, maternal education levels are mostly secondary (57.5%) and low (23.8%). Based on the characteristics of the mother's employment status, more than half of mothers are not working (53.4%). Based on marital status characteristics, almost all have partners (97.1%). Based on the number of children ever born, almost all children with desired pregnancies (92.4%). Child characteristics show that boys are more (52.1%) than girls and almost all children are born with normal weight (92.3%).

Table 1. Frequency Distribution of Family, Mother, and Child Characteristics

Characteristic	Frequency	Percentage
Residence		
Urban	3,299	50.7
Rural	3,390	49.3
Socioeconomic Status		
Rich	2,884	43.1
Medium	1,369	20.5
Poor	2,436	36.4
Mother's Age		
< 20 years	174	2.6
≥ 20 – 35 years old	4,853	72.6
> 35 years old	1,662	24.8
Mother's Education		
Higher Education	1,250	18.7
Middle Education	3,848	57.5
Lower Education	1,591	23.8
Mother's Work		
Work	3,119	46.6
Not Working	3,570	53.4
Marital Status		
No Partner	193	2.9
Have a Partner	6,496	97.1
The Desire to Have Children		
Refrigerated Pregnancy	6,181	92.4
Unwanted Pregnancy	506	7.6
Child Gender		
Man	3,483	52.1
Woman	3,206	47.9
Birth Weight		
Normal (≥2500 gram)	5,859	92.3
LBW (< 2500 gram)	486	7.7

LBW: Low Birth Weight

Table 2 shows that most mothers in Indonesia with multiparity (58.5%) and Grande Multipara (4.8%), there are 43.6% of children with a pregnancy gap of less than 2 years, there are 26.5% of mothers at the age of childbirth less than 20 years (73.5%), only 26.2% of mothers give exclusive breastfeeding for 6 months.

Table 2. Characteristics of Pregnancy History and Exclusive Breastfeeding

Pregnancy History	Frequency (n = 6,689)	Percentage
Paritas		
Primipara	2,456	36.7
Multipara	3,913	58.5
Grande Multipara	320	4.8
Pregnancy spacing		
≥ 2 Years	3,771	56.4
< 2 Years	2,918	43.6
Age during pregnancy		
< 20 Years	1,775	26.5
≥ 20 Years	4,914	73.5
Exclusive breastfeeding		
Yes EB	1,752	26.2
No EB	4,937	73.8

EB: Exclusive Breastfeeding

Table 3. Association Pregnancy History with Exclusive Breastfeeding

Pregnancy History	Exclusive Breastfeeding				Total		p-value
	Yes EB		Not EB		n	%	
	n	%	n	%			
Parity							
Primipara	665	37.96	1,791	36.28	2,456	36.72	0.009
Multipara	1,026	58.56	2,887	58.48	3,913	58.50	
Large Multipara	61	3.48	259	5.25	320	4.78	
Pregnancy spacing							
≥ 2 Years	1,024	58.45	2,743	55.56	3,771	56.38	0.044
< 2 Years	728	41.55	2,190	44.36	2,918	43.62	
Age during pregnancy							
< 20 Years	418	23.86	1,357	20.29	1,775	26.54	0.003
≥ 20 Years	1,334	76.14	3,580	53.52	4,914	73.46	

EB: Exclusive Breastfeeding
LBW: Low BirthWeight

Table 3 shows an overview of breastfeeding practices based on the characteristics of parity, pregnancy spacing, and age during pregnancy. The results showed that there were differences in the proportion of exclusive breastfeeding practices based on parity, birth spacing, and maternal age during pregnancy ($p < 0.05$). Parity or the number of children born alive with multiparous parity, namely having 2-3 children (58.56%), while those who are not exclusively breastfed with multiparity (58.48%). In the variable distance of pregnancy, exclusive breastfeeding is good at a distance of ≥ 2 years, namely (94.56%), while not exclusive breastfeeding is (94.23%). Age during pregnancy with an age range of ≥ 20 years (76.14%), while those who are not exclusively breastfed are 53.52%.

Table 4 shows the results of a bivariate analysis of the relationship between child, mother, and family characteristics with exclusive breastfeeding in Indonesia. Based on the sex of the child, there is no difference in the proportion of exclusive breastfeeding between boys and girls (p -value = 0,911), the practice of non-exclusive breastfeeding was higher in boys (52.12%). Based on the history of the child's birth weight, there is no difference in the proportion of exclusive breastfeeding between normal birth weight and low birth weight children (p -value = 0,11), most children are not exclusively breastfed with normal birth weight (87.28%). Based on the maternal age group, there is no difference in the proportion of exclusive breastfeeding between the ages of < 20 years, 20-35 years, and > 35 years (p -value = 0,28). Most children who were not exclusively breastfed by mothers between the ages of 20 and 35 years (72.25%). Based on the level of education of mothers, there is a difference in the proportion of exclusive breastfeeding between low, secondary, and upper education (p -value < 0.0001), the proportion of non-exclusive breastfeeding is mostly in mothers with secondary education (56.61%). Based on the level of education of mothers, there is a difference in the proportion of exclusive breastfeeding between low, secondary, and upper education (p -value < 0.0001). Based on the employment status of mothers, there was no difference in the proportion of exclusive breastfeeding between working and

non-working mothers (p-value = 0.636), the practice of non-exclusive breastfeeding was mostly in working mothers (52.56%). Based on maternal marital status, there was no difference in the proportion of exclusive breastfeeding between mothers who had a partner and did not have a partner (p-value = 0.868), the practice of non-exclusive breastfeeding was mostly in mothers who had a partner (97.20%). There is no difference in proportion based on pregnancy desire, breastfeeding practices are not exclusive, mostly in mothers with desired pregnancies (92.2%). Based on family characteristics, there are differences in the proportion of exclusive breastfeeding between children living in urban and rural areas (p-value < 0,001), non-exclusive breastfeeding is higher in rural areas (52.11%). There are differences in the proportion of exclusive breastfeeding based on place of residence (p-value = 0,001), the failure of exclusive breastfeeding is higher in poor families (44.32%).

Table 4. Association Characteristics of Children, Mothers, and Family with Exclusive Breastfeeding

Characteristic	Exclusively Breastfed				Total		P- Value
	Yes EB		Not EB		n	%	
	n	%	n	%			
Gender							
Man	910	51.94	2,573	52.12	3,483	52.07	0.911
Woman	842	48.06	2,364	47.88	3,206	47.93	
Child Birth Weight							
Normal (≥2500 gram)	1,550	88.47	4,309	87.28	5,859	87.74	0.110*
LBW (<2500 gram)	145	8.28	341	6.91	486	7.27	
Mother's Age							
< 20 years	37	2.11	137	2.77	174	2.68	0.280
20 – 35 years old	1,286	73.40	3,567	72.25	4,853	72.55	
> 35 years old	429	24.43	1,233	24.97	1,662	24.85	
Mother's Education							
Higher Education	340	21.69	910	18.43	1,250	18.69	<0.001*
Middle Education	1,053	60.10	2,795	56.61	3,848	57.53	
Lower Education	355	20.26	1,232	24.95	1,591	23.79	
Mother's Work							
Work	932	53.20	2,595	52.56	3,527	52.73	0.636
Not Working	818	56.80	2,340	47.40	3,158	47.21	
Marital Status							
No Partner	49	2.80	144	2.92	193	2.89	0.868
Having a Partner	1,703	97.20	4,793	97.08	6,496	97.11	
The Desire to Have Children							
Desired Pregnancy	1,629	92.98	4,552	92.20	6,181	92.41	0.293
Unwanted Pregnancy	122	6.96	384	7.78	506	7.56	
Residence							
Urban	932	53.20	2,367	47.99	3,299	49.32	<0.001*
Rural	820	46.80	2,570	52.11	3,390	50.68	
Socioeconomic Status							
Rich	701	40.01	1,735	35.18	2,436	36.42	0.001*
Medium	353	20.15	1,016	20.60	1,369	20.47	
Poor	698	39.84	2,186	44.32	2,884	43.12	

*: Multivariate analysis candidate variables p-value<0,25
 EB: Exclusive Breastfeeding LBW: Low BirthWeight

Table 5 shows the final modeling results of logistic regression multivariate analysis. There is a significant relationship between parity, pregnancy spacing, age of first birth, and place of residence with exclusive breastfeeding of babies in Indonesia. Mothers with multiparous Grande parity were at risk 1.195 times (95% CI:1.039 – 1.374), and mothers with primiparous parity at risk 1.716 times (95% CI:1.265 – 2.327) were not exclusively breastfed compared to mothers with multiparous parity. Infants with a pregnancy gap of less than 2 years are 1.210 times (95% CI: 1.055-1.388) at risk of not being exclusively breastfed compared to babies with a pregnancy gap of more than 2 years. Mothers with low pregnancy age <20 years are 1,267 times (95% CI: 1.107 – 1.451) not to exclusively breastfeed than mothers who are pregnant first over 20 years of age. Mothers living in rural areas were 1.221 times more likely (95% CI: 0.733-0.914) to not exclusively breastfeed than mothers living in urban areas.

Table 5. Final Model Relationship Risky Pregnancy with Failure of Exclusive Breastfeeding

Variable	B	p-value	aOR (95% CI)
Parity			
Multipara			
Grande Multipara	0.178	0.001	1.195 (1.039 – 1.374)
Primipara	0.540	0.001	1.716 (1.265 – 2.327)
Pregnancy spacing			
≥ 2 Years			
<2 Years	-0.191	0.006	1.210 (1.055 - 1.388)
Age during pregnancy			
≥ 20 Years			
< 20 Years	0.237	0.001	1.267 (1.107 - 1.451)
Residence			
Urban			
Rural	0.199	<0.0001	1.221 (1.093 – 1.363)

Discussion

The results of this study showed that children 6-24 months in Indonesia who received exclusive breastfeeding were only 26.2%. This coverage is still very far from the national target of 80%. The 2017 IDHS report shows that the percentage decreases with increasing age, from 67% at 0-1 months of age to 55% at 2-3 months of age, and 38% at 4-5 months of age. The same results also occur in various countries, where the coverage of exclusive breastfeeding is quite low. Exclusive breastfeeding coverage in Indonesia is lower than in other countries, such as Ethiopia (54.5%), Bangladesh (61%), and India (41.4%). Low coverage of exclusive breastfeeding is a risk factor for various nutritional and health problems in children.

The United Nations Children'sFund(UNICEF) states that breast milk can save infants' lives, especially in developing countries, due to the high prevalence of diarrhea and acute respiratory infections in developing countries. Breast milk is the best source of nutrients that can improve the health of mothers and children. Breastfeeding in infants is very important, especially in the early

period of life, therefore babies are fed exclusively for the first 6 months without adding and/or replacing with other foods or drinks.⁸ Exclusive breastfeeding is very influential on future health, the impact of children who are not exclusively breastfed can experience *stunting*^{26,23}, obes, and other chronic diseases.^{24,25,27} The impact of infants not being exclusively breastfed is increased susceptibility to diseases both infants and mothers, such as acute respiratory tract infections (ARI), diarrhea events, maternal risk of breast cancer, cognitive loss, and low intelligence function.⁸

Pregnancy is at risk of being the cause of various health problems for the mother and fetus, even threatening the safety of the life of the mother and baby during childbirth.^{1,2} Too close birth distance is one of the risk factors for pregnancy.^{5,6} The results of the study found that pregnancy spacing too close is associated with failure to provide exclusive breastfeeding, there are 43.6% of mothers in Indonesia with a pregnancy gap of <2 years. The results of this study are in line with findings in Ethiopia, where 23.3% of birth distances are too close to cause less than optimal administration.²⁸ Birth distances that are too close are very worrying because being a risk factor will directly affect the health of women and fetuses conceived. Women after giving birth take 2 to 3 years to recover their bodies and prepare for pregnancy and subsequent childbirth.^{8,16}

The pregnancy gap is ≥ 2 years, the previous child can get the maximum benefits of breastfeeding, namely from exclusive breastfeeding and breast milk for up to 2 years. Not only that, children can also get full attention from their parents during their development.^{16,29} Close delivery distances can reduce prolactin production so that babies will not get enough milk while sparse delivery distances milk production in mothers is much more so that mothers can give their babies exclusive breastfeeding.¹⁶ spacing a safe pregnancy, will certainly protect mothers and babies from various risks. The uterus will get enough rest and enough time to prepare itself so that nutritional intake for the baby will run well and of course in the end will make the baby healthy and quality.³⁰

Being too close in pregnancy can affect the success of exclusive breastfeeding of the baby in several ways. Women who become pregnant consecutively over short distances may have a less-than-optimal body recovery time.³¹ The process of pregnancy and childbirth demands a lot of energy and resources from the body. If the body does not have enough time to fully recover, this can have an impact on milk production and the mother's ability to exclusively breastfeed. A short pregnancy gap may not give the mother enough time to prepare physically and psychologically for exclusively breastfeeding the newborn. This preparation involves an understanding of breastfeeding techniques, adequate support, and mental readiness. If the mother does not have enough time to recover and adapt to the role of the new parent before the next pregnancy, the stress level can be high.³² High levels of stress can affect milk production and the mother's willingness to exclusively breastfeed. A pregnancy that is too close can make the mother less likely to get adequate support, either from a partner, family, or community. Emotional and practical support is

essential to assist mothers in exclusively breastfeeding.³³ Successive pregnancies with short distances can increase the risk of health problems in the mother, such as nutritional deficiencies fatigue, and anemia.³⁴ Suboptimal health conditions can affect the mother's ability to exclusively breastfeed. If a previous pregnancy or delivery had complications, the mother may take longer to recover physically and mentally.

The results of the study found primiparous mothers at risk of not providing exclusive breastfeeding compared to being given exclusive breastfeeding. The degree of parity has largely determined the concern in maternal and child health. It is said that there is a tendency for the health of high-parity mothers to be better than low-parity mothers. Parity is one of the precipitating factors that can influence health behavior. Research conducted in Sidorejo found that primiparous mothers do not provide exclusive breastfeeding because mothers are not experienced in providing exclusive breastfeeding, psychological mothers who are not ready and do not know the correct breastfeeding techniques so that the nipples blister milk.⁸

Primiparous is characterized by the unreadiness of organs to support pregnancy and the presence of the fetus, the inability of the mother to take good care of herself and the fetus, and the psychological state of the mother who is still labile.³⁵ A mother who is giving birth and breastfeeding for the first time very easily gets provocations and unfavorable comments about breastfeeding and becomes demotivated to give exclusive breastfeeding, while mothers who have experience breastfeeding then the child born next mother will do the same thing which is to give exclusive breastfeeding to her baby. The results of this study are in line with research conducted at the Puskesmas Kemiri Depok, the number of deliveries that have been experienced provides experience to mothers in providing breast milk to babies, mothers with parity of 1-2 children often encounter problems in giving breast milk to their babies, one of which is breastfeeding techniques that are not correct. Mothers who have fewer than three children will have more time to breastfeed the baby each time, compared to mothers who have a high level of parity. Mothers who have low parity tend to breastfeed their children exclusively because they spend more time with their children.¹⁷

The results of this study also found a significant relationship between the number of children too many and the failure of exclusive breastfeeding in Indonesia. A large number of children can also affect the success of exclusive breastfeeding.³⁶ While it doesn't always fail, mothers with high parity may face some challenges due to having greater responsibilities and workloads. With tasks and needs to be met for each child, the time and attention that can be given to each child may become divided. Exclusive breastfeeding requires a significant investment of time and attention, and a high burden of responsibility.³⁷ Mothers with multiple parties may experience difficulty paying sufficient attention to breastfeeding.³⁶ A large number of children can also increase stress levels in mothers.³⁷ High levels of stress can negatively affect milk production and the motivation

to exclusively breastfeed. In addition, stress can also affect the overall health of the mother.³⁸ Mothers with multiple children may need to work outside the home to provide for the family's financial needs, which can make it difficult to prioritize and exclusively breastfeed.³⁹ Although knowledge of the benefits of exclusive breastfeeding may be higher in mothers with high parity due to previous experience, other factors such as time and support can be barriers to applying this knowledge consistently.^{40,41} Mothers with high parity also face higher health risks, which can affect their ability to exclusively breastfeed, both physically and psychologically.⁴²

The results of this study found a relationship between the age of mothers who are too young during pregnancy with the failure of exclusive breastfeeding. This research is in line with findings in Bidan Praktek Mandiri (BPM) Palembang that the age of the mother giving birth is related to exclusive breastfeeding of the infant.¹⁶ Likewise, the results of research in Buleleng Regency prove that the age of mothers too young and too old as risk factors for failure to breastfeed exclusively, the age of mothers less than 20 years or more than 35 years increases the risk of failure to breastfeed by 1.83 times.⁴³ The age of the first mother giving birth greatly determines maternal health because it is related to the conditions of pregnancy, childbirth, and postpartum, as well as how to care for and breastfeed her baby. Mothers younger than 20 years old are still immature and not physically and socially ready to face pregnancy, childbirth, and breastfeeding of the baby. Childbirth in mothers under the age of 20 years results in physical, psychological, and social development, it can interfere with psychological balance, low education experience is very lacking, and things that often cause stress so that they fail to provide exclusive breastfeeding.⁴⁴

Research in Cikeruh found that the age of less than 20 years is a period of growth including reproductive organs (breasts), while the age of more than 35 years reproductive organs are weak and not optimal in exclusive breastfeeding, so a mother's ability to breastfeed exclusively is also no longer optimal due to decreased function of reproductive organs such as breasts.^{44,45} The research is supported by the results of research on adolescent mothers who do not provide exclusive breastfeeding at all because they do not understand the benefits of exclusive breastfeeding for mothers and babies, most of them work, they say if they still want to be free, they see family and friends who give formula, teenage mothers say if their milk does not come out and the baby is fussy, There is no support from the family, if breastfeeding the mother will be easily hungry it results in weight gain, and teenage mothers want to find their identity like teenagers in general.⁴⁶

The age of mothers who are too young and too old can have an impact on the success of exclusive breastfeeding.^{12,36,47} Failure in this practice in young mothers can be attributed to their limited experience and knowledge regarding pregnancy, childbirth, and infant care. A lack of understanding of the benefits and techniques of exclusive breastfeeding can affect success in implementing this practice. Young mothers may also experience a lack of social support from

family and society regarding exclusive breastfeeding. Therefore, emotional and practical support is essential to help young mothers overcome new challenges as parents and ensure the success of exclusive breastfeeding.⁴¹

Young mothers may still be in education or looking for work, which can create additional burdens and limit the time available to care for the baby. This can affect the mother's ability to exclusively breastfeed. Young mothers may also experience higher levels of stress as they adapt to parenthood and contend with financial and social challenges. High levels of stress can hurt milk production and the motivation to breastfeed exclusively.⁴⁴ The health condition of young mothers can also be a factor that affects their ability to breastfeed exclusively. Poor health or lack of prenatal care can be barriers, and young mothers may have difficulty accessing adequate health care during pregnancy and after. This limited access may hinder the receiving of information and support necessary for exclusive breastfeeding. In addition, young mothers may have different priorities and life choices, such as pursuing an education or a career. This may affect their commitment to exclusive breastfeeding.

The limitation of this research lies in the cross-sectional research design, so it cannot explain the causal relationship between the independent and dependent variables. However, with the availability of pregnancy and childbirth history data, the relationship between pregnancy and childbirth history can be explained in relation to the practice of exclusive breastfeeding. The use of secondary data also results in limited availability of other variables that may be related to the practice of exclusive breastfeeding, for example the history of illnesses experienced by the mother during pregnancy and childbirth, husband and family support, and other factors. So that future researchers can identify various other factors related to the practice of exclusive breastfeeding with a cohort research design.

Conclusion

The coverage of exclusive breastfeeding in Indonesia is still shallow, most mothers fail in exclusive breastfeeding (73.3%). Failure of exclusive breastfeeding is associated with risky pregnancies, where the mother's age is too young, parity is too much, and pregnancy spacing is too close after being controlled for high-level factors as risk factors for failure of exclusive breastfeeding. There is a need to improve health promotion programs for the public regarding the importance of exclusive breastfeeding. Pregnant women with risky pregnancies are priority targets in health promotion programs, preventing child marriage, mobilizing maternal activity in Family Planning (KB) programs to regulate birth spacing and the number of children.

Acknowledgment

Thank you to the Central Bureau of Statistics and BKKBN for preparing secondary IDHS data for further analysis.

Funding

This research did not have funding from other parties.

Conflict of Interest

The author declared that the author had no conflict of interest.

Reference

1. Sari P, Hapsari D, Dharmayanti I, Kusumawardani N. Faktor-Faktor Yang Berpengaruh Terhadap Risiko Kehamilan “4 Terlalu (4-T)” Pada Wanita Usia 10-59 Tahun (Analisis Riskesdas 2010). *Media Penelitian dan Pengembangan Kesehatan*. 2015;24(3):143–52. Available from: <https://garuda.kemdikbud.go.id/documents/detail/282094>
2. Davis EP, Narayan AJ. Pregnancy is a period of risk, adaptation, and resilience for mothers and infants. *Development Psychopathology*. 2020;32(5):1625–39. Available from: DOI: <https://doi.org/10.1017/S0954579420001121>
3. Nani SA. Faktor-faktor Penyebab Rendahnya Pemberian ASI Eksklusif di Puskesmas Patebon II Kabupaten Kendal. *J Ilm Multidisiplin [Internet]*. 2023;1(8):63–70. Available from: DOI: <https://doi.org/10.5281/zenodo.8322069>
4. Bayuana A, Anjani AD, Nurul DL, Selawati S, Sai’dah N, Susianti R, et al. Komplikasi Pada Kehamilan, Persalinan, Nifas dan Bayi Baru Lahir: Literature Review. *J Wacana Kesehat*. 2023;8(1):26. Available from: DOI: <https://doi.org/10.52822/jwk.v8i1.517>
5. Chirwa TF, Mantempa JN, Kinziunga FL, Kandala JD, Kandala NB. An exploratory spatial analysis of geographical inequalities of birth intervals among young women in the democratic republic of Congo (DRC): A cross-sectional study. *BMC Pregnancy Childbirth*. 2014;14(1):1–10. Available from: <http://www.biomedcentral.com/1471-2393/14/271>
6. Ali MM, Bellizzi S, Shah IH. The risk of perinatal mortality following short interpregnancy intervals—insights from 692402 pregnancies in 113 Demographic and Health Surveys from 46 countries: a population-based analysis. *Lancet Global Health*. 2023;11:1544–1552. Available from: DOI: [https://doi.org/10.1016/S2214-109X\(23\)00359-5](https://doi.org/10.1016/S2214-109X(23)00359-5)
7. Thoma ME, Rossen LM, Silva DA De, Warner M, Alan E, Moskosky S, et al. Beyond birth outcomes: Interpregnancy interval and injury-related Infant Mortality. *Paediatr Perinat Epidemiol*. 2020;33(5):360–70. Available from: DOI: <https://doi.org/10.1111/ppe.12575>
8. Hailu D, Gulte T. Determinants of Short Interbirth Interval among Reproductive Age

- Mothers in Arba Minch District, Ethiopia. *Int J Reprod Med.* 2016;2016:1–17. Available from: DOI:
9. World Health Organization (WHO). Pekan Menyusui Dunia: UNICEF dan WHO Menyerukan Pemerintah Dan Pemangku Kepentingan Agar Mendukung Semua Ibu Menyusui Di Indonesia Selama COVID-19. 2020.
 10. Kemenkes RI. Hasil Survei Status Gizi Indonesia Tahun 2022 [Internet]. Kementerian Kesehatan Republik Indonesia. Jakarta: Kementerian Kesehatan Republik Indonesia; 2023. Available from: <https://promkes.kemkes.go.id/materi-hasil-survei-status-gizi-indonesia-ssgi-2022>
 11. Kementerian Kesehatan RI. Indikator Program Kesehatan Masyarakat dalam RPJMN dan Renstra Kementerian Kesehatan 2020-2024 [Internet]. Katalog Dalam Terbitan. Kementerian Kesehatan RI. 2020. 1–99 p. Available from: <https://kesmas.kemkes.go.id/assets/uploads/contents/attachments/ef5bb48f4aaae60ebb724caflc534a24.pdf>
 12. Purnamasari D, Banyuwangi S. Hubungan Usia Ibu dengan Pemberian ASI Eksklusif di Kota Yogyakarta. *Jurnal Bina Cipta Husada.* 2022;18(1):131–40. Available from: <https://jurnal.stikesbch.ac.id/index.php/jurnal/article/view/62>
 13. Assriyah H, Indriasar R, Hidayanti H, Thaha AR, Jafar N. Hubungan Pengetahuan, Sikap, Umur, Pendidikan, Pekerjaan, Psikologis, dan Inisiasi Menyusui Dini dengan Pemberian ASI Eksklusif di Puskesmas Sudiang. *JGMI Journal Indones Community Nutr.* 2020;9(1):30–9. Available from: DOI: <https://doi.org/10.30597/jgmi.v9i1.10156>
 14. Hidayah N, Meilani N, Owa W. Determinan Pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Katobengke. *J Publ Kesehat Masy Indones.* 2019;6(3):103–8. Available from: DOI: 10.20527/jpkmi.v6i3.8182
 15. Sari Y, Farlikhatun L. Faktor-Faktor yang Berhubungan dengan Pemberian ASI Eksklusif di Desa Sukamerta Kecamatan Rawamerta. *Jurnal Keperawatan Muhammadiyah.* 2023;8(3):1–7. Available from: DOI: <https://doi.org/10.30651/jkm.v8i2.16273>
 16. Lubis ES. Hubungan Pemberian ASI Eksklusif dengan jarak kehamilan pada ibu di Wilayah Kerja Puskesmas Sei Mencirim Kabupaten Deli Serdang. *Jurnal Ilmiah Binalita Sudama Medan,* 5(1), 25–29. Available from: <http://ojs.bsm.ac.id/index.php/bsmejurnal/article/view/9>
 17. Indriani D, Kusumaningrum Y, Nurrochmawati I, Retnoningsih T. Pengaruh Paritas, Pekerjaan Ibu, Pengetahuan dan Dukungan Keluarga terhadap Pemberian ASI Eksklusif pada Ibu Bayi. *Jurnal Bidan Pintar.* 2022;3(1):329–38. Available from: DOI: <https://doi.org/10.30737/jubitar.v3i1.3240>
 18. Ariyani W, Nulhakim L, Siregar N. Hubungan Karakteristik dan Tingkat Pengetahuan Ibu

- dengan Pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Bunyu. *Aspiration Health Journal* [Internet]. 2023 Sep 10;1(3):382–92. Available from: <https://ejournal.itka.ac.id/index.php/aohj/article/view/183>
19. Haskas Y. Gambaran Stunting di Indonesia: Literature Review. *Jurnal Ilmu Kesehatan Diagnosis*. 2020;15(2):154–7. Available from: <https://jurnal.stikesnh.ac.id/index.php/jikd/article/view/179>
 20. Puspita R. Hubungan antara Pemberian ASI Eksklusif dengan Pekerjaan Ibu dan Paritas Ibu di Rumah Bersalin Citra Palembang. *JMTB Jurnal Midwifery Tiara Bunda*. 2023;1(1):1–7. Available from: DOI:<https://jurnal.poltektiarabunda.ac.id/index.php/jmtb/article/view/5>
 21. Sijabat S, Siagian MT, Munthe SA, Nababan D, Sitorus MEJ. Faktor-faktor yang berhubungan dengan Pemberian ASI Eksklusif di Puskesmas Buhit Samosir Tahun 2023. *PREPOTIF Jurnal Kesehatan Masyarakat*. 2023;7(2):16037–48. Available from: DOI: <https://doi.org/10.31004/prepotif.v7i1.18196>
 22. BPS, BKKBN, RI K. *Survey Demografi dan Kesehatan Indonesia 2017. Survei Demografi dan Kesehatan Indonesia 2017*. 2018.
 23. Tello B, Rivadeneira MF, Moncayo AL, Buitrón J, Astudillo F, Estrella A, et al. Breastfeeding, feeding practices and stunting in indigenous Ecuadorians under 2 years of age. *Int Breastfeed J* [Internet]. 2022;17(1):1–15. Available from: DOI: <https://doi.org/10.1186/s13006-022-00461-0>
 24. Perikleous EP, Fouzas S, Michailidou M, Patsourou A, Tsalkidis D, Steiropoulos P, et al. Association between History of Prolonged Exclusive Breast-Feeding and the Lung Function Indices in Childhood. *Children*. 2022;9(11):1–10. Available from: DOI: <https://doi.org/10.3390/children9111708>
 25. Li W, Yuan J, Wang L, Qiao Y, Liu E, Wang S, et al. The association between breastfeeding and childhood obesity/underweight: a population-based birth cohort study with repeated measured data. *Int Breastfeed J* [Internet]. 2022;17(1):1–9. Available from: DOI: <https://doi.org/10.1186/s13006-022-00522-4>
 26. Ekholuenetale M, Okonji OC, Nzopotam CI, Barrow A. Inequalities in the prevalence of stunting, anemia and exclusive breastfeeding among African children. *BMC Pediatr* [Internet]. 2022;22(1):1–14. Available from: <https://doi.org/10.1186/s12887-022-03395-y>
 27. Abrego Del Castillo KY, Dennis CL, Wamithi S, Briollais L, McGowan PO, Dol J, et al. Maternal BMI, breastfeeding and perinatal factors that influence early childhood growth trajectories: a scoping review. *J Dev Orig Health Dis*. 2022;13(5):541–9. Available from: DOI: <https://doi.org/10.1017/S2040174421000726>
 28. Gebrehiwot SW, Abera G, Tesfay K, Tilahun W. Short birth interval and associated factors among women of childbearing age in northern Ethiopia, 2016. *BMC Womens Health*.

- 2019;19(1):1–9. Available from: DOI:<https://doi.org/10.1186/s12905-019-0776-4>
29. Siregar EP. Hubungan Jarak Kehamilan dengan Kejadian Stunting di Puskesmas Pargarutan Tapanuli Selatan Tahun 2023. *J Gen Heal Pharm Sci Res.* 2023;1(3):22–7. Available from: DOI:<https://doi.org/10.57213/tjghpsr.v1i3.119>
 30. Untari J. Hubungan Antara Karakteristik Ibu Dengan Pemberian ASI Eksklusif Di Wilayah Kerja Puskesmas Minggir Kabupaten Sleman. *JurnalFormil (Forum Ilmiah) Kesehatan MasyarakatRespati [Internet].* 2017;2(1):17–23. Available from: DOI: <http://formilkesmas.respati.ac.id/index.php/formil/article/view/58/31>
 31. Pitriani T, Nurvinanda R, Lestari IP. Faktor-faktor yang Berhubungan dengan Meningkatnya Kejadian Bayi dengan Berat Badan Lahir Rendah (BBLR). *JurnalPenelitianPerawatProfesional.* 2023;5(4):1597–608. Available from: DOI:<https://doi.org/10.37287/jppp.v5i4.1884>
 32. Heriansyah R, Rangkuti NA. Hubungan Jarak kehamilan dengan kejadian anemia Ibu di Puskesmas Danau Marsabut Kabupaten Tapanuli Selatan Tahun 2019. *Jurnal KesehatanIlmiah Indonesia.* 2019;4(2):77–. Available from: DOI:<http://dx.doi.org/10.51933/health.v5i1.242>
 33. Masyudi, Winandar A, Yusuf N, Muhammad R, Safmila Y, Yusnani R. Hubungan Dukungan Keluarga Dengan Keberhasilan Pemberian Asi Eksklusif Di Kabupaten Aceh Besar. In: *Prosiding Seminar Nasional Multidisiplin Ilmu: tantangan Pendidikan Tinggi menuju Dudi melalui Merdeka Belajar.* 2023. p. 8–20.
 34. Afriyani R, Savitri I, Sa'adah N. Pengaruh Pemberian ASI Eksklusif di BPM Maimunah Palembang. *J Kesehat.* 2018;9(2):330–4. Available from:<https://jurnal.poltekkes-tjk.ac.id/index.php/JK/article/view/640>
 35. Nisa ZH. Faktor-Faktor Yang Berhubungan Dengan Ketidakberhasilan Dalam Pemberian Asi Eksklusif Pada Ibu Yang Memiliki Bayi Usia 0-6 Bulan Di Klinik Pratama Spn Polda Metro Jaya Periode 06 Juni 06 – 06 Juli 2022. *JurnalIlmu Kesehatan BPI.* 2023;7(1):50–9. Available from: DOI: <https://doi.org/10.58813/stikesbpi.v7i1.123>
 36. Dewi PDPK, Watiningsih AP, Megaputri PS, Dwijayanti LA, Ni Ketut Jayanti IGADW. Prediktor Kegagalan Pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Sawan I Kabupaten Buleleng. *JurnalIlmu Bidan.* 2020;5(1):1–10. Available from: DOI:<https://doi.org/10.61720/jib.v5i1.147>
 37. Soleha M, Tri Zelharsandy V. Pengaruh Paritas Di Keluarga Terhadap Status Gizi Anak Balita : Literature Review. *Lentera Perawat.* 2023;4(1):71–85. Available from: DOI:<https://doi.org/10.52235/lp.v4i1.210>
 38. Yanuarini TA, Rahayu DE, Hardiati HS. Hubungan Paritas dengan Tingkat Kecemasan Ibu Hamil Trimester III dalam Menghadapi Persalinan. *Ilmu Kesehat.* 2013;2(1):41–6.

Available from: DOI:<https://doi.org/10.32831/jik.v2i1.28>

39. Winda Gaolis Putri Br. Manurung, Yulia Irvani Dewi, Erika. Gambaran Faktor Pendukung dan Penghambat Dalam Pemberian Asi Eksklusif Di Klinik Laktasi Masa Pandemi Covid-19. *Health Care Jurnal Kesehatan*. 2023;12(1):56–67. Available from: DOI:<https://doi.org/10.36763/healthcare.v12i1.284>
40. Arora A, Manohar N, Hayen A, Bhole S, Eastwood J, Levy S, et al. Determinants of breastfeeding initiation among mothers in Sydney, Australia: Findings from a birth cohort study. *International Breastfeeding Journal*. 2017;12(1):1–10. Available from: DOI: DOI 10.1186/s13006-017-0130-0
41. Choiriyah, F. N, Yudi, T. H. “Hubungan dukungan sosial dan stres pada ibu yang memberikan asi eksklusif.” In: *Prosiding Seminar Nasional Psikologi dan IlmuHumaniora (SENAPIH 2022)*. 2022. p. 178–90.
42. Faradila, Putri RA. Keberhasilan Pemberian ASI Eksklusif pada Ibu Bekerja Pabrik. *Pendidik Kim PPs UNM*. 2021;3(2):256–64. Available from: DOI:<https://doi.org/10.35473/jhhs.v3i2.105>
43. Arami N, Asti Mulasari S, Hani UE, Yogyakarta A. Gejala Depresi Postpartum MempengaruhiKeberhasilan Asi Eksklusif: SistematisLiteratur Review.*Jurnal Kesehatan Kusuma Husada*. 2021;1(1):27–34. Available from: DOI:DOI: <https://doi.org/10.34035/jk.v12i1.530>
44. Hanifah SA, Astuti S, Susanti AI. Gambaran Karakteristik Ibu Menyusui Tidak Memberikan Asi Eksklusifdi Desa CikeruhKecamatan Jatinangor Kabupaten Sumedang Tahun 2015. *JurnalSistem Kesehatan*. 2017;3(1):38–43. Available from: DOI: <https://doi.org/10.24198/jsk.v3i1.13960>
45. Ristiana UCHK, Kristiana, Sendra E, Indriani R. Analisis Faktor Yang Berhubungan Dengan Pemberian Asi Eksklusif Pada Ibu Usia Di Bawah 20 Tahun. *Heal J Inov Ris Ilmu Kesehat*. 2022;1(4):192–201. Available from: DOI: <https://doi.org/10.51878/healthy.v1i4.1706>
46. Istantina AG. Hubungan Antara Kehamilan Diluar Usia Reproduksi Sehat Dengan Asfiksia Neonatorum di RSUP DR. Sarjito. Doctoral dissertation. Yogyakarta; 2014.
47. Efriani R, Astuti DA. Hubungan umur dan pekerjaan ibu menyusui dengan pemberian ASI eksklusif. *J Kebidanan*. 2020;9(2):153–62. Available from: DOI: 10.26714/jk.9.2.2020.153-162

HISTORY OF RISKY PREGNANCIES AND FAILURE OF EXCLUSIVE BREASTFEEDING IN INDONESIA

ORIGINALITY REPORT

15%

SIMILARITY INDEX

PRIMARY SOURCES

1	karya.brin.go.id Internet	176 words — 3%
2	repository.poltekkesbengkulu.ac.id Internet	145 words — 3%
3	www.ncbi.nlm.nih.gov Internet	137 words — 2%
4	wjahr.com Internet	71 words — 1%
5	"1st Annual Conference of Midwifery", Walter de Gruyter GmbH, 2020 Crossref	57 words — 1%
6	www.ssoar.info Internet	49 words — 1%
7	paediatricaindonesiana.org Internet	43 words — 1%
8	kesans.rifainstitute.com Internet	40 words — 1%
9	journal.aloha.academy Internet	38 words — 1%

10 Dian Kristiani Irawaty, Indra Elfiyan, Edy Purwoko. 28 words — 1%
"Exploring the Factors Associated with Infant
Mortality in Rural Indonesia", Global Journal of Health Science,
2020
Crossref

11 garuda.kemdikbud.go.id 28 words — 1%
Internet

EXCLUDE QUOTES OFF
EXCLUDE BIBLIOGRAPHY ON

EXCLUDE SOURCES < 1%
EXCLUDE MATCHES OFF